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OWEN CAROLAN
PROSPECT

SAN CARLOS
INDIAN RESERVATION

GILA CO.

Mc Richards

Geo. Heistle

Owen Carolan

~~Xmas. Dues~~
1000

Shawn Mining Co.

Going up hill, toward
So. Cu in 3 places

A-1^{cut} - Drey. green Cu ^{Tenarite}
along bed of gfto.

Strike NW, dip SW.

Pebbly gfto. c.b.

10.90% Cu from sample
cut ± 3' across bed

B-2^{cut} Green Cu along NW
of N10W flt. gfto on
both sides - Few inches
wide

C-3 Cut - Bottom

not exposed but
numerous clumps
with green stain.



Y

Fit zone
± 8' wide

B2

± 45

~~⊗~~
Bounded ridge
of geyte strikes

C3

~~a/v~~

E-W.

Very few outcrops

A-1

Copper-bearing bed
exposed for $\pm 50'$ on strike
by bulldozer cut.

Green copper & black
oxide in patches &
splashes. Widest area
of close-spaced patches is
 $\pm 4'$ stratig.

Poorly dev. N60E
fractures

E. N. PENNEBAKER
CONSULTING GEOLOGIST
P. O. BOX 817
SCOTTSDALE, ARIZONA

September 25, 1958

Mr. Owen P. Carolan
4750 North 29th Avenue
Phoenix, Arizona

Dear Sir:

C
O
P
Y

On September 20, 1958, I made a brief inspection of the prospecting operations of yourself and associates a few miles east of Globe, Gila County, Arizona. The area of interest, as shown on the geologic map of Arizona, is about 6 miles south-southwest of Cutter and about a mile inside of the western boundary of the San Carlos Indian Reservation. Here the Apache group of rock formations strike west-northwest toward Pinal Peak and is overlain by Troy quartzite and younger rocks that dip at moderate inclination toward the south.

The area is reached by paved highway to near Cutter; thence by a fair gravel road up Gilson Wash; and finally by about a mile of steep and rough road up a ridge.

The area where your work has been carried out is in the lower part of the Troy quartzite. This composes a rounded ridge that strikes about east and west. To the north the Mescal limestone can be seen dipping southerly under the ridge. Between the limestone and the quartzite is a zone of greenish rock a few hundred feet wide that probably contains both diabase and the ancient basalt that commonly occurs immediately above the Mescal limestone.

Mr. Owen P. Carolan - 2 - September 25, 1958

I was shown about a half-dozen bulldozer cuts of substantial size, three of which contain copper showings of some interest.

The cut known as A-1 is near the east end of the ridge. It exposes an irregularly mineralized zone along the bedding of the Troy quartzite for about 50 feet in a west-northwest direction. Mineralization occurs as green copper minerals (chrysocolla, diopside, and malachite) and probably also as the black oxide of copper, tenorite. The copper occurs in erratically spaced patches and streaks. Where widest, close-spaced patches are abundant throughout a bedding thickness of about 4 feet, but the general average thickness is much less than this. According to the information that you gave me, a sample across the thicker section returned 10.90% of copper for a sample width of about 3 feet, but the general average grade that could be mined from this face would undoubtedly be considerably lower than this. At this locality the quartzite beds are cut by a weakly developed set of fractures that run about N60°E.

Your second bulldozer cut of interest, B-2, lies on the north face of the ridge, a few hundred feet northwest of cut A-1. This trench runs east-west and exposes a fault zone that is about 8 feet wide. The fault cuts through quartzite and strikes about N10°W with a dip of approximately 45 degrees to the east. The hanging wall edge of the fault carries a few inches of crushed rock that is impregnated with green copper minerals. The cut is not cleaned out sufficiently to expose the fault where it crosses its bottom.

Mr. Owen P. Carolan - 3 - September 25, 1958

Bulldozer cut C-3 is near the top of the ridge, several hundred feet west of A-1 and a few hundred feet southwest of B-2. Sufficient work has not been done here to expose bedrock, but loose chunk carrying green copper minerals and iron oxide are much in evidence.

Copper mineralization appears to be localized, and there is no indication that copper showings in any one trench connect with those in another.

In my opinion none of these copper showings are promising, but it should be pointed out that more work should be done in order to arrive at a definite decision. For example, cut A-1 should be thoroughly cleaned out by hand and the best sections followed into the hill by a short tunnel. Secondly, the fault at B-2 should be traced down-hill toward the north to where it cuts the diabase (or basalt) and there opened up to see if mineralization improves in this area. Thirdly, the bottom of the cut at C-3 should be exposed in order to examine the copper mineralization in place.

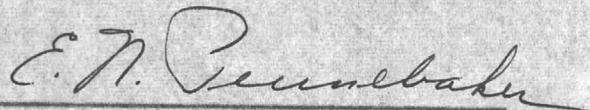
At present the best copper showing is at A-1, and the question arises as to whether this could be profitably mined. Such appears doubtful because of the erratic and pockety nature of the mineralization and its narrow average thickness, but vertical samples of measured length taken at regular intervals a few feet apart along the strike of the mineralized beds are needed in arriving at a decision. Whether a grade of 10% copper could be maintained to provide a substantial tonnage from the present exposure is doubtful. This is because the vertical height (thickness) of the mineralized beds is limited, and, as these

Mr. Owen P. Carolan - 4 - September 25, 1958

beds dip into the hill under a brow of barren quartzite, more waste must be broken to free the ore. This will give a lower-grade mixture that would need to be hand sorted, and it is very doubtful if such an operation would be profitable.

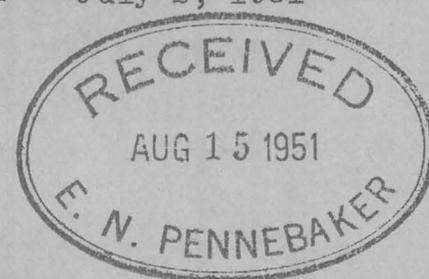
Furthermore, the green and black copper minerals that are found in cut A-1 have been transported and deposited by groundwater. I believe that this copper has been derived from zones of scattered sulfides that occur in nearby quartzite, and that it has been dissolved, transported a short distance, and concentrated by groundwater to give the deposit we see in cut A-1. Consequently I would expect that such an occurrence might become lower grade if followed well into the hill.

In my opinion, your prospect deserves a small amount of additional work, but I do not think that payment of an advance royalty to the Indian Reservation is warranted.


E. N. PENNEBAKER

ENP:mc

FROM R. W. Ludden, Assistant Geologist CITY Nogales, Arizona
TO E. N. Pennebaker, Consulting Geologist DATE July 2, 1951
SUBJECT KEYSTONE MINE, GILA COUNTY, ARIZONA



Conclusions:

It is likely that a small amount of gold and copper ore can be found on this property. However, the location and its small size would make it an unpromising prospect for Consolidated Coppermines Corporation.

Introduction:

This property was examined on June 20, 1951 by myself and L. H. Beal. We were accompanied on our examination by Mr. C. B. Pettengill.

The mine is located approximately 14 miles west of Young in Gila County, Arizona. The main mine workings and outcrops are located a few hundred feet southeast of Fred Pranty Cabin. Fred Pranty Cabin, as shown on the Diamond Butte, Arizona quadrangle, is just south of Sec. 36 Township 9 N Range 11 E. From Young, Arizona, the mine may be reached by a fairweather road to the Flying "W" ranch in Spring Creek, then continuing on a ranch road to the head of Soldier Camp Creek and from there taking a trail for approximately $2\frac{1}{2}$ miles.

The mine is owned by Mr. C. B. Pettengill, P. O. Box 6, Payson, Arizona. His property consists of four contiguous unpatented claims.

Mr. Pettengill stated that the mine was developed as a gold mine in the early twenties. It is improbable that there was any production from the mine. Mr. Pettengill acquired the property in 1949. He has driven a cross-cut at the 115 foot level into the mineralized zone and rehabilitated the old workings. The old workings consist of a 120 foot shaft with a 65 foot level (approx. 120 feet of drift), 115 foot level (approx. 50 feet of drift), and two adits, one in the bottom of Pranty Wash (est. 200 feet) the other in the bottom of Gun Creek (est. 200 feet). (See sketch map).

Geology:

The rock types in the area are for the most part Precambrian schist and quartzites. With the exception of comparatively barren quartz veins in the schist, evidence of mineralization is generally absent or very weak.

FROM R. W. Ludden, Assistant Geologist CITY Nogales, Arizona
 TO E. N. Pennebaker, Consulting Geologist DATE July 2, 1951
 SUBJECT KEYSTONE MINE, GILA COUNTY, ARIZONA

Page 2

All the workings are in Precambrian schist. The mineralized zone, which consists of a group of veins of variable widths, parallels the schistosity which has a general strike of N 60° E and a variable dip south (45° to vertical). The stronger portion of the zone varies from approximately 10 to 25 feet in width and is estimated to be 800 to 1000 feet in length. The zone is strongest at the vertical shaft, which is near its center (see sketch map) and becomes progressively weaker away from the shaft. This zone appears to be a concentration of mineralization in a much larger weakly mineralized structure. The larger structure has much the same attitude as the zone explored.

The veins in the zone consist largely of hematite, limonite, other iron oxides, and silica. A moderate amount of copper metallization is associated with these veins as primary sulfides and supergene oxides. Gold appears to occur in small, sporadic shoots. Pyrite mineralization is apparently confined mainly to the extremities of the long axis of the zone. However, no sulfides were seen in the workings examined on the zone. The drift with its adit in Gun Creek is approximately 800 feet SW of the shaft. It is believed to be in the same structure but on the southern extremity of the zone. Its face exhibits a foot-wide vein of pyrite with a minor amount of chalcopyrite (?). Fresh pyrite in schist was observed which, Mr. Pettengill stated, outcrops to the northeast about 200 feet away and is apparently on the same structure.

The depth of oxidation in the zone is estimated at 150 feet. No positive evidence of boxwork or limonite after chalcocite was seen in the zone.

Evidence of copper metallization occurs in the 115 level crosscut and consists of migratory green copper which probably percolated down from the zone above. A moderate amount of green copper and cuprite is present on the dump of the vertical shaft.

Sampling:

Because of the weak metallization, only two check samples were taken and their assays are:

<u>Cu</u>	<u>Au</u>	<u>Ag</u>	
.43%	Tr.	Tr.	- 115' level, 40' grab sample from wall, from vertical shaft to face; no sulfides.
.018	Tr.	Tr.	- 115' level, 95' grab sample from wall, from vertical shaft toward adit; no sulfides.

FROM R. W. Ludden, Assistant Geologist CITY Nogales, Arizona
TO E. N. Pennebaker, Consulting Geologist DATE July 2, 1951
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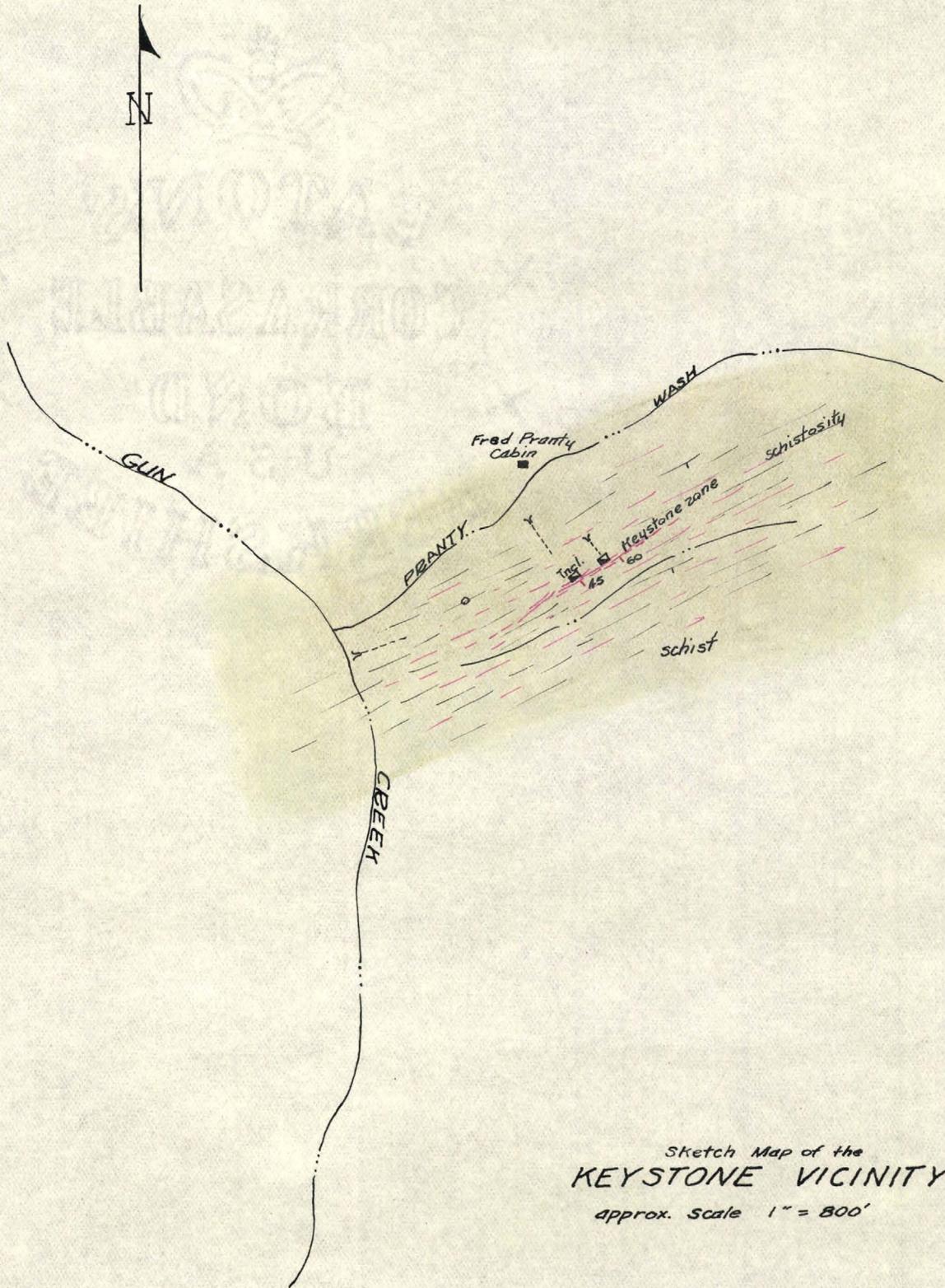
Page 3

Mr. Pettengill took a 9 foot channel sample (completely oxidized) on the 65 level south from the shaft. He reports the assays at 1% Cu., \$27.00 Au. and \$2.16 Ag. He also stated that the face of the Gun Creek adit assays approximately .3% Cu. This face is in the sulfide zone.

R. W. Ludden

RWL/hh

cc: John Hope



Sketch Map of the
KEYSTONE VICINITY
 approx. scale 1" = 800'

Gila County

July 10, 1951

Mr. C. B. Pettengill
P. O. Box 6
Payson, Arizona

Dear Mr. Pettengill:

Our Mr. Ludden recently examined your mining property near Young on behalf of Consolidated Coppermines Corporation.

We regret that his findings are such that we shall be unable to give the ground further attention. Although it undoubtedly has some merit, it is not the type of property for which we are searching at present.

We sincerely appreciate your having drawn our attention to this area and your courtesies to our men.

Sincerely yours,

ENP
fme

cc: Mr. John Hope, Jr.

April 22, 1950

Mr. Wallace W. Clark
Bank of Douglas Building
Phoenix, Arizona

Dear Mr. Clark:

On April 13 and 14, 1950, Mr. John Hope, Jr., and I visited the property of Summit Copper Mines, Inc. near Payson, Arizona, on behalf of Consolidated Coppermines Corporation. We sincerely appreciated the opportunity to undertake this visit, and while there we were made most welcome by the kindly hospitality of Mr. and Mrs. Thompson.

Our present assignment in the Southwest is to investigate properties that might contain ore bodies of the so-called "porphyry copper" or related types. Inasmuch as the mineralization at Summit Copper does not promise to develop into ore bodies of this kind, we shall be unable to carry on any further investigation of this most interesting area.

Again we wish to assure you of our appreciation in permitting us to have a look around, and we shall hope for the pleasure of making your personal acquaintance in the near future.

Yours very truly,

April 23, 1950

Mr. Charles Quarelli
Winkelman, Arizona

Dear Mr. Quarelli:

I sincerely regret having to postpone our visit to the Bunker Hill property last Saturday, and I hope you received my telegram from Tucson in time to prevent any inconvenience to you. I was unexpectedly called out of town to the southern part of Arizona and was thereby prevented from keeping our appointment.

Mr. Hope and I will try to call on you in the near future. I note that you would like to schedule our trip on a Saturday or a Sunday, and we shall endeavor to fit this into our plans. I shall advise you well in advance of our coming, although just now I can not be sure precisely when that might be.

Again I regret any inconvenience this may have put you to.

Yours very truly,

cc: Mr. John Hope, Jr.

SUMMIT COPPER MINES, INC.

April 10, 1950

Mr. E. N. Pennebaker
Consulting Geologist
P.O. Box 2996
Globe, Arizona

Dear Mr. Pennebaker:

Your letter of April 8 received. I will be expecting your visit to the mine on Thursday of this week.

If you desire you may stop at my home in Payson and obtain directions to go to the mine.

We are only working five days per week at the present time - so Thursday will be the most opportune time for your visit as I will be away over the weekend.

Yours very truly,

R. W. Thompson
R. W. Thompson, Gen. Mgr.
SUMMIT COPPER MINES, INC.

RWT/n





*Gila County.
Payson Ariz.*

CLARK AND COKER
ATTORNEYS AT LAW
BANK OF DOUGLAS BUILDING
PHOENIX, ARIZONA

WALLACE W. CLARK
ELMER C. COKER
JAMES S. RIGGS

February 28, 1950

TELEPHONE
4-8441

Mr. E. N. Pennebaker
P.O. Box 2996
Globe, Arizona

Dear Mr. Pennebaker:

Please excuse my delay in replying to your letter of February 10. Some delay was occasioned by the fact that I wished to take it up with the Board of Directors at a recent meeting before communicating further with you.

The Directors of the Summit Copper Mines, Inc. agreed with me that they would welcome a visit by you to the property. Up to the present the weather has not been too good at Payson, but I am sure that in the near future the weather will be congenial.

The mine is now in operation. It is situated some six miles northwest of Payson. I would suggest that you contact Mr. R. W. Thompson, President and General Manager, who resides at Payson, Arizona, to arrange a suitable time for your visitation. He may be reached by telephone; the telephone number is 7F6 Payson. I am frank in stating that our development work to date looks quite promising.

If I may be of any further service to you in this matter, please feel free to call upon me.

Yours very truly,

CLARK AND COKER


WALLACE W. CLARK

WWC:EB

March 2, 1950

Mr. Wallace W. Clark
Bank of Douglas Building
Phoenix, Arizona

Dear Mr. Clark:

Thank you for your kind letter of February 28, 1950. I shall hope to pay a visit to the Summit Copper Mine around the middle of March. However, because of inclement weather and other business I might have to postpone my trip to Payson until the middle of April. I shall follow your instructions and contact Mr. Thompson to arrange a suitable time for the visit.

Yours very truly,

Atomic Energy Comm.

137 N 2nd Ave

Maps become
available on each 15th
day of month at noon.

April 8, 1950

Mr. R. W. Thompson
Summit Copper Mines, Inc.
Payson, Arizona

Dear Mr. Thompson:

Some time ago, I wrote Mr. Wallace W. Clark regarding the opportunity to make a visit to the Summit Copper Mines near Payson. Mr. Clark replied that the Directors were agreeable to such a visit and suggested that I get in touch with you to arrange a suitable time for making the trip.

If entirely agreeable with you, I should like to drive from Globe to Payson next Thursday morning, April 13th. If this date is not suitable, the visit can be postponed until the following week. I shall appreciate your advising me by mail or telephone (Globe 921-R7) if next Thursday will be convenient.

Yours very truly,

cc: Mr. Wallace W. Clark

LESLIE F. HOAG
35 EAST PIERSON
PHOENIX, ARIZONA
February 6, 1950

Payson - Gila County

Dear Penny:

A friend of mine in town, Wallace Clark, an attorney, is interested in a copper mine in the Payson district, about 3 or four miles airline N.W. of Payson, 6 miles by road. It is called the Summit Copper Mine. They have been working a patented claim for some little time and they think they have now hit a sizable ore body.

I saw him Saturday and he gave me a sample of the ore they are now in. Knowing your deep and abiding interest in mines, thought you might like to take a gander at the sample which to me looks pretty good. If they actually have a lot of that stuff, they should have a mine. They claim that it runs well in gold also.

This is just a small group so if they really are into something, think they would be very much interested in making a deal with someone with adequate finances.

If you think this is worth looking in to, you could get in touch with Wally who has an office in the Bank of Douglas building in Phoenix.

In addition to the patented claim they have tied up about 15 claims surrounding the one they are working. I understand they have started or are about to start a small mill.

Am sending the sample parcel post so it will be showing up. Looks to me as tho this might be worth taking a look at at least.

Hope you had a good trip to Nevada and didn't freeze to death in the cold North. The Merrys are due the 14th and I expect that Henry and I, at least, will be over to Globe.

Best to you both,



February 10, 1950

Mr. Wallace Clark
Bank of Douglas Building
Phoenix, Arizona

Dear Mr. Clark:

Mr. Leslie F. Hoag has recently sent me a specimen from your Summit Copper Mine in the Payson district. The specimen is promising and we are always interested in seeing where such things come from. If it is entirely agreeable with you, I should like to have a brief look at the property when the weather is more congenial, and shall appreciate your advising me if this can be arranged.

Yours very truly,

February 10, 1950

Mr. Leslie F. Hoag
35 East Pierson
Phoenix, Arizona

Dear Les:

Many thanks for your kind letter of February 6, regarding Mr. Clark's prospect. I also received the ore specimen and find it to be of considerable interest. John Hope and I shall probably be going up into the Payson country when the weather is a little more pleasant and should like to have a look at this ground. I am writing Mr. Clark asking him if he is agreeable to our making such a visit.

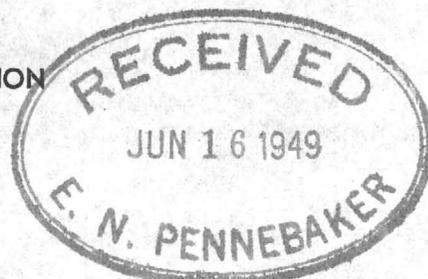
Be sure and let us know as far ahead as possible when you and Henry Merry might be coming this way. Catharine is going into Phoenix Monday for a check up that will take several days and might be away all of next week. During the latter part of the week I shall probably be travelling around with John Hope in the southern part of the state. We are most anxious to see you both, so please let us know when you might be coming out this way.

The little blue book on South Africa has just arrived from overseas, and Catharine will bring it into Phoenix with her next week.

With very kindest personal regards to you all from us both.

Yours sincerely,

CONSOLIDATED COPPERMINES CORPORATION
KIMBERLY, NEVADA



~~C. L. COOK~~
C. L. COOK
GENERAL MANAGER
A. J. O'CONNOR
GENERAL SUPERINTENDENT
JOHN EABY
CHIEF CLERK

FROM: F. V. Tompkins, Asst. Chief Geologist
TO: John Hope, Chief Geologist

Florence, Arizona
June 14, 1949

KULLMAN - MCCOOL PROPERTY NEAR HAYDEN, ARIZONA

On May 26, Rex Arrowsmith, John Culver, and myself visited the Kullman - McCool property near Hayden, Arizona. This property which consists of 21 unpatented claims is under option to Mr. Martin Fishback, Kelvin, Arizona. These claims are adjacent to Kennecott's Chilleta property and were under option that company but the option was dropped. The property is located Gila County and falls within Sec. 21, 22, 27, 28, 33, and 34, T 4 S, R 15 E.

Because of the limited amount of mineralization, the property warrants no further consideration from Coppermines.

The rocks of the area are Martin (?) limestone which is locally garnetized, an igneous rock of perhaps andesitic composition, and Troy (?) quartzite which at or near the northeastern end of the property is faulted against the limestone.

Mineralization occurs in several relatively short and narrow zones which cut the limestone. Mineralized outcrops are siliceous and contain heavy limonite. As the majority of the workings was along two of these zones, the examination was limited to their vicinity. These two mineralized zones strike N 70° E, dip 50 to 80° south, are less than 20 feet in width, and have a maximum length of 500 feet. In the oxidized zone the ore consists of lead and copper carbonates and silicates. Rock from one of the dumps contains chalcopyrite, galena, and pyrite.

Workings have little extent. On the Brick No. 3 claim, a zone was explored by about 200 feet of drifting and 170 feet of cross cutting. Prospecting of a mineralized zone on the Brick No. 2 and Lead Silver No. 7 claims was by several short drifts and shallow pits and by two inclines.

Eight samples were taken from the property.

Sample No.	Assay				Location
	Os	Au.	Ag. %	Cu .% Pb	

Brick No. 3 Claim

5965	Tr.	.02	.78	Tr.	End NE x-cut, SE side, 3' cut
66	Tr.	.50	2.57	5.81	do , NW side, 3' cut
67	Tr.	.26	.74	Tr.	SW x-cut, 115' from main adit, 4' cut
68	.01	.85	1.56	6.69	do , 60' do , 5' cut

KILLMAN - McCOOL PROPERTY (Cont.)

Sample No.	Assay				Location
	Oz Au.	Oz Ag.	% Cu	% Pb	
<u>Brick No. 2 and Lead Silver No. 7 Claims</u>					
5969	.01	.21	1.67	Tr.	N drift along road, face W x-cut, 5' cut
70	Tr.	.14	2.60	Tr.	do, face E x-cut, snick grab
71	.01	.66	.34	3.78	Shaft dump ± 100' W of 5970
72	Tr.	.04	.26	3.55	Dump ± 100' W of 5971

F. H. Tompkins

RECORDED
 1914
 J. H. BOWLING
 1000