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M.D.R.	<input type="checkbox"/>
J.H.F.	<input type="checkbox"/>
E.C.J.	

To G.M. Hogg  
 ROLLING HILLS COPP  
 Subject Cache Creek Area C

Rolling Hills Copper mines Ltd

Cache Creek Highland Valley

April 19 1971

E  
recommends

Dr. Seraphim's contention is that the intrusion which extends from Bethlehem's property into the Rolling Hills ground has not been adequately tested along its southern contact. He has, therefore, proposed seven additional drill holes to be drilled from north to south along the power line which crosses the property. The reason for selecting the power line location is to avoid problems with the surface rights which are held by a rancher.

I disagree with Dr. Seraphim's programme because Bethlehem had previously drilled three rotary drill holes on the property, one of which was in the centre of the intrusion and another was located close to the south edge. The third one did not reach bedrock. The two holes which did reach bedrock tested the intrusion to depths of 200 and 300 feet and obtained copper values in the order of .03 and .04%. Quite apart from the Bethlehem drilling, there are thirteen other drill holes on the property, one of which penetrated the intrusion to a depth of 240 feet. The others were in the altered zone adjacent to the intrusion or well out in the unaltered Cache Creek rocks.

To simplify perusal of the map, the Bethlehem holes are designated PMM 1, 2 and 3. As far as I know, all of the other holes were drilled by Rolling Hills, and there is a summary of the results in Seraphim's report. Suffice it to say that none of them approximated ore grade.

Apart from the above considerations, there is a motel area shown on the map for which Rolling Hills has no mineral rights because that ground (DL 95) was awarded to someone many years ago under the so-called Soldier's Settlement Act.

I have drawn a hypothetical ore zone with a radius of 500 feet which would contain 75 million tons to a depth of 1,000 feet and the perimeter of that hypothetical pit would extend to the Miocene bluffs on the east and into the motel area on the west. If the hypothetical zone were moved further south then it would come to

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To G.M. Hogg

From W.M. Sirola

Subject Rolling Hills Copper Mines Ltd. - PAGE 2

Date May 11, 1971.

the east edge of the main highway.

It could be argued that deeper drilling on this property would produce better values, but it would also produce greater stripping ratios, and since this is potentially a low grade area I am unable to recommend work on the Rolling Hills ground. It seems to me that the likelihood of locating a mineable deposit is not good in view of the work which has been carried out and in view of the limited width between the Miocene rocks and the highway.

WMS/jm  
Encl.

*Bill*  
W.M. Sirola.

*I agree with  
Bill Sirola's negative  
recommendation*

*W.M. Sirola May 13/71*

*Agreed  
T.M.K.  
May 13/71*

MAR 30 1972

**KERR ADDISON MINES LIMITED**

(FOR INTER-OFFICE USE ONLY)

92 I

*attach to previous corr.*

To MR. G. M. HOGG

From MR. W. M. SIROLA

*April 72*

L.H.S.	
P.M.K.	✓
G.M.H.	✓
R.D.S.	
B.C.B.	
I.D.B.	
M.D.R.	
J.H.F.	
(E.C.J.)	

Subject ROLLING HILLS PROPERTIES, KAMLOOPS, B. C.

Date March 28, 1972.

The question was raised yesterday during our telephone conversation as to what my recommendation is for the Rolling Hills property. My recommendation is negative for the following reasons:

1) I think we should be prepared to deal in competition for those properties with an established ore reserve, such as Afton and Leemac, but we should not deal under difficult terms for those properties such as are held by Rolling Hills, which are, in a sense, raw prospects.

2) An example of difficult terms would be the Cherry Creek portion of the Rolling Hills ground, for which Cy Keyes is asking the following terms:

- (a) \$25,000 cash for a 50 claim block, or \$500 per claim.
- (b) A \$100,000 work commitment.
- (c) The expenditure of \$500,000 would earn a 50% interest in that particular claim block.
- (d) The 50% interest could be increased to 60% by placing the sum of \$1,000,000 into the Rolling Hills treasury.

Since it appears that this is the type of deal Mr. Keyes is asking for each 50 claim block, regardless of its location, I am unable to recommend exploration of any of the Rolling Hills ground on this basis.

*Bill*

W. M. Sirola

WMS/eh

MAR 27 1972

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

92 I  
attach to

To MR. G. M. HOGG

From MR. W. M. SIROLA

Subject Re: ROLLING HILLS COPPER MINES LTD.  
Kamloops Area

Date March 24, 1972.

✓	J.H.S.
✓	P.M.K.
✓	G.M.H.
	R.D.S.
	B.C.B.
	I.D.B.
	M.D.R.
	J.H.F.
	E.C.J.

Herewith John Lund's summary of the properties held by Rolling Hills Copper Mines Ltd. We investigated this situation in part as a result of your conversation with Cy Keyes in Toronto.

It would appear that in view of the extensive holdings of Rolling Hills, Cy Keyes will attempt to deal the property off in blocks of claims and on each of these he is asking \$25,000 cash plus a \$100,000 work commitment. Payments in the order of \$200,000 are spread over a number of years. In this manner the major company could achieve a 70% interest.

About all that can be said of the Rolling Hills claims is that they are underlain, at least in part, by the same intrusive rocks which have made ore on the Afton and Leemac properties. We have not pursued the matter any further because of the seeming reticence of Kerr Addison to become involved in the Kamloops area. Your instructions to date have been to keep informed but not to become involved beyond that point.

W. M. Sirola

*Have asked for a specific recommendation on this.*

*J.L.*

WMS/eh  
att.

*Note - Leemac deal with Western Mines Ltd involves purchase of 100,000 shares of Leemac at \$3.00, further options for 100,000 shares at \$4.00, 5.00 and 6.00*

*J.L.*

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To..... MR. W. M. SIROLA ..... From..... MR. JOHN C. LUND .....

Subject..... ROLLING HILLS COPPER MINES LTD., ..... Date..... March 14, 1972, .....

Kamloops Properties.

---

Rolling Hills holds three groups of claims in the active Kamloops mining camp. Cy Keyes, who is managing their affairs, advises that the groups will be dealt off in blocks, the size of which will be dictated by what a company wants. Riocanex, American Smelting & Refining, and Cambridge Mines have expressed interest in the property. Riocanex is negotiating for the Countess claim group at Cherry Creek, but want to wait until an examination can be made after the snow has left; A.S. & R. are after the claim group adjoining Leemac on the east, and Cambridge Mines are asking for a small block near the Countess Claims. As I understand from Mr. Keyes, none of the deals are finalized.

On the Countess Group, Mr. Keyes is asking \$25,000 cash plus a \$100,000 work commitment the first year. The optioner would assume Rolling Hills' commitment of \$200,000 to the owners of the claims. Payment of the \$200,000 is spread over a number of years. After spending \$1,500,000 over a 5 year period, the optioner will hold a 50% interest. An additional 20% can be obtained at that time for an additional \$500,000. Thus, after spending \$2,000,000, the optioner can have a 70% interest, with Rolling Hills retaining 30%. Each company would then contribute his share to bring the property to production.

Terms for the other groups were not discussed.

Properties held by Rolling Hills include:

- (a) Countess Claim Group at Cherry Creek.
- (b) Large claim groups surrounding the CM & S property at Jacko Lake and including the Makao deposit.
- (c) A 30 claim group adjoining Leemac on the east.

Countess Claims: Mineralization on the Countess Claims consists of chy, pyrhh, bornite and magnetite in north to northeasterly striking, steeply dipping fracture zones in diorite. The diorite is part of the Cherry Creek intrusion. Production from the crown granted claims (Copper King property) which form part of this group between 1901 and 1940 was 7,460 tons of ore producing 405,700 lbs. of copper (-3%); 1,183 oz. Au (0.15 oz./ton) and 2,290 oz Ag (0.32 oz./ton).

No recent work has been recorded and the geologic description is mainly from Memoir 249 (GSC).

COPY

- 2 -

Dr. Victor Preto, of the B. C. Department of Mines, (M.M. Report 1967 pp. 138) finds a resemblance between the Cherry Creek and Sugarloaf intrusions which implies a close genetic relation. Both rock types are phases of the Iron Mask batholith and are closely associated with mineralization. These two phases are younger than the main batholith. Composition is variable in both but commonly dioritic and porphyritic. The Cherry Creek rocks can be distinguished from the Sugarloaf intrusions by its pinkish cast which is due to a widespread introduction of K-feldspar. The K-feldspar is less developed in Sugarloaf rocks.

Large Claim Block Surrounding CM & S: This group includes the old Makaoo property that has a reported 800,000 tons of 0.8 - 0.9% Cu. The most favourable ground lies south of CM & S claims. These claims are part of a joint venture between Minex and Rolling Hills. This leaves the Makaoo deposit and a zone of unexplored area between Makaoo and CM & S. A soil and IP survey has been done on much of this ground. At least four drill holes have been drilled adjacent to the CM & S property on the north and east. The two holes on the east intersected minor pyrite and magnetite. *→ Those zones to of CM & S.*

The only Cherry Creek intrusive rocks mapped on this block is near the Makaoo deposit.

Claim Group Adjoining Leemac on the East: This group covers a 2,000 foot section of favourable southern contact of the Iron Mask batholith. There is, however, no Sugarloaf rocks which are in part hosts to Leemac, Afton and the CM & S mineral deposits.

SUMMARY AND CONCLUSIONS:

- 1) Host rocks for mineralization in the Kamloops camp are (a) Sugarloaf and/or Cherry Creek intrusions, (b) highly fractured picrite basalt and/or (c) Nicola volcanic rocks.
- 2) Structural controls are fracture and shatter zones.
- 3) Rolling Hills hold 3 groups of claims:
  - (a) Countess claims at Cherry Creek. These include 9 crown grant and 88 located claims straddling the Highway NW from Afton Mines.
  - (b) The old Rolling Hills property surrounding CM & S ground and including the Makaoo property.
  - (c) Thirty claims adjoining Leemac on the east.
- 4) Of the three groups held, the Cherry Creek claims have the most favourable geological environment.

COPY

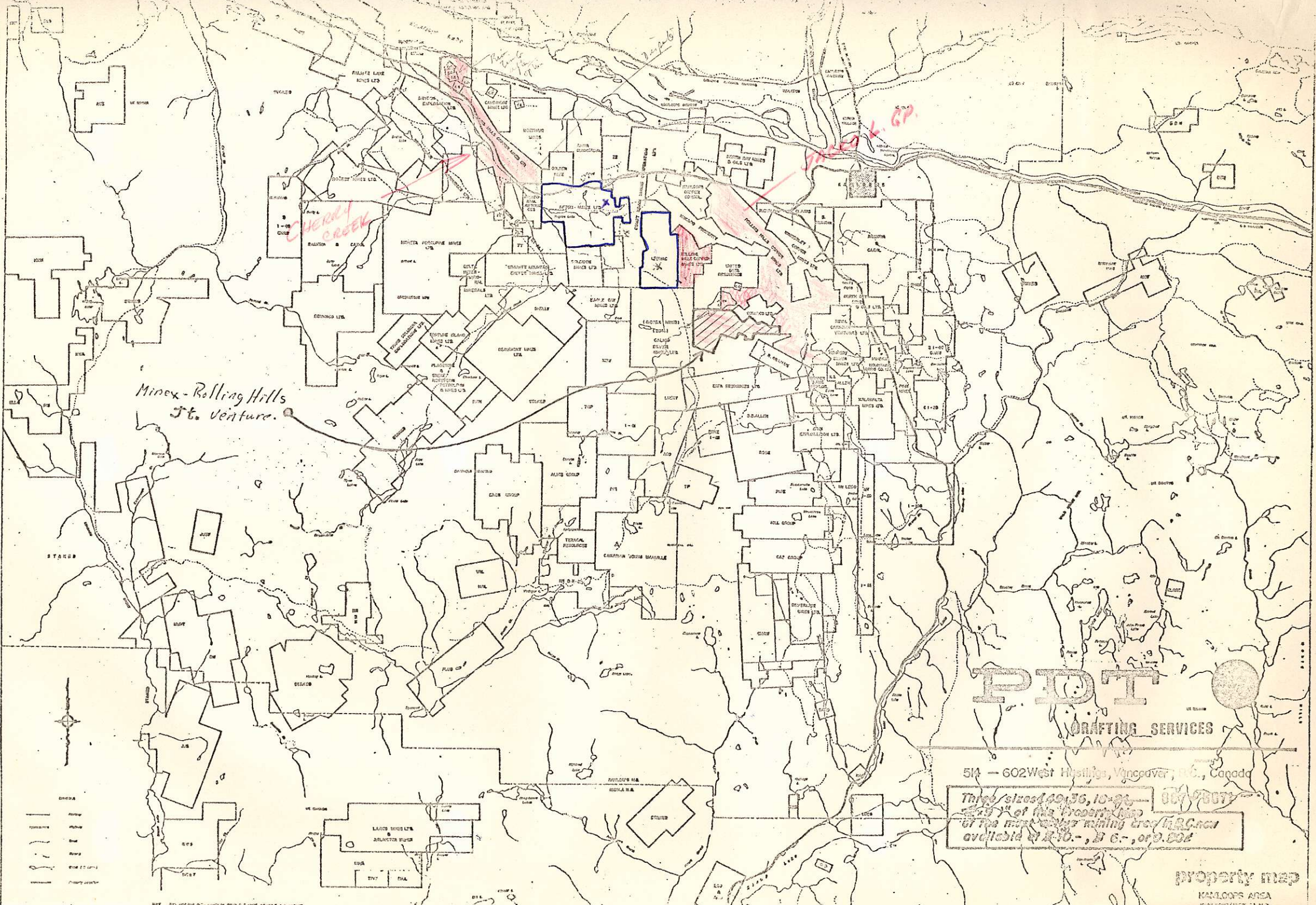
- 3 -

- 5) Riocanex has approached Rolling Hills regarding the Cherry Creek claims but will not deal until they can see the property without snow.
- 6) A.S. & R. are dealing for the 30 claims adjoining Leemac.
- 7) Minex - Rolling Hills joint venture is working the claim block south of CM & S.

If we are to pursue this matter any further, I would suggest that we pursue the Cherry Creek property. Any deal with Mr. Keyes (Rolling Hills) must be equal to or more attractive than that offered by Riocanex. We should, however, examine the property prior to any agreement.

  
John C. Lund

JCL/eh  
att. 3



Minex - Rolling Hills  
St. Venture.

Cherry Creek

Shelby Cr.

**PDT**  
DRAFTING SERVICES

514 - 602 West Hastings, Vancouver, B.C., Canada

Three sizes 49, 36, 10-20  
1/4" of this Property Map  
of the Manloos mining area is available  
at \$10.-, \$6.-, or \$3.50d

property map  
MANLOOS AREA  
SHEET NO. 1001

- BOUNDARY
- ROAD
- RAIL
- STREAM
- POWER LINE

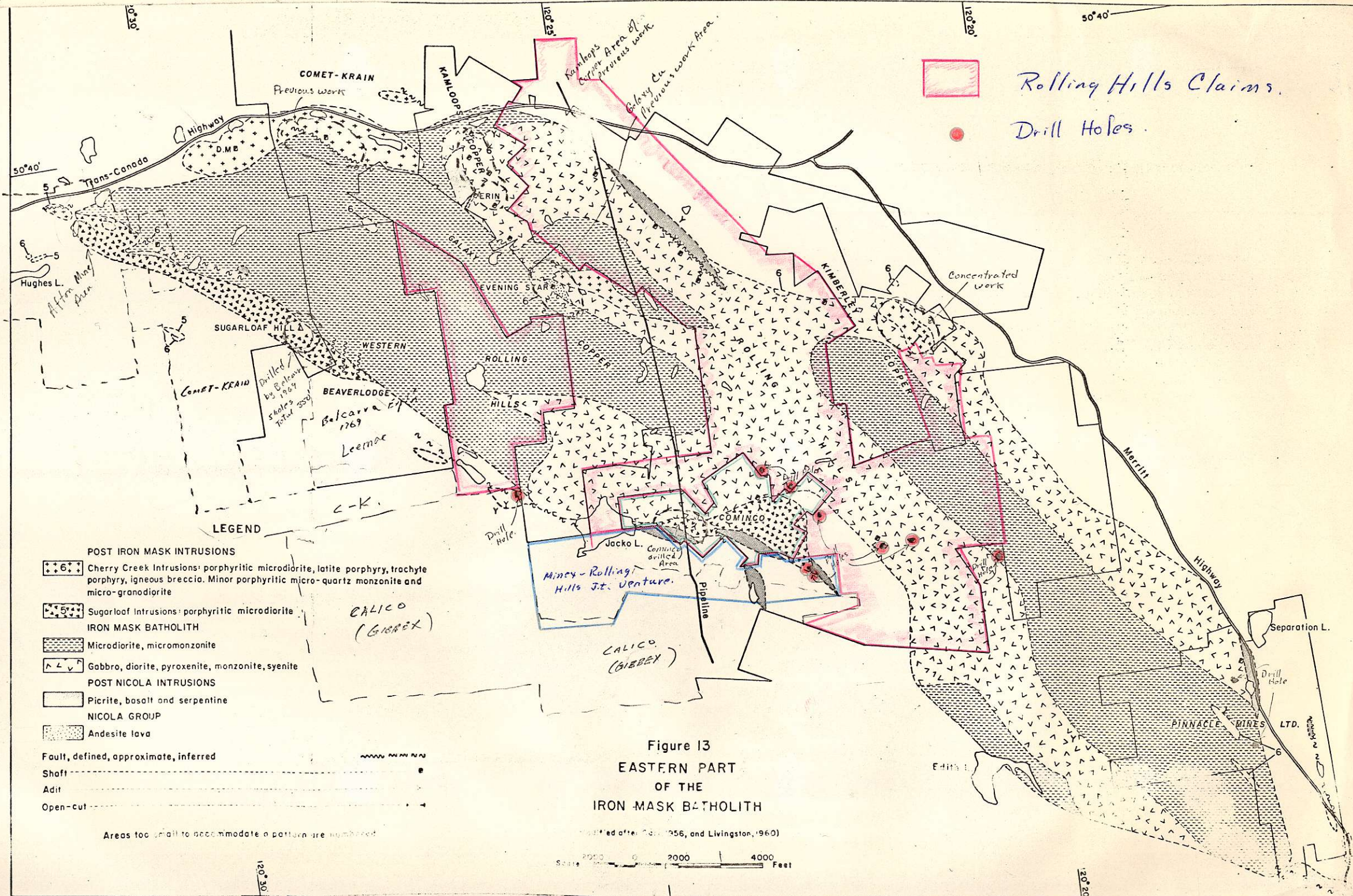




*Location Map  
Copper King property  
Cherry Cr., B.C.*

*1" = 2 mi.*

CHUWHELMS  
MTN.  
6235'



- LEGEND**
- POST IRON MASK INTRUSIONS**  
 Cherry Creek Intrusions: porphyritic microdiorite, latite porphyry, trachyte porphyry, igneous breccia. Minor porphyritic micro-quartz monzonite and micro-grandiorite
  - Sugarloaf Intrusions: porphyritic microdiorite
  - IRON MASK BATHOLITH**  
 Microdiorite, micromonzonite
  - Gabbro, diorite, pyroxenite, monzonite, syenite
  - POST NICOLA INTRUSIONS**  
 Picrite, basalt and serpentine
  - NICOLA GROUP**  
 Andesite lava
  - Fault, defined, approximate, inferred
  - Shaft
  - Adit
  - Open-cut

Areas too small to accommodate a pattern are numbered

**Figure 13**  
**EASTERN PART**  
**OF THE**  
**IRON MASK BATHOLITH**  
 (modified after: 1956, and Livingston, 1960)

Scale 0 2000 4000 Feet

MAY 21 1971

KERR ADDISON MINES LIMITED  
405 - 1112 WEST PENDER STREET  
VANCOUVER 1. B.C.

COPY

92 I

May 19, 1971.

<input checked="" type="checkbox"/>	J.H.S.
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<input type="checkbox"/>	M.D.R.
<input type="checkbox"/>	J.H.F.
<input type="checkbox"/>	E.C.J.

*attach to previous  
of April 1971  
do not update*

Mr. C.C. Keyes,  
President,  
Rolling Hills Copper Mines Ltd.,  
580 Howe Street,  
Vancouver, B.C.

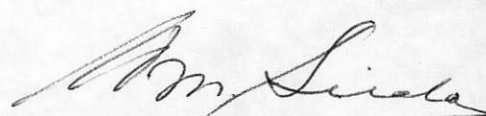
Dear Mr. Keyes:

We have carefully perused the information which you and Ken Spraggs so kindly provided and have come to the somewhat reluctant conclusion that we would not undertake work on the Rolling Hills property at Cache Creek.

We cheerfully concur that there may well be better values at depth on the property, but this would mean higher stripping ratios which would make difficult an economic operation where the indicated grades are of a low order.

It has been a real pleasure dealing with both you and Ken Spraggs, and I hope that we will have an opportunity to do so again. In the mean time, all the best with your efforts on behalf of Rolling Hills.

Yours sincerely,



WMS/jm  
Encl: Report by R.M. Seraphim,  
Rolling Hills Copper Mines Ltd.  
'Maggie Area'

W.M. Sirola.

c.c. Mr. G.M. Hogg - Toronto ✓

APR 20 1971 92 I.

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

J.H.S.
<input checked="" type="checkbox"/> P.M.K.
<input checked="" type="checkbox"/> G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
<hr/>
<u>(E.C.J.)</u>

To G.M. Hogg

From W.M. Sirola

Rolling Hills Copper Mines Limited  
Property near Cache Creek, B.C.

Subject

Date April 19, 1971.

Following our last telephone conversation regarding the Rolling Hills property, I realized that I may not have made clear the fact that the property I examined is not one of the properties that Rolling Hills has in the immediate vicinity of Kamloops, B.C. The property I looked at is ten miles north-west of Cache Creek on the east bank of the Bonaparte River.

The Rolling Hills claims are contiguous with Bethlehem's Maggie property, on which Bethlehem claims to have 100 million tons of better than 0.4% Cu. The porphyritic intrusion in which most of the Bethlehem mineralization occurs, extends through the Rolling Hills ground in a generally eastward direction.

The information I get from Rolling Hills is that Bethlehem had at one time thought they owned what is now the Rolling Hills property and drilled one cross section of holes in a north-south direction across the intrusion and the adjacent Cache Creek rocks. To the best of my knowledge, no assays of ore grade were encountered.

My scrutiny of the material is not complete because four lines of I.P. survey were run just prior to my examination, and I would like to see these results before making a final decision. For the moment my sentiments are somewhat on the pessimistic side, and this impression results from lack of ore grades in the drilling completed to date, lack of surface rights to the property, which is owned by a somewhat hostile rancher, and the need to effect a costly new route for the main highway and transmission line through the area if something of importance were found. I recognize at the same time, of course, that there are definite advantages to being that close to a main highway and a power line.

The new President for Rolling Hills is Cy Keayes, and he is in the process of re-organizing the assets of the company and was not prepared to discuss a deal for the Cache Creek property as a separate entity. However, I am quite sure he could be brought around to doing this if the technical picture justifies so doing.

# KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To G.M. Hogg

From W.M. Sirola

Subject Rolling Hills - PAGE TWO

Date April 19, 1971.

I will send you my final impressions as soon as I have seen the I.P. data.

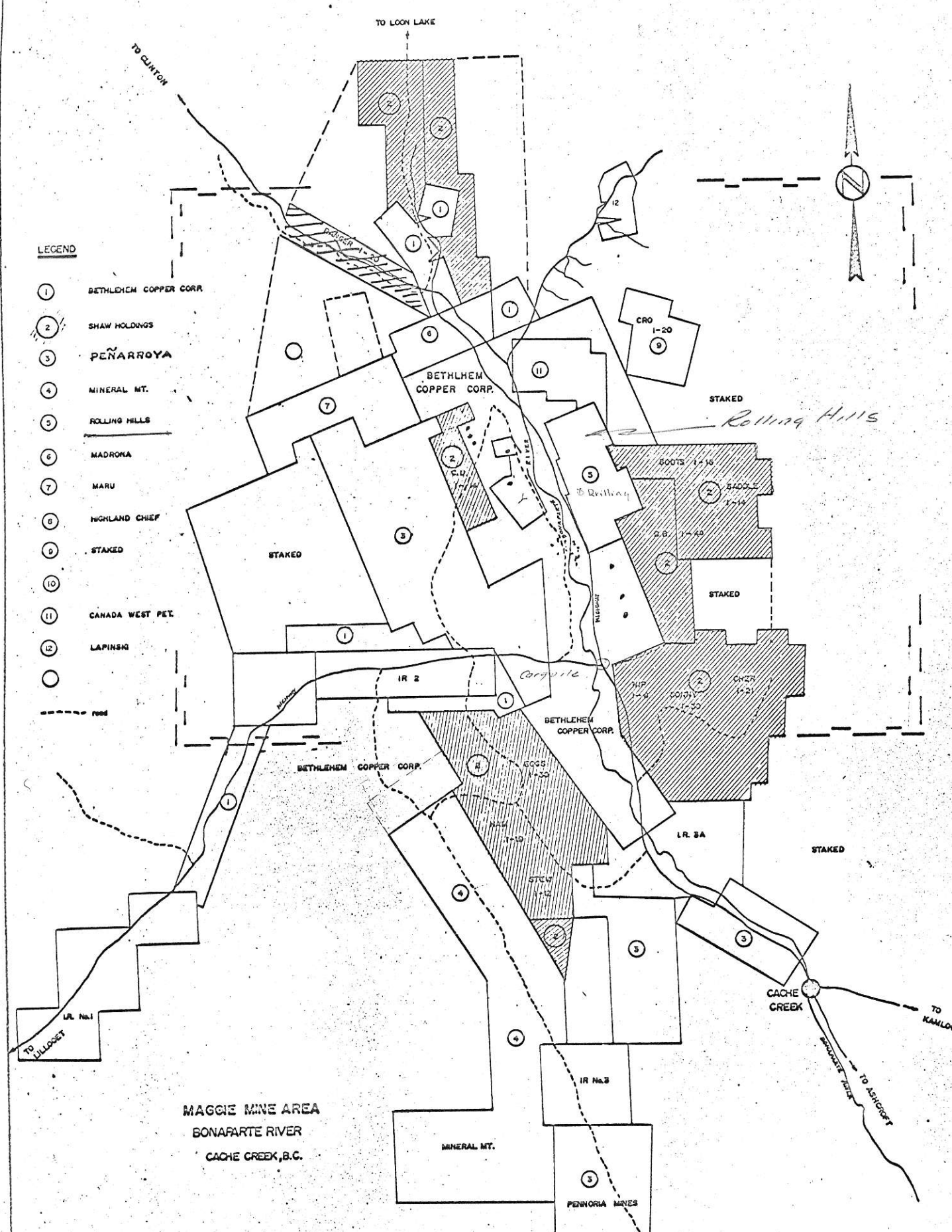
WMS/jm  
Encl.

*Bill*

W.M. Sirola.

*I have been discussing this matter with Bill Sirola in the current sense, and we will have to wait for his recommendations for evaluation.*

*WMS*  
*April 20/71*



**LEGEND**

- ① BETHLEHEM COPPER CORP.
- ② SHAW HOLDINGS
- ③ PEÑARROYA
- ④ MINERAL MT.
- ⑤ ROLLING HILLS
- ⑥ MADRONA
- ⑦ MARU
- ⑧ HIGHLAND CHIEF
- ⑨ STAKED
- ⑩
- ⑪ CANADA WEST PET.
- ⑫ LAPINSKI
- 
- road

Telephone: Office 685-2914  
Res. 224-7309

R. H. SERAPHIM ENGINEERING LIMITED  
Geological Engineering

316  
~~427~~ - 470 GRANVILLE STREET  
VANCOUVER 2, B.C.

ROLLING HILLS COPPER MINES LTD.  
BUG ETC. CLAIMS  
'MAGGIE' AREA  
CACHE CREEK, B.C.

May 4, 1971.

by

R.H. SERAPHIM, Ph.D. P.Eng.

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MAPS

LOCATION MAP - 10 miles = 1 inch.....	4A
CLAIMS, GEOLOGY, DRILL HOLES Etc - 500' = 1 inch...	Back Pocket



R. H. SERAPHIM ENGINEERING LIMITED

Geological Engineering

316  
~~427~~ — 470 GRANVILLE STREET  
VANCOUVER 2, B.C.

ROLLING HILLS COPPER MINES LTD.

BUG etc. CLAIMS

'MAGGIE' AREA

CACHE CREEK, B.C.

SUMMARY, CONCLUSION, and RECOMMENDATION

The Rolling Hills claims lie within one or two thousand feet of the 'potential ore body' being drilled by Bethlehem near the old Maggie mine. The porphyry intrusive which hosts the copper mineralization continues onto Rolling Hills claims. A group of drill holes on Rolling Hills claims has explored part of the north contact of the porphyry, but the main part of the porphyry and the south contact are tested by only two percussion holes, which are approximately 1000 feet apart. The southmost of the two holes, 170 ft deep, did not reach bedrock.

The most practicable way to test the ground on the trend of the intrusive and Bethlehem's mineralized zone is by further drilling. If percussion or rotary holes can be used to penetrate the hundred feet and more of overburden, and continue through several hundred feet of bedrock to say 500 ft depth, then this method of drilling might be used. The alternative is diamond drilling. A series of holes is recommended at say 300 to 400 foot intervals between PMM 3 and PMM 2, and continuing southerly as far as the intrusive and its halo extend on the claim group. At least seven drill holes will likely be needed. The cost of seven holes to 500 ft depth at approximately \$15.00 per foot (overall cost) would be roughly \$52,500.

#### INTRODUCTION

The 'Maggie' area was examined initially in October, 1970. A second examination was made on April 24, 1971, under the guidance of Mr. K. Spraggs of Rolling Hills. Some conversation with other exploration personnel working in the district added materially to the knowledge concerning the mineralization in the area. Much of the data compiled herein are taken from the files of Rolling Hills Copper Mines Ltd., and this data is accepted as correct.

CLAIMS

The claims controlled by Rolling Hills in the area are listed as follows:

Claims in Kamloops Mining Division at Cache Creek-Owned outright

Gossan 1	90085	July	13/75
Gossan 2	90086	July	13/75
Gossan 3	90087	July	13/75
Gossan 4	90088	July	13/75
Gossan 5	90089	July	13/75
Gossan 6	90090	July	13/75
Gossan 7	90091	July	13/75
Gossan 8	90092	July	13/75
Gossan 9	90093	July	13/75
Gossan 10	90094	July	13/75
Gossan 11	90095	July	13/75
Gossan 12	90096	July	13/75
Gossan 13	90097	July	13/75
Ira 1 Fr.	91877	Sept.	28/75
Ira 2 Fr.	91878	Sept.	28/75
Goss 1 Fr.	91880	Sept.	28/75

Claims in Kamloops Mining District-held under option to purchase

Bug 1	87453	Mar.	16/75
Bug 2	87454	Mar.	16/75
Bug 3	87455	Mar.	16/75
Bug 4	87456	Mar.	16/75
Bug 5	87457	Mar.	16/75
Bug 6	87458	Mar.	16/75
Bug 7	87459	Mar.	16/75
Bug 8	87460	Mar.	16/75
Bug 9	87461	Mar.	16/75
Bug 10	87462	Mar.	16/75
Bug 11	87463	Mar.	16/75
Bug 12	87464	Mar.	16/75
Bug 13	87465	Mar.	16/75
Bug 14	87466	Mar.	16/75
Irish 1	88730	May	11/75
Irish 2	88731	May	11/75
Irish 3	88732	May	11/75
Irish 4	88733	May	11/75
Irish 5	88734	May	11/75
Irish 6	88735	May	11/75
Pit 1 Fr.	90536	Aug.	4/75
Pit 2 Fr.	90537	Aug.	4/75
Pit 3 Fr.	90538	Aug.	4/75

The location of these claims is shown on the accompanying composite plan (500 ft to the inch). The mineral rights on the parts of the claims which cover the District Lots (D.L. 95 etc) are not completely determined.

OWNERSHIP

"Rolling Hills Copper Mines Ltd statement dated 4 Aug 70 filed with Vancouver Stock Exchange says that by 24 July 70 agreement, the company has acquired from John B. Lepinski of Ashcroft B.C., options to buy a total of 33 claims adjoining a property presently under active exploration by Bethlehem Copper Corp Ltd., some nine miles N of Cache Creek B.C. for \$153,000 (of which 3,000 has been paid and 25,000 is payable in each of six years commencing 24 July 70) plus 100,000 shares to be issued forthwith and subject to a royalty of 2½% of net smelter returns" George Cross News Letter, August 19, 1970. Lepinski acquired the ground when he discovered that some of Bethlehem's original claims were invalid.

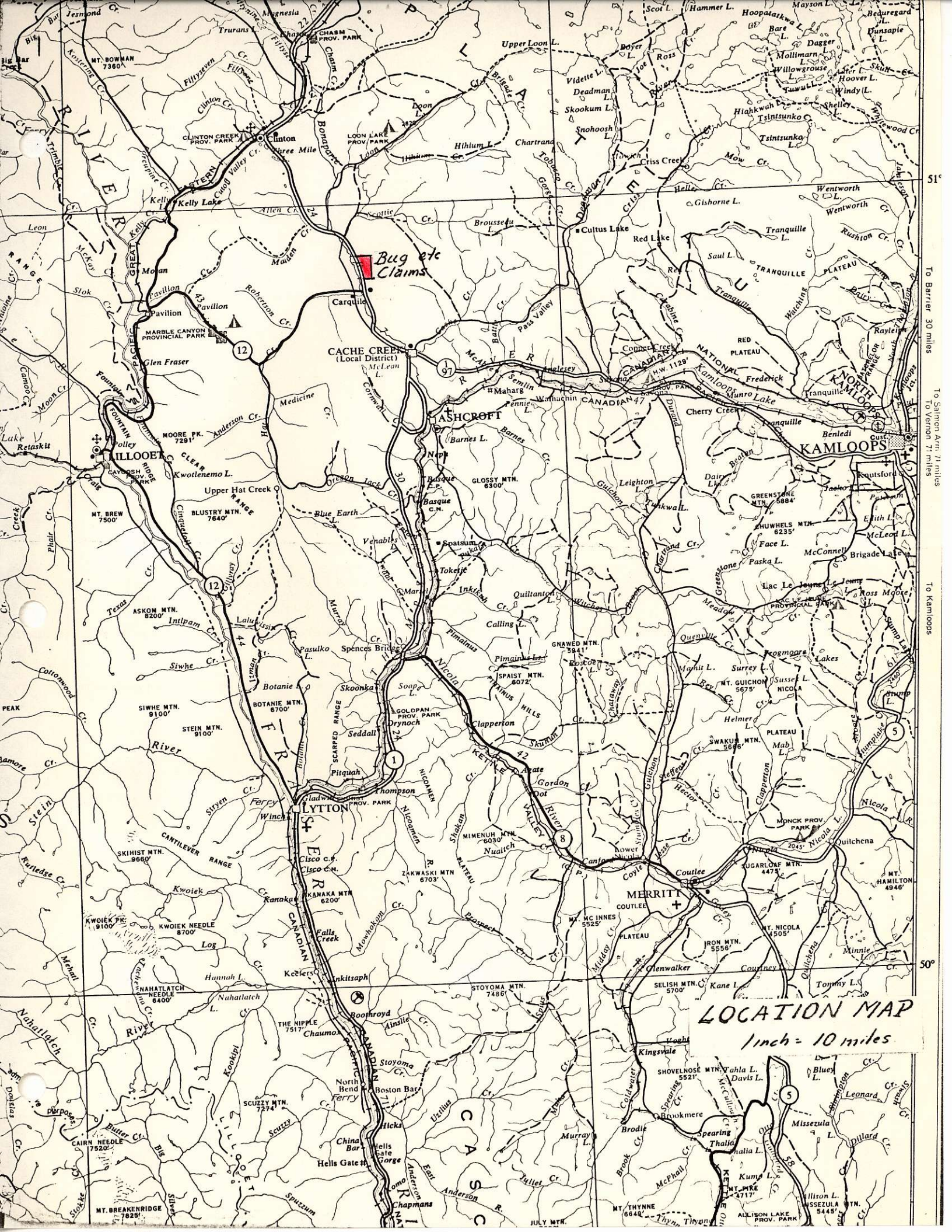
Directors and officers of Rolling Hills are:

C.C. Keyes - president  
G.D. MacDonald - managing director  
F.W. Charlton  
A.C. Armour  
A.R. Belanger  
H.L. Jestley - secretary

The former president, and one of the largest shareholders, R.G. Campbell, died recently.

LOCATION, ACCESS, TOPOGRAPHY

The accompanying map shows the location with respect to Ashcroft and to Kamloops. The property is unusually well located with respect to water supply, timber, power, and housing facilities. The claims are on the west facing slope of the Bonaparte Valley. The Cariboo Highway and the power line pass through the westmost claims in the group.



Bug etc Claims

LOCATION MAP  
1 inch = 10 miles

51°  
To Barrier 30 miles  
To Salmon Arm 71 miles  
To Vernon 71 miles  
To Kamloops

50°

HISTORY

The history of the property is outlined in the following press releases:

**INTERIM REPORT  
ON EXPLORATION OF  
THE MAGGIE PROSPECT**

**Location**

The Maggie property is located in the Bonaparte Valley, immediately west of Highway 97, approximately 10 miles north of Cache Creek, British Columbia (see map — reverse side).

**History of Property**

Mineral was discovered on the Maggie property at the turn of the century when approximately 1100 feet of drifting was done on a shear zone. Some fifty tons of selected ore was shipped to the Ladysmith smelter, assaying 2 ounces of silver per ton and 8% copper.

Major mining companies drilled the property in 1952 and in 1964. Only weak mineralization was encountered.

In 1968, Bethlehem drilled five percussion holes in the southwest part of the property and intersected trace values of silver and copper.

**Current Exploration**

In the past five months, under the direction of Mr. H. G. Ewanchuk, P. Eng., Vice-President of Bethlehem, a series of percussion drill holes followed by seven diamond drill holes were completed on the valley floor to the east of the pyritic zone on which the previous exploration had been done. This program

outlined a potential orebody approximately 2800 feet in length and 800 feet in width. The inferred tonnage of ore in the zone is estimated to be at least 100 Million tons of copper/molybdenum mineralization with a copper equivalent greater than 0.40% Cu.

**Current Plan**

The following work will proceed immediately:

- (1) Continuation of the drilling program by employing two diamond drill rigs and one percussion drill;
- (2) Metallurgical tests to determine recoveries of the minerals in the deposit;
- (3) Golder Brawner & Associates Ltd. of Vancouver is retained to provide a preliminary geotechnical evaluation of the area.

Our technical staff is being assisted by Mr. J. David Lowell, Geological Consultant of Tucson, Arizona, who has visited the property on several occasions and will continue to do so.

The current exploration program will extend over a four-month period. The next progress report to shareholders will be prepared in about eight weeks' time. Included herewith is a general area location map. Our next report will contain a map showing more detail of the specific area being explored.

August 24th, 1970. **Patrick M. Reynolds**  
President

*PROGRESS REPORT  
ON EXPLORATION OF  
THE MAGGIE PROSPECT*

Exploration of the property has progressed satisfactorily and continues to indicate the presence of a substantial orebody.

Since the report of August 24th, 1970, nine percussion drill holes and nine diamond drill holes have been completed. Total percussion drill holes has now reached 57 for a total of 16,949 feet. Total diamond drill holes is now 15 for a total of 14,232 feet. The diamond drill holes were positioned to test the continuity of the mineralized zone and current drilling will provide additional data in critical areas. Average grade will be established upon completion of the program.

Computerization of all current geological data and assay values will be undertaken by the firm of Meyer and Banfield of Tucson, Arizona.

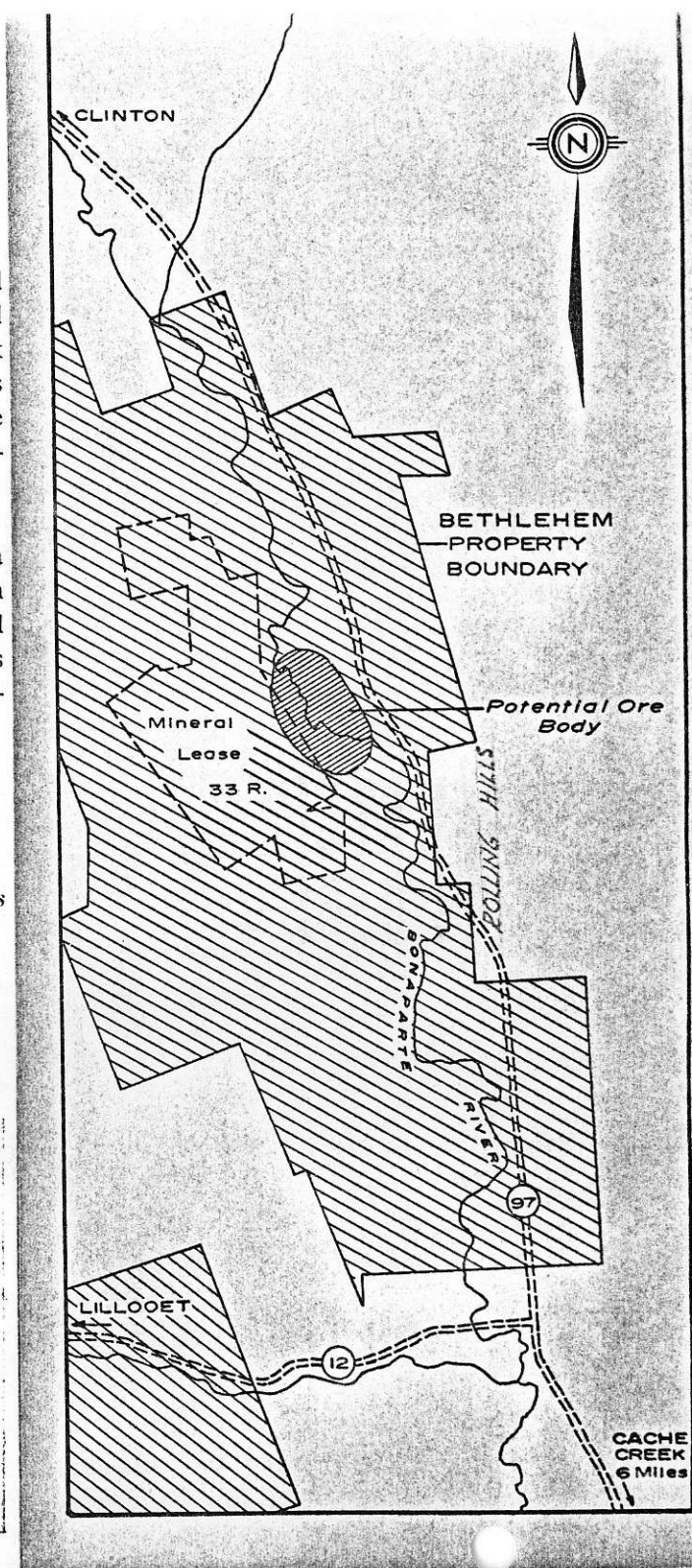
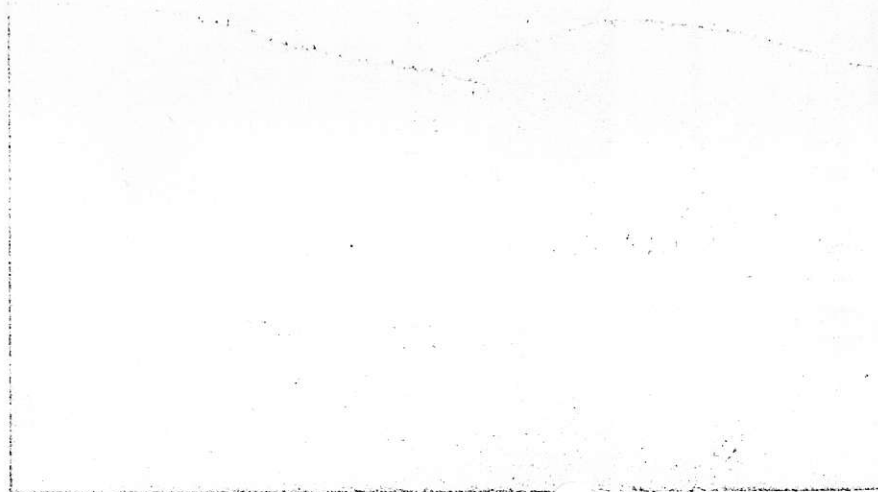
Metallurgical tests have been initiated at our Mine Laboratory and the ore was found to be highly responsive to flotation of a bulk concentrate. The next phase in the program is designed to investigate methods for separate production of copper and molybdenum concentrates.

The map on the reverse side shows a general outline of our claim holdings in relation to the highway, the ore zone and Mineral Lease 33R which covers our original holdings in the area. A photograph showing the topography is included.

October 23, 1970

Patrick M. Reynolds  
President

*Photograph looking  
northwest across  
area of strong  
mineralization.*



Several old tunnels on Rolling Hills ground indicate that exploration was completed there probably during the time the Maggie was active. In fact, it was the suspicion that the gossans on the opposite sides of the valley matched up that led to Bethlehem's successful exploration under the heavy drift in the valley bottom.

### GEOLOGY

The Geological Survey Memoir which covers the Maggie area, Memoir 262 - Ashcroft Map Area, does not show an intrusive in the immediate vicinity. The memoir does report that the Cache Creek rocks are highly sheared, and vividly colored by oxidation of pyrite. Also "The siliceous material on the dumps (of the Maggie) and the amount of silica and pyrite in evidence in the rocks close to the workings indicate strong hydrothermal activity in the vicinity".

The extensive gossan, alteration, and shearing in the area are associated with a quartz-feldspar porphyry intrusion into the Cache Creek rocks. The widespread and locally thick overburden make the location and extent of the porphyry subject to conjecture. The approximate location of the porphyry as determined by Bethlehems drilling is shown on the accompanying map. The several outcrops on Rolling Hills leave no doubt that the mineralized porphyry continues onto Rolling Hills claims. The porphyry is sheared, intensely altered with clay minerals, sericite, and silica, and highly pyritized in these outcrops, and in some of the core.



The Cache Creek rocks on the north side of the porphyry are mostly volcanics, with some serpentine and some graphitic argillites. Those on the south side of the porphyry are reported to be more sedimentary, but are altered to a quartz biotite hornfels. A halo of Cache Creek rocks some hundreds of feet wide on each side of the porphyry is silicified, and pyritized, and locally contains dykes and or sills of the porphyry.

The copper mineralization drilled by Bethlehem is reported to lie near the southwest contact of the porphyry, mostly in the porphyry but pervading some of the hornfelsed Cache Creek rocks. The southeast limit of the 'potential ore body' may have been determined by Bethlehem drilling, but some sub-ore grade has been intersected in drill holes completed by Rolling Hills.

#### DRILLING

The location of the drill holes is shown on the accompanying map. Not all of them are surveyed in. The southmost three holes PMM 1, PMM 2, and PMM 3, are percussion holes drilled by Bethlehem when they believed they owned the ground. A series of percussion holes P 1 to P 4 followed by rotary holes R 1 to R 6, and by diamond drill holes 70-1 to 70-4 were drilled by Rolling Hills. Details of most but not all of the drilling results are available, and are

summarized below:

<u>Hole</u>	<u>Ovbdn</u>	<u>Total</u>	<u>Rock</u>	<u>Range % Cu</u>
PMM 1	170	170		.01
PMM 2	115	300	porphyry?	.01-.06 (.03 avge)
PMM 3	85	210	pyritized porphyry	.04 avge
P 1	40	240	porphyry	.03-.07
P 2	90	200	porphyry	.01-.02
P 3	110	110	---	----
P 4	80	2.10	Cache Creek	31-256 ppm
R 1	205	325	Cache Creek	56- 94 ppm
R 1A	165	165	-----	----
R 3	95	520	Cache Creek	----
R 4	120	375	Cache Creek	----
R 5	87	280	altered	----
R 6	91	91	-----	----
DDH 70-1	85	731	porphyry and Cache Creek	.02-.54 (.10 avge)
DDH 70-2	194	430	porphyry and Cache Creek	.02-.12 (.08 avge)
DDH 70-3	caved and lost			
DDH 70-4	85	1000	porphyry and Cache Creek	.03-.26 (.09 avge)

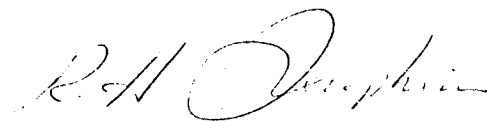
GEOPHYSICS and GEOCHEMISTRY

Four lines of I.P. Survey were recently completed across the southwestmost claims, but the interpretation of the results is not yet available. The I.P. survey was almost completely within the pyritized area consisting of the porphyry and its halo, thus may not be of much assistance in determining specific targets. Lines C and D do show increasing chargeability towards the west, and line B towards the north, which is a strong indication that the main body of pyritized intrusive and halo lie in the same direction.

Magnetometer readings were taken along the I.P. lines, but they give very erratic profiles. The serpentine lenses in the Cache Creek rocks would probably provide high readings, and the bleached and silicified porphyry itself should provide low magnetic readings. The locally thick overburden, and perhaps serpentine boulders in the overburden, may account in part for the erratic results obtained.

No geochemistry was completed on the claim group, and none is recommended. The overburden is too thick for meaningful work.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "R.H. Seraphim".

R.H. Seraphim, Ph.D. P.Eng.

R. H. SERAPHIM ENGINEERING LIMITED  
Geological Engineering

316  
~~427~~ — 470 GRANVILLE STREET  
VANCOUVER 2, B.C.

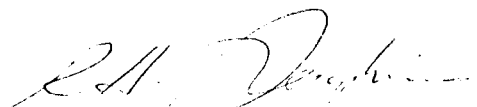
CERTIFICATION

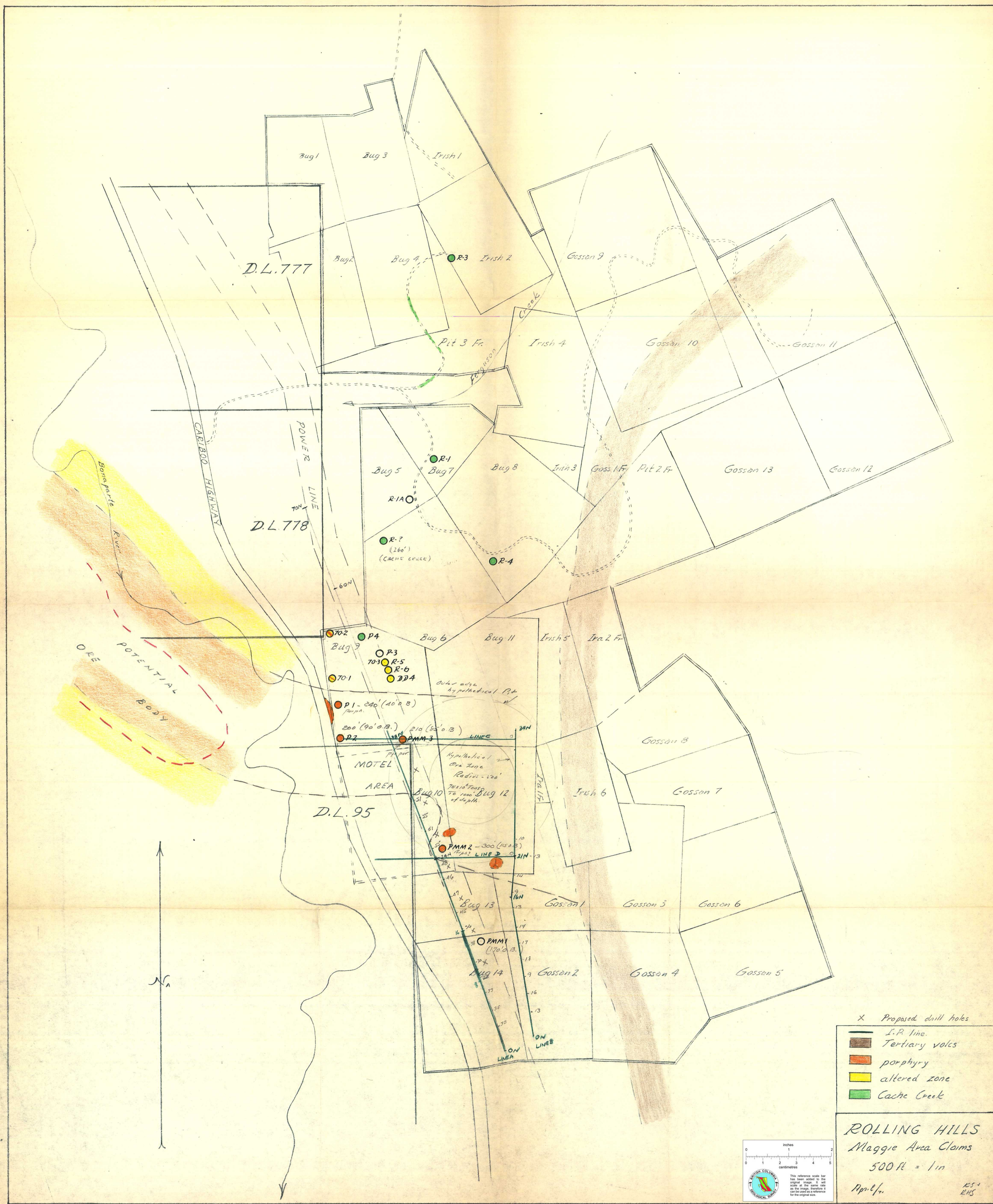
I, Dr. R.H. Seraphim, of the City of Vancouver,  
Province of British Columbia, hereby certify as follows:

1. I am a geological engineer residing at 4636 West 3rd Avenue, Vancouver, B.C., with office at 316-470 Granville Street, Vancouver, B.C.
2. I am a registered Professional Engineer of British Columbia. I graduated from the University of British Columbia in 1947, and from the Massachusetts Institute of Technology in 1951.
3. I have practised my profession for 24 years.
4. I have no interest in the securities or claims of Rolling Hills Copper Mines Ltd.
5. The above report is based on inspections of the area in October, 1970, and April 24, 1971, and on records from the files of Rolling Hills Copper Mines Ltd., and from the writers files.
6. The location of the claims is based on a survey by McWilliam, Whyte, Gobel and Associates, B.C. Land Surveyors, Kamloops, B.C.

DATED at Vancouver, B.C.

this 4th day of May, 1971.

  
R.H. Seraphim, Ph.D. P.Eng.



- X Proposed drill holes
- L.P. line.
- Tertiary volcanics
- porphyry
- altered zone
- Cache Creek

**ROLLING HILLS**  
 Maggie Area Claims  
 500 ft = 1 in  
 Apr 4/71  
 R.S. 1  
 R.H.S.

