92 H attach to JUL hereaces! 820901 P.M. KAVANA To. Subject RICO COPPER June 28th, 1965

Accompanying this memorandum is McRae's study of the existing reports on this property. The organization of McRae's report is strictly of his own doing, consequently such things as "Access to the Property" are shown on the final page. He concludes that there are two contact metamorphic zones, the first of which has one lense containing 25,000 tons averaging 0.7 ozs. Au, 6.1 ozs. Ag, and 8.7% Cu; and a second lense containing 75,000 tons grading 1.2 ozs. Ag and 1.8% Cu. The second, or east zone, is apparently very small and is estimated to contain only 1,000 tons grading 6.05% copper. Apparently this second zone could have more potential but is very difficult to explore.

There remains the possibility of finding other similar lenses along the granite-sedimentary contact to the east of the known ore shoots, and some attempt has been made, by Scope Mining & Exploration in 1961, to explore this possibility. Scope carried out an E.M. survey over a portion of this area, but no one has seen fit to drill the anomalies encountered. Without actually visiting the property I do not know if the anomalies are caused by carbonaceous argillites, but it seems quite probable that they are. There may also be a certain amount of pyrite in these rocks.

The known mineralized zones are small and very difficult of access, and I would not be keen about looking for more similar plumbs of mineralization under those conditions.

If we have an opportunity sometime in the future, it might be worthwhile looking at the anomalous contact area and perhaps running the odd traverse across it to see what sort of impression we are able to form with our own equipment.

William M. Sirola.

(FOR INTER-OFFICE USE ONLY)

To P.M. KAVANAGH.

W.M. SIROLA.

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820901

attach to previoussi corresp.

Subject RICO COPPER MINES LTD., HOPE DISTRICT, B.C. (92-H). Date June 28th, 1965.

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William M. Sirola.

WMS:iw. Encls:

(FOR INTER-OFFICE USE ONLY)

Subject RICO COPPER MINES, LTD., HOPE DISTRICT, B.C. (92-H) Date May 31st, 1965.

SUMMARY:

The mineralization at Rico Copper Mines occurs as contact metasomatic deposits of Cu in argillites and minor lenses concordantly bordering a granodiorite intrusion. The copper occurs as chalcopyrite lenses within a garnetite alteration zone.

Rico have blocked enough ore to show a probable profit of \$0.18/T. on 100,000 tons in the West Zone. In attempting to prove more ore it becomes a triple problem of: 1) exploring the possibilities of the East Zone; 2) doing an evaluation of the E.M. conductors found by Scope Mining & Exploration Consultants; and 3), doing a basic geochem, magnetometer and S.P. survey along the contact east from the East Zone for some 1,200 ft. The ore of the West Zone may be divided into 25,000 tons grading 0.7 ozs. Au, 6.1 ozs. Ag, and 8.7% Cu; and 75,000 tons grading 1.2 ozs. Ag, and 1.8% Cu. The high grade occurs in three lenses within the low grade.

In the East Zone known mineralization would indicate possibly 1,000 tons grading 6.05% Cu, but apparently little has been done to explore this zone.

Aside from the E.M. done by Scope, the development done on the West Zone and the rumoured drift of the East Zone, only geological prospecting has been done on the property.

The best chance for extra skarn zones would be east of the East Zone.

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To W.M. SIROLA. From D.G. MCRAE.

Subject RICO COPPER MINES LTD. Date May 31st, 1965.

INTRODUCTION:

The Rico Copper property is located in the Cheam range, 14 miles south of Laidlaw, in extremely rugged terrain. It extends along the east and west flanks of a divide above Jones Lake.

In 1915 a skarn zone was found along the contact of granodiorite and sediments. It was staked by the prospectors, acquired by Foley, Welch and Stewart. In 1918 and 1919 some drilling and tunnelling was done. The property was inactive from then until 1949 when the original Crown Grants were acquired by Rico Copper Mines Ltd. A camp was established at 6,100 ft. and men and supplies were brought in by helicopter. Exploration has continued sporadically until the present. A tunnel was driven 200 ft. under the West (Main) Zone for some 520 ft. Approximately 7,000 ft. of diamond drilling was done, primarily from within the tunnel.

Geological and mining reports were made as follows:

1949	W.H. White	-	Geology and Plane Table.
1949, 155,	'56 H.L. Hill	-	Geology
1955	V. Dolmage	-	Geology of Tunnel and D.D.H.
1956	W.N. Plumb	-	Geology and Prospecting
1961	Scope M. & Ex.	-	Geology and Geophysics
1962	Gormely Forestry	-	Road Survey
1963	Forman & Sharp	-	Engineering and Geology

PROPERTY:

The property has consisted of as much as 14 Crown Grants and 76 located claims. At present the holdings are 14 Crown Grants and 29 located mineral claims.

WORKINGS:

(1)West (Main) Show has been tunnelled 520 ft. long and approximately 200 ft. lower than the mineralized outcrop. There has been 7,000 ft. of diamond drilling done.

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To......From.

Subject

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(2)The East Show has two short adits for a total of 28 ft. and a 200 ft. tunnel. These have now caved in and there are no reliable reports on their findings. These were driven from 150 ft. to 250 ft. below the mineralization. The longest and lowest is rumoured (in the 1919 edition of B.C. Minister of Mines Report) to have encountered copper mineralization.

......Date.....

GENERAL GEOLOGY:

The principal geologic feature is the contact zone between the Chilliwack batholith and local argillaceous units of the Chilliwack sedimentary volcanic group. The general trend of the contact is N.W., but within the claim group it is more westerly. The bordering argillites are similarly warped. There is little evidence of major fracturing or shearing caused by this warp. Primary structural deformation of the bedded rocks was mainly confined to development of breccia.

Wall rock alteration is slight and marked by zones of fine-grained hornfels adjacent to the intrusive or occasion silicified beds at greater distance. Zones of coarse skarn alteration is local and restricted.

No zones of prominent folding were noted. Thin-bedded argillites are bent, or crumpled, over small sections at the contact. The prevailing dip of the granite contact, where seen, is steeply to the north or northeast. Frequent apophyses in the form of granite shoots, or prongs, were observed. The attitude of the bedded rocks is essentially concordant with the contact. Dips are usually steep N.E., but some are vertical or steep south.

DETAIL GEOLOGY:

West (Main) Zone:

The West Zone is composed of skarn altered beds which are erratically mineralized. Sulphide bodies are in localized structural features. Some of the presumed structural controls are mild bedding-dip flexures, associated shears and fractures. The shear fractures, which appear to exert a prime controlling influence, are bedding faults and act as conduits for the mineralizing fluids. Wallrock composition apparently is not important in localizing skarn. The main skarn zone is 700 x 50' and is composed of coarse crystalline garnetite with minor pyroxene and hornblende, coarse calcite and quartz. Bands of coarse quartz are distinctive but are not of economic importance.

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To.....From

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Subject _____ Date _____

Metallic mineralization consists of: chalcopyrite, pyrite, pyrrhotite, arsenopyrite and some molybdenite. Chalcopyrite of ore grade occurs chiefly as fracture and cavity fillings but is restricted in extent. The dimensions of the principal ore shoot are 100 x 100 x 5'. This shoot outcrops along the foot of a steep bluff near the crest of the saddle at the main showing. Other indicated high grade lenses are smaller. All three of the high grade lenses occur within the same body of low grade mineralization. Disseminated mineralization in the granodiorite is of slight importance. The low grade mineralization is an erratic zone extending downwards from the high grade zones for approximately 75 ft. Beneath this for -- ft., the skarn is relatively unmineralized.

Immediately east of the west zone there are 600 ft. of From that, the 1,400 ft. east to the east zone the contact ice. is well exposed and has no skarn.

The east zone is 2,000 ft. east of the main zone. East Zone is 150 x 20' exposed on a bluff face. Chalcopyrite is at the apex of the zone in and around a cavity (?) structure. The mineralization narrows and dies out in a few feet to the west and doesn't extend down the bluff face. To the east the skarn zone disappears under the overburden. A tunnel driven in 1919 is reputed to have intersected ore some 200 ft. below the mineralized outcrop.

COMMENT:

Rico Copper Mines have had prospector teams on the property at various times, as well as a coterie of consultants; so it would appear that the surface geology available to a nonmechanized man has been thoroughly done. It would seem that the next step for Rico might profitably be a thorough geochemical survey combined with a magnetic and self-potential study of selected portions of the contact to the east of East Zone in an attempt to find new zones of copper mineralization.

TONNAGE OF HIGH GRADE LENSES by H.L. Hill, 1956:

Zone	Tons	Ozs Au	Ozs Ag	% Cu
A	5,600	0.23	2.14	8.61
B	5,600	ø	5.58	11.90
C	10,000	Ø	11.00	11.00
Total (Diluted	21,200	0.08	7.3	10.6
(Undiluted	25,000	0.07	6.1	8.7
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Zone A B C	Tons 6,250 12,500 7,266	<u>Ozs Au</u> 0.008 0.008 Ø	Ozs Ag 1.53 6.99 9.43	<u>Ozs Cu</u> 5.0 10.3 8.7
Total	26,016	0.008	5.98	8.0

ACCESS TO PROPERTY:

(1) From the North:

From Laidlaw 8 miles by logging road to Jones Lake. From Jones Lake 7 miles by trail up a steep cirque to 6,200 ft. elevation. However, the logger is unreasonable in his demands.

(2) From the South:

From Chilliwack Lake road three miles up Foley Creek on existing road, and a further 7 miles up Foley and Granite Creeks by trail to a cirque wall. By path up the 700 ft. cirque and $\frac{1}{2}$ mile West Zone. Rico proposes putting in a road to the base of the cirque. Estimated and surveyed by Gormely in 1962. Estimated cost \$120,000.

David G. McRae.

KERR ADDISON MINES LIMITED 44 KING STREET WEST TORONTO 1, ONTARIO

GOPY

June 28th, 1965.

Mr. T.H. Wilkinson, Rico Copper Mines Limited, Room 2, 821 West Pender Street, Vancouver, B.C.

Dear Mr. Wilkinson :

Many thanks for giving us the opportunity to read the rather voluminous file you have on Rico Copper Mines Ltd.

We do not have adequate staff this year to undertake a serious surface study of your property, but should the opportunity arise to do so we will certainly get in touch with you. It would be interesting to know the cause of some of the electromagnetic conductors located along the granite-sedimentary contact to the east of the main showings.

Yours sincerely,

William M. Sirola.

WMS:iw c.c.P.M.K.

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W.S.R. K.C.G.

(FOR INTER-OFFICE USE ONLY)

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То	W. M. Sirola	From	E.F. R.D.S
	. H. SHOID	r. n. Kevenegn	B.C.B. P.M.K.
Subject	Rico Copper Properi	ty, Hope District, B.C. Date April 2 nd, 19	
			C.K.W.

This morning by phone Mr. Charlie McNellen told me about this property which he apparently controls. He said information about it can be obtained from T. H. Wilkinson at 821 West Pender Street, Vancouver.

You may already know something about this property. If you do not, and if you consider that it might be of some interest to us, I suggest that you ask Wilkinson to give you on loan all of the information which he has on it.

The property, of course, is not to be confused with the Reco silver situation in which Stan Cropper is involved.

Paul M. Kavanagh Chief Geologist - Exploration.

PMK:sw