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Property of
GEOLOGY. DEPT.

Geological Report on
BOULDER MOUNTAIN PROPERTY
 of
GOLD RIVER MINES LTD. (NPL)
 Similkameen Mining Division, B.C.
 92-H/10W
 L. Sookochoff, P.Eng.
 Vancouver, B.C. February 1973

GOLD RIVER MINES LTD (BOULDER MOUNT. PROP.)
 Similkameen Mining Div., Geological Report,
 By: L. Sookochoff, February, 1973.
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February, 1973
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L. Sookochoff, P.Eng.,
Consulting Geologist

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SUMMARY

During October and November, 1972, in conjunction with a diamond drilling program and geochemical and geophysical surveys, the writer mapped the geology of the Boulder Mountain Property of Gold River Mines Ltd. (N.P.L.)

The property is comprised of 61 claims and Crown Grants and is located on Boulder Mountain northwest of Tulameen, British Columbia.

Access is by a three mile "cat" road originating, and to the west of, a secondary highway three and a half miles north from Tulameen.

Water is scarce on the property during the winter months, however, trenches have been excavated to provide some water for exploration purposes during this time.

Diesel-electric power would be initially required as a power source. A power line follows the highway from Tulameen.

There is generally low relief on the property with maximum relief to the north and south of the claim group.

Moderate to heavy stands of pine cover the property. Finished lumber is available from local sawmills.

The property is situated in a belt of Nicola Rocks which stretch from near the U.S. border to beyond Kamloops Lake and which contain numerous occurrences of copper mineralization. Most of the mineralization in the southern part of this belt appears to be associated with large scale north to northwest striking faults. The northwest trending Otter Lake Fault borders the northern edge of the property.

A porphyritic and a siliceous greenstone predominate on the property. Intercalated flows of augite porphyry also occur. Schists ranging from chlorite to sericite are present mainly in a broad shear zone on the east, although may be present in narrow zones throughout the property.

Mineralization consists of galena, sphalerite, silver, chalcopyrite and gold in quartz veins up to six feet wide in the east shear zone. Galena and sphalerite are also present as splashes on fracture planes or disseminated through the schist adjacent to the quartz veins.

Three zones of chalcopyrite mineralization occur over a strike length of 7200 feet along the centre of the property. The zones are referred to as the South, Middle, and North Copper Showings and contain massive chalcopyrite in the greenstone or more often in siliceous zones which grade up to 2.32% Cu (weighted over 13.5 feet).

CONCLUSIONS

The Boulder Mountain Property contains widespread mineralization that generally occurs along two north striking zones.

The East Shear Zone that is up to 500 feet wide and 4,700 feet long carries numerous quartz veins which contain variable amounts of galena, sphalerite, chalcopyrite, silver and gold mineralization. In addition to a predominant 250-foot wide zone of mineralized quartz veins, mineralization also occurs along fracture planes and as disseminations throughout the schist.

The East Shear Zone is a major structure on the property which hosts mineralization and has good potential for containing additional mineralized zones. The geophysical and geochemical surveys have established the presence of numerous anomalies within this zone.

A large copper anomaly borders the shear zone on the west and appears to trend toward the North Copper Showing and more generally to the South Copper Showing, although the anomaly is not continuous in these directions.

The position of the copper anomaly suggests a zonal arrangement of mineralization.

A second "zone" of mineralization trends in a north-south direction along the centre of the property and within it are exposed three localized showings of relatively heavy chalcopyrite mineralization.

At least eight occurrences of chalcopyrite are exposed on the South Copper Showing. These mineralized siliceous zones follow the flat to west dipping flow bedding planes. Mineralization also occurs in more vertical quartz stringers, along fracture planes and as large splashes within the greenstone.

The Middle Copper Showing contains significant but sporadic high-grade chalcopyrite mineralization. The zone strikes north and dips irregularly at 40° W. Flow bedding and possibly tight crenulated folding appear to be the controlling factors of the mineralization.

Chalcopyrite mineralization on the North Copper Showing occurs in a siliceous zone within a low angle shear zone which is coincident to the flow bedding planes in that area.

Other shear zones scattered throughout the property, which usually carry sulphides, have developed along flow bedding planes.

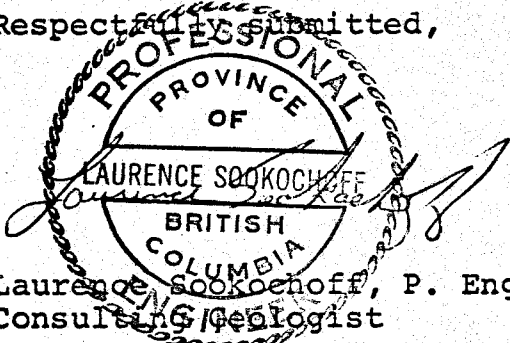
RECOMMENDATIONS

1. The East Shear Zone should be thoroughly prospected and mapped. Any sulphide zones should be sampled and assayed for copper, lead, zinc, silver and gold.
2. Any shear zone that occur elsewhere on the property should also be mapped, sampled and assayed.
3. Areas containing flat-lying quartz stringers should be examined by trenching.
4. Areas containing outcrops with a high pyrite content should be explored by trenching.
5. Areas of coincident geophysical and geochemical anomalies should be examined if no apparent reasons for the anomalies are evident.

6. Additional prospecting and mapping should be carried out to the north and east of the East Shear Zone to determine its limits.

7. Geological mapping should be carried out on the Hope claims to the west where air photos disclose a domical structure suggesting the possibility of an intrusive stock or plug.

Respectfully submitted,



LAURENCE SOOKOCHOFF
P. Eng.,
Consulting Geologist

February, 1973
VANCOUVER, B.C.

INTRODUCTION

During October and November 1972 the writer mapped the geology of the more significant portion of the Boulder Mountain property of Gold River Mines Ltd. (NPL). In conjunction with the mapping, diamond drilling was in progress on the property. A geophysical and a geochemical survey was also carried out during this period. The established survey grid was used as ground control in mapping the geology.

The objective of the mapping was primarily to define any controlling structures and to trace the zones of surface mineralization. The geology was also invaluable in the interpretation of the geophysical and geochemical data. By correlating the geophysical data with the geology, the data was analyzed with consideration given to the various rock types and structures on the property.

PROPERTY

The property is comprised of 61 claims and Crown Grants and are as follows:

| <u>CLAIM NAME</u> | <u>RECORD NUMBER</u> | <u>EXPIRY DATE</u> |
|-------------------|--------------------------|--------------------|
| Pit 1-2 | 29014-29025 | October 21, 1974 |
| Pit 3-6 | 33776-33779 | June 18, 1974 |
| Hope 1-2 | 29022-29023 | October 21, 1974 |
| Hope 3-24 | 33754-33775 | June 18, 1974 |
| J.M. 1-2 | 28204-28205 | September 1, 1974 |
| Hawk 1-4 | 29026-29029 | October 21, 1974 |
| Rex 1-4 | 33780-33783 | June 18, 1974 |
| Worth 1-8 Fr. | 348153M-348160M (Tag No) | November 3, 1973 |

| <u>Crown Grant Name</u> | <u>Lot No.</u> | <u>Mineral Lease</u> | <u>Expiry Date</u> |
|-------------------------|----------------|----------------------|--------------------|
| Cousin Jack | L263 | M-82 | February 13, 1974 |
| Ymir | L264 | M-83 | June 24, 1974 |
| Morning | L265 | M-83 | June 24, 1974 |
| Oskkosh | L266 | M-83 | June 24, 1974 |
| Winnibago | L267 | M-83 | June 24, 1974 |
| Black Bird | L268 | M-83 | June 24, 1974 |
| Berlin Fraction | L269 | M-83 | June 24, 1974 |
| Freddie Burn | L270 | M-84 | June 24, 1974 |
| Constitution | L282 | M-87 | December 18 1974 |
| International | L283 | M-87 | December 18 1974 |
| Anaconda | L373 | M-83 | June 24, 1974 |

The claims are held by location and the Mineral Leases are registered in the name of Gold River Mines Ltd (NPL)

LOCATION AND ACCESS

The claims and Crown Grants are situated on Boulder Mountain four and a half miles northwest of Tulameen and west of Otter Lake.

The property is accessible by a three-mile four-wheel drive road cutting off to the west at Mile 20.5 of an all-weather gravel road originating at Princeton, B.C. Tulameen is at Mile 17 on this secondary road.

WATER AND POWER

Water is plentiful on the property from either many small creeks which comprise the drainage of Boulder Mountain and which have a seasonal flow, or from the larger creeks such as Elliot, Perley and Lockie which flow for most of the year.

Water is a rarity during the winter months, however, three trenches have been excavated on the property to provide water for drilling purposes.

Initially diesel-electric power would be required. An additional power source is available from a power line that follows the highway to the east of the property.

TOPOGRAPHY AND TIMBER

There is relatively low relief on Boulder Mountain which is at 5400' elevation. However, the relief may be up to 2000 feet from the larger creeks to the north and south.

Moderate to heavy stands of pine cover the property which if required would provide sufficient timber for mining or exploration purposes. Finished lumber is available locally.

GENERAL GEOLOGY

A northerly trending belt of Nicola rocks ranging from eight to twenty-five miles wide stretches northward from near the U.S. border to beyond Kamloops Lake. Within the Nicola Group, which is comprised of vari-colored lavas, argillite, tuffs, limestones, chlorite and sericite schists, are more recent formations of sedimentary rocks as well as stocks and plugs of Coast or Copper Mountain Intrusives. The Coast Intrusives are usually peripheral to the belt of Nicola rocks.

Cutting the Nicola rocks are large scale, north-trending faults which are believed to have provided the "plumbing" system for the deep seated mineralizing fluids to have reached the surface and deposited the widespread mineralized zones that are found scattered throughout the area.

It is near the projected intersection of the north-trending Allison Fault and the northwesterly-trending Otter Lake Fault where the Copper Mountain ore deposits occur nine miles south of Princeton. Other smaller mineralized occurrences are scattered along and adjacent to these major structures.

The Boulder Mountain property is situated adjacent to the Otter Lake Fault sixteen air miles northwest of Princeton, British Columbia.

LOCAL GEOLOGY

The Boulder Mountain property of Gold River Mines Ltd lies to the west and north of Otter Lake and predominantly covers porphyritic to siliceous greenstones of the Nicola Group. These both tend toward chlorite schist and are intercalated with an augite porphyry and a zone of chlorite and sericite schists.

A granodiorite of the Coast Intrusives outcrops in the southeast corner of the property.

The Otter Lake Fault passes through part of Elliot Creek, which marks the northern limit of the property, and through Otter Lake which is directly to the east. The magnitude of the faulting is evident by the northeast trending faults,

and on a smaller scale by the schistosity of the rocks in the same direction.

A porphyritic greenstone is predominant within the claim groups. It contains euhedral feldspar phenocrysts, usually less than $\frac{1}{4}$ " and commonly greenish white due to saussuritization. The matrix, which originally was probably andesitic, has been subjected to propylitization and has resulted in a dense aphanitic and generally chloritic ground-mass.

A porphyritic greenstone with feldspar phenocrysts larger than $\frac{1}{4}$ " was mapped as a separate unit to aid in interpreting structure on the property.

The contact between the porphyritic and more siliceous greenstone appears to be gradual relative to the degree of alteration. The phenocrysts that were originally present in the greenstone have been subjected to greater degrees of alteration, digested by this process, and incorporated into the matrix. Silicification of and the absence of phenocrysts in the porphyritic greenstone occurs in localized areas adjacent to quartz stringers.

The greenstone contains a much higher proportion of quartz stringers and is peripheral to the granodiorite to the southeast and to a larger extent, peripheral to a quartz sill in the centre of the property. It is also present

to the south, in and adjacent to, an area of numerous quartz veins.

An augite porphyry flow outcrops in localized areas and is intercalated with porphyritic greenstone. Folding, faulting and topography localize this particular unit. Euhedral crystals of augite, usually less than $\frac{1}{4}$ ", and at times accompanied by euhedral feldspar phenocrysts, are within a dense aphanitic dark grey to greyish-white siliceous matrix.

North-trending shear zones, usually narrow, and dipping at 5° to 25° to the west are found throughout the property. The shearing effect has produced a chlorite schist, and with increased shearing, a sericite-chlorite schist or a sericite schist. Random narrow, irregular quartz stringers, along with a variable content of pyrite, are often contained within the sericite schists.

A broad northerly trending zone of the aforementioned sheared schists occurs on the eastern side of the property stretching from the granodiorite in the southwest to 4200 feet north where overburden has masked the geology. Shearing is widespread and variable within this general zone and various grades of schist have been produced. To the north and to the south a greater amount of sheared greenstone occurs between the schists.

The shear direction is slightly variable from a northerly strike and shallowly dips to the west although easterly dips are present. A superimposed shear dipping at 40° to 50° to the east and west is present within this zone.

A quartzitic sill which outcrops near the center of the property appears to have intruded the Nicola rocks along the flow contacts. A sharp contact at 340° and dipping at 23° to the west is exposed in an adit at 70+00N 9+60E. The sill is almost wholly comprised of a quartz with noticeable contamination by the host rock along the southern extension. The sill covers a local topographical high and is a minimum of sixty feet wide.

A Coast Intrusive granodiorite outcrops on the south eastern part of the property. It is hypidiomorphic granular, medium-grained, and has a relatively fresh appearance.

Mapping of the property, beyond the grid to the east has not yet been done, therefore the northern extension of the eastern contact of the schist zone was not determined. However, the contact as shown on a geological map published by the Department of Mines in 1937 indicates the contact trending northeasterly, touching the southwest corner of L268.

An andesite, assigned to the more recent Princeton Group because it is relatively unaltered and shows no indication of shearing, outcrops in the center of the property. It is very fine-grained to aphanitic, dark blackish-grey and contains rare unaltered feldspar phenocrysts.

STRUCTURE

Any major faults on the property were assumed to be reflected as topographical features such as sharp narrow continuous gulleys or abrupt and continuous changes in elevations or in the drainage pattern. These features were mapped and indicated major northerly faulting with subsidiary or splay faults in a northeasterly and northwesterly direction. The faulting appears to be related to the Otter Lake Fault.

Other than the major shear zone to the east, the northwesterly striking shear zones occur along the contact of the original volcanic flows.

Subsequent to the formation of the original shear zones, secondary stresses arising from the nearby intrusions, have either caused additional easterly striking shear zones or

through the same forces re-oriented the original zones. This would explain the north to northwesterly as well as the easterly striking zones.

The larger schistose shear zone in the east also indicates variable stresses were imposed on the original zone. A steeply dipping, northerly striking, complementary fracture pattern is superimposed on shallowly dipping, northerly and easterly trending zones.

HISTORY OF THE PROPERTY

Prior to and early in the 1900's when the region from south of Princeton to Kamloops was being thoroughly prospected because of the occurrence of placer gold as well as hi-grade base metals in the area, outcroppings with mineralized quartz veins were discovered on Boulder Mountain. In the following years the Cousin Jack and surrounding properties were explored by trenches, pits, open cuts and adits on known mineralized zones that were scattered throughout the area. Similar workings were excavated over large areas surrounding the mineralized zones in search for additional "ore" zones.

Interest in the properties diminished as much surface and underground work proved the showings to be uneconomical at that time and additional exploration or development was not warranted.

The following years through to 1970 saw a number of individuals and companies interested in further exploration of the properties.

In 1970 Gold River Mines Ltd (NPL) acquired the Crown Grants, staked a number of claims adjacent to the original property, and an active exploration program of soil sampling and diamond drilling was carried out. In 1971 "cat" trenching over some of the original workings in the area revealed significant chalcopyrite mineralization in three zones to the west of the original Cousin Jack workings. These zones were designated the South, Middle and North Copper Showings with the South and North Showings 7200 feet apart and the Middle Showing on "strike" 4700 feet north from the South Showing.

Subsequent exploration during 1972 included a combined geochemical, geophysical and geological surveys. Seven diamond drill holes were drilled on the South Copper Showing to test the extent of the exposed mineralization.

MINERALIZATION

South Copper Showing

Numerous chalcopyrite-bearing, quartzitic zones are/or have been exposed over an area of 500 by 300 feet on the South Copper Showing centered near the Base Line at L21+00N. The zones that are exposed vary in width from eight inches in a pit at L20+60N, 00+25E to over 3.4 feet in a trench at L21+50N, 02+60E.

The zones strike between 310° and 337° and dip up to 52° to the southwest. They are generally siliceous and are either mineralized quartz veins or intermittent bands of irregular quartz and host rock.

In a trench at L19+60N 01+40E, massive splashes and pods of chalcopyrite occur in a silicified greenstone.

Quartz veins are uncommon and the zone appears to strike at 063° and dip at 32° south. The exposure of this zone reveals it to be at least six feet wide.

Chalcopyrite is exposed intermittently northward along the trench for 250 feet. A 70-foot long mineralized zone occurs in the north end of the trench. The extensions of the zone are covered by overburden. The zone is a minimum of 3.4 feet wide which is that part exposed on the trench wall. Sampling of this zone disclosed copper values of up to 1.45% Cu and 0.32 oz Ag per ton.

Middle Copper Showing

A north-south trench 400 feet long exposes chalcopyrite mineralization at L70+00N, 10+00E. The mineralization occurs in quartzitic bands and veinlets interlaced with the greenstone host rock. The strike and dip of the zone appears to follow a quartz sill-greenstone contact which is exposed in an adit 60 feet to the west and is at 330° with a southwest dip of 25° .

A second zone of mineralization is exposed in a 65-foot long trench between an open-cut to the south and an adit to the north. Chalcopyrite occurs in a silicified zone which strikes at 355° and dips 40° to the west. The zone includes veinlets and patches of chalcopyrite and pyrite within random quartz stringers and also within convoluted bands of quartz and host rock. The zone intersects the bottom section of the portal and dips into the floor of the adit.

Sampling of the zone revealed a weighted average grade of 2.32% Cu over 13.5 feet in the open-cut and up to 5.55% Cu across 7 feet in the trench.

North Copper Showing

An east-west trench between L94+00N and L95+00N and 13+00W to 17+30W exposes a shear zone bearing moderate chalcopyrite and pyrite mineralization within quartz veins and stringers. The shear zone strikes at 060° and dips from 15° to 28° to the southeast and contains a 10 inch section which is heavily mineralized with chalcopyrite and pyrite. 160 feet east, the same shear zone with chalcopyrite mineralization in quartz stringers is exposed in a pit adjacent to the trench. Additional pits over a length of 300 feet, which include the above shear zone, are sloughed-in but show evidence of shearing in silicified greenstone.

East Shear Zone

The north-trending East Shear Zone has been traced for 4200 feet and is up to 500 feet wide. This zone was the prime interest of the original prospectors of the property as it contains the Cousin Jack vein system, which is comprised of a number of mineralized quartz veins trending between 330° and 340° with valuable dips to the west.

A vein exposed in a road-cut below the Cousin Jack Adit shows the mineralization to be relatively heavy with spalerite and galena. Chalcopyrite, gold and silver occur in lesser amounts.

The mineralization occurs as impregnations and replacement of the schistose greenstone (chlorite schist). The vein

and associated veinlets exposed in the adit exhibit convoluting or warped banding of the quartz and schist. The adit exposes bands, stringers and veins of quartz up to 4 feet wide with light to moderate mineralization and dipping to the west.

Similar mineralization occurs in at least four other quartz veins exposed along a trench above and paralleling the road. The 250-foot wide vein system is centered around L68+50N, 40+00E and is exposed in cuts and trenches.

To the south of the Cousin Jack Vein and at the southernmost exposed limit of the zone is a short adit in a schistose greenstone bearing moderate pyrite and stringers of quartz with light sulphides.

To the north of the Cousin Jack and along the zone are a number of open cuts and adits exposing mineralization in quartz veins or within the sericite schist or greenstone.

Zones of mineralization that were exposed by the original prospectors but could not be found include:

- i) - a zone of approximately L70+50N, 40+00E of quartzose mineralization over 8 to 10 feet in a weakly sheared greenstone
- ii) - a zone at approximately L75+00N, 41+00E that was

traced for 550 feet and included a 5-foot vertical quartz zone at the south end which was weakly mineralized with pyrite and sphalerite.

iii) - A zone 150 feet north exposed in an open cut with some mineralization in a flat quartz vein less than 12 inches wide.

A 25-foot adit at L81+00N 41+00E reveals a flatly sheared chloritic schist contains considerable pyrite although the flat-lying mineralization exposed at the portal is not encountered in the adit.

Open-cuts at L83+00N 41+00E expose a chloritic schist and sheared greenstone with ribbons and veins of quartz bearing light mineralization as well as relatively moderate galena and sphalerite on fracture planes of a schistose greenstone.

100 feet to the northeast and in an open-cut along the side of the road and approximately 30 feet lower in elevation irregular bands of mineralization striking northwesterly and dipping flatly to the southwest are exposed.

Bornite occurs in an easterly striking quartz vein at L94+00N 37+00E.

A shallow shaft at L95+50N, 35+50E contains pyrite mineralization in an easterly trending shear zone.

Other Areas of Mineralization

Traces of bornite occur in sheared porphyritic greenstone at L30+00N, 8+00E.

Minor galena mineralization occurs in a porphyritic greenstone at:

| | |
|--------|-------|
| L4+40N | 9+40W |
| L4+80N | 4+30W |
| L8+50N | 3+40W |

and in greenstone at:

| | |
|--------|-------|
| L9+20N | 4+50E |
| L9+50N | 0+50W |

Chalcopyrite blebs occur in a greenstone at L00+60N 8+00W.

Shear zones on the property most of which have been exposed by open-cuts or adits, usually contain varying amounts of pyrite and mineralized quartz stringers.

ALTERATION

Epidote

Epidote is not common on the property. It occurs locally bordering zones of silicification. It usually appears as patches through the rock or less often as a film surrounding feldspar crystals (saussuritization product). The epidote is often associated with either moderate pyrite or quartzitic zones and can only generally be related to the mineralized copper showings.

Silicification

General silicification of the greenstone is evident throughout the property. The greenstone also contains a higher proportion of quartz veins. Quartz veins or stringers are most prevalent in the shear or schistose zones.

There are two or more ages of quartz intrusion, one of which is mineralized. The barren veins are usually less than one inch wide, strike from 305° to 345° and from 025° to 075° (occupying two sets of fractures) and generally dip steeply. Other quartz veins and stringers strike north to northwest and dip at a shallow angle to the east, often along the shear or schistose direction.

Trends of heavier silicification which includes quartz veins or stringers occur as narrow north to northwest striking zones.

Pyrite

Pyrite mineralization is ubiquitous on the property and may comprise up to 10% of the rock. The geological map indicates the pyrite content of the outcrops where it occurs. The symbol "py" with a numeral following it denotes the pyrite content. A figure of 1 indicates traces of pyrite and 10 indicates approximately 10% pyrite content. Numbers from 1 to 10 suggest proportional amounts.

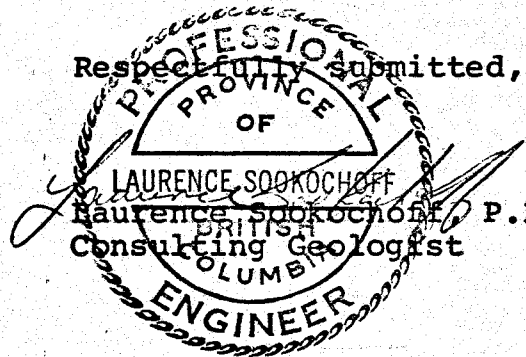
Pyrite is prevalent in the east shear zone and is usually present in greater amounts in the sericite or sericite-talc schist.

An area of relatively heavy pyrite mineralization (py 2+) extends northeast to the East Shear Zone and to the southwest of the South Copper Showing. An east-west band of heavier pyrite passes through the North Showing and possibly is a continuation of the pyritization of the East Shear Zone.

EXPLORATION PROGRAM

An exploration program of detailed prospecting, mapping and sampling of the property to the north and west should be carried out. Hitherto unknown shear or quartzitic zones should be thoroughly examined to assess their potential for mineralization.

Prime consideration should be given to a structural analysis relating to all the mineralized zones.

Respectfully submitted,
A circular seal for the Professional Engineers of the Province of British Columbia. The seal contains the text: "PROFESSIONAL ENGINEER OF THE PROVINCE OF BRITISH COLUMBIA". Overlaid on the seal is a signature and the text: "LAURENCE SOOKOCHOFF P. Eng., Consulting Geologist".
LAURENCE SOOKOCHOFF P. Eng.,
Consulting Geologist

February, 1973

Vancouver, B.C.

REFERENCES

Mark, D.G. Geophysical-Geochemical Report on I.P. Resistivity, S.P., VLF-EM, Horizontal Shootback EM, Vertical Loop EM, Magnetometer and Soil Sample Surveys, Hawk and Hope Claim Groups, Tulameen Area, Similkameen M.D., B.C.

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1937 p.p. D27-D29

Rice, H.M.A. Geology and Mineral Deposits of the Princeton Map Area, British Columbia. Geol. Serv. of Can. Mem 243, 1960.

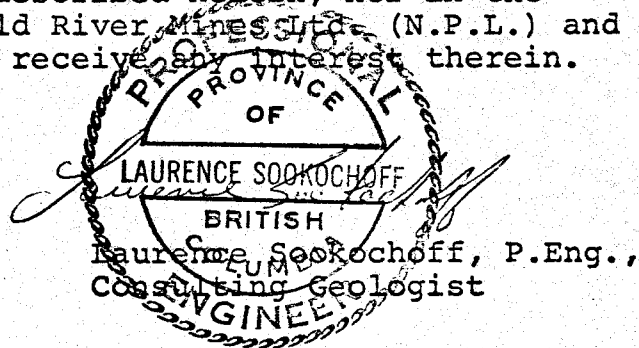
CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver,
in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with offices
at 3812 West 16th Avenue, Vancouver 8, B.C.

I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past six years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information in this report was obtained by the writer in mapping the Boulder Mountain property during October and November, 1972 and from selected references as stated at the end of this report.
5. I have no direct or indirect interest whatsoever in the property described herein, nor in the securities of Gold River Mines Ltd. (N.P.L.) and do not expect to receive any interest therein.



February, 1973

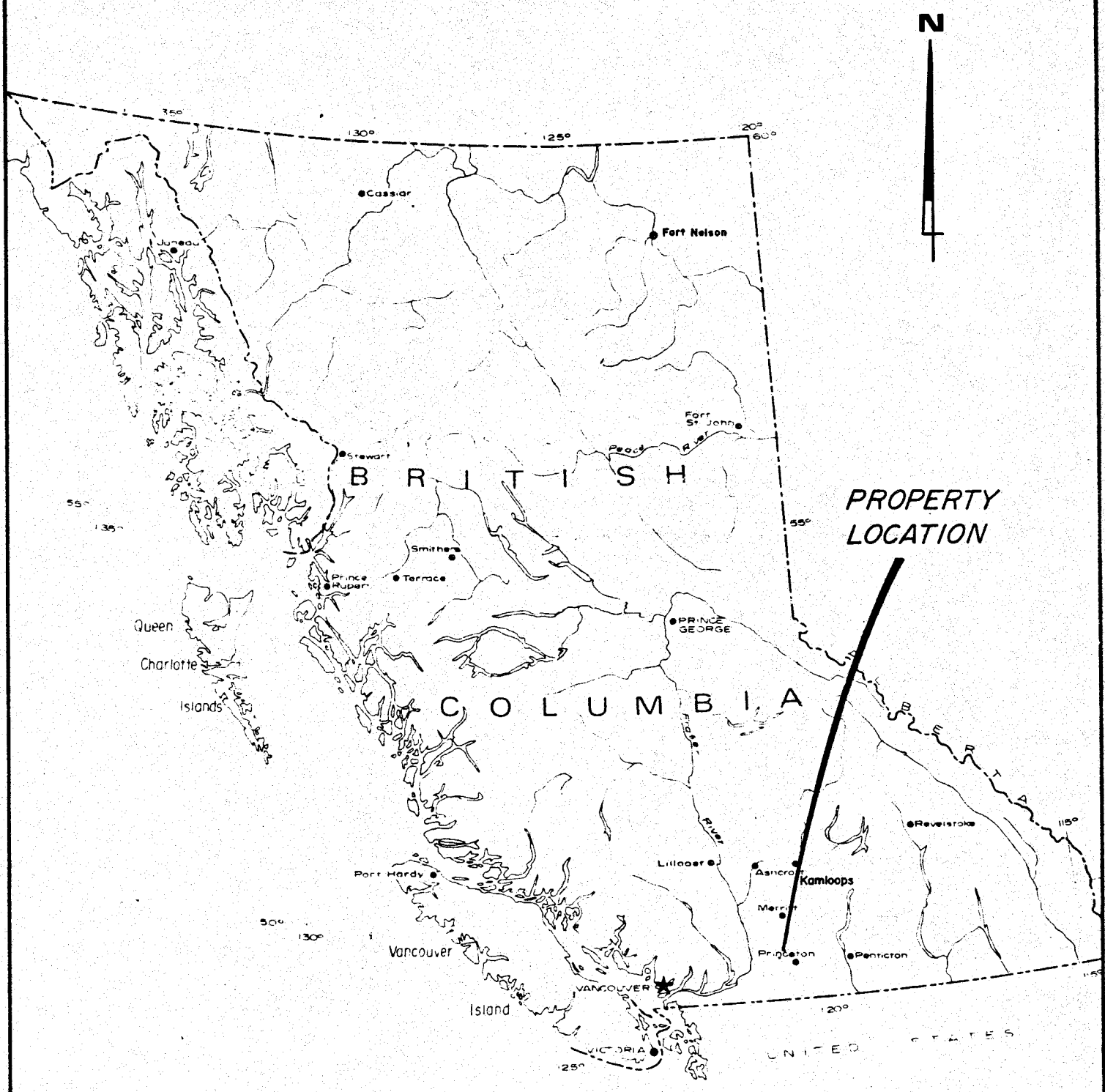
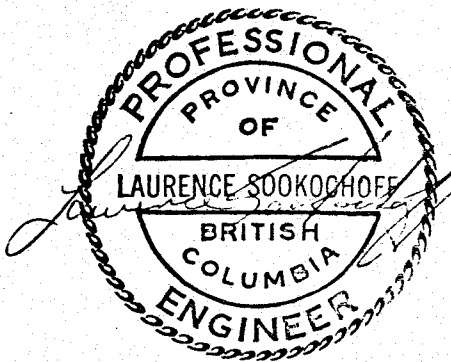
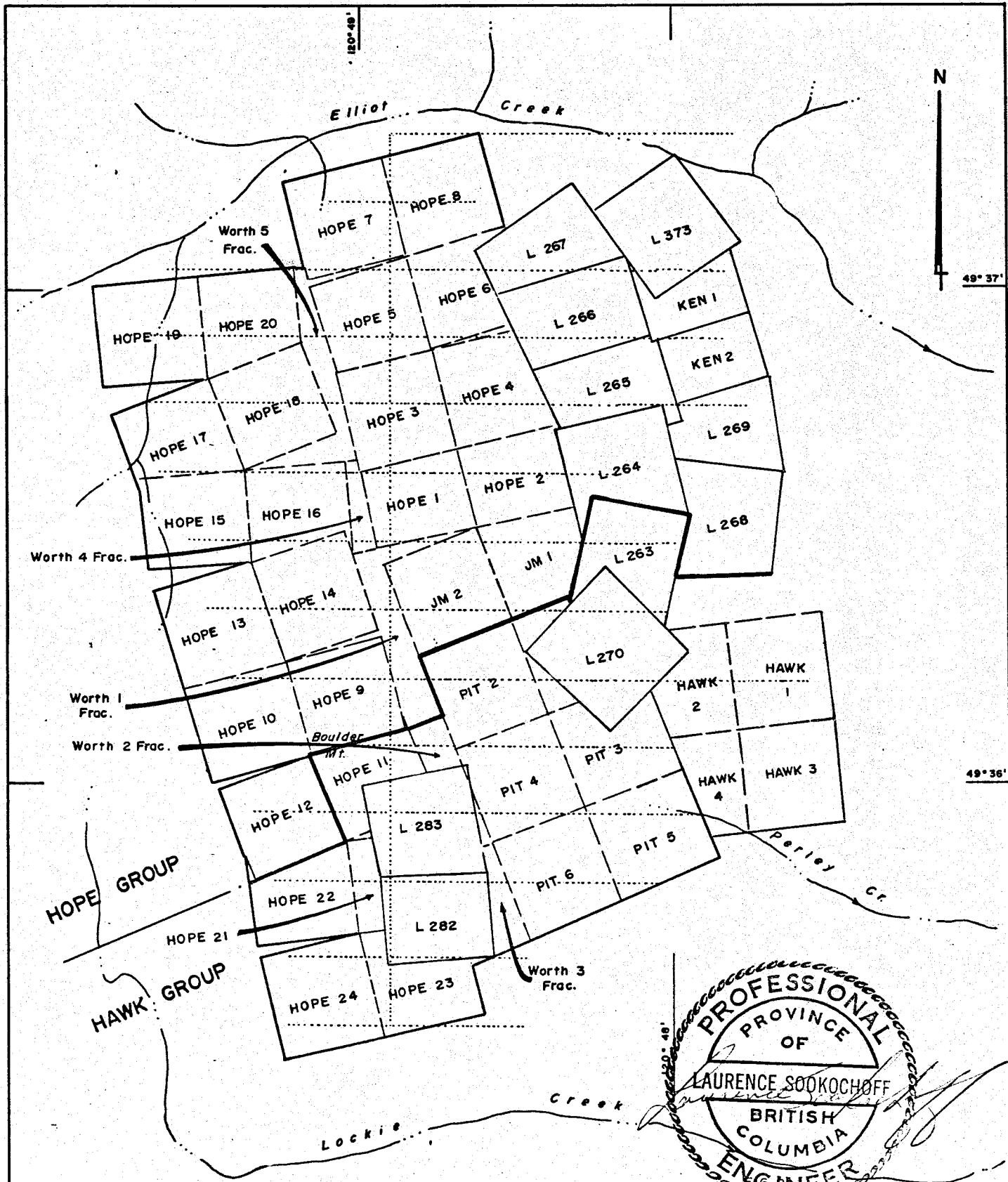






FIG. 1



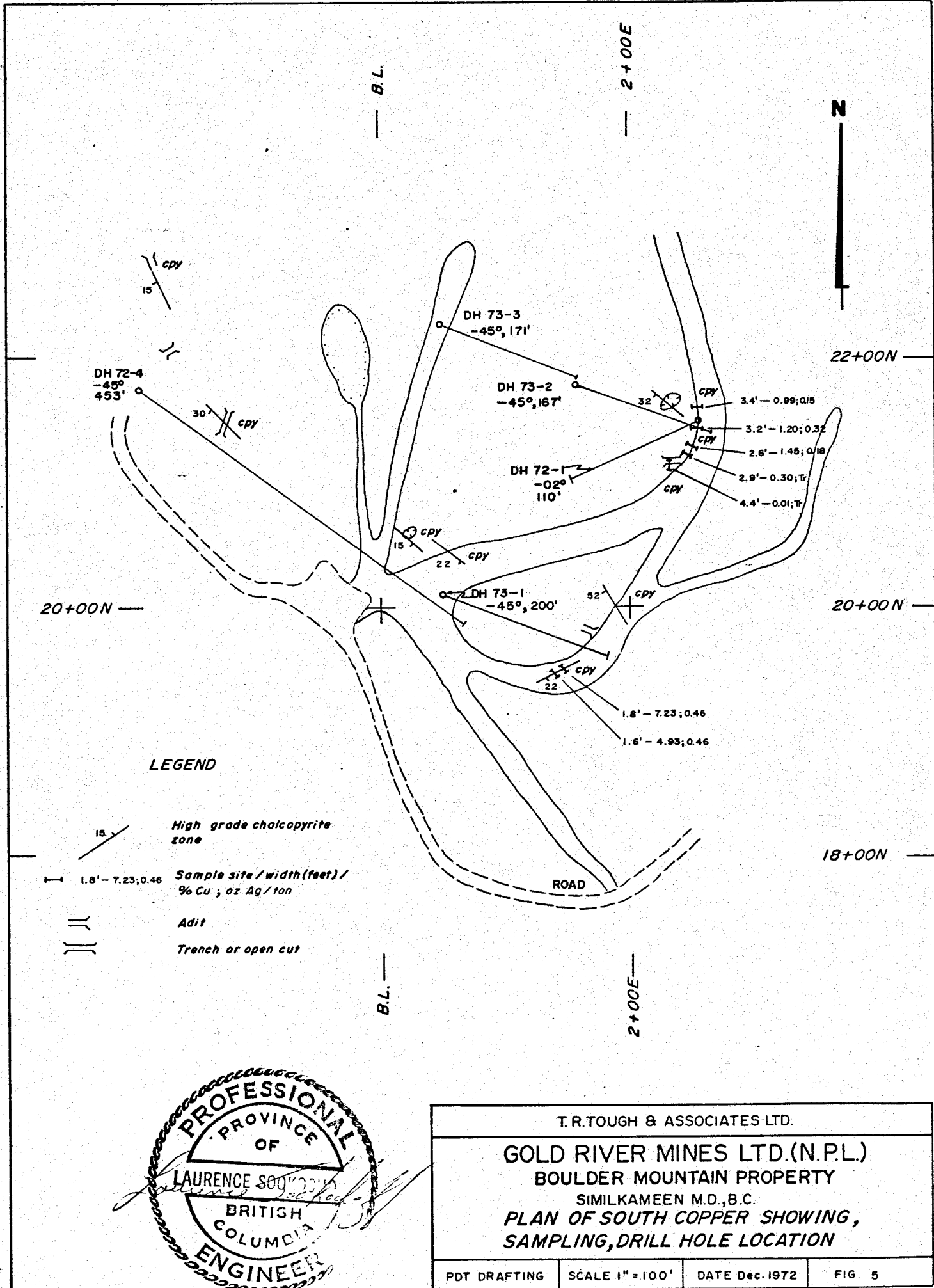
| | | |
|-------------------------------------------------------------|---------|------------------|
| T. R. TOUGH & ASSOCIATES LTD. | | |
| GOLD RIVER MINES LTD. (N.P.L.) BOULDER MOUNTAIN PROPERTY | | |
| SIMILKAMEEN M.D., B.C. | | |
| LOCATION MAP | | |
| SCALE 1" = 134 mi | | |
| DRAWN. PDT. | CHECKED | DATE October '72 |



LEGEND

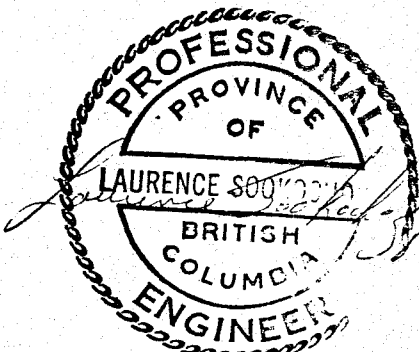
-  CROWN GRANTED CLAIM BOUNDARY
-  STAKED CLAIM
-  PROPERTY OUTLINE
-  SURVEY GRID 1972

| | | |
|----------------------------------------------------|---------------------|----------------------|
| GOLD RIVER MINES LTD.(N.P.L.) | | |
| BOULDER MOUNTAIN PROPERTY | | |
| SIMILKAMEEN M.D. | | |
| B.C. | | |
| CLAIM MAP | | |
| T. R. TOUGH & ASSOC. LTD. PDT DRAFTING SERVICES | SCALE 1" = 2000' | DATE October 1972 |



LEGEND

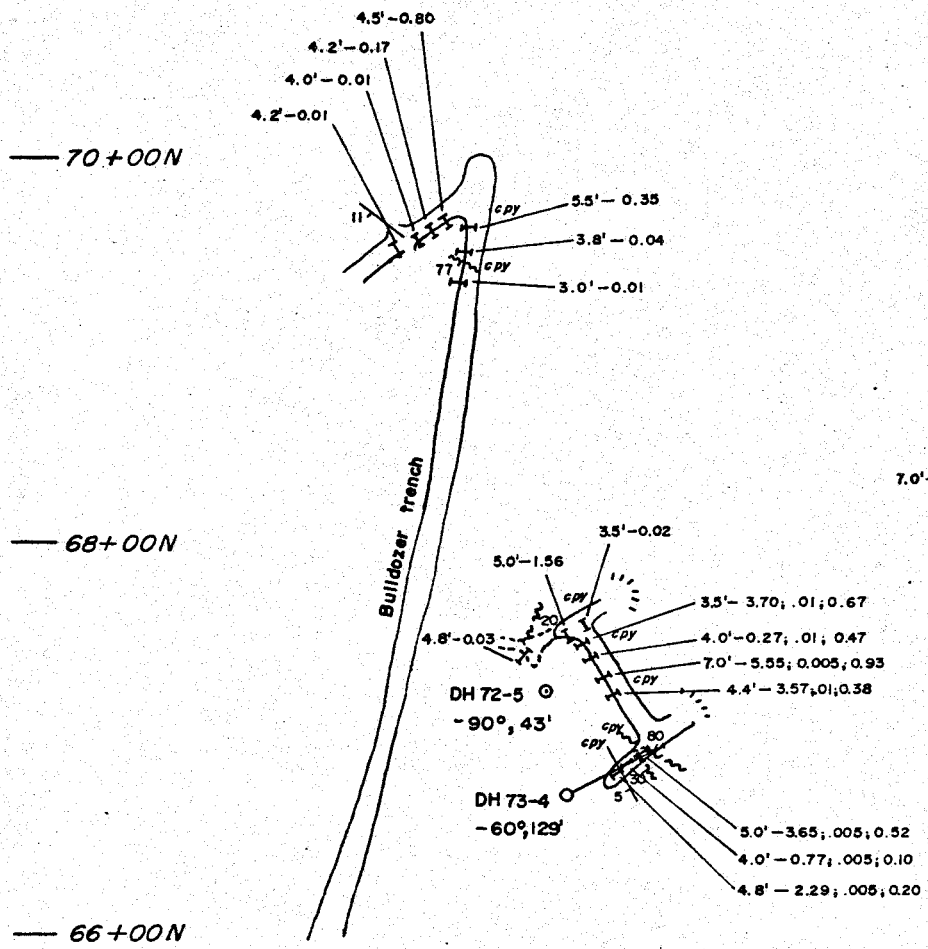
- High grade chalcopyrite zone
- Sample site / width (feet) / % Cu ; oz Ag / ton
 1.8' - 7.23; 0.46
- Adit
- Trench or open cut



| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|--------|
| T.R. TOUGH & ASSOCIATES LTD. | | | |
| GOLD RIVER MINES LTD. (N.P.L.) BOULDER MOUNTAIN PROPERTY SIMILKAMEEN M.D., B.C. PLAN OF SOUTH COPPER SHOWING, SAMPLING, DRILL HOLE LOCATION | | | |
| PDT DRAFTING | SCALE 1" = 100' | DATE Dec. 1972 | FIG. 5 |

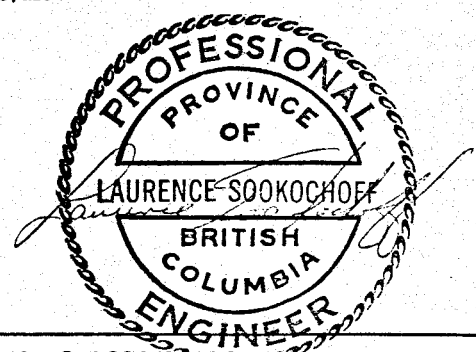
10+00E

12+00E



LEGEND

- High grade chalcopyrite zone
- 7.0' - 5.55; 0.005; 0.93 Sample site / width (feet), % Cu, oz Au/ton, oz Ag/ton
- Trench or open cut
- Shear zone



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| | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|--------|
| <p>GOLD RIVER MINES LTD. (N.P.L.) BOULDER MOUNTAIN PROPERTY SIMILKAMEEN M.D., B.C. PLAN OF MIDDLE COPPER SHOWING, SAMPLING & DRILL HOLE LOCATION</p> | | | |
| PDT DRAFTING | SCALE 1" = 1000' | DATE Dec. 1972 | FIG. 6 |

12+00E

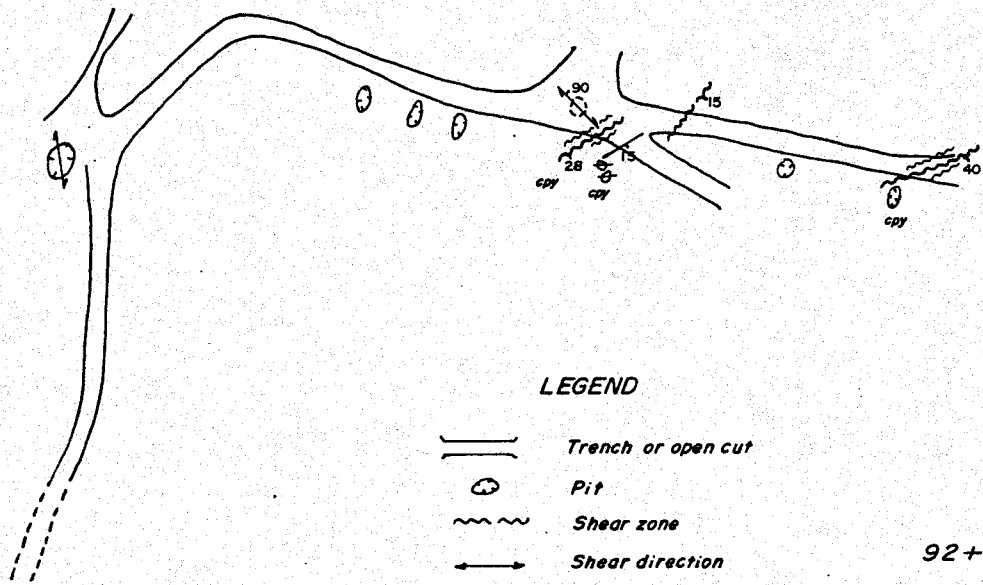
14+00E

N

96+00N

94+00N

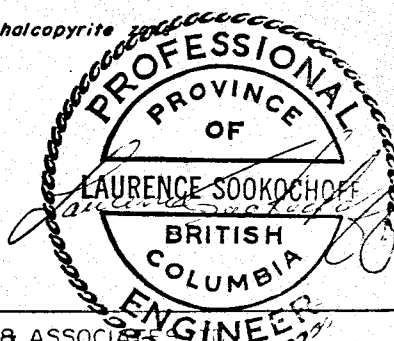
25



LEGEND

- Trench or open cut
- Pit
- Shear zone
- Shear direction
- Fracture
- High grade chalcopyrite

92+00N



T.R. TOUGH & ASSOCIATES

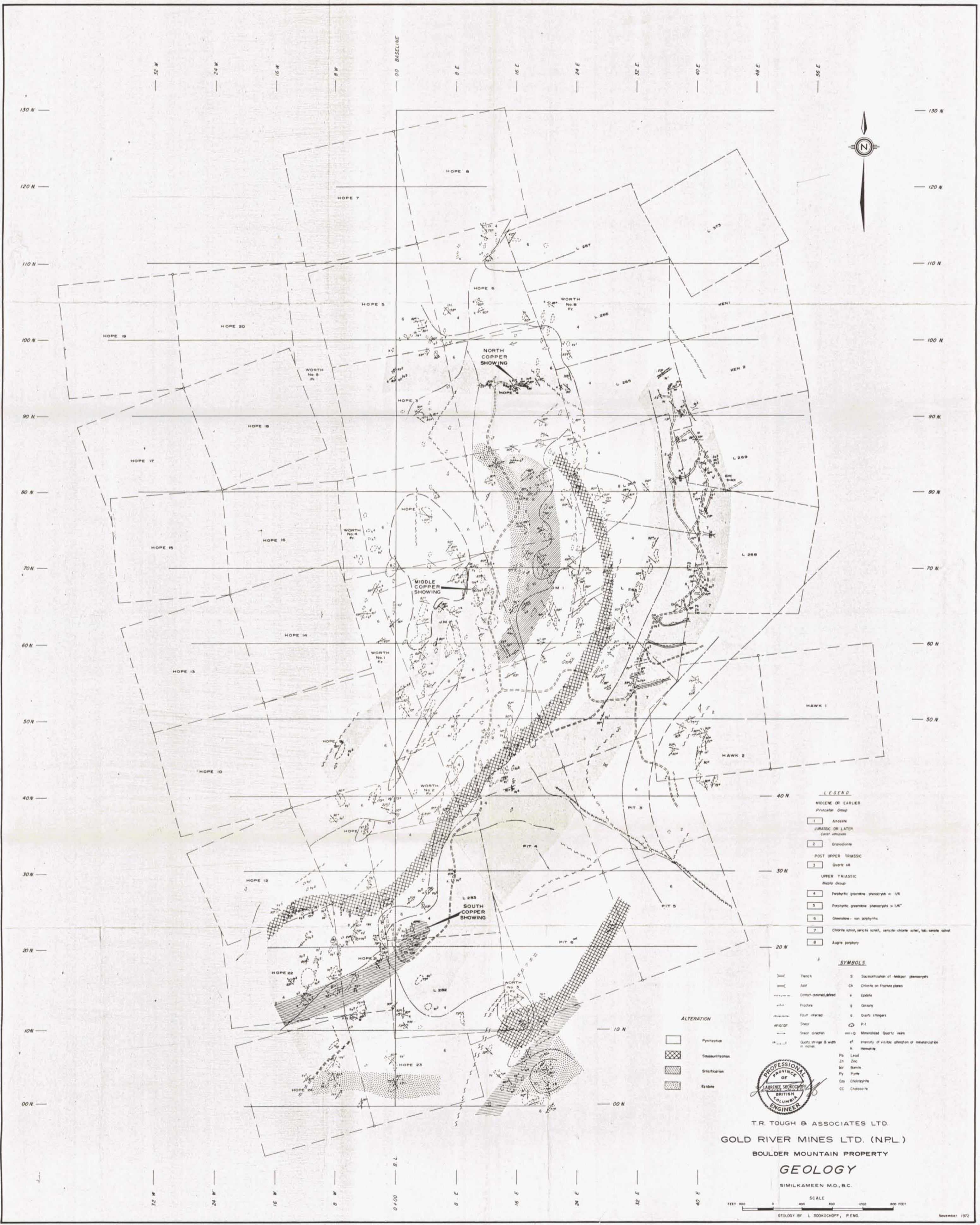
GOLD RIVER MINES LTD. (N.P.L.)
 BOULDER MOUNTAIN PROPERTY
 SIMILKAMEEN M.D., B.C.
 PLAN OF NORTH COPPER SHOWING

PDT DRAFTING

SCALE 1" = 100'

DATE Dec. 1972

FIG. 7



LEGEND

| | |
|---------------------|----------------------------------------------------------------------------------|
| MIOCENE OR EARLIER | |
| Princeton Group | |
| 1 | Andesite |
| JURASSIC OR LATER | |
| Creston Formation | |
| 2 | Granodiorite |
| POST UPPER TRIASSIC | |
| 3 | Quartz vein |
| UPPER TRIASSIC | |
| Naselle Group | |
| 4 | Porphyritic greenstone phenocrysts < 1/4" |
| 5 | Porphyritic greenstone phenocrysts > 1/4" |
| 6 | Greenstone - non porphyritic |
| 7 | Chlorite schist, sericite schist, sericite-chlorite schist, talc-sericite schist |
| 8 | Angite porphyry |

SYMBOLS

| | | | |
|---|----------------------------------|-----|---------------------------------------------------|
| — | Trench | 5 | Sulfidation of feldspar phenocrysts |
| — | Adit | Ch | Chlorite on fracture planes |
| — | Contact (normal, thrust) | + | Epithermal |
| — | Fracture | g | Granite |
| — | Fault inferred | Q | Quartz stringers |
| — | Shear | PIT | Pit |
| — | Shear direction | Q | Mineralized Quartz veins |
| — | Quartz stringer 5' width or more | al | Intensity of visible alteration or mineralization |
| | | h | Hemimorphite |
| | | Pb | Lead |
| | | Zn | Zinc |
| | | Sp | Sphalerite |
| | | Py | Pyrite |
| | | Cy | Chalcopyrite |
| | | CC | Chalcosite |

ALTERATION

| | |
|-----------|----------------|
| [Pattern] | Perthitization |
| [Pattern] | Sulfidation |
| [Pattern] | Silicification |
| [Pattern] | Epithermal |



T.R. TOUGH & ASSOCIATES LTD.
 GOLD RIVER MINES LTD. (N.R.L.)
 BOULDER MOUNTAIN PROPERTY
GEOLOGY
 SIMILKAMEEN M.D., B.C.

SCALE
 FEET 0 400 800 1200 1600 2000
 GEOLOGY BY L. SOOKCHOFF, P. ENG. November 1972