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2627 Ottawa Avenue
West Vancouver, B.C.
May 17th 1959

DEPT. OF MINES
Rec'd MAY 19 1959
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Dear Dr. Sargent:

I thought that you might be interested in a mining property adjacent to the old Copper mountain mine and that you might like to arrange for one of your geologists, interested in open pit or glory hole mining methods, to inspect and report on the property. It was formerly known as Deep Gulch Syndicate and it has now been turned into a Public Company and given the name "Deep Gulch Mines Ltd." This property lies immediately adjacent to the Eastern flank of the Hope - Princeton Highway and nearly opposite the old Copper mountain mine.

We have completed some 6,300' of 'Cat' cut trenches: all are 6' or more deep and some of them 13' deep. These trenches cover an area some 2030' by 1350' and we are now embarking upon a further exploration program to expand the trenched area to 6000' x 1350'. The trenches have revealed that mineralization exist in a so-called mineralized belt, some 1350' wide: flanked in the West by Nicola Volcanics rocks and by the Copper mountain stock in the East. Copper mountain old mine lies about a mile E.N.E. from the Deep Gulch trenches. We have compared the ore from the old mine with ore from Deep Gulch trenches and they seem to be identical. Having established the fact that the Deep Gulch mineralized area was 1350' wide, I used this factor to discover

that the open pit mining carried out by Granby was also done within a distance of 1350' of the Western and Eastern Copper mountain stocks. With this knowledge, we have postulated a mineralized zone surrounding the stocks.

To brief and paint a picture for one of your geologists who may inspect the property, the following information is offered. Our Consulting Geologist, Dr. Skerl, (with other professionals) has discovered that two major faults are aligned at the Contact flanks of the so-called mineralized zone. The Western fault Contacts the Nicola Volcanic rocks and the Eastern fault Contacts the pegmatite stock. Multiple minor faults radiate diagonally between the two major faults. These minor faults, and their associated heavily fractured zones, possess the principal mineralization. However, the whole so-called mineralized zone is severely cracked and some degree of mineralization exists everywhere.

Dr. Skerl thinks that the so-Called mineralized zone was formerly Nicola Volcanics and when the stock intruded, its intense and slowly subsiding heat, transmuted a belt of Nicola 1350' wide: to bear a granitic character. These rocks are now pegmatite, hornblende and gabbro: with pegmatite possessing most mineralization. The Copper Mt. Stock ~~Stocks~~ proper, Consists of whitish non-mineralized pegmatite.

The mineralization can be said to bear three distinct characteristics:-

(a) Two 40' exposures of competent sulphided rocks. Visiting geologists have declared this to be the best showing. These rocks carry bornite and we think they form part of a dyke leading across the stock: perhaps a replica or a continuation of the dyke, mined by tunnel, by Granby.

(b) Primary mineralization of the Cracked rocks: particularly in the minor faulted heavily fractured zones. These rocks carry both Bornite and Chalcopyrite.

(c) Between the Cracked rocks, particularly in the heavily fractured zones: lies a rock powdered paste carrying secondary Copper i.e. both bornite & Chalco. This has evidently been leached out of earlier top hamper to the hillside, which has weathered earlier and departed.

We have hazarded a speculation as to the amount of ore already revealled, by using the following formula:-

2,030' length by 1350' width x 100' depth ÷ 5 = 5,895,000 tons.

note: there is an altitude differential of 200' between the extremities of the trenches: hence the depth factor of 100'

The trenches have been estimated to possess 20% economic ore: hence the division by 5.

Only one drill hole has been projected into Deep Gulch. It was designed to penetrate at -30°, the area of the Western major fault. Core recovery was extraordinary poor: due to the fractured rocks: but enough core was recovered to show that the whole

length of 600' was sulphided rock. We now propose to drill the competent sulphided rock showings mentioned earlier.

Mr. E. Chapman, of Chapman, Wood and Griswold of New Mexico: is an expert on open pit mining prospects and he is due to inspect and report upon the Deep Gulch property, at the end of May.

The assaying program, so far, has been Casually done. Some 40 grab assays have responded with assay reports ranging between 2% and 38% Copper. However, a massive sample from a point of 40', weighing 500 lbs: was submitted to assay and its response was .79% Cu and .04% Gold. (02/TON ?) We now propose to undertake a Comprehensive and inclusive mass assay of all the trenches.

We possess plenty of money to Conduct the best exploration: but so far, we are short on professional advice, as to what we have in the bag. My experience has been that Consulting Engineers are loathe (with one eye on their Career) to utter any positive declaration: until the evidence is there for all to see in the Cores from the drill holes. One of the things we are anxious to know is whether we shall have to prove drill the 100' altitude differential factor, mentioned on page 3. ! or whether we can take it for granted that the ore is present.

I will now try to draw a rough sketch to illustrate the geological associations adjacent to Deep Gulch property.

In case you may approve a visit by a Departmental Geologist, one should note that at present with the snow almost gone, that there is some water in the trenches and therefore a visit would be more beneficial, subsequent to June 10th. One can drive in a jeep throughout the length of the trenches and thus, a comprehensive picture can be gleaned in a relatively short time.

Things we should like to know

(a) Do 30,000,000 tons of economic ore a suitable target to shoot at: to warrant a 5,500 ton a day output?

(b) The average assay of ore produced over 30 years by Granby at Copper Mountain was .71% Cu. .01% Mo 2.35% Silver and 3.25% Vanadium. Do this assay still a suitable economic factor? for open pit mining operations,

(c) 'Cats' fitted with drag hooks to experience no difficulty at all in sinking trenches rapidly to 14' in the rotten fractured rock. Could we employ 'Cats' to disgorge 5,500 tons a day?

Yours sincerely

R. Cellis-Lane

May 20th, 1959.

Wing Cmdr. R. Collingham,
2627 Ottawa Avenue,
West Vancouver, B. C.

Dear Sir:

Your letter of May 17th indicates your interest in having one of our geologists visit the property being explored by Deep Gulch Mines Ltd. near the Copper Mountain mine. I am sure that it will be possible to have one of our geologists visit the property in the forthcoming summer, possibly later than the time you mentioned in June. If for any reason work is to be suspended I shall appreciate it if you will let us know so that we can arrange to have our geologist visit the property when work is in progress. Most probably Dr. J.M. Carr, who will be doing some general reconnaissance in that area in addition to doing some more detailed work near Merritt, may visit the property and it may be that Dr. Hedley will also visit it.

Your letter asks three questions and I would point out that any brief answer is apt to be an over simplification. Your consultant, no doubt, could give you the best answer. However, I shall attempt brief answers to your questions.

(a) "Is 30,000 tons of economic ore a suitable target to shoot at to warrant a 5,500 ton a day output?"

The quantity mentioned would be adequate for a long period of operation at a rate of 5,500 tons per day. I note that you have referred to economic ore and no doubt mean that the grade is good enough for the ore to be worked profitably. The figures work out to roughly 17 years of operation.

(b) "The average assay of ore produced over 30 years by Granby at Copper Mountain was .71% Cu., .01% Au., 2.35% Silver and 3.25% Vanadium. Is this assay still a suitable economic factor? for open pit mining operations."

Our figures indicate that the Copper Mountain mine mined and milled between 34 and 35 million tons of ore yielding an average of a little more than half the gold you have given, a little more than 1/10 oz. of silver per ton and approximately 0.9% copper. The figures are for metal recovered in the concentrates. Calculated back to the tonnage

....2

of ore the assay of ore for the period would average somewhat higher than the figures I have given because there were some losses in the tailings. We have no record of any production of vanadium or of any credit for vanadium. A large scale open pit operation could probably operate profitably on ore averaging 1% copper, and under favourable circumstances might operate on slightly lower grade material. However, many of the larger mines have been able to start up on somewhat higher grade material and when they have developed their working techniques and have paid off part of the large capital required in the original development and equipment of the mine, have operated on lower grade material. In the early years of operation the Copper Mountain mine recovered 25 to 28 pounds of copper per ton which is about 50% more than the average grade throughout the life of the operation.

(c) "'Cats' fitted with drag hooks experience no difficulty at all in sinking trenches rapidly to 14' in the rotten fractured rock. Could we employ 'Cats' to disgorge 5,500 tons a day?"

I could not advise you specifically in regard to the possibility that caterpillar tractors suitably equipped could produce 5,500 tons per day from your property. It would seem to me that the problem of dealing with unaltered rock which would be encountered at shallow depth is quite different from the problem of digging trenches. Undoubtedly large enough caterpillars could handle 5,500 tons of broken ore a day but there might be more economical ways of doing so.

Page 4 of your letter reads in part:

"One of the things we are anxious to know is whether we shall have to prove drill to 100' altitude differential factor, mentioned on page 3 : or whether we can take it for granted that the ore is present".

The only comment that I can make is that it would not be prudent to count on any tonnage as established until it has been explored adequately. The 100' depth you refer to may not seem very much and it may well be that ore does extend through that dept. However, until testing has been done there remains a considerable degree of risk.

Yours truly,

H. Sargent,
Chief, Mineralogical Branch.

HS:md

2627 Ottawa Avenue
West Vancouver B.C.
Nov. 11th 1960

Dear Dr. Carr:

I should be grateful if you will please let me have back the maps and reports by Dr. Sherl: Concerned with the Deep Gulch mining property you visited in 1959. I now need them.

I have just read your report in the 1959 Minister of Mines annual report, with interest and found it good.

In 1960, we spent some $26,000 at Deep Gulch. The Company has been renamed Copper Mountain Mines Ltd. Since June 1960 Norman Kelly, for Geophysical Explorations of Toronto, spent 3 months Conducting a geophysical survey between June and Sept 1960 and we simultaneously conducted two additional geophysical surveys. The general result was that some 60 anomalies were discovered and the area of interest was increased from 2,500'x 1,200' to 5,500'x 3,000' The Geophysical Surveys shifted our center of interest out of the Gabbro: across the Contact in to the Nicola Volcanics and in September and October we did 1,000 feet of diamond

drilling: of which about 375' was in the Nicola rocks. A good deal of mineralization of ore value was revealed in the drill cores and one hole in particular, No 4 drill hole, produced excellent results. No 4 Drill hole was sunk on the Western flank of the swamp area, near the main fault and the Contact of the gabbro and the Nicola Volcanics. The drill penetrated dark grey limey banded tuffs in good ore and the general indications were that a massive Copper field had been discovered. I wanted to sink the drill deeper: but as I had Notified the Mutel Diamond drilling Company, that the Contract would cease at the end of 1000' of drilling and Mutel had committed his two drills to jobs elsewhere, we had to stop drilling. We have not yet had our drill cores split or assayed: but Dr. Shenk will do this shortly.

We now propose to systematically drill along the Contact on its Nicola flank, over a 3000' frontier in May 1961. I showed also like to drill in to a huge Anomaly that extends along the Nicola – gabbro contact, as far as Friday Creek. This Anomaly is still some 2,300' wide, at the limit of our three Geophysical Surveys in 1960.

A Curious feature emerging out of the Geophysical surveys was that the inference of the surveys postulated that we had grown our trenches in the wrong areas. However, I am a bit tired of exploration by 'Cat' cut- trenches: as we now have 18,600' of trenching.

We Cut several miles of 'Cat' road and after much struggling, we made a road to the Similkameen River bed in the Gorge and built a bridge over the river, to provide access to a diamond drilling rig, whence we drilled a high grade Bornite showing in an ancient adit, at the junction of the Yale Crown granted 59 & 60 claims. The drill went through a brief showing of Bornite and after 100 feet of drilling we were none the Wiser!

NEW OCCURRENCE ?

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The diamond drilling results in the Nicola Volcanics at Deep Gulch, together with the general agreement of the three Geophysical surveys that a vast mineral area exists along the Nicola - Gabbro contact. Our projected exploration in 1961 should produce most interesting results and I hope you will pay us a visit at that time.

Yours sincerely

R. Colliedew

Hotel Princeton,
Princeton, B.C.
June 3rd, 1961,

Information - Deep Gulch - R. Collishaw.

" The following gives a summary of the work completed at Deep Gulch to the end of 1960:-"

a. 18,600 feet of 'cat" cut trenches: i.e. 56 trenches

b. Three geophysical surveys completed, one of them by Geophysical Exploration Ltd. of Toronto.

c. 12 drill holes completed.

d. 7 miles of 'cat' roads made, to provide access through the woods for geophysical instruments.

e. $28,100.00 spent at Deep Gulch in 1960: on development and exploration work.

The following addition work has been done in 1961:-

a. Two additional geophysical surveys has been completed.

b. A diamond drilling program is being conducted by the Hamelin drilling company and is now in progress. Two drill holes, one 330' and the other 500 feet, have been completed and a third hole is now being started. (~~not being drilled - R C letter June 3rd '61~~. was being drilled during visit, June 15th.)

c. By the end of June 1961, about $9000.00 will have been spent at Deep Gulch this year, in development work."

R. Collishaw.

Copy

Care General Delivery
Desert Hot Springs
California U.S.A.
Feb. 3rd 1962

Dear Carr:

Thank you for your Jmc: In dated Jan 29th 1962.
Yes, No 3A Drill Hole located near the Highway at Deep
Gulch, discovered the Deep Gulch fault at about 275 feet.'
We already knew from the combined inclinations of No 15 D.H.
(-60° Westerly) and the earlier 3A (Vertical) that the Nicola
strata in the neighborhood was dipping S.W. at 30° and
the fault appeared as expected, at 275'.

Faulted material with intervening sections of intrusive
rock continued between 275' and 320'. Below 320' the
drill continued in Nicola rock of a character which
seemed to me to be continuously Andesite down to
530 feet. There was only scant mineralization in the
rock normally: but some minor sections of Chalco appeared
near the bottom of the hole at 530'.

Thus, from the evidence of No 3A Drill Hole, it can
positively be stated that there is NO inclined Nicola-
gabbro contact in the main fault at Deep Gulch, as
postulated by Dr. Sheel. The fault is, indeed, inclined

at 30° to the S.W. but the only evidence of gabbro or any intrusive was in the section of the faulted material between 295' and 320'.

The continuation of Andesite down to 530' was a disappointment to me and the presence of the thick mantle of andesite on the flank of the Copper mountain stock on its Western flank: probably explains why No mine of significance has emerged in the general neighborhood. I now think that the mantle of Andesite covers the whole region from Deep Gulch Northward as far as Whipsaw Creek, to an elevation of 3500'. Mining operations in this general region have shown that Copper mineralization is confined to sheared zones, wherein Chalco attends with monzonite.

The 16 drill holes we have projected at Deep Gulch have all been confined to the Southern half of the trenched Zone. Of the 16 drill holes, two were put down in the Nicola rocks and 14 in the Gabbro region. Generally speaking, the holes in the Gabbro produced much more ore than those in the Nicola. The ore in the Gabbro was in short sections of about 10'

and due to detachment, one section from another. These sections were uneconomic for mining operations.

The whole Northern half of the bimeted zone at Deep Gulch is as yet unexplored by any drilling and we shall try to drill therein in 1962. The most Northern region of the bimeted area abutting Deep Gulch could be looked upon as inticing to drill in, because the area is Completely bottled in on all four flanks by faults.

Deep Gulch has been a flop, so far as Geophysical anomalies are Concerned. We produced some 56 anomalies, some of which were Compounded Geophysical anomalies in which at least 5 different Geophysical surveys were in agreement as to sites. We drilled fruitlessly into 16 of these Compounded anomalies. The demon of the piece was in all cases, white iron pyrites: which provided the sulphided reaction. The attendance of magnetite waxed and waned with increased and lessened pyrite. This experience was unexpected, as there was scant history of pyrite in Copper Mountain mine experience.

When things began to go wrong at Deep Gulch, Dr. Short blamed it on the fact that I had drilled

Sherwin Kelly's anomalies rather than drill his recommended sites and projections. In 1961, we drilled three of Dr. Sterle's recommendations and the answer was absorbite. Having now drilled in both the Nicola and the Gabbro, we have now satisfied all the earlier contending geological opinion. accomplishing this was quite a feat, as we took advice from five geological Consultants. One school of thought declared the deed to stay in the Gabbro: while the other school were adamant in Condemning the Gabbro: in favour of the Nicola. As it turned out, the answer to both was unrewarding.

A lot of money, time, and effort has been expended on the neighboring Friday Creek property, in the form of lengthy tunnels and much drilling. The general result at Friday Creek, was a repitition of the experience at Deep Gulch.

I have purchased a copper property from the Ashley brothers of Princeton which lies on Rabbit mountain, 3 miles N.W. of Tonlameen, B.C. and I shall be developing this property in the forthcoming Summer. I shall let you know of this later.

my wife and I have been in Desert Hot Springs for two months and we expect to be here for another two months. This is the real winter life! one can go around all day in bathing trunks: in and out of a natural hot water mineral pool. Desert Hot Springs lies about 10 miles from Palm Springs and while everything is expensive at Palm Springs, it is relatively reasonable hereabouts. Some 10,000 people move out from Los Angeles at the week ends and live in motels at Palm Springs and Desert Hot Springs.

No, I do not want the 100' map of Deep Gulch made by Dr. Eberl. What I was looking for was the Geological Report on Deep Gulch by Dr. Eberl: which was mislaid: or lent to someone.

Yours sincerely

Raymond Collishaw

Summary of Work done at Deep Gulch by Copper Mountain Mines Ltd. in the period 1958-1961

(a) 16 Drill Holes in 3,028 feet of drilling.

(b) 65 trenches average depth 10' and 17,800' long

(c) 7 miles of 'cat' cut roads made to provide access by geophysical instruments through the woods

(d) Four geophysical surveys conducted using different methods. 17 claims intimately surveyed.

(e) Channel samples taken from the floors of 4,225' of trenching for assay.

(f) Copper Mountain Mines owns 48 mineral claims at Deep Gulch - None are under option.

(g) Average Crew employed = 3 - April to November

(h) Registered Company address of Copper Mountain Mines Ltd.
1500 Marine Building
355 Burrard Street
Vancouver B.C.

Feb. 3rd 1962

R. Callaghan
President
Copper Mt. Mines Ltd.

Hotel Princeton
Princeton B.C.

June 15th 1961

Dear Dr. Carr:

While your visit to Deep Gulch is fresh in mind, I thought you might like me to make a resumé of the property as a mining potential from my point of view. In thinking of the layman's outlook, one has to recollect that the Consulting Geologist pays a fleeting visit and then disassociates his mind forthwith, to consider other properties. In addition to Dr Sherl, we had employed five other Geologists in the past three years. The general result was that: while Dr. Sherl was intent upon exploration exclusively in the Gabbro — all the other Geologists wanted to ignore the gabbro and to concentrate upon exploration in the Nicola.

Dr. Sherl believed that by deepening the trenches in the Nicola one should penetrate through secondary ore and reach primary ore in solid rock. Consequently, the trenches were deepened to 12 feet without any real response. Dr Sherl's Conception was later proven unfounded by a series of diamond drill holes in the gabbro. The general consensus of opinion of Geologists was that the secondary ore exposed in the trenches at the places where the North-Easterly shattered Zones crossed them, was that the secondary ore was simply a Veneer which was water borne through the shattered Zones downhill out of the Nicola rocks.

The fact that water does flow down these shattered zones was proven by the use of dyed water. The fact that the moving water also carried sulphides was proven by electro magnetic responses of the same shattered zone sites when tested in the late spring and late autumn. In Autumn, the electrical recordings dropped by 20%.

No 16 Drill hole, which you saw being projected: was bolstered by the following factors (a) It was marked on Dr Sherlock's 40' to 1" map as his most likely region of ore. (b) It was a Sherwin Kelly anomaly and a electro magnetic anomaly. (c) It was both a dip needle and a magnetometer anomaly (d) It was started in high grade tonalite and designed to pass under 50' of .79% Cu in No 7 trench.

No 24 Trench assayed 2.20% massive trench flow channel sample over 280' — yet, when we drilled under 24 trench, the drill cores produced only 22 feet of ore.

No 14 Drill hole was in an area of completely new zone of exploration and located some 700 S.E. of any zone previously explored. Bedrock was reached at 37 feet in tonalite. No 14 Drill hole was selected after an exhaustive Geophysical series of test and study. It was collared in an area which produced the highest responses in every way. Nevertheless, No 14 D.H.

was an utter failure from start to finish, at a drill length of 500 feet. A feature which has had No Geological explanation as yet, is the presence of three magnetometer anomalies in the Granitic rocks. (a) One centered by No 14 D.H. in the monzonite (b) One centered by No 16 Drill Hole in the Gabbro (c) The most electrically intense anomaly centered 350' South of No 16 Drill hole. This latter anomaly produced magnetometer responses of 26,000 gammas. In sharpf contrast to this, responses in the Nicola Zone have not exceeded 24,000 gammas. This, of course, could be explained because magnetite is near the surface in the gabbro and deep down below the andesite in the Nicola rocks.

Leaving quite aside the 22' - 41' - 51' etc of ore produced in drill holes in the Gabbro zone and the 50', 40', 20' + 10' etc of secondary ore exposed in the trenches in the Gabbro. The only place where drill holes did not reach the bottom of the ore was in the 100' wide shear zone lying between the Gabbro and the Nicola. Six drill holes have been sunk in this zone and all have experienced the same results: Very shattered rocks, very hard to penetrate with a diamond drill, because the substance of the rocks turns in to a gummy compact, which prevents water circulation through the core barrels. The conditions

were so bad that 100' of casing was only good enough to permit a foot of penetration: before the rods had to be pulled to free the water circulation. Each drill hole sunken in this shear zone is certain to be a big bear to the drillers.

Evidence that ore exists at depth on the Western Nicola flank of the Shear Zone was obtained in N054, 1A and 1 Drill holes. all were sunk continuously in Gabbro. In N04 D.H. sunk vertically to 280'- the last 100' was in so-Called micro gabbro with Chalco response of about 1% Cu. We have not yet had the Cores of these drill holes assayed and the result was obtained by grab samples from the Cores. ~~20'~~ 20' in 1A D.H. was 5% Cu.

It is conceivable to me that the 100' wide shear zone between the Nicola and the Gabbro is a potential open pit mining potential of 1% Cu. The shear zone is about, 2340' long and extends in to Deep Gulch Creek. As the shear zone is known to extend under the Ground level exposures of Nicola: because of the Westerly dip of the Sheared Zone main fault, the actual width of the Shear Zone could be in reality - 200'.

I liked Yours idea of a drill hole designed to penetrate Eastward to discover the actual Contact on the one hand and on the other hand, to probe for ore in the postulated ore trap envisaged by the Nicola overhang.

I have had this idea in mind for two years: but I did not embark upon it because I thought that the dip of the Nicola was 40° N.E. and consequently, on this postulation one would be simply projecting a drill down the dip and getting no where. The discovery that the Nicola dip was in reality, Westerly has in result, been a 'wind fall' for us: because on the one hand we can now drill against the dip and on the other hand, realize that different strata of Nicola will be nearer the Ground Surface near the Contact than will be the case further Westward.

The revelations at Deep Gulch in recent weeks has put a fresh Conception upon the mining potential at Deep Gulch and amongst the newly perceived factors may be mentioned :— Viz.

(a) The so called Magnetite Zone is 'on'. This was an earlier Concept: but the geophysical surveys mislead us to assume interest in this Zone.

(b) The Gabbro Zone is 'on' except for short distances near the Nicola-Gabbro Contact ~~xxxx~~ and then exclusively Confined to the N.E. tending minor faulted fractured Zones.

(c) The 100' wide shear Zone near the Contact is our best bet. This was our original Conception 4 years ago: but we were attracted away from it by misleading clues.

(d) The realm of the Nicola rocks Westward of the Gabbro - Nicola rocks is an unknown world to us at present. according to Fahrni, the observable light green Colored Calcite banded rocks in drill holes and trenches (and called by us a type of Andesite) lie Conformedly upon a dark gray Colored ore bearing strata of Nicola banded ~~band~~ limey tuffs. At Copper Mt. Mine, the light green strata is 222' thick with its base at 3900'. At Deep Gulch the altitude of the highway at the Camp Road entrance is 3900' while the altitude of Deep Gulch Creek is 3645'. The light green Colored rocks lie exposed over the intervening distance of 1650' and difference in altitude of 255' - So, manifestly, a difference in Nicola strata altitudes occurs between Conditions at Deep Gulch and at Copper Mt. Mine.

(e) Manifestly, our best bet to explore the lower reaches of the strata of Nicola at Deep Gulch is to project a drill hole Westward from the floor of Deep Gulch Creek. In this position, we shall start 255' lower than would be the case if we planted to collar a hole near the Camp road entrance from the highway. Confronting this idea, is the only geophysical aid we possess is the Shamrock Kelly anomaly: Which embraces the area of the Camp road entrance area.

(4) All the ore taken at Copper Cat mine, was taken between 2900' and 3,900' – (even the open cuts were sunk to this altitude i.e 3900' to get ore) and incidently, the same altitude horizons apply at Craigmont and on the old Phoenix area. One can postulate therefore, with some reason, that any ore field discovered at Deep Gulch will be embraced by the same altitude limitations. I interpret the altitude limitation to signify that, at one time, the land at these altitudes was at common shallow sea bottom level, when the banded tuffs comprising volcanic ashes and sea life limestone, were formed and later upheaved. Curiously enough, these present altitudes also embrace the Caribou Gold Quartz mine: in schist.

My present intention is to close down Deep Gulch in a few days. On the one hand, to give my weak right foot a rest, and on the other hand, to provide an interlude in which to digest what fresh information has been made available, with a view to making a fresh onslaught on the drilling problem in the Autumn.

I quite enjoyed your visit and wished it could have been more extended.

Yours sincerely

Raymond Callahan
