



CORPORATION FALCONBRIDGE COPPER

6415 - 64th Street
Delta, B.C., Canada V4K 4E2
Telephone (604) 946-5451

OK 1-2-3-4

827352

Kennedy Lake

July 10, 1984

Mr. G. Kinneard
Viva Ventures Ltd.
210 - 1012 Douglas Street
Victoria, B. C.
V8W 2C3

OK 1-2-3-4 MINERAL CLAIMS, KENNEDY LAKE, VANCOUVER ISLAND

Dear George;

Thank you for the information concerning your mineral claims in the Kennedy Lake area. I would be interested in discussing the gold values which you mention in your letter but are not included in the reports enclosed. As you well know, the current depressed price of copper does not encourage exploration for deposits rich only in copper.

I look forward to talking to you about the OK claims next time we meet. Possibly I could visit your claims this fall if I am in the area.

Yours truly,

per David Lefebure
Project Geologist

DVL/ik

cc A. J. Davidson

Viva Ventures Ltd. (NPL)

210-1012 Douglas Street
Victoria, B.C.
V8W 2C3

June 22, 1984

Corporation Falconbridge Copper
5215 Hykawy Road
R.R. 6
Duncan, B.C.

Dear Sirs:

Re: OK 1-2-3-4 Mineral Claims,
Kennedy Lake - Vancouver Island, B.C.

We own one of the choice mineral claim properties in the Kennedy Lake area consisting of four legally surveyed Crown Grants. These claims were worked in the 1903-4 era. They have proven gold values right on the strike line of a limestone - grano-diorite contact zone.

Enclosed are some interesting details and a map showing the proximity of the Kennedy Lake Gold Camp - (See Prospector and Developer Magazine).

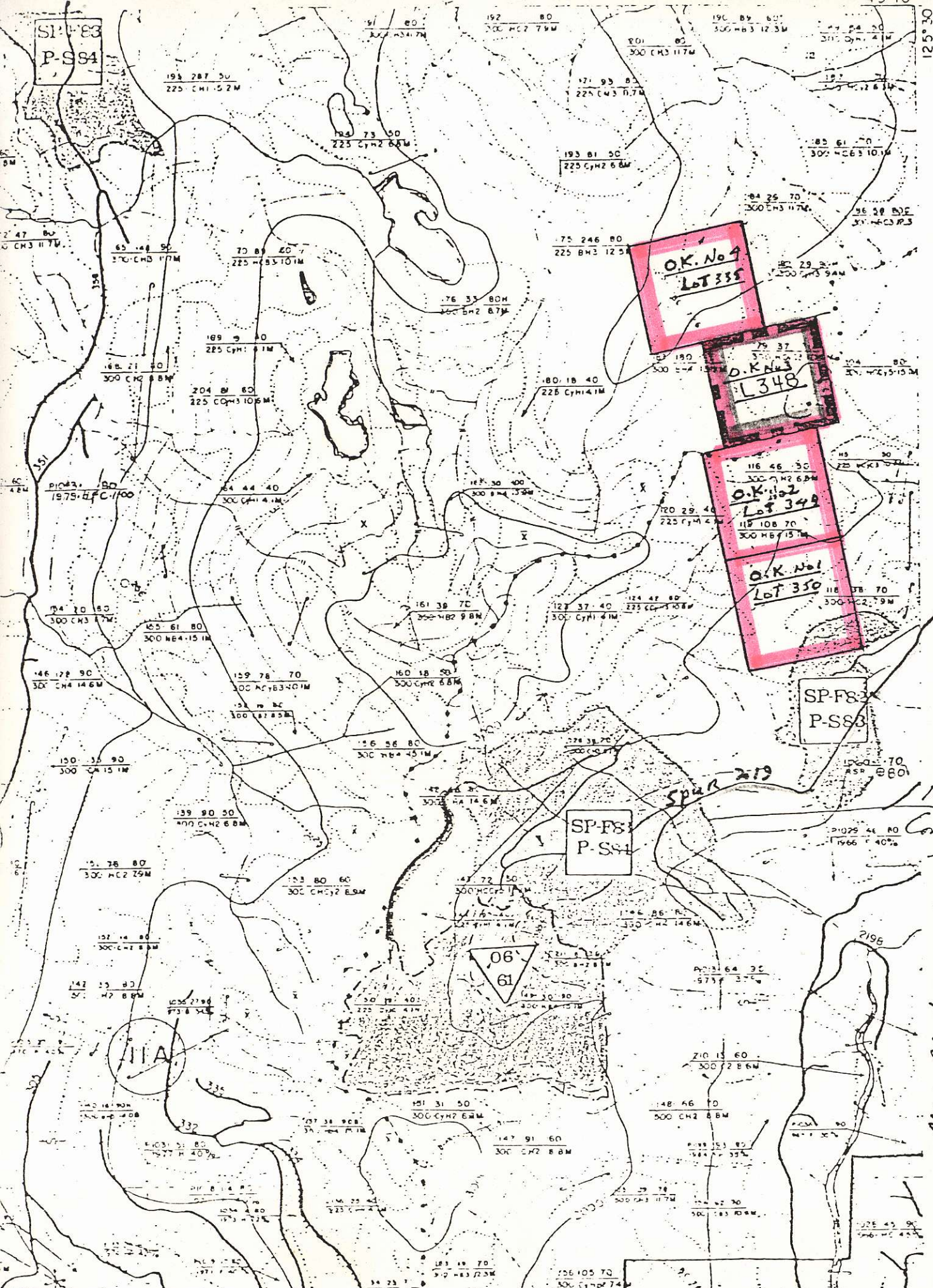
We are interested in leasing out this property for some cash and shares. If you care to discuss this in detail please contact the undersigned.

Yours truly,



G. Kinneard

Phone: 386-8411 before 4 p.m.
381-4288 after 4 p.m.



SP-F83 219

Nearly Complete

Mac-Bio Logging Road
 Approx 20 Miles
 To Ucluelet

SP-F83
P-S84

O.K. No 4
Lot 335

O.K. No 3
Lot 348

O.K. No 2
Lot 349

O.K. No 1
Lot 350

SP-F83
P-S83

SP-F83
P-S84

06
61

11A

193 287 50
225 CH1 5.2M

192 80
300 HC2 7.9M

190 84 60
300 HC3 12.3M

174 84 30
300 CH1 4.1M

65 48 90
370 CHD 17.7M

70 89 20 7
225 CH3 10.1M

173 73 50
225 CH2 6.8M

193 81 50
225 CH2 6.8M

185 61 70
300 HC3 10.1M

188 21 50
300 CH2 8.8M

189 9 40
225 CH1 8.1M

204 89 60
225 CH3 10.6M

175 246 80
225 BH3 12.3M

157 190
300 CH2 11.9M

154 80
300 HC3 15.5M

157 21 50
300 CH2 8.8M

164 44 40
300 CH1 4.1M

176 33 80M
300 BH2 6.7M

180 18 40
225 CH1 4.1M

170 29 40
225 CH1 4.1M

155 30
220 CH3 10.1M

154 20 50
300 CH3 11.7M

165 61 80
300 HC4 15.1M

168 30 400
300 BH4 13.9M

127 37 40
300 CH1 4.1M

124 47 80
225 CH3 10.6M

118 38 70
300 HC2 7.9M

146 28 90
300 CH4 14.6M

159 78 70
300 HC3 14.0M

160 18 50
300 CH2 6.8M

156 56 80
300 HC4 15.1M

150 35 90
300 CH1 5.1M

139 90 50
300 CH2 6.8M

156 56 80
300 HC4 15.1M

174 38 70
300 CH1 4.1M

170 35 70
300 HC3 10.1M

157 28 80
300 HC2 7.9M

153 80 60
300 CH2 6.8M

147 72 50
300 HC2 7.9M

170 35 70
300 HC3 10.1M

170 25 46 80
1966 40%

152 14 80
300 CH2 6.8M

142 33 80
300 CH2 6.8M

151 31 50
300 CH2 6.8M

147 91 60
300 CH2 6.8M

170 35 70
300 HC3 10.1M

142 16 90M
300 HC2 7.9M

140 31 50
300 CH2 6.8M

157 31 90M
300 CH2 6.8M

151 31 50
300 CH2 6.8M

147 91 60
300 CH2 6.8M

148 46 70
300 CH2 6.8M

148 46 70
300 CH2 6.8M

140 16 90M
300 HC2 7.9M

140 31 50
300 CH2 6.8M

157 31 90M
300 CH2 6.8M

151 31 50
300 CH2 6.8M

147 91 60
300 CH2 6.8M

148 46 70
300 CH2 6.8M

148 46 70
300 CH2 6.8M

140 16 90M
300 HC2 7.9M

140 31 50
300 CH2 6.8M

157 31 90M
300 CH2 6.8M

151 31 50
300 CH2 6.8M

147 91 60
300 CH2 6.8M

148 46 70
300 CH2 6.8M

148 46 70
300 CH2 6.8M

This group contains two mineral claims—the *Wanderer* and *L. Grant*—and the *Wanderer* Group, located at the summit of a deep gulch about a quarter of a mile from the shore of Kennedy lake, about two miles from the mouth of Elk river and about 250 feet above the lake-level. The group is owned by L. Grant, of Tofino, and the claims are staked as full claims and contain about 100 acres.

Geology.—The rocks on the *Wanderer* group are igneous and apparently belong to an extension of the belt of Vancouver volcanics that occurs in the vicinity of Henderson lake, in the Alberni Mining Division. These rocks are much sheared, fissured, and altered. In places the shearing action has been so severe as to give the rocks schistose structure. The fissuring has resulted in the development of narrow quartz veins, which at and near the surface show quite good prospects in free gold by panning.

Characteristics of Ore-deposits.—The ore-deposits on the *Wanderer* group belong to the shear-zone type. The quartz veins which carry values in gold are narrow, but appear to be persistent, having the lines of strike S. 40° W. (mag.) and dip 72 degrees to the north-west (mag.). Some of the oxidized outcroppings furnish fine specimens of quartz, with particles of free gold in the quartz gangue. If further development determines that the veins increase in width and carry fair values throughout, this property would be a good milling proposition.

The topography of the ground is such that development-work can be carried on by a series of adits which would gain backs rapidly as they were driven into the mountain, which rises to an altitude of several hundred feet within a short distance from the outcroppings.

Development-work.—The development-work done up to September 7th, 1915, represented one assessment-work and consisted of two open-cuts and short adits. The upper open-cut is 12 feet long as an approach to an adit 6 feet long under cover. A sample from 6 inches of quartz assayed: Gold, 0.32 oz.; silver, 0.4 oz. The lower open-cut is about 25 feet below the upper; it is about 15 feet long as an approach to an adit 4 feet long. Two samples were taken at this work; one from the floor under cover assayed: Gold, 0.64 oz.; silver, 0.5 oz. The other sample, taken from near the face, assayed: Gold, trace; silver, trace. A selected specimen assayed: Gold, 1.86 oz.; silver, 0.5 oz.; copper, 15 per cent.

The location-line of the claim was followed in a north-easterly direction for some distance to the No. 2 post of the claim, where it appeared that the vein was persistent to that point, but this had not been determined by any work. This group of claims was only staked a short time prior to the examination.

This group of mineral claims consists of four claims known as the *O.K. No. 1*, *O.K. No. 2*, *O.K. No. 3*, and *O.K. No. 4*, and is located at the summit of the

mountain at an elevation of about 4,000 feet, between the Clayoquot arm of Kennedy lake and the main lake. There is practically no trail to the group, except up the bed of Sandy creek, which is full of large boulders. Sandy creek flows into Kennedy lake about six miles from the head, and the distance to the mine-workings on the *O.K. No. 3* claim is about four miles. There could be a fair trail built from the head of Clayoquot arm which would be shorter than the present route, but somewhat steeper. The group is owned by T. G. Norger, of Victoria, who staked the claims about 1900, built a cabin on the summit, and worked on the property almost continuously until he obtained a Crown grant, since which time but little further development-work has been done. The group contains about 195 acres. The claims are staked in a northerly direction from Norger creek, a branch of Sandy creek, in a line one claim wide, with the *O.K. No. 1* as the most southerly and the *O.K. No. 4* the most northerly.

Geology.—The rocks on the *O.K.* group belong to the Vancouver series and consist of white and blue limestones and dioritic rocks, with the limestone occurring in extensive masses on the southerly part of the property and dioritic rocks on the northerly part. The bedding-planes of the limestone strike east (mag.) and dip 40 degrees to the north. The dioritic rock is sheared, fractured, and altered, especially so near the line of contact with the limestone.

Characteristics of the Ore-deposits.—The occurrences of copper ore belong to the contact-metamorphic type, although they do not occur at the immediate contact of the igneous and sedimentary rocks, but are found enclosed by walls of the dioritic rock. The mineralization is chiefly chalcopyrite, with which is associated iron pyrite and some pyrrhotite and magnetite.

The outcroppings are characterized by the chalcopyrite occurring in masses of rather unusual purity and considerable size. These outcroppings are quite persistent for about 200 feet above the surface, where the mineral is about 3 feet wide, as shown by trenching. The strike is

S. 20° E. (mag.) which carry quite workings assayed

The surface of develop into a mill direct to a smelter, along the outcrops value to any appra the main Kennedy precipitous, and the no work has be

Development-work. *O.K. No. 3* claim, a rather deep trench 21 feet from the post at right angles for 30 feet. Some ore though this occurs the main adit.

The Northern Crown. H property is easy of by water and about full-sized mineral lo

Geology.—The type, the rocks being illustrated and the H The latter occurs as N. 70° W. (mag.) and

lines which cut the The mountain r Clayoquot arm and feet within a short di

Characteristics of replacement deposits of contact metamorphic made up of pyrrhotite deposit the most ab minerals, garnetite a

Samples taken fr side of a high precip ent. Gold, trace; at the portal of a sh

Development-work of an open-cut along open-cut. The adit is The adit was driven cut, but it appeared to to accomplish the pur angles to that taken. there are indications o

Deer creek empt bears ago this was o Vancouver island, wh

OK
mineral
claims

O.K. Mineral Claims.

s. 20° E. (mag.) and dip 50 degrees to the easterly. Samples from the outcrops can be taken which carry quite high-grade ore in copper values, but a sample taken from the underground workings assayed only: Gold, trace; silver, 0.8 oz.; copper, 4.7 per cent.

The surface outcrops are on the O.K. No. 3 claim and gave promise that the property would develop into a mine that would produce a grade of copper ore sufficient to warrant shipping direct to a smelter, but in the underground workings, which are almost directly under the trench along the outcrops, it does not appear as though the ore-deposit had maintained continuity or value to any appreciable depth. The ore occurs on the northerly side of the summit between the main Kennedy lake and the Clayoquot arm of the lake, where the mountain-side is very precipitous, and float as well as some outcrops are found at other points on the mountain-side, but no work has been done to determine their extent.

Development-work.—The development-work on the O.K. group is confined to that on the O.K. No. 3 claim, and consists of an adit about 165 feet long, in addition to about 200 feet of rather deep trenching. The adit was started as a crosscut and driven 60 feet. At a point 21 feet from the portal some ore is exposed and the course of the adit changed to the right or at right angles for 15 feet, where the course is again changed to the left at right angles for 20 feet. Some ore is crosscut in the last change in the course of the adit, and it appears as though this occurrence of ore is possibly an extension of the ore exposed near the portal in the main adit.

This mineral claim is owned by J. E. Martin, superintendent of Kennedy Lake Northern Crown Hatchery, whose post-office address is Tofino, B.C. The claim is located about 300 feet above sea-level near the head of Clayoquot arm of Kennedy lake. The property is easy of access, being only about a mile and a half from the Kennedy Lake Hatchery by water and about half a mile by a good trail from the shore. The claim is staked for a full-sized mineral lode claim, 1,500 feet square.

Geology.—The geologic formations on this mineral claim belong to the contact-metamorphic type, the rocks being igneous and altered sedimentaries. The results of metamorphism are well illustrated and the line of contact clearly defined between the dioritic igneous rock and limestone. The latter occurs as forming high precipitous cliffs, with the line of strike of the bedding-planes N. 70° W. (mag.) and dip 65 degrees to the north-east (mag.). There are some igneous intrusive dykes which cut the limestone.

The mountain range back of the Northern Crown claim forms the watershed between the Clayoquot arm and the upper part of Tofino inlet. The peaks rise to altitudes exceeding 2,000 feet within a short distance from the shore. The section presents a promising field for prospecting.

Characteristics of the Ore-deposits.—The occurrences of ore on the Northern Crown claim are replacement deposits in limestone and represent illustrations of Clapp's contact deposits in a zone of contact metamorphism some distance from the actual line of contact. The mineralization is made up of pyrrhotite, chalcopyrite, and iron pyrite, with the pyrrhotite in some portions of the deposit the most abundant. The gangue material is chiefly limestone and the usual contact minerals, garnet and epidote.

Samples taken from across about 3 feet where the outcrop has been stripped on the southerly side of a high precipitous limestone cliff assayed: Gold, trace; silver, 0.8 oz.; copper, 8.4 per cent. Gold, trace; silver, trace; copper, 1.5 per cent. Another sample from a sorted dump at the portal of a short adit assayed: Gold, trace; silver, 0.8 oz.; copper, 9.1 per cent.

Development-work.—The development-work on the Northern Crown mineral claim consists of an open-cut along the strike of an outcrop 28 feet long and an adit about 50 feet below the open-cut. The adit is driven about 62 feet long, with an open-cut approach about 12 feet long. The adit was driven with the purpose of intersecting the ore-deposit exposed in the upper open-cut, but it appeared to the writer that the adit had been driven too far to the left from the portal to accomplish the purpose, and that the course from the portal should have been nearly at right angles to that taken. Near the face of the adit the course has been changed to the right, and there are indications of ore near the face.

Deer Creek Subsection.

Deer creek empties into Tofino inlet, Clayoquot sound, at the head of the inlet. Several years ago this was one of the most popular fields for the prospector on the west coast of Vancouver Island, when several mineral claims were staked and partly developed. The South

(Section 203 (1))

CERTIFICATE OF TITLE TO MINERALS

Date of application the 8th day of October, 1982 at 8:50

Kelly James Kinneard is the owner of* all minerals, precious and base (save coal, petroleum and any gas or gases) in, upon or under Alberni Assessment District, British Columbia,

described as Lot 335, Clayoquot District - Subject to the terms of Crown Grant filed D.D. 230179-G

Lots 349 and 350, Clayoquot District - Subject to the terms of Crown Grant filed D.D. 230178-G

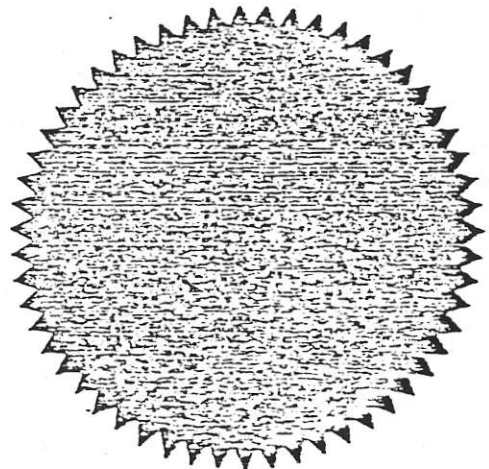
All minerals, precious and base (save coal and petroleum) in, upon or under in respect of the land in Alberni Assessment District, British Columbia described as: Lot 348, Clayoquot District - Subject to the terms of Crown Grant filed D.D. 67092-G

The title to the surface of the land is registered under Certificate of Title No. L36786, and the title of said minerals precious and base (save is registered by endorsement on it as a charge under No. L55282 (See Page 2)

SIGNED and SEALED by me

this 12th day of October, 1982

at the Victoria Land Title Office, British Columbia.



Handwritten signature of David A. Gib

Deputy Registrar

From "Open file" section of Dept of Mines
Victoria BC
Douglas Bldg
4th floor

OK
Rev. Jan 1912
see Rio Estero
Creston file

Vancouver, B.C. Jan 13, 1912

Dear Sir;- re THE O. K. COPPER GROUP.

This property consists of ^{four} full size mineral claims viz: O.K. I, II, III, IV, each 1500' X 1500' in size or there about 200 acres and are situated at 2500' altitude above sea level and about 1 1/2 from Kennedy Lake, Vancouver Island, B.C.

ACCESSIBILITY.

From Victoria the property is reached first by C.P.R. steamer 4 times a month to Clayquot about 24 hours journey and from Clayquot a distance of about 10 miles by smaller boat within 1 1/2 miles of the property. Kennedy Lake is connected with the salt water by a long channel about 1/2 miles wide and 4 1/2 miles long navigable for loaded scows its entire length except last 1/2 mile where the channel is rocky and the water is shallow making it impossible for navigation by larger boats.

The Government has made a channel 25' wide at one side but gasoline boats and row boats have to be pulled up and down these rapids.

While in Clayquot I had a long conversation with Mr. Brewster, M.P. for the district and he informed me that the Government is just about to build a gravity surface tram from the rapids to salt water to enable shipping of timber, etc. from the lake.

At the present time the property is reached from Kennedy Lake the first 1 1/2 miles by trail and the last mile by following an old creek bed; with \$500 expense a trail about half the distance in length and with a gentle slope to the lake can be made from Clayquot Arm to the Property.

GEOLOGY.

Five distinct veins about 4' wide are exposed on the surface for several hundred feet and show good values in copper for their entire width in every place that the ledges have been broken into. Each of these veins lie alongside of a diorite dike with about the same width which gives assurance that the ore bodies will go down to considerable depth.

The mountain is very steep, in some places almost perpendicular, and by driving a tunnel ^{4000'} long from a point about 100 ft. below present tunnel the veins can be tapped at considerable depth. The strike of the veins N. 30° E. dipping 60° to the N.E. ^{+ 400' to 500'}

DEVELOPMENT.

At 2500' altitude a tunnel 52' long driven in a N. 30° E direction to crosscut and tap 2 veins at 50' depth exposed on the surface. This tunnel would, if driven at a right angle have tapped the first vein now, but as the tunnel was driven 30° out of direction, it will take 4' more before the first vein is reached.

One "blind" vein 4' wide is cross cutted in the tunnel giving good values.

An average assay taken from the different veins gave the following returns:

No. 1 vein	Gold	Copper	Total
No. 1 vein	.05	12.50	25.00
" 2 "	.02	4.50	9.00
" 3 "	.025	2.40	5.00
" 4 "	.125	15.00	30.00

TIMBER & WATER.

All the claims are covered with a very heavy growth of timber running I would think at least 40-50000' to the acre and consisting of Yellow and Red Cedar, Hemlock, White Fir (Balsam).

A stream crosses the property within 3000' of the proposed tunnel and ample fall can be obtained to give any reasonable amount of power required.

CONCLUSION:

Considering the very little work done on the property the showings are excellent and as a prospect I consider the surface showings are of the best- and I am sure that the ore bodies will "go down" to considerable depth.

Faithfully yours,



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1J0

PHONE (604) 888-1323

Invoice 4641

Report for: David Lefebvre,
Corporation Falconbridge Copper,
5215 Hyhawy Road,
Duncan, B.C.,
V9L 4T8

July 19, 1984

DETERMINATION OF GREEN MINERAL IN SAMPLES BCS 2332 AND 2333

The green mineral in both these samples is muscovite; in thin section it is colourless. It forms a streaky mass of ragged flakes 0.05 to 0.1mm in length interlayered with lenses of quartz. Cubic grains of pyrite occur along the more quartzitic layers. Fine Fe-Ti oxides are scattered (in small aggregates) within the micaceous parts.

According to Deer, Howie and Zussman (Rock Forming Minerals, 1966) fuchsite is a chromium - bearing variety of muscovite with up to 6% Cr₂O₃; they do not state what the lower limit is. It is pleochroic in shades of green. The pale green colour of some muscovites is due to Fe²⁺ in the structure. This muscovite is colourless and non-pleochroic.

Muscovite

I suspect that other elements or element combinations may also give rise to green colours in micas. Optical properties such as RI and 2V, or X-ray powder patterns are of little value in determining chemical composition of muscovites. The only sure method is by chemical analysis, either by probe (only if more than approximately 0.5 wt. %) or by other methods on a mineral separate. If you need know the trace element content of this mica then I suggest that you submit it to a geochemical lab for separation and analysis.

A. L. Littlejohn
A. L. Littlejohn, M.Sc.

*green micas
in quartz veins*

*mineralogy lab
before
GSC*

*\$125 for analysis
\$175 for analysis
\$250*

*not sensitive
energy dispersive
wavelength
spectrometer
+
probe*

*0.2 wt %
oxide
Fe²⁺ to Fe³⁺ ratio*

*AA analysis
complete
spectrum elements
mineral separate*

*non-pleochroic
ANIMET
DETAILED
PROBE
WORK
- TORONTO*