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REPORT
ON
THE GOLD CUP GROUP
SITUATED IN
THE YMIR GOLD CAMP
BRITISH COLUMBIA

BY

ROBERT WOLFE, P.Eng.

15 July 1983

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SUMMARY AND CONCLUSIONS

- 1) Kokanee Resources Ltd. holds title to the Gold Cup Group of 7 claim units in the Ymir Gold Camp of B.C.
- 2) The Ymir area has produced some 529,000 ounces of gold and 6,540,000 ounces of silver. No production record of the Gold Cup has been found.
- 3) Old workings are caved and inaccessible. In 1903, it was reported:

that "5 feet of ore containing high bunches assaying as high as \$ 220 per ton" was encountered.

In 1914 an assay of a sample of sacked ore containing chalcopryrite and tetrahedrite, made by the Mines Branch, gave 0.60 oz./ton in gold and 4.24 oz/ton in silver.

The mine is described as consisting of one or more quartz veins, striking northeasterly, dipping 68° south. The "lower workings" are in a granite porphyry schist and the "upper workings" in augite porphyrite schist; the contact between the two formations passes close to the prospect shaft.

No work has apparently been done on the property since 1935.

- 4) In 1981, Nithex Exploration Ltd. conducted a reconnaissance type soil survey over 1 1/2 out of the 7

claims. P.W. Richardson, P.Eng., concluded that 1) the geochemical program on the Gold Cup outlined areas with anomalously high concentrations of metals in soils, 2) more work is required to determine the economic potential of these anomalous areas.

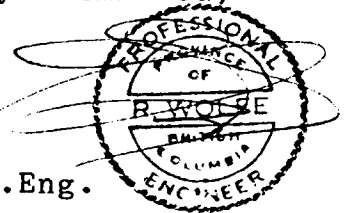
- 5) Part of the dump material consists of a highly altered, silicified (quartz stockworks) and pyritized schist. This is considered an excellent host rock for disseminated gold-silver mineralization.

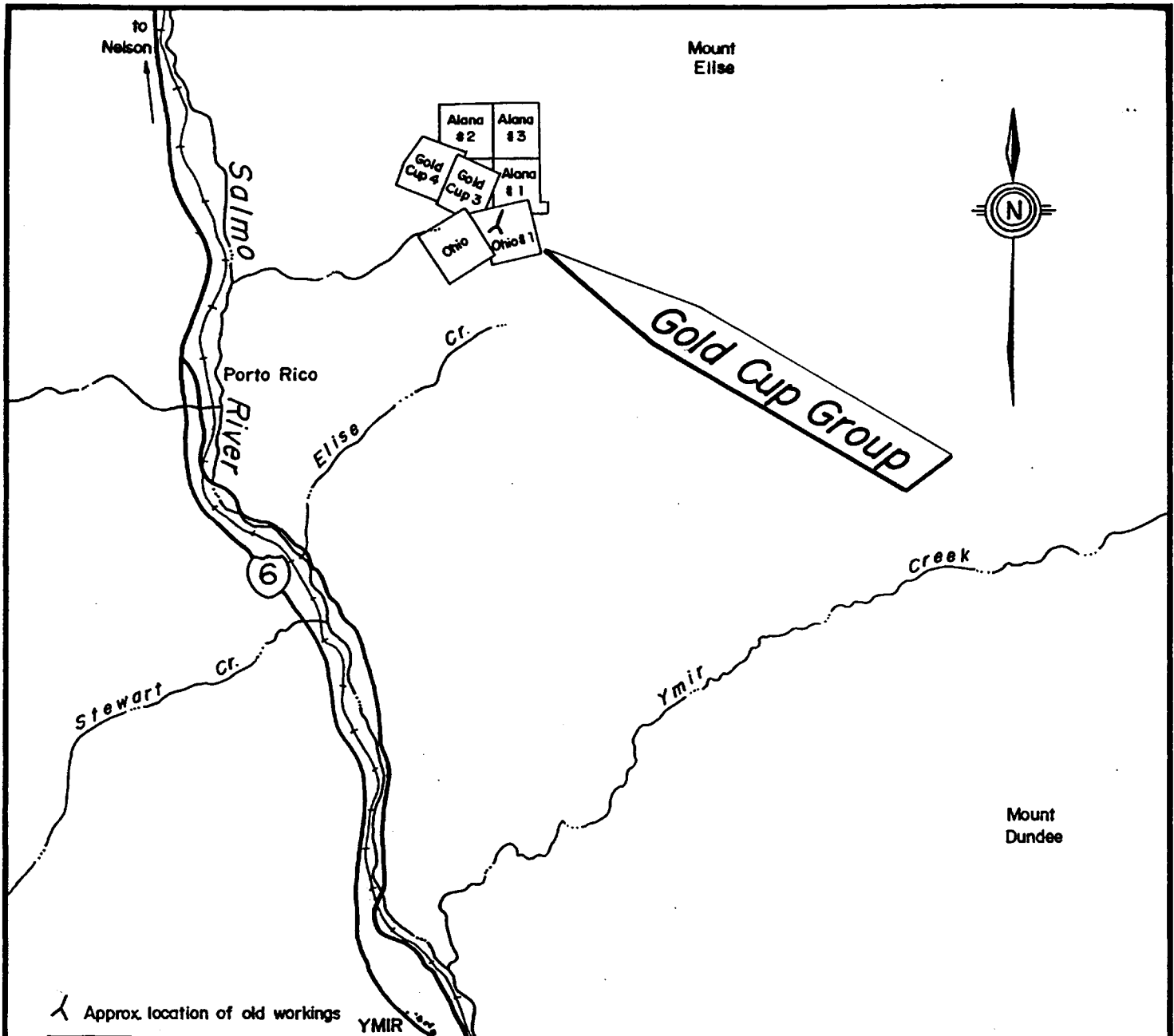
Also, a good possibility exists of discovering additional veins and/or extensions of existing veins (overburden is extensive). The Gold Cup is therefore considered a favorable economic target, well worth an intensive exploration program.

- 6) Recommendations for the first phase are focused on, (1) soil geochemistry preceded by an orientation survey to test for possible dispersion halos, (2) an Induced Polarization Survey (disseminated pyrite is associated with the ore), and (3) road rehabilitation. (Cost estimate for Phase I is \$ 40,000). Phase II is contingent on Phase I and includes bulldozer trenching of possibly anomalous areas, followed by diamond drilling. (Cost estimate for Phase II is \$ 100,000).

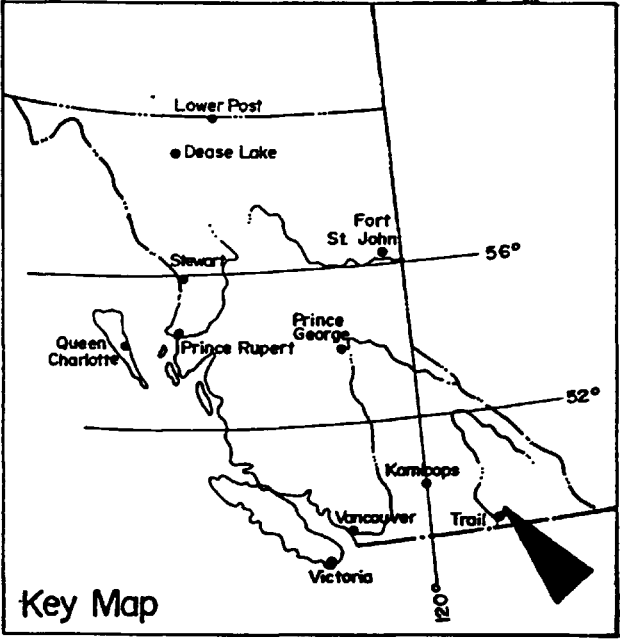
Respectfully submitted,

R. Wolfe, P.Eng.





⌘ Approx. location of old workings



Kokanee Resources Ltd.

Gold Cup Group *Ymir Gold Camp*

Nelson Mining Division *N.T.S. 82F/6*

0 500 1000 2000 4000m

SCALE 1:50,000

Location & Claims Map figure 1

INTRODUCTION

The writer was retained by the directors of Kokanee Resources Ltd. to evaluate the Gold Cup Mine near Ymir, B.C. The property was personally examined on September 26, 1980 on behalf of Nithex Exploration Ltd. Nithex subsequently conducted a reconnaissance-type soil survey over a small part of the property. The following report describes the Gold Cup and its history, and contains recommendations for further work.

LOCATION, ACCESS AND GENERAL SETTING

The Gold Cup is located on the west flank of Mt. Elise, 6 km due north of Ymir, B.C., 2 km east of Highway 6 (connecting Nelson and Salmo) at an elevation of 5,200 feet. An old road (presently inaccessible) connects the property with Porto Rico Siding on the Burlington Northern Railroad. (N.T.S. Code 82F/6E, Latitude: $49^{\circ}20'N$, Longitude: $117^{\circ}13'W$).

Ymir is situated in the Central Kootenay Region of southeastern B.C. about 400 km east of Vancouver. Forming part of the Selkirk Mountain system, the area is moderately rugged and well timbered.

The town is partly abandoned, but includes a post office, general store, pub, service station, and private residences.

The smelter at Trail, B.C. is less than 80 km from Ymir and a custom mill at Ainsworth, B.C. is within 120 km.

The climate is moderate, with usually only 3 months of below

freezing mean monthly temperatures. Summers are generally temperate and dry. The average annual precipitation occurs largely as snow in the winter and is 75 cm at Nelson.

CLAIMS

The following information was provided by the owners, Kokanee Resources Ltd.

Claim Name	Record No.	Anniversary Date	Expiry
Gold Cup 3, (L11010)	1043	9 April	1986
Gold Cup 4, (L11011)	1044	9 April	1986
Ohio, (L11008)	762	22 August	1985
Ohio #1, (L11009)	763	22 August	1984
Alana 1,2,3	1660-1662	20 May	1985

REGIONAL HISTORY

The Central Kootenay region has the highest numerical concentration of mines in the area of the Province.

In the Ymir-Nelson area, 1,783,000 tons of ore were produced with a gross content of 529,000 ounces of gold and 6,540,000 ounces of silver (Government of British Columbia, Economic Survey of the Central Kootenay Region, January 1970).

The overall average of the 24 former producers in the Ymir area is 0.3 oz. Au per ton and 3.67 oz. Ag per ton.

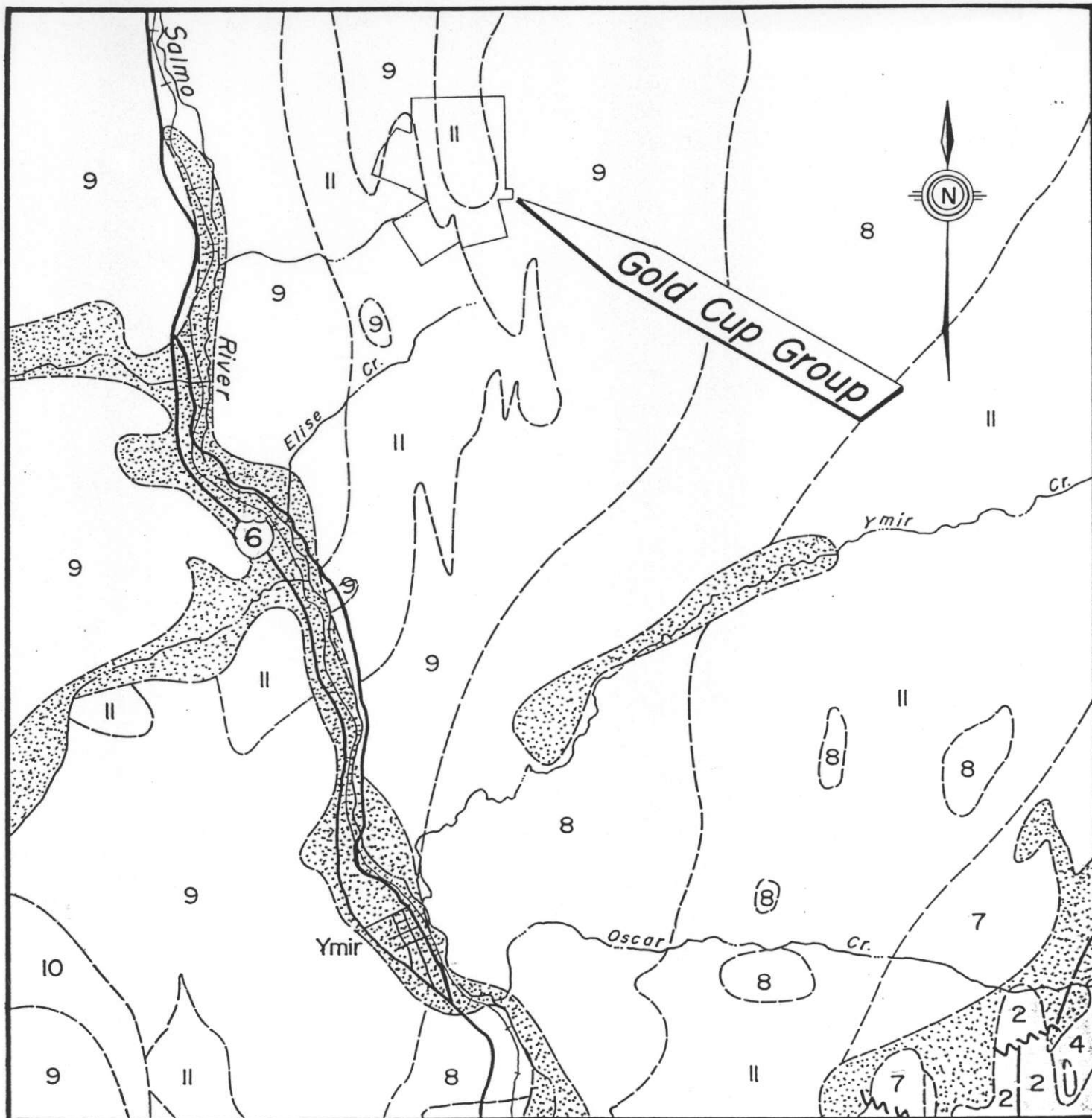
At one time the Ymir Gold Mine, situated 3 km to the SE of the Gold Cup, was the largest gold mine in Canada. Between 1899 and 1950, 366,983 tons of ore were produced, yielding 109,606 oz. of gold, 458,409 ozs. of silver, 10,531,644 lbs. of lead, and 1,777,780 lbs. of zinc.

No official production record of the Gold Cup is in existence.

GENERAL GEOLOGY AND MINERALIZATION

The Ymir Gold Camp lies on the east flank of a large, north-trending synclinorium whose axis runs from Salmo to Nelson, a distance of roughly 40 kilometres. The synclinorium is "floating" being enclosed for the most part in Nelson plutonic rocks, and the latter is considered by most workers as being derived by metamorphism of pre-existing volcanic and sedimentary rocks (Little, pg. 98). The synclinorium consists of the following sequence (from outside or oldest, toward the center):

1. Lower or Pre-Jurassic Ymir Group (formerly Pend D'Oreille by Drysdale) consisting of argillite, slate and paragneiss.
2. Lower Jurassic Rossland Formation consisting predominately of greenstones.
3. Mid/Upper Jurassic Hall Formation, which conformably overlies the Rossland, and consists of argillite, sandstone and conglomerate.

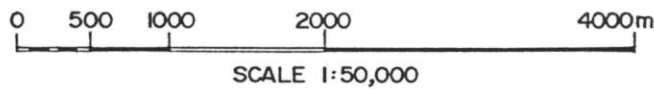


LEGEND

RECENT		Alluvium
CRETACEOUS (?)	11	Nelson Plutonic Rocks
JURASSIC	10	Hall Formation
LOWER JURASSIC	9	Elise Formation
TRIASSIC (?)	8	Sediments
	7	Sediments
LOWER CAMBRIAN	4	Laib Formation
	2	Quartzite Range Formation

Kokanee Resources Ltd.

Gold Cup Group *Ymir Gold Camp*
Nelson Mining Division *N.T.S. 82F/6*



Regional Geology

figure 2

This entire complex is intruded by various intrusives of the Nelson plutonic suite and is locally strongly deformed and metamorphosed.

To the east of the synclinorium is a sequence of Cambrian and Ordovician strata that are northerly-trending and are characterized by quartzite, argillite, and various schists.

Productive metalliferous gold, silver, lead and zinc deposits occur in all the above described rocks except the Hall Formation.

Geology extracted from GSC maps 1144A and 1145A show the Gold Cup claims to be underlain by the Lower Jurassic Elise Formation (andesite and basalt flows and flow breccia, agglomerate, augite porphyry)(Little's Rossland Formation) and the cretaceous Nelson plutonic rocks (mainly granite, minor granodiorite, quartz diorite and diorite).

Drysdale (1917, GSC Memoir 94) reports on the geology of the Gold Cup as follows:

"Geology. The underground workings were inaccessible in 1914. Ore from the lowest dump sacked and ready for shipment contained chalcopyrite, tetrahedrite, and malachite in a quartz gangue-stained with iron oxide. An assay of a sample weighing 1 pound 2 ounces made by the Mines Branch gave 0.60 ounces to the ton in gold and 4.24 ounces in silver. The quartz vein outcrops farther up the trail near the shaft and strikes north 72 degrees east (magnetic) and dips 68 degrees to the south. The vein consists of 1 1/2 feet of rusty quartz with parallel veins all cutting the schists almost at right angles. The foot-wall of the vein contains a zone of much oxidized schist and some limonite and is bounded by a narrow quartz stringer. The lower workings are in granite porphyry schist and the upper Inaugite porphyrite schist; the contact between the two formations passes close to the prospect shaft. The schist trends north 18 degrees west (magnetic) and is vertical. The belt underlain by granite porphyry forms a relatively broad undulating bench on the mountain slope. Above the workings the greenstone schist passes into massive augite porphyrite which stands out in bold relief as a series of rocky bluffs."

At the time of examination, the main portal was caved for at least 50'. Dump material was carefully sorted into 3 piles. (1) Quartz, (2) oxidized, silicified and altered host rock, probably schist, (3) unoxidized phyllite or schist.

Three samples were taken as follows:

Sample No.	Description	Au oz/ton	Ag oz/ton	% Pb	% Zn
3851	Representative grab of unoxidized phyllite or schist	0.002	0.03	0.01	0.01
3852	Representative grab of highly silicified and oxidized schist	0.003	0.18	0.01	0.01
3853	Selected quartz with chalcopyrite and tetrahedrite	0.312	0.68	0.01	0.01

The dump has been vandalized by 3 generations of high grade pickers and these results cannot be considered representative of the primary mineralization. The careful sorting of the dump also suggests that the "old timers" almost certainly removed any and all economic material.

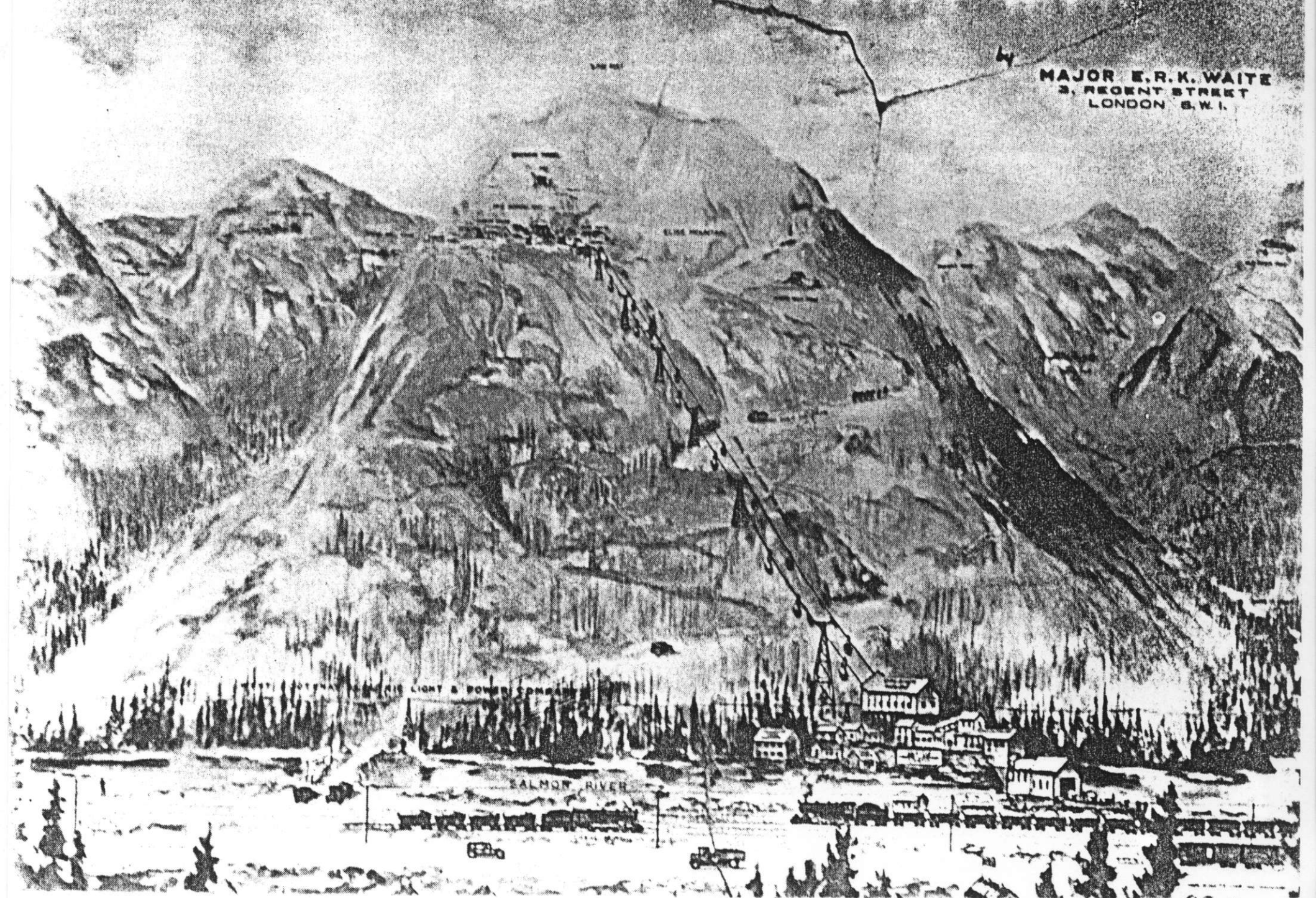
PREVIOUS WORK

The following is quoted from Drysdale, C.W. (1917) GSC Memoir 94:

"Location and Development. The Gold Cup claim is situated about 4 miles north of the town of Ymir on the western slope of Elise Mountain. The workings are at an elevation of approximately 5,200 feet above sea-level and are accessible by means of a switchback trail from Porto Rico Siding. The property was under development during 1903 by Mr Conrad Wolfe and DaWault Brothers, who took a lease on the Gold Cup and erected an experimental mill of two stamps. At that time the vein was opened up to a depth of 100 feet and was reported to have small values in copper and silver. A shaft extends down 85 feet on a vein which widened in that distance from 4 feet to 5 feet. A tunnel which was run to get below this shaft encountered, it was reported, 5 feet of ore containing high bunches assaying as high as \$ 220 per ton. The property is at present owned by Ryan and A. Burgess of Ymir."

PERSPECTIVE PLAN OF GOLD CUP MINE NELSON MINING DIVISION B.C.

MAJOR E.R.K. WAITE
3, REGENT STREET
LONDON S.W.1.



From Minister of Mines Annual Report 1935:

"The Gold Cup Mining Company Limited, (private) , of which E.R.K. Waite is president, held twenty claims, including three which are Crown-granted, situated about 4 miles north of Ymir and 2 miles due east from the main road. The workings and camp are at an elevation of about 5,000 feet. An old shaft and an adit-level on the Ohio No. 7 claim were reported on in Memoir 94, Geological Survey of Canada. The present operators opened and did some work in the old adit."

"About 1,750 feet northwest from the old adit, a crosscut was started and driven about 330 feet on a course of south 72 degrees east to test the downward extension of a quartz-lens outcropping 160 feet above. A tractor-road was built to the property and new camps and mine buildings have been erected. Work ceased in the middle of December."

No further work was apparently done until 1981 when Nithex Exploration Ltd. conducted a reconnaissance type soil survey over 1 1/2 out of 7 claims in the group. The following has been extracted from Richardson, P.W., Ph.D., P.Eng. (1982): "Assessment report describing the Soil Geochemistry programme on the Gold Cup Claim group".

A baseline 675 m long was run on a bearing of 115° starting near the SE corner of the Ohio #1 claim. Cross lines totalling 5,075 m were flagged 75 m apart and sampled at 25 m intervals.

A base map with a scale of 1:2,500 was prepared from 1:2,500 topographic maps that were made from available air photos taken in 1980. On this base map the grid was plotted and adjusted to fit the creeks and topography.

In total, 245 reconnaissance soil samples were collected and analyzed by Acme Analytical Laboratories for Cu, Pb, Ag, Zn and Au.

Four areas with abnormally high concentration of metals in soils were identified. One of these areas centered near L O+75E/1+50N and extending NE for approximately 300 m, is probably due to the mineralization upon which the early workings were driven. Two other anomalous areas are located in the NW and SW corners of the grid. At present, the reasons for these metal occurrences are not known.

Detail sampling around the 4th anomaly at L O+75E/O+75S, suggest that it is an isolated, spuriously high sample. The results from the detail sampling were uniformly low and are not plotted on the maps.

Richardson concludes that:

1. The geochemical sampling programme on the Gold Cup claim group outlined areas with anomalously high concentrations of metals in soils.
2. More work is required to determine the economic potential of these anomalous areas.

DISCUSSIONS ON THE EXPLORATION POTENTIAL OF THE GOLD CUP GROUP

Early prospectors focused almost entirely on discovering high grade quartz veins in areas where outcrop or quartz float was exposed. Drysdale, 1917, points out the following about the Ymir camp:

"Without doubt many undiscovered veins and ore-shoots are still hidden under the thick cover of wash and drift in certain promising belts. Much of this territory, however, is held by crown grant and there is little encouragement to the prospector. Veins parallel to those of the main producers of the past should be sought after and many of the abandoned barren veins should be tested further for the occurrence of ore-shoots at geologically favourable localities."

The claims are extensively covered by overburden and occur in a favourable gold camp. A good possibility therefore exists to discover additional veins and/or extensions of existing veins, which were missed by the "old timers".

The writer examined several other old mines and prospects in the Ymir Camp in 1980 and noted the strong association of silicification (replacement and quartz stockworks) and pyritization with the ore minerals.

Part of the dump material on the Gold Cup consists of a highly altered, oxidized, silicified (quartz stockworks) and pyritized schist. The possibility of disseminated gold-silver deposits occurring in this favourable wallrock should not be overlooked.

RECOMMENDATIONS

PHASE I

Road Rehabilitation

Since the old road was built in the early 1900's, considerable repairs, or possibly re-routing will be necessary.

Line Grid

The reconnaissance-type grid established by Nithex on a small part of the claims is not sufficient. An accurate cut grid should be established on all the claims. Since the veins are reported to strike northeasterly, the lines should run perpendicular to this direction spaced 100 m apart.

Geochemical Soil Survey

Before any further sampling is contemplated, an orientation survey over the old workings should be conducted (this was never done). Geochemical dispersion is dependent on many variables (i.e., Ph. etc.). The near-surface Afton copper deposit, for example, does not show anomalous copper content in the soil (G.H. Giroux, personal communication). A closely spaced "mini-grid" should be established over the old workings. Samples to be collected at various depths and/or soil horizons and analyzed by the 24 element I.C.P. (Inductively Coupled Plasma) method (which only costs \$ 7.50 per sample) as well as for gold. From the results of the orientation, the most favorable tracer elements in the dispersion halo can be determined and the rest of the property can then be sampled and analyzed only for those particular elements.

Induced Polarization Survey

In addition to disseminated pyrite in the wallrock, the Gold Cup also contains chalcopyrite and tetrahedrite in the vein matter itself. Such deposits can be detected by Induced Polarization methods. Prior to testing the entire grid, an orientation survey should be conducted over the old workings to determine the most favorable "A" spacings and in general test I.P. and Resistivity response.

Geological Mapping

All outcrops should be mapped.

PHASE II

Contingent on results of Phase I, anomalous areas should be trenched by bulldozer and subsequently, favorable targets should be diamond drilled.

COST ESTIMATE

Phase I

<u>Road Rehabilitation</u>	\$ 6,300.00
70 hours @ \$90/hr	
<u>Line Grid</u>	3,600.00
18 km @ \$200/km	
<u>Soil Sample Collection</u>	2,700.00
18 km @ \$150/km	
<u>Soil Sample Analysis</u>	3,280.00
720 SAMPLES @ \$4	
<u>I.P. Survey</u>	7,200.00
18 km @ \$400/km	
<u>Accommodation, Transportation</u>	5,000.00
<u>Supervision, Geological Mapping</u>	3,000.00
<u>Drafting, Reports, Consulting Fees</u>	5,000.00
	\$ 36,080.00
Contingencies approximately 10%	<u>3,920.00</u>
TOTAL PHASE I	<u>\$ 40,000.00</u>

PHASE II

Contingent on results of Phase I

Bulldozer trenching\$ 20,000.00

Diamond Drilling 60,000.00
1,200 feet @ \$50 (all inclusive)

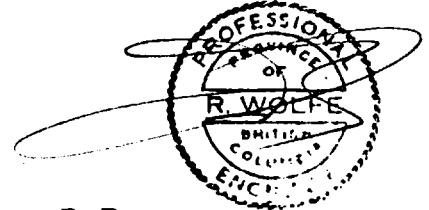
Supervision, Assays, Reports,
Consulting Fees, etc..... 10,000.00

\$ 90,000.00

Contingencies 10,000.00

TOTAL PHASE II \$100,000.00

Respectfully submitted,



R. Wolfe, P.Eng.

APPENDIX I

REFERENCES

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"Ymir Mining Camp, B.C."
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3. Little, H.W. (1960)
"Nelson Map Area, West Half, B.C. (82FW 1/2)"
4. Minister of Mines Annual Reports
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5. Richardson, P.W. (1982)
"Assessment Report describing the Soil Geochemistry
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6. Sinclair, A.J. (1974)
"Selection of Threshold in Geochemical Data Using
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Journal Geochem. Expl. Vol. 3, pp. 129-149
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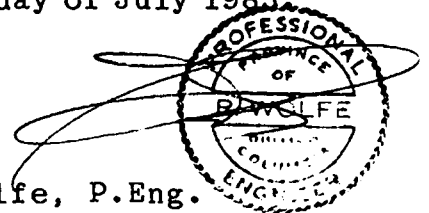
CERTIFICATE

I, Robert Wolfe, of Vancouver, B.C., do hereby certify that:

1. I am a Consulting Geological Engineer with an office at 3919 West 31st Avenue, Vancouver, B.C.
2. I am a graduate of the University of Alberta with a B.Sc. degree in Physics and Geology. I also took an extra year of Geology at the University of British Columbia in 1963-64.
3. I have practised my profession since 1964, while being employed by such companies as Kennco (Western) Exploration, Meridian Exploration Syndicate, (Canex Aerial Exploration Ltd., Noranda Mines Ltd., Home Oil Co.), Orequest Syndicate (Granby Mining Co., Home Oil Co., Homestake Silver Mines.) I have been in private independent practice since 1968.
4. I have no interest, either direct or indirect in the properties or securities of Kokanee Resources Ltd., nor do I expect to receive or acquire any such interest.
5. I have been a member in good standing of the Association of Professional Engineers of the Province of British Columbia since 1967 and the Association of Professional Engineers of the Yukon Territory since 1972.
6. Kokanee Resources Ltd. has my permission to use this report to satisfy the requirements of the various regulatory bodies in B.C. I also consent to the inclusion of this report and/or the summary thereof in the prospectus of the company.

DATED at Vancouver, British Columbia this fifteenth day of July 1983.

Robert Wolfe, P.Eng.



Appendix II