

~~GAYLE, GALE~~
RESULTS OF GEOLOGICAL,
GEOCHEMICAL AND GEOPHYSICAL SURVEYS
CONDUCTED ON PORTION OF SPENHO
MINES LTD.(N.P.L.) PROPERTY
SIMILKAMEEN MINING DIVISION
LATITUDE $49^{\circ}9'$, LONGITUDE $120^{\circ}38'W$
BY
GUY F. ALLEN, AUGUST 31, 1966

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Introduction:

The following report is the result of geological, geochemical, and geophysical investigations conducted on a portion of the property of Spenho Mines Ltd. (N.P.L.). This work was performed during July and August, 1966 by myself under the direction of Dr. Christopher Riley, P. Eng.

General

The area covered by this report lies in the Similkameen Mining District, B.C., and approximately thirty miles south of the town of Princeton. The property is bounded in part on the south by Highway #5 and on the west by Manning Park. Towers Cafe borders the property on the south and Bonneverre Ridge runs adjacent to the north edge.

The Topographic map shows some of the claims that were included in the studied area. No posts could be found in the north and north-east portions of the area, but this section is believed to be covered by Sandra S. and Gail R. claims. As can be seen from the map, there are fractional areas not covered by staking.⁽¹⁾

Access to the property is direct from Highway #5 by logging roads. These roads are shown on the Topographic map and are in relatively good condition.

The property is centered upon a large, rounded hill, probably sculptured by glaciation. It is heavily timbered with pine and fir although there are open areas on the southern slope. The summit lies approximately 1400' above Highway #5.

Procedure:

The work program on this property was initiated by the cutting of lines in order to give a working grid as shown in the Grid-Location map. The north-south lines were originally set at 500' apart whereas the east-west lines were set at 300' apart. Since these measurements were taken on the slope they had to be corrected to the horizontal. Stations were established at 200' intervals along both sets of lines. The Principle of the Coordinate Plane was used in identifying the stations. An east-west base line, or zero line crosses the north-south base line, or zero line at the origin (0,0). All north-south lines east of the north-south zero line have a positive value, that value depending on how far in feet they are from the zero line. North-south lines lying to the west of the zero line have negative values. Similarly, the east-west lines lying north of the east-west zero line have positive value while those lying to the south have negative values.

At each station the following work was done:

1. A soil sample was taken just below the layer of humus.
2. An altimeter was used to record the elevation.
3. A Sharpe ES-180 Personal Magcrometer was used to record the magnetic reading.

The area was canvassed in search of rock outcroppings. These were recorded and described. The descriptions of the rocks comprising these outcrops will be found in Appendix A of this report.

(1) These fractions were staked by the time this report was completed.

Using this information the following maps were prepared:

1. Grid-Location map
2. Topographic map
3. Copper Content of Soil map
4. Isomagnetic Contour map
5. Geological map
6. Geological Interpretation of Surface Exposures Around the Junction of the Woodpecker Claims map

With the exception of #6, all maps were drawn on a scale of one inch equals 300 feet.

Geology

The rocks underlying this general area belong to the Nicola group which is considered to be Triassic in age. Bordering the Nicola group in a northwest-southeast line of the west are a series of Coast Intrusions of Jurassic age. Mineralization is associated with this contact at a number of localities.

The Nicola rocks are typically made up of metamorphosed volcanics with minor metamorphosed sediments. In the report area, however, only rocks of a sedimentary origin were found outcropping. Of these, three relatively distinct rock types could be identified.

Type I - Chlorite and/or Hornblende Schist. These schists grade from a hornfels, which is predominantly hornblende to a very siliceous chloritic schist. Generally these rocks contain about 20% hornblende and 40% chlorite. They are relatively well banded, hard, competent rocks. The Geological map shows these rocks to underly the extreme eastern and the west-central part of the report area. They generally strike N20 - 30°W and dip at angles greater than 45° to the west.

Type II - Siliceous Schists and Metasediments. This variety has a high silica content. They are considered to be primarily of a sandstone origin. In fact, many samples show evidence of pre-existing sand grains. These rocks are very hard and resistant. Commonly they are light grey, weathering a buff colour. The metasediments show practically no schistosity nor crystal alignment and are quite blocky, while the siliceous schists commonly exhibit good banding. In some localities the metasediments grade into quartzite and show jointing. Generally, these rocks are interbedded with those of Type I where they occur. The best exposures of these rocks occur near the (0,0) point.

Type III - Talc-Sericite Schists. These schists are the product of a high grade shear zone, and in fact their presence marks such a zone in this area. The rock is very soft, platy, and crumbly. It weathers easily and feels soapy. Exposures could only be found where previous excavation work had been done. Often this rock type leaves evidence of its subcropping by giving a talcose soapy sheen to the overlying soil. As shown by the geological maps, there appear to be two zones of talc sericite schist running parallel in a northerly fashion. At the edges of these zones the rock loses its talc content and becomes more siliceous and hence harder and more resistant.

Strikes of Types II and III rocks are generally a little east or west of north. Dip angles are high to the west.

Rapid changes of dip in these rock types where exposed, indicates they have undergone considerable folding. On the other hand, strike changes are less apparent and probably represent only a regional warping of the zones. Where the strike change is sudden (see Outcrop #9) it is assumed a minor lithologic disconformity is represented.

No outcrop could be found in the western sections of the report area. Analysis of the Isomagnetic Contour Map in this area gives support to the assumption that the contact between the Nicola Group and the Coast Intrusives underlies this portion. The Eagle Granodiorite is the Intrusive representative in this area and can be seen outcropping on Highway #5 near the east gate of Manning Park.

A tunnel was driven approximately 175' westward from the point (125, 140) in the early 1900's. This tunnel intersected the two shear zones mentioned above. Sulphide mineralization occurs at these intersections primarily in the form of pyrite. Chalcocite coating on the pyrite is evident in some places. The presence of chalcopyrite in these exposures has been mentioned in literature but no evidence of it could be found. Copper assays on these zones have been reported as high as 4.20% (Cairnes, 1923). A Rubeanic test was done on soil at the tunnel entrance. This showed a high copper content, but was probably due to secondary enrichment of the soil by water running out of the tunnel.

Diamond drill hole #1 also penetrated these two talc-sericite zones, but no significant copper assays were recorded from the core.

Apart from these sub-surface investigations, examination of outcrops yielded the presence of only two sulphide minerals. Pyrite is found generally as a fracture filling material in the more siliceous rocks. Metasediments and quartz veins where exposed often contain rust cubes and evidence of the pyrite having been leached out.

Sphalerite is the other sulphide. It occurs as distinct euhedral crystals disseminated through a number of the outcrops. Some of these samples were assayed for zinc and copper as follows:

<u>Sample Number</u>	<u>% Zinc</u>	<u>% Copper</u>
O-34-1	.27	trace
O-34-2	.33	trace
O-19-1	.79	.02
O-26-4	.53	.03
DDH #1 -149'	.65	
DDH #2 -249'	1.15	

Although the zinc is not commercial as indicated by these assays, it does have widespread occurrence and is not confined to one particular rock type.

Geophysical

The geophysical work on this property took the form of a ground magnetometer survey using the Sharp ES-180 Magnetometer. This type of survey was used with the hope of tracing the shear zone and its associated mineralization over a wider area.

The results of the magnetometer work can be seen on the Isomagnetic Contour Map. The magnetic readings taken in the field were corrected for background readings recorded each day at the Circle K.

There appears to be very little if any relation between the magnetic component and the results of the geochemical or geological work. Neither the shear zone nor the mineralization could be traced. Since only such minerals as magnetite and pyrrhotite have a noticeable magnetic effect and these have not been observed in samples, such negative results are not surprising.

The isomagnetic contour lines in the western portion of the report area become more tightly packed as the magnetic value becomes relatively much higher. This is considered to be a result of the presence of an igneous intrusive as subcrop in this area.

The edge of the more highly magnetic region probably marks the contact between the Nicola Group and the Eagle Granodiorite.

Geochemistry

The soil samples collected were analyzed for copper content using the Rubeanic Acid Test. The results of these tests can be seen on the Composit of Rubeanic Tests Results chart.

A six-point scale was established to interpret the results. It is as follows:

- 0 - Nil to very slight trace
- 1 - slight trace to trace
- 2 - poor
- 3 - fair
- 4 - good
- 5 - excellent - high copper content

Soils testing on the scale at 0 or 1 were considered to contain only background concentrations of copper. Only those testing 2 or more were to be anomalous.

The Copper Content of Soils Map shows the results of these tests. Of the approximately 1300 samples tested, only seven showed anomalous results. It is interesting to note that four of these anomalies align themselves in a N30°W trend in the eastern part of the map area. This is also the strike of the country rock in this area. This trend is designated as a Region of Interest on the Copper Content of Soils Map.

Conclusions:

The Area of Interest as outlined on the Copper Content of Soil Map is significant in that its trend parallels the general strike of the rocks in this area. This area was outlined as a result of the four small anomalies where the soil tested high in copper. Four samples which gave rise to the four anomalies in the south-east quadrant were forwarded for analysis. The results were as follows:

<u>Sample No.</u>	<u>Parts Per Million Of</u>	
	<u>Copper</u>	<u>Zinc</u>
(+1000, -2292)	25	98
(+1150, -600)	32	100
(+1800, -2292)	500	52
(+2200, -3148)	75	140

If 50 parts per million of copper in soil is considered the upper limits of background concentration, it can be seen that the samples at (+2200, -3148) and especially (+1800, -2292) represent anomalously high concentrations. On the basis of these results, the area immediately surrounding these two locations was sampled on a 50 ft. grid. These samples were sent for analysis and as yet (August 30, 1966) the results have not been received. Should these results indicate higher than background copper concentrations further investigations would be warranted.

It is interesting to note that the Area of Interest trend contains within its borders the only known copper occurrences on the property, those of the upper tunnel.

The widespread disseminated sphalerite found in outcrops on the property is another interesting occurrence. As mentioned previously in this report none of the assay values obtained from the samples selected were of commercial grade. It is possible, that these zinc percentages may improve elsewhere or at depth. The soil samples already collected could be analyzed for total zinc in order to pinpoint these higher concentrations, if they exist.

Guy B. Allen
August 31/66.

Guy B. Allen, Geologist
August, 1966

CERTIFICATION OF QUALIFICATION

I, Guy B. Allen, do HEREBY CERTIFY that:

1. THAT I reside at Blind Bay, British Columbia.
2. THAT I am a graduate of the University of Western Ontario, and hold a Degree of Bachelor of Science in Honours Geology, and that I graduated in the year 1957.
3. THAT the information contained in my accompanying Report is the result of my personal examination, and that such examination was made during the months of July and August, A.D. 1966.

DATED at Vancouver, British Columbia, this 31 day of August, A.D. 1966.

Guy B. Allen

Guy B. Allen, Geologist

A P P E N D I X A

O U T C R O P D E S C R I P T I O N S

Sample
Number

Outcrop #1 (-2350, -1714)

- O-1 - Very poor exposure on hillside, appears to be in place. Dip and strike cannot be determined. Approximately a 4' section exposed. Hornblende gneiss - a metasediment, 30 - 70 % hornblende, very siliceous, hard, blocky, quite resistant - white speckled on fresh surface weathers dark grey brown - direction of hornblende crystal alignment \approx N80° E. Quartz lenses and inclusions present.

Outcrop #2 (1400, -2000)

- O-2-1 - Trench runs S45° W from this point. Fresh outcrop is not exposed but weathered rock is present. Strike on dip cannot be determined but strike appears East-west? hence thickness estimated at 20 - 30 feet. Metasediment - very siliceous, almost a quartzite hard blocky resistant, light grey on fresh surface weathers dark buff - leached, evidence of mineralization, brown mica present - sphalerite.
- O-2-2 Chlorite Schist - with 10 - 20% hornblende, relatively hard, dark grey, fair schistosity, not fissile, little evidence of banding. These two rock types are interbedded with the metasediment making up 75% of the rock.

Outcrop #3 (1850, -2598)

- O-3 - Trench at this point runs north-south. Only outcrop is a 2 foot exposure in base of trench. Strike N20° W. Chlorite Schist - with hornblende, fair schistosity, hard resistant - dark grey on fresh and weathered surface, siliceous. Hillside to north and northeast is littered with float of this type.

Outcrop #4 (1900, -3000)

- O-4 Strike N20° W, Dip 30° SW
3' Hornblende - Chlorite Schist - very siliceous, fair schistosity, hard resistant, fair alignment of hornblende crystals, medium grey, weathers dark grey.

Outcrop #5 (2107, -3000)

- O-5 - Strike N20° W, Dip: cannot be determined
8' Hornblende Metasediment - very siliceous, little schistosity, 30 - 40% hornblende, no crystal alignment, hard resistant blocky.
- This is very similar to O-4 but with much reduced chlorite content. Similar to O-1 also.

Outcrop #6 (2100, -3148)

- O-6 Strike N20° W, Dip 55° SW
35' Hornblende Chlorite Schist - a metasediment, 30 - 50% hornblende, poor to fair schistosity, partly hard blocky very resistant, very siliceous.

Outcrop #7 (0, - 167)

- O-7-1 - Strike N10W to N12° E, Dip 70 - 80° W. Outcrop is exposed in wall of a trench which trends N70° E. 100 vertical feet of section exposed. Strike N10W at top to N10E at base. Dip 65° W.
100' Talc Sericite Schist - fissile, very siliceous, fairly soft, greasy, crumbly
20' Overburden
- O-7-2 8' Talc Sericite Schist - as above, harder, more siliceous.
Strike N12E, Dip 35° W.

[illegible]

0-11-6

3rd Metasediment - very siliceous, almost a quartzite, hard, blocky, blue tinge, weathers buff.

1' Metasediment, very siliceous, as above

0-11-7

1' Siliceous Schist - with chlorite, thin, platy, medium grey, siliceous, speckled black from biotite flakes

The base of this outcrop traced on strike occurs 2/3 way up outcrop #12.

-Outcrop in trench. Strike N30°W, Dip 75°W.

0-12-1

1' Chlorite Schist - siliceous, hard, blocky

0-12-2

3' Metasediment - metasandstone, hard, blocky, resistant, very siliceous, trace sulphides

0-12-3

1' Quartz band - no sulphides

5: Overburden

10' Metasediment - as above

8: Overburden

0-12-4

4' Quartzite and Siliceous Schist - interbedded, hard, resistant,
trace sulphides

←-----→ North-South zero line

0-12-5

5' Hornblende Schist - large acicular hornblende crystals, relatively hard and resistant

0-12-6

6' Metasediment - sandy, siliceous, poorly exposed, rotted, no sulphides

9¹ Overburden

3¹ Hornblende Schist - as above, relatively hard

0-12-7

1st Metasediment - blocky, trace rust cubes

0-21-8

17' Hornblende Chlorite Schist - siliceous, resistant, dark grey to black, banded.

- remainder of trench is overburden

- Excavation. Strike N12°E, Dip 56°W

0-13-1

4' Chlorite schist - good schistosity, dark grey weathers buff.

-Strike: N to N24°E. Dip: Vertical to 35° W. Some of this material, exposed in base of trench may be disturbed by cat. Strikes generally east of north.

0-14-1

15' Metasediment - Strike N24°E, Dip: Vertical. Metasandstone, white, weathers buff, siliceous, quartz grains

8¹ Overburden

0-14-2

10' Hornblende Schist - high hornblende, rosettes. Brown, also chlorite, good schistosity

17¹ Overburden

0-14-3

1' Chlorite Schist - Strike N10E, Siliceous, well foliated

25^t Overburden

7¹ Metamediment - Strike N10°E. as above

10' Overburden

1' Chlorite Schist - Strike North. Dip 45°W. - as above

12' Overburden

2' Metasediment - Strike N12E to N24°E. Dip 35°W - as above

Overburden - remainder

<u>Sample Number</u>	
	<u>Outcrop #15</u> (210, -566)
	-Strike N10°W. Dip? apparently vertical
0-15-1	3' <u>Chlorite Schist</u> - medium - dark brown, weathers buff
	50' <u>Overburden</u>
	15' <u>Talc Sericite Schist</u> - not exposed, but indicated from ground surface
	5' <u>Overburden</u>
0-15-2	4' <u>Quartzite</u> - Strike N22°E with sericite and talc - a metasandstone
	<u>Outcrop #16</u> (200, -200)
	- Very poor exposure: Approximately Strike N10°W, Approximately Dip 10°SW
0-16-1	2' <u>Talc sericite schist</u> - siliceous, fairly hard
	<u>Outcrop #17</u> (-300, -3148)
	- Strike N12E, Dip 44°W
0-17-1	9' <u>Hornblende Chlorite Schist</u> - large hornblende laths, very siliceous, well banded, hard, rounded, mottled, light grey (silica) and black (hornblende) quartz lenses - no sulphides
	<u>Outcrop #18</u> (800, -3050)
	- Outcrop exposed in cut on road.
0-18-1	35' <u>Metasediment</u> - very siliceous, chloritic, hard, dense, blocky and platy, slightly disseminated, sphalerite crystals. Light grey - weathers brown - slight bend in strike from N5°E at top to N15°W.
0-18-2	4' <u>Chlorite schist</u> - medium - dark grey, platy
0-18-3	18' <u>Metasediment</u> - Strike N18°E - as above at base. trace sphalerite and pyrite
	<u>Outcrop #19</u> (766, -2000)
	-Strike N15°E, Dip 37°W
0-19-1	3' <u>Metasediment</u> - White, banded, weathers buff, very siliceous, almost cherty, hard resistant, blocky, disseminated sphalerite crystals
	<u>Outcrop #20</u> (0, -337)
	- Outcrop exposed in base of trench crossing N-S zero at (0, -337)
	-top of exposure 20 feet E along trench from N-S zero.
0-20-1	20' <u>Metasediment</u> - not truly exposed, but indicated from surface. Light grey, weathered buff, hard, resistant, blocky, indications of bedding - Strike and dip not indicated
0-20-2	5' <u>Talc Sericite Schist</u> - siliceous, relatively hard
0-20-3	8' <u>Chlorite Schist</u> - siliceous, platy, slickensides
0-20-4	8' <u>Metasediment</u> - as above
0-20-5	16' <u>Siliceous Schist</u> - Strike N32E, Dip 60W. with chlorite - ½ way between a chlorite schist and metasediment, platy and blocky, light grey, weathers brown.
	5' <u>Overburden</u>
	5' <u>Metasediment</u> - as above with quartz bands - barren
	20' <u>Siliceous Schist</u> - as above with chlorite. Strike N36E, Dip 50W
0-20-6	5' <u>Metasediment</u> - Strike N36E, Dip 50W. As above

<u>Sample Number</u>	<u>Outcrop #20</u> (continued)
0-20-7	10' <u>Sericite Schist</u> - with talc and chlorite, very fissile, breaks easily, good schistosity
0-20-8	5' <u>Chlorite Schist</u> - high chlorite, medium grey, fissile 13' <u>Sericite Schist</u> - with chlorite and talc as above, folding evident - strike change
0-20-9	10' <u>Metasediment</u> - Strike N10°, Dip 45°W - as above with sericite and rust cubes
0-20-10	6' <u>Metasediment</u> - almost a quartzite, white - light grey, weathers brown - highly leached, not banded as above 36' <u>Talc - Sericite Schist</u> - Strike N70°E, Dip 75°W, as above, soft, crumbly, partly siliceous
0-20-11	7' <u>Metasediment</u> - white, weathers light brown, hard, dense, rust cubes 6' <u>Overburden</u> 1' <u>Sericite Schist</u> - as above with talc and chlorite 3' <u>Overburden</u> 20' <u>Talc Sericite Schist</u> - Strike N70°E, Dip 50°W - as above - The talc sericite schist appears to underly another 30' although not exposed.
	<u>Outcrop #21</u> (220, -330) -Poor outcrop <u>Talc Sericite Schist</u> - no evidence of thickness, strike or dip
	<u>Outcrop #22</u> (200, -290) -Exposed in road bank
0-22-11	2' <u>Talc Sericite Schist</u> - Strike N70°E, Dip 5°W
	<u>Outcrop #23</u> (0, -508) - top of section - (20, -508) -Exposed in trench which strikes S83°E
	17' <u>Talc Sericite Schist</u> - Strike N30°W, Dip Approximately vertical
0-23-1	4' <u>Sericite Schist</u> - with talc & chlorite, Strike N30°W
0-23-2	1' <u>Chlorite Schist</u> - Strike as above, siliceous 1' <u>Metasediment</u> - Strike? hard, blocky, white, weathers buff 1' <u>Sericite Schist</u> - Strike N15°E, with talc and chlorite 2' <u>Overburden</u> 2' <u>Siliceous Schist</u> 8' <u>Overburden</u> 9' <u>Sericite Schist</u> - with talc and chlorite
0-23-3	7' <u>Metasediment</u> - as above, Strike N.0° 2' <u>Chlorite schist</u> - as above
	10' <u>Talc Sericite Schist</u> 5' <u>Overburden</u>
0-23-4	20' <u>Siliceous Schist</u> - Strike N, Dip 70°W, schistose and blocky, resistant, light grey, weathers light brown 2' <u>Talc Chlorite Schist</u> 3' <u>Overburden</u>
0-23-5	7' <u>Siliceous Schist</u> 3' <u>Talc Sericite Schist</u> 3' <u>Sericite Schist</u> - Strike N - with talc and chlorite 1' <u>Quartz</u> 8' <u>Talc Sericite Schist</u> (± 200, -566) 2nd trench - 20' south
	10' <u>Overburden</u> 5' <u>Talc Sericite Schist</u> 10' <u>Overburden</u>
0-23-6	15' <u>Chlorite Schist</u> - Strike No°
0-23-7	5' <u>Siliceous schist</u> - with sericite

Sample
Number

Outcrop #24 (300, -566)

-Continuation of 2nd trench of outcrop #23

0-24-1 5' Siliceous Schist - Strike N20E, Dip 17W - with sericite

Outcrop #25 (65, 0)

-Outcrop exposed at road cut, runs along road

0-25-1 4' Talc sericite schist - soft crumbly, greasy
Strike N30E, Dip 35W. This zone grades laterally and becomes hard,
with a higher siliceous content.

0-25-2 5' Metasediment - slightly banded - trace sulphides

Note (125, 0) - There is no outcrop exposed here, but surface material indicates
the location is underlain by Metasediment and Talc Sericite Schist

Note (175, 0) - No outcrop. Surface material indicates a metasediment

Outcrop #26 (710, -2850)

-Strike N50E, Dip appears vertical

0-26-1 5' Siliceous Schist - slight trace sulphides

5' Overburden

0-26-2 5' Chlorite Schist - with some talc

5' Overburden

0-26-3 21' Metasediment - Slight trace sulphides, blocky, resistant with
interbeds of siliceous schist (banded)

fault? 5' Chlorite Schist - with talc as above

0-26-4 20' Metasediment - Strike N30W, Dip apparently vertical.

As above, trace sphalerite

2' Chlorite Schist - no talc, strike N

10' Metasediment - as above with interbeds of siliceous schist,
trace sphalerite

5' Overburden

3' Siliceous Schist

0-26-5

2' Chlorite Schist

3' Siliceous Schist - Strike N20W

2' Overburden

2' Siliceous Schist

Outcrop #27 (2305, -2875)

0-27-1 -Approximately 35' Chlorite Schist, trace hornblende, dark grey,
weathers dark grey, poor schistosity, hard, resistant. Strike N25W,
Dip 60W. There are numerous small outcroppings of this rock type
in this area.

Note (2200, -3148) Entire hillside in this area littered with chlorite schist
as described for Outcrop #27

Outcrop #28 (2107, -3200)

0-28-1 -Approximately 30' Chloritic Hornblende Schist - siliceous, hard,
dense, resistant, Strike N12W, Dip 75E

Outcrop #29 (2800, -3148)

0-29-1 Outcrop represented in hillside

55' Chlorite Schist - trace hornblende, hard, resistant, blocky,
Strike No°, Dip approximately vertical

Sample
Number

Outcrop #30 (-70, 10)

-running east

- 0-30-1 30' Metasediment - not exposed but indicated from surface - also from (-70, 10) (-90, 0) is probably this type, other lithologies may be interbedded in this section
10' Metasediment - Strike N20°E? Dip 40°W Slight banding, light grey weathers brown, fracture pattern \perp to bedding, slight trace disseminated sulphides
2' Talc Sericite Schist
3' Overburden
3' Siliceous Schist

Outcrop #31 (0, 135)

-Outcrop exposed in trench running N70°E and crossing zero line at this point

- 0-31-1 5' Chlorite Schist - rich in chlorite, well banded, relatively hard, resistant
4' Siliceous Schist - Strike N10°E, Dip 30°W, with interbeds of metasedi-
4' Overburden - possibly a schist with talc } ment.
0-31-2 23' Siliceous Schist - as above
16' Overburden

← N. S. zero line at (0, 135)

-possibly underlain by chlorite schist or with talc-sericite

- 40' Overburden - considerable talc - sericite evidence on ground.
1' Talc Sericite Schist
2' Siliceous Schist
3' Metasediment - Strike N5°E, Dip 40°W - some leaching, slight trace disseminated sulphides
10' Overburden
0-31-3 7' Sericite Schist - Strike N10°E, Dip 50°W., some talc, siliceous, fairly hard and resistant

Outcrop #32 (0, 90)

-Trench running due west from (0, 90). Top of exposure (140, 90)

- 1' Siliceous Schist - Strike N5°E, some sericite, leached
18' Overburden
2' Metasediment - highly leached
2' Sericite schist - siliceous with talc
36' Overburden
3' Talc Sericite Schist
31' Overburden
0-32-1 24' Siliceous Schist - Strike N10°E, Dip 75°W, with metasediment, slight trace disseminated sulphides

Outcrop #33 (0, 220)

- Trench running due west from (0, 220). Top of exposure (150, 220)

- 0-33-1 2' Metasediment - almost a quartzite, trace sulphides
4' Chlorite Schist - siliceous, slight trace sulphides
18' Overburden
0-33-2 5' Metasediment - metasandstone, sand grains evident
32' Chlorite Schist - Strike N5°E, Dip almost vertical occasional metasediment interbed
37' Overburden - appears to be underlain primarily by a talc -sericite rock
0-33-3 45' Siliceous Schists - Strike N10°E, Dip 65°W, with interbeds of metasedi-
ment, light grey, weathers brown, trace disseminated sulphides

Sample
Number

Outcrop #34 (0, 338)

-Trench running west. Top of exposure at (180,338)

- 0-34-3 3' Talc Sericite Schist - indicated from ground surface
6' Siliceous Schist - banded
6' Chlorite Schist
17' Overburden - appears to be underlain by schist with sericite and talc.
0-34-4 1' Chlorite Schist - thin, platy, fissile
2' Metasediment - Strike N10W, Dip 20W, blocky, poor sulphides
8' Chlorite Schist - Strike N10W, Dip 45W, trace sulphides
5' Metasediment - fractured, slight trace sulphides
5' Overburden - appears underlain by chlorite schist
6' Siliceous Schist - banded, trace sulphides, partly leached
0-34-2 52' Chlorite Schist - Strike N25E, Dip 45W, with minor metasediment, interbeds, trace sphalerite, platy and massive
10' Overburden - appears to be underlain by siliceous schist
3' Chlorite Schist - thin, platy, soft, Strike N, Dip 55W
0-34-1 40' Metasediment - blocky, slightly banded, light grey, weathers brown, trace sphalerite
3' Chlorite Schist - not exposed, very soft, sericite and talc
14' Chlorite Schist - Strike N5E, Dip 25W, with metasediment and quartz interbeds - slight trace sulphides

Outcrop #35 (90, 288)

-Exposed along and running parallel to road cut. Strike N5E, Dip 10W

- 2' Sericite Schist - slightly talcose
8' Overburden
2' Metasediment - massive, blocky, leached, strike and dip cannot be determined

Outcrop #36 (390,500 - 650)

-Outcrop exposed along catcut, material is highly weathered.

Top at (340,650)

- 1' Metasediment
3' Chlorite Schist
1' Metasediment - leached, sphalerite
6' Chlorite Schist

Strike and dip cannot be determined - this zone is exposed along N-S line for approximately 100' - entire section consists of interbedded metasediment and chlorite schist. There is considerable staining and leaching at the rock.

APPENDIX B

CORE DESCRIPTIONS OF
DIAMOND DRILL HOLES
NUMBERS 1 & 2

AND

DESCRIPTIONS OF ROCK
EXPOSED IN TUNNELS

<u>Footage</u> <u>From</u>	<u>To</u>	<u>Diamond Drill Hole #1</u>	(-250, -80)
0	- 8	<u>Overburden</u>	
8	- 10	<u>Siliceous Schist</u>	with chlorite
10	- 15	<u>Chlorite Schist</u>	
15	- 19	<u>Siliceous Schist</u>	with chlorite, slight trace sulphides
19	- 20	<u>Chlorite Schist</u>	
20	- 24	<u>Chlorite Schist</u>	- siliceous
24	- 27	<u>Hornblende Schist</u>	- with chlorite, large hornblende crystals
27	- 29½	<u>Chlorite Schist</u>	- siliceous, trace sulphides
29½	- 31	<u>Chlorite Schist</u>	- with hornblende, slight trace sulphides
31	- 33	<u>Chlorite Schist</u>	- siliceous
33	- 33½	<u>Chlorite Schist</u>	
33½	- 34	<u>Chlorite Schist</u>	- quartz vein
34	- 35	<u>Chlorite Schist</u>	- siliceous, slight trace sulphides
35	- 35½	<u>Chlorite Schist</u>	- with sericite, slickensides, indicative of shear
35½	- 37	<u>Chlorite Schist</u>	- partly slickensides, slight trace sulphides
37	- 38	<u>Chlorite Schist</u>	
38	- 39	<u>Chlorite Schist</u>	- slickensides
39	- 42	<u>Chlorite Schist</u>	- slight trace sulphides with biotite
42	- 44	<u>Chlorite Schist</u>	- with biotite
44	- 44½	<u>Chlorite Schist</u>	- with biotite, slight trace sulphides
44½	- 47½	<u>Chlorite Schist</u>	- slight trace sulphides
47½	- 48	<u>Chlorite Schist</u>	- slight trace sulphides
48	- 48½	<u>Chlorite Schist</u>	- trace sulphides
48½	- 49	<u>Chlorite Schist</u>	- with hornblende, slight trace sulphides
49	- 49½	<u>Chlorite Schist</u>	- poor sulphides
49½	- 50	<u>Chlorite Schist</u>	- with hornblende, trace sulphides
50	- 50½	<u>Chlorite Schist</u>	- with hornblende, trace sulphides
50½	- 51	<u>Chlorite Schist</u>	- siliceous, with hornblende, poor sulphides
51	- 52½	<u>Chlorite Schist</u>	- with hornblende
52½	- 53½	<u>Hornblende Schist</u>	- with chlorite, highly slickensides, very disturbed, quartz bands, greater than 70% hornblende
53½	- 54½	<u>Hornblende Schist</u>	- high hornblende content
54½	- 57	<u>Metasediment</u>	- almost a quartzite, slight trace sulphides interbedded with hornblende schist
57	- 58	<u>Metasediment</u>	- almost a quartzite, sulphides
58	- 59	<u>Chlorite Schist</u>	with hornblende, trace sulphides
59	- 60	<u>Chlorite Schist</u>	- siliceous, trace sulphides
60	- 61½	<u>Siliceous Metasediment</u>	- slight trace sulphides
61½	- 69	<u>Chlorite Schist</u>	- with hornblende, slight trace sulphides
69	- 71	<u>Siliceous Schist</u>	- with biotite - chlorite, trace sulphides
71	- 120	<u>Chlorite Schist</u>	- with biotite and hornblende, trace to fair sulphides, partly siliceous, slickensides in part. -dip distorted around 95' -rock highly distorted at 97', highly slickensides, possible fault zone -rock highly leached 105' - 107' good sulphides at 109 -hornblende content increases at 112'- evidence of vertical fracturing - fair sulphide mineralization at 115'

<u>Footage</u> <u>From</u>		<u>To</u>	<u>Diamond Drill Hole #1</u>	(-250, -80) continued
120	-	124 $\frac{1}{2}$	<u>Siliceous Schist</u>	- with chlorite, trace sulphides
124 $\frac{1}{2}$	-	132 $\frac{1}{2}$	<u>Chlorite Schist</u>	- slickensides, trace sulphides
132 $\frac{1}{2}$	-	134 $\frac{1}{2}$	<u>Metasediment</u>	- trace sulphides
134 $\frac{1}{2}$	-	143	<u>Siliceous Schist</u>	- with chlorite, trace sulphides, highly distorted 140' - 142'
143	-	144	<u>Metasediment</u>	- white, trace sulphides
144	-	148	<u>Siliceous Schist</u>	- slight trace sulphides
148	-	154	<u>Chlorite Schist</u>	- high biotite content, sphalerite? trace sulphides
154	-	161	<u>Siliceous Schist</u>	- some chlorite, trace sulphides
161	-	167	<u>Chlorite Schist</u>	- trace sulphides
167	-	171	<u>Metasediment</u>	- no bedding, trace sulphides and sphalerite
171	-	171 $\frac{1}{2}$	<u>Chlorite Schist</u>	- heavily slickensided
171 $\frac{1}{2}$	-	173	<u>Chlorite Schist</u>	- with hornblende
173	-	178	<u>Siliceous Schist</u>	- with chlorite, trace sulphides
178	-	180	<u>Chlorite Schist</u>	- heavily slickensided - hornblende
180	-	192	<u>Siliceous Schist</u>	- chlorite, fair sulphides
192	-	195	<u>Chlorite Schist</u>	- heavily slickensided as above
195	-	196	<u>Quartzite</u>	- disturbed with chlorite
196	-	198	<u>Metasediment</u>	- slight trace sulphides
198	-	203	<u>Chlorite Schist</u>	- heavily slickensided at 198, siliceous, trace sulphides, well banded, heavily slickensided, crumbly at 198, heavily slickensided, crumbly at 203
203	-	224	<u>Talc-Sericite Schist</u>	- soft, crumbly
224	-	245	<u>Sericite Schist</u>	- with slight talc - <u>siliceous</u> , fairly competent, fair sulphides, varying amounts of chlorite - chlorite content increasing from 243
245	-	247	<u>Sericite - Chlorite schist</u>	- poor-fair sulphides
247	-	250	<u>Chlorite Schist</u>	- with sericite, trace-poor sulphides
250	-	265	<u>Sericite Schist</u>	- medium grey with chlorite, fairly resistant, well banded, poor to good sulphides
265	-	266 $\frac{1}{2}$	<u>Siliceous Schist</u>	- distorted, fair sulphides
266 $\frac{1}{2}$	-	267	<u>Sericite Schist</u>	- excellent sulphides
267	-	268 $\frac{1}{2}$	<u>Chlorite Schist</u>	- with sericite
268 $\frac{1}{2}$	-	277	<u>Siliceous Schist</u>	- with chlorite and sericite, trace sulphides
277	-	278	<u>Metasediment</u>	- slight trace sulphides - no banding
278	-	280	<u>Chlorite Schist</u>	- trace sulphides
280	-	283	<u>Sericite Schist</u>	- with talc, fairly resistant, poor sulphides
283	-	284	<u>Quartzite</u>	- with schist zones - very distorted, fault zone
284	-	293	<u>Talc Sericite Schist</u>	- poor sulphides
293	-	310	<u>Siliceous Schist</u>	- with chlorite, fair sulphides, poorly banded, almost a quartzite, fractured
310	-	311	<u>Chlorite Schist</u>	- well banded, platy
311	-	313	<u>Siliceous Schist</u>	- slight trace sulphides
313	-	314 $\frac{1}{2}$	<u>Chlorite Schist</u>	- slight trace sulphides
314 $\frac{1}{2}$	-	319 $\frac{1}{2}$	<u>Siliceous Schist</u>	- trace sulphides
319 $\frac{1}{2}$	-	320	<u>Talc Sericite Schist</u>	
320	-	323	<u>Siliceous Schist</u>	- with chlorite, fractured, poor sulphides -4" band of chlorite schist at 321
323	-	324	<u>Chlorite Schist</u>	- slight trace sulphides
324	-	327	<u>Siliceous Schist</u>	- with chlorite, poor sulphides, good sulphides at 326 $\frac{1}{2}$

<u>Footage</u> <u>From</u>		<u>To</u>	<u>Diamond Drill Hole #1</u> (-250, -80) continued
327	-	330	<u>Sericite Schist</u> - with talc, fair sulphides
330	-	334	<u>Siliceous Schist</u> - with chlorite and sericite - fair sulphides, good sulphides 331½ - 334
334	-	340	<u>Sericite Schist</u> - very siliceous, fair sulphides
340	-	341	<u>Siliceous Schist</u> - very sericitic, fair sulphides
341	-	342	<u>Siliceous Schist</u> - with chlorite and sericite, distorted, good sulphides
342	-	344	<u>Siliceous Schist</u> , distorted, fractured, trace sulphides
344	-	346	<u>Chlorite Schist</u>
346	-	348	<u>Siliceous Schist</u> - almost a quartzite, distorted, fractured, fair sulphides
348	-	349	<u>Chlorite Schist</u> - very siliceous, fair sulphides
349	-	353	<u>Sericite Schist</u> - with chlorite, excellent sulphides
353	-	355	<u>Quartz</u> - trace sulphides
355	-	357	<u>Sericite Schist</u> - with chlorite, very disturbed, fair sulphides
357	-	358½	<u>Chlorite Schist</u> - with sericite, poor sulphides
358½	-	363	<u>Chlorite Schist</u> - trace sulphides
363	-	364	<u>Siliceous Schist</u> - trace sulphides
364	-	366	<u>Chlorite Schist</u> - trace sulphides
366	-	374	<u>Siliceous Schist</u> - trace sulphides, fractured, thin chlorite schist bands
374	-	375	<u>Chlorite Schist</u> - slickensides
375	-	376	<u>Siliceous Schist</u> - with chlorite
376	-	379	<u>Chlorite Schist</u> - with hornblende, slickensides in places
379	-	384	<u>Chlorite - Hornblende Schist</u>
384	-	386½	<u>Siliceous Schist</u> - slight trace sulphides
386½	-	389	<u>Hornblende - Chlorite Schist</u>
389	-	390	<u>Chlorite Schist</u> - siliceous, trace sulphides, sphalerite?
390	-	394	<u>Siliceous Schist</u> - almost a quartzite, trace sulphides
394	-	397	<u>Hornblende Schist</u> - with chlorite
397	-	397½	<u>Chlorite Schist</u> - siliceous with sphalerite
397½	-	403½	<u>Siliceous Schist</u> - trace hornblende crystals, slight trace sulphides
403½	-	404	<u>Chlorite Schist</u> - slickensides, trace sulphides
404	-	406	<u>Chlorite Schist</u> - with hornblende, trace sulphides
406	-	409	<u>Siliceous Schist</u> - with thin chlorite schist bands, fractured
409	-	412	<u>Hornblende Chlorite Schist</u>
412	-	414	<u>Siliceous Schist</u> - with bands of hornblende, chlorite schist, disturbed, fractured, fair sulphides
414	-	419	<u>Hornblende Schist</u> - with chlorite, slight trace sulphides
419	-	420	<u>Siliceous Schist</u> - fractured
420	-	421	<u>Chlorite Schist</u>
421	-	423	<u>Siliceous Schist</u> - highly fractured, slight trace sulphides
423	-	423½	<u>Chlorite Schist</u>
423½	-	425	<u>Chlorite Schist</u> - siliceous, sphalerite?
425	-	427	<u>Chlorite Schist</u> - slickensides
427	-	428	<u>Siliceous Schist</u>
428	-	429	<u>Chlorite Schist</u> - slickensides with trace sulphides, last ½ foot very distorted
429	-	444	<u>Siliceous Schist</u> - slight trace sulphides -2" band of chlorite schist at 439 -chloritic at 442 - 442½ -highly fractured at 443½

<u>Footage</u> <u>From</u>	<u>To</u>	<u>Diamond Drill Hole #1</u>	(-250, -80) continued
444	- 445½	<u>Chlorite Schist</u>	- siliceous, trace sulphides
445½	- 449	<u>Siliceous Schist</u>	- chloritic - trace sulphides
449	- 450	<u>Chlorite Schist</u>	
450	- 462	<u>Siliceous Schist</u>	
		-distorted at 450	
		-chlorite schist bands at 451	
		-6" chlorite schist band at 453 with sphalerite	
		-fractured 456-458	
		-with chlorite and sericite 458-460	
462	- 464	<u>Chlorite Schist</u>	- with hornblende, slickensides
464	- 466	<u>Siliceous Schist</u>	- poor sulphides
466	- 467	<u>Chlorite Schist</u>	- slight trace sulphides
467	- 476	<u>Siliceous Schist</u>	- partly fractured, trace sulphides
476	- 478	<u>Chlorite Schist</u>	- quartz filling fractures 477 - 478
478	- 479	<u>Hornblende - Chlorite Schist</u>	- fractured
479	- 481	<u>Siliceous Schist</u>	- highly fractured, slight trace sulphides
481	- 483	<u>Hornblende Chlorite Schist</u>	
483	- 488	<u>Siliceous Schist</u>	- trace sulphides
488	- 497	<u>Chlorite Schist</u>	- siliceous, trace sulphides with hornblende
497	- 500	<u>Siliceous Schist</u>	- fractured, slight trace sulphides

The following assays were run on Diamond Drill Hole #1. Depth footages are approximate.

<u>Depth</u>	<u>% Copper</u>
200 - 208	0.16
230 - 238	0.11
272 - 277	trace
310 - 320	0.09
323 - 330	0.0
343 - 348	0.21
355 - 360	0.21
390 - 398	trace
462 - 470	trace

A sample of the core taken at a depth of 149' assayed .65% zinc.

<u>Footage</u> <u>From</u>		<u>To</u>	<u>Diamond Drill Hole #2</u> (-750, -480)
0	-	15	<u>Overburden</u>
15	-	18	<u>Hornblende Schist</u> - siliceous
18	-	32	<u>Chlorite Schist</u> - soft, crumbly with sphalerite
32	-	37	<u>Siliceous Schist</u> - with chlorite
37	-	42	<u>Chlorite Schist</u> - brownish, sphalerite crystals?
42	-	47	<u>Chlorite Schist</u> - interbedded with siliceous schist
47	-	53	<u>Siliceous Schist</u> - well banded, regular, sphalerite crystals
53	-	54	<u>Chlorite Schist</u>
54	-	72	<u>Siliceous Schist</u> - well banded
72	-	73	<u>Chlorite Schist</u> - with hornblende
73	-	81	<u>Siliceous Schist</u> - slight trace sulphides
81	-	89	<u>Metasediment</u> - very siliceous, white, trace sphalerite and sulphides
89	-	93	<u>Chlorite Schist</u>
93	-	95	<u>Metasediment</u> - slight trace sulphides
95	-	102	<u>Siliceous Schist</u> - trace sulphides
102	-	106	<u>Metasediment</u> - sphalerite
106	-	110	<u>Siliceous Schist</u> - interbedded with chlorite schist
110	-	122	<u>Siliceous Schist</u> - trace sulphides -chlorite schist interbeds at 111 - 113
122	-	125	<u>Metasediment</u> - slight trace sulphides
125	-	158	<u>Siliceous Schist</u> - 8" chlorite schist band at 142
158	-	163	<u>Chlorite Schist</u> - with thin interbeds of siliceous schist
163	-	167	<u>Siliceous Schist</u> - trace sulphides
167	-	172	<u>Chlorite Schist</u> - siliceous, trace sulphides
172	-	174	<u>Siliceous Schist</u> - trace sulphides
174	-	175	<u>Metasediment</u> - trace sulphides
175	-	194	<u>Chlorite Schist</u> , partly siliceous, trace to poor sulphides
194	-	220	<u>Siliceous Schist</u> - poor sulphides 4" chlorite schist band at 203', trace sulphides 6" chlorite schist band at 207' chloritic 207 - 220'
220	-	238	<u>Chlorite Schist</u> - very siliceous, occasional bands of siliceous schist, poor sulphides -quartz band at 221 -quartz band at 223
238	-	244	<u>Siliceous Schist</u> - slight trace sulphides, becoming chloritic at 241
244	-	257	<u>Chlorite Schist</u> - siliceous, with hornblende, trace sulphides, sphalerite
257	-	260	<u>Hornblende Schist</u> - chloritic
260	-	262	<u>Siliceous Schist</u> - chloritic, trace sulphides
262	-	281	<u>Chlorite Schist</u> - partly siliceous, trace to poor sulphides, with hornblende (271-272)
281	-	285	<u>Siliceous Schist</u> - chloritic, slight trace sulphides
285	-	287	<u>Chlorite Schist</u> - slight trace sulphides
287	-	291	<u>Siliceous Schist</u> - chloritic, slight trace sulphides
291	-	307	<u>Chlorite Schist</u> - siliceous, trace sulphides -siliceous schist, interbeds 298-299 -sericitic at 300
307	-	328	<u>Siliceous Schist</u> - partly chloritic, trace sulphides -6" chlorite schist band at 318 -6" hornblende chlorite schist band at 323

<u>Footage</u> <u>From</u>		<u>To</u>	<u>Diamond Drill Hole #2</u> (-750, -480) continued
328	-	330	<u>Hornblende Schist</u> - chloritic, poor sulphides
330	-	350	<u>Siliceous Schist</u> - slight trace sulphides, chloritic -6" hornblende schist band at 335 -chlorite schists bands 337-338 -18" chlorite schist band at 339 -12" chlorite schist band 342 - 343 -chlorite schist interbeds around 347
350	-	351	<u>Argillite</u> - light brown, crumbly - clay smell, slight trace sulphides
351	-	359	<u>Siliceous Schist</u> - partly chloritic, slight trace sulphides and sphalerite
359	-	363	<u>Chlorite Schist</u> - partly crumbly, argillaceous, slight trace sulphides
363	-	375	<u>Siliceous Schist</u> - very chloritic -interbedded with chlorite schist at 364
375	-	376	<u>Chlorite Schist</u> - siliceous
376	-	377	<u>Hornblende Schist</u>
377	-	381	<u>Chlorite Schist</u> - siliceous, trace sulphides
381	-	387	<u>Siliceous Schist</u> - trace - poor sulphides
387	-	389	<u>Hornblende Schist</u> - with chlorite
389	-	391½	<u>Siliceous Schist</u> - crumbly, argillaceous, trace sulphides
391½	-	393	<u>Chlorite Schist</u> - slight trace sulphides
393	-	425	<u>Siliceous Schist</u> - slight trace sulphides -chlorite schist band at 396, sericitic 397-399 -6" chlorite schist band at 401 -chloritic at 405½, sericitic around 422
425	-	427	<u>Chlorite Schist</u>
427	-	454	<u>Siliceous Schist</u> - with talc and sericite in part - partly leached, trace sulphides, micaceous -6" chlorite schist band at 435
454	-	457	<u>Chlorite Schist</u> - argillaceous
457	-	463	<u>Siliceous Schist</u> - partly sericitic, bedding partially distorted, slight trace sulphides -6" chlorite schist band at 259, slickensided
463	-	464	<u>Quartzite</u>
464	-	466	<u>Chlorite Schist</u>
466	-	468	<u>Siliceous Schist</u> - soft, crumbly, chloritic
468	-	471	<u>Chlorite Schist</u> - partly siliceous
471	-	473	<u>Siliceous Schist</u> - distorted, trace sulphides
473	-	476	<u>Sericite Schist</u> - siliceous, regular bedding, fissile
476	-	486	<u>Chlorite Schist</u> - medium grey, banded, becoming siliceous 483 - 486
486	-	489	<u>Metasediment</u> - trace sulphides -becoming chloritic near 489
489	-	490	<u>Chlorite Schist</u> - siliceous
490	-	499	<u>Metasediment</u> - partly sericitic, trace sulphides -becoming chloritic at 495
499	-	500	<u>Chlorite Schist</u> - siliceous
500	-	502	<u>Siliceous Schist</u> - chloritic, trace sulphides
502	-	505	<u>Metasediment</u> - slight trace sulphides
505	-	522	<u>Chlorite Schist</u> -6" metasediment band at 507 -508 - 516 - very disturbed, fault zone, quartz, very sericitic, bedding folded, slickensided

<u>Footage</u> <u>From</u>		<u>To</u>	<u>Diamond Drill Hole #2</u> (-750, -480) continued
522	-	547	<u>Hornblende - Chlorite Schist</u> - uniform bedded, hornblende rosettes, slight trace sulphides
547	-	549	<u>Chlorite Schist</u> - partially distorted
549	-	550	<u>Talc Sericite Schist</u>
550	-	553	<u>Siliceous Schist</u> - trace sulphides, almost a quartzite, bedding poor, chloritic at top
553	-	555	<u>Talc Sericite Schist</u>
555	-	591	<u>Siliceous Schist</u> - partly chloritic, also some sericite, trace sulphides - fair sulphide 576 - 588, leached
591	-	593	<u>Talc - Sericite Schist</u>
593	-	597	<u>Sericite Schist</u> - partly siliceous
597	-	607	<u>Chlorite Schist</u> - very siliceous, bedding irregular, trace sulphides
607	-	611	<u>Talc Sericite Schist</u> - partly siliceous
611	-	612	<u>Chlorite Schist</u>
612	-	615	<u>Talc Sericite Schist</u>
615	-	622	<u>Chlorite Schist</u> - partly siliceous
622	-	624	<u>Talc Sericite Schist</u>
624	-	629	<u>Chlorite Schist</u> - with hornblende
629	-	638	<u>Metasediment</u> - trace sulphides
638	-	639	<u>Chlorite Schist</u> - siliceous
639	-	646	<u>Sericite Schist</u> - partly siliceous, fairly resistant
646	-	647	<u>Siliceous Schist</u> - bedding distorted, trace sulphides
647	-	655	<u>Chlorite Schist</u> , partly siliceous, partly leached, slight trace sulphides
655	-	659	<u>Hornblende, Chlorite Schist</u>
659	-	667	<u>Talc Sericite Schist</u> - siliceous in part
667	-	673	<u>Siliceous Schist</u> - hard, dense, trace sulphides, sphalerite
673	-	675½	<u>Chlorite Schist</u> - siliceous in part
675½	-	689	<u>Siliceous Schist</u> - hard, dense, trace sulphides, sphalerite
689	-	698	<u>Chlorite Schist</u> - siliceous at top becoming very argillaceous at 691, 692 - poor sulphides - very siliceous from 692-698
698	-	699½	<u>Talc Sericite Schist</u>
699½	-	700	<u>Chlorite Schist</u> - bedding distorted

<u>Sample Number</u>	<u>Footage</u>	<u>Upper Tunnel</u> (125, 140)
T-1	0' - 20'	<u>Siliceous Metasediment</u> - hard, blocky, almost a quartzite, trace sulphides, sphalerite and pyrite
T-2	20' - 27'	<u>Chlorite Schist</u> - blocky and fissile varieties interbedded, also interbeds of siliceous schist - no sulphides, black Strike N12E, Dip 40W
T-3	27' - 35'	<u>Siliceous Metasediment</u> - almost a quartzite, slightly banded, hard, dense, blocky, trace sulphides
T-4	35' - 47'	<u>Sericite Schist</u> - with chlorite - mineralized, mineralization lensy and parallel to schistosity. Dip average 45W but varies due to folding, Strike N30W, heaviest mineralization occurs in quartz, shingels A sample from this zone is reported in C.M.Cairnes' report to have assayed 4.20 per cent copper and 23.57 per cent iron in the early 1920's.
T-5	47' - 65'	<u>Chlorite Schist</u> - Strike N10W, Dip 55W - fissile, with biotite, trace mineralization in lenses
T-6	65' - 66'	<u>Quartz Vein</u> - with siliceous metasediment - trace sulphides
T-7	66' - 72'	<u>Chlorite Schist</u> - platy, fissile, trace sulphides in bands
T-8	72' - 87'	<u>Siliceous Metasediment</u> - almost quartzite, hard, blocky Strike N10E? Dip 35W - trace to poor sulphide mineralization
T-9	at 87'	<u>Quartz Vein</u> - 3" thick - parallel to bedding, trace sulphides
T-10	87' - 93'	<u>Talc Sericite Schist</u> - heavily mineralized in lenses copper stain - mineralization is approximately 15% of rock and found associated with quartz parallel to schistosity, soft, crumbly - leached
T-11	93'	2" <u>Quartz Vein</u> - irregular, lensy, copper stain, parallel to schistosity
T-12	93'	123 <u>Chlorite Schist</u> - fissile, crumbly, interbedded with hard, denser bands. Strike N10W at top to N25E at base, faulted at 111' - fault appears to strike N80E and Dip 50S 2" quartz vein at 105'

Lower Tunnel (970, 787)

The section exposed in this tunnel consists of approximately 50' of interbedded metasediment and chlorite schist. There is no indication of mineralization. The strike is approximately N10-20W with a dip of 52° to the west.

ADDENDA

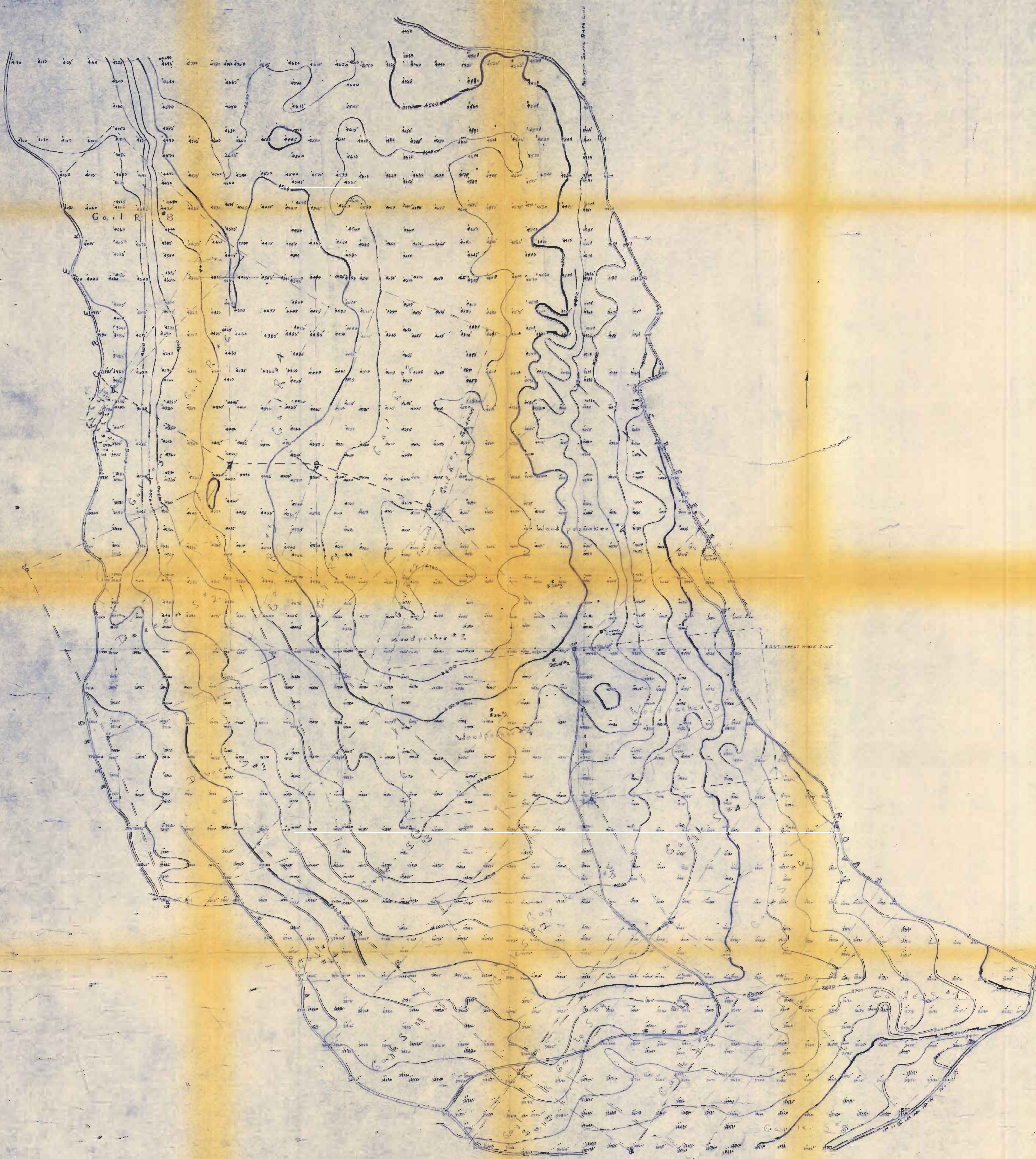
Sampling Method: Soil samples for geochemical analysis were collected at the stations indicated on the Grid Location Map. Each sample was taken by digging a hole approximately two inches below the humus layer. The sample was cleaned of any vegetative matter and placed in a plastic bag which was tied at the top. The samples were then taken to the Spenho Mines Ltd. field office where a Rubenian test was run for relative copper content on a small representative portion.

SPENHO MINES LTD. (NPL)
PROPERTY
SIMILKAMEEN MINING DISTRICT
GRID-LOCATION MAP
SCALE: 1" = 300'

Harry B. Allen
August 31/66
GUY & ALLEN
Geologists

Approved for
mining and
exploration
TACOMA TERRAZZA
ON

878



TOPOGRAPHIC MAP

SPENHO MINES LTD. (INC.)
PROPERTY
SIMPHEMEEN MINING DISTRICT, B.C.

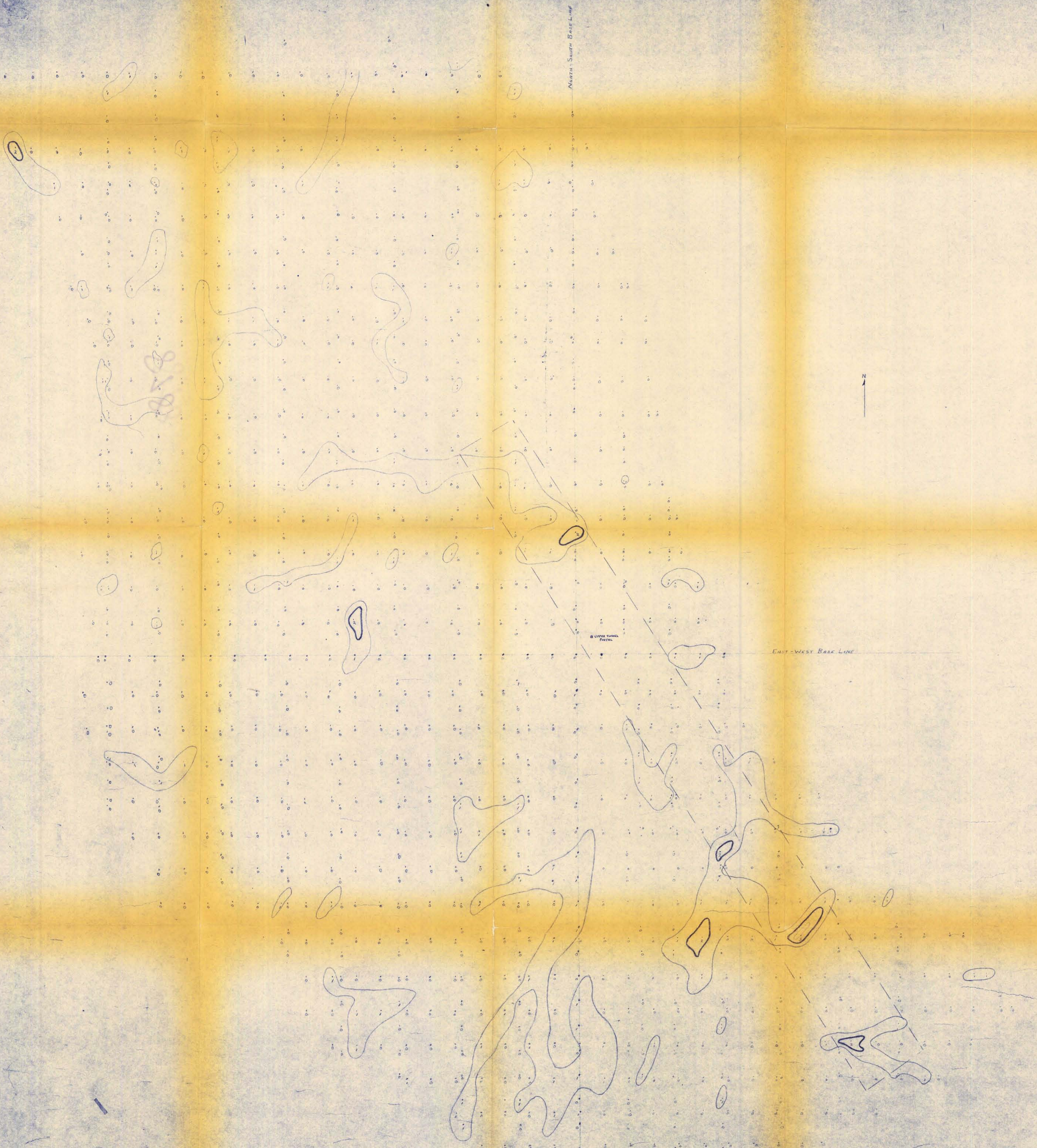
SCALE: 1" = 3000 FT.
CONTOUR INTERVAL: 100 FT.
LEGEND
--- CLAIM BOUNDARY
X CLAIM POST
--- MARSH

Shay B. Allen
August 31/16



ISOMAGNETIC CONTOUR MAP
 SPENHO MINES LTD. (NPL)
 PROPERTY
 SIMILKAMEEN MINING DISTRICT, BC

SCALE: 1" = 300'
 CONTOUR INTERVAL = 100 GAMMAS
 — = POSTULATED SCHIST-GRANODIORITE CONTACT
 ○ = MAGNETIC LOW
 Aug. B. Allen
 August 3, 1966
 878



SPENHO MINES LTD (N.P.L.) PROPERTY
SIMILKAMEEN MINING DISTRICT B.C.
COPPER CONTENT OF SOIL

USING ROBERTSON TEST METHOD
SCALE: 1" = 300 FT.

Region of Interest

- LEGEND**
FOR COPPER CONTENT
- 0 - NIL TO VERY SLIGHT TRACE } CONSIDERED BACKGROUND VALUES
 - 1 - SLIGHT TRACE TO TRACE
 - 2 - FAIR
 - 3 - GOOD
 - 4 - EXCELLENT - HIGH CU CONTENT
- ANOMALOUS AREAS

Ray B. Allen
August 31/66
GUY D. ALLEN
REGISTERED

878



SPENHO MINES LTD.(N.P.L) PROPERTY
SIMILKAMEEN MINING DISTRICT, B.C.

SCALE
 $1'' = 50'$

- 878

Gay B. Allen
August 31/66
Gay B. Allen

GEOLOGICAL MAP
SPENHO MINES LTD (NPL) PROPERTY
SIMILKAMEEN MINING DISTRICT, B.C.

LEGEND

PROPOSED LITHOLOGICAL BOUNDARY
S* - DIRECTION OF STRIKE
DIP ANGLE AND DIRECTION
*S - OUTCROP NUMBER
X - OUTCROP LOCATION

HORNBLende AND/OR CHLORITE SCHISTS
METASEDIMENT AND/OR SILICEOUS SCHISTS
METASEDIMENT AND CHLORITE SCHISTS INTERBEDDED
THALC-SERICITE SCHIST
SP - SPHALERITE
P - PYRITE

Guy B. Allen
August 31, 1966.
GUY B. ALLEN
August 31, 1966.