



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

09/21/98

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: COPPER BELT

ALTERNATE NAMES:

OLD NEVADA
OLD BLUE BELT
GOLD BELT
TRI-METALS GROUP

MARICOPA COUNTY MILS NUMBER: 181B

LOCATION: TOWNSHIP 5 N RANGE 10 W SECTION 17 QUARTER E2
LATITUDE: N 33DEG 46MIN 27SEC LONGITUDE: W 113DEG 19MIN 07SEC
TOPO MAP NAME: GLADDEN - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

COPPER OXIDE
GOLD LODE
SILVER

BIBLIOGRAPHY:

USGS GLADDEN QUAD
ADMMR COPPER BELT MINE FILE
ADMMR "U" FILE MARICOPA Cu-10
ADDITIONAL WORKINGS SEC 16 W 1/2 T5N-R10W
ADMMR OLD NEVADA FILE
USBM MLA 43-85, HARQUAHALA MLA, THOMPSON, J.
USGS BULL. 1701C MIN. RES. HARQUAHALA MTS.

COPPER BELT MINE

MARICOPA COUNTY

Piedmont Mine (file)

"U" File

MILS Sheet sequence number 0040130225

Old Nevada (file) Maricopa County

Arizona Department of Mines and Mineral Resources
INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

Maricopa Co.
21 mi SW of Aguila
Vulture Dist.
Copper Belt Group

MM-K076 Copper Ore
K077 Copper Ore

MILS # 181B
4-AKA's
Copper Belt (file)

COPPER BELT MINE

MARICOPA COUNTY

BIG HORN MINING DIST.

8 (EIGHT) MAPS

IN PART 2 OF 2

Copper Belt Mine (aka Old Nevada Mine) (aka Old Blue Belt)
Sec. 16, 17 T. 5N., R. 10W. (aka Gold Belt Mine)
Maricopa County

reference: Arizona Dept. of Mineral Resources
Copper Belt Mine (file)

present owner: Bob White + Jim McEwen (leasing from
Roy Hudson of Los Angeles) (1971 info)
minerals: copper, gold

history of the area:
the property located prior to 1910. It was
then owned by the Tri-Metals Mining Company.
By 1945 the property was owned by the
Copper Belt Mining Company. In 1946 a
few cars that averaged (\$16.00) (mostly copper)
were shipped. By late 1946 the property was
idle. By 1961 the property was owned by
the Nevada Corporation. Some work was
done but it was decided that the property did
not warrant any further work. By 1971 the
property belonged to Roy Hudson of
Los Angeles. The property then was called
the Gold Belt Mine and was leased to
the Jim and Bob Mining Co. (Bob White
and Jim McEwen).

geology of the area:

granite, some limestone; ore occurs in
40 to 50 narrow veins which are 12" to 20"
wide in a silica gouge.

assays:

1946

\$12.50 per ton

1971

0.50% Au, 4% Cu

MM-K076 wt 1 lb 17
C-5 11x5x5

MINERAL SPECIMEN FOR DEPARTMENT OF LIBRARY AND ARCHIVES

MM K077
wt 1 lb 4 g
9x8x5 cm

(Do not write in this space)
Ore _____
Cabinet _____
No. _____

(Wrap each specimen separately, or place it in a substantial bag, by itself, with a number attached, identical with the number on this card.) This specimen now in the ADMR Museum
Specimen No. 10, collected by Carl G. Barth, Jr. Field Engineer

Name of ore Copper, Gold Ore Operator Wm. Hershkowitz and Assoc.

Minerals contained (Chalcopyrite) Gold, Silver, Sulfur active or inactive Active
If inactive, when operated _____

Gangue Quartz Specimen presented by _____

Depth at which taken 50 feet Date November 1939

Approximate mineral content (in terms of average per ton) _____
Notes (Any general information regarding the history of the property.) _____
Old Location _____

Name of mine or claim _____

Group Copper Belt _____

District Vulture _____

Location (distance and direction by highway from what town 21 mi. SW Aguila _____

Owner of property _____
If more space is desired for notes, use other side.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Copper Belt (Nevada Corp.)

Date May 5, 1961

District Harquahala Dist., Maricopa Co.

Engineer Lewis A. Smith

Subject:

Flip Evans reported that he did not hold the lease, because he could not market the ore, even though he could have made a little on it. Under present costs, he felt he could not make enough to warrant the work.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Old Nevada Mine (Old Blue Belt) Date January 10, 1961
(also Old Copper Belt)
District Harquahala District, Maricopa Co. Engineer Lewis A. Smith

Subject: Interview with "Flip" Evans, Sahuara Motel, Aguila

Owners: Nevada Corporation, Las Vegas, Nevada

south from Aguila

Location: The mine is reached by traveling the county graded highway/for 16 miles and thence west and northwest by country road.

Lessees: Flip Evans et al, Sahuara Motel, Aguila

Work and Ore Occurrence: According to Evans there are several shafts but two main ones. The deepest is 200 feet and the second is 150' and these are on two of 8 veins. The vein zone is in a highly altered material which resembles an altered andesite. The main vein has a blue granite, which is coarsely blocky on the hanging wall. The upper 30 or 40 feet of the vein dips about 70° and then straightens up to nearly vertical. On the 50 foot level of the deeper shaft, there is 3 feet of ore which runs 5-17% copper. The 8 veins strike varyingly from EW to NW. The dips are variable. A drift is now being run toward the point of intersection of two veins. The ore obtained from the drift is being stock-piled.

The gangue is quartz with fragments of country rock. The ore minerals are chrysocolla, malachite and chalcocite, the latter being in minute stringers up to 1 inch wide along with residual pods.

Six men are employed on two shifts.

NAME OF MINE: ~~TRIGONAL~~ COPPER BELT COUNTY: Yuma W
 OWNER: ✓ R.C. Davis, Glendale, Calif. DISTRICT: Big Horn
 208 S ADAMS T METALS: Cu, Au

OPERATOR AND ADDRESS		MINE STATUS	
Date:	Copper Belt Mng. Co.,	Date:	Working mine &
3/15/45	H.K. Thomas, Mgr., Aguila	3/15/45	constructing camp.
6/45	J.H. Collins, 2502 Ivar Ave.,	6/45	Shipping 50 tons
	Garvey, Calif.		week to Wickenburg
			Ore Market.
		1/46	Preparing to
			diamond drill
		10/46	Idle

Complete maps have been made.
The geological maps are in our files.
The surface maps are on
record in the Phoenix Recorder's
office.

Map

Scale
Date

Section

Scale
Date

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Copper Belt Mining CO.
Old Tri-Metals
District Ellsworth Maricopa CO.

Date April 12th, 1945

Engineer A. C. Nebeker

Subject: Copper Belt Mine.

Location

This mine is located 20 miles southwest of Aguila, Ariz. Aguila is a small town on the Santa Fe Railroad 27 miles west of Wickenburg. The property is just over the ^{Muhua} Pavalai County line and in Maricopa county.

Owners

This property is owned by the Copper Belt Mining Co, which is also the operating company. They claim 21 lode mining claims.

The Manager is H.L. Thomas, Glendale Calif.

The Superintendent is L. G. Andrews, Aguila, Arizona.

Men Employed Eleven men employed, some of these are doing construction work on the surface, building bunkhouses and working on the road around camp.

Ore and Vein

A copper ore claimed to carry 5% copper and \$12.00 in gold. The vein is in walls of schists and diorite and varies from 18 inches wide to 4 feet. It has an eastwest strike and a dip of 60 degrees to the north. To south of this vein there are two others which parrallel this and claim to have a better grade of ore.

Development

On the north vein where work is carrying on, there is a incline shaft 125 feet deep, and a level driven off on the 100 ft level, on the surface there is a short tunnel through the ridge on the vein.

On the south veins is two shafts and short amount of drifting. In one of these water was developed, which would be good for mine work.

For camp use water has to be hauled in from a well about 4 miles down the road.

Shipments No shipment made as yet, but some ore is in the ore bin at the shaft.

Equipment

Consists of boarding house, four bunkhouses, so men stay at the property, 210 cu ft compressore, 20 HP hoist, atugger hoist, Koalor light plant, all gasoline driven, and the necessary small equipmen t.

Remarks

The company claim to have two mining engineers reports to guide them, The are working on their own money, know they have the ore and am not looking to anybody for help.

A. C. Nebeker

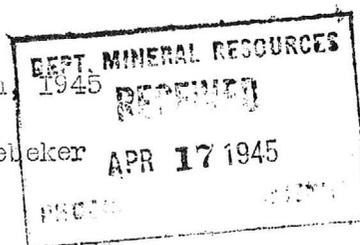
CMA

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Copper Belt Mining CO.
Old Tri-Metals
District Ellsworth Maricopa CO.
Subject: Copper Belt Mine.

Date April 12th, 1945

Engineer A. C. Nebeker



Location

This mine is located 20 miles southwest of Aguila, Ariz. Aguila is a small town on the Santa Fe Railroad 27 miles west of Wickenburg. The property is just over the Yavapai County line and in Maricopa county.

Owners

This property is owned by the Copper Belt Mining Co, which is also the operating company. They claim 21 lode mining claims.

The Manager is H.L. Thomas, Glendale Calif.

The Superintendent is L G. Andrews, Aguila, Arizona.

Men Employed

Eleven men employed, some of these are doing construction work on the surface, building bunkhouses and working on the road around camp.

Ore and Vein

A copper ore claimed to carry 5% copper and \$12.00 in gold. The vein is in walls of schists and diorite and varies from 18 inches wide to 4 feet. It has an eastwest strike and a dip of 60 degrees to the north. To south of this vein there are two others which parallel this and claim to have a better grade of ore.

Development

On the north vein where work is carrying on, there is a incline shaft 125 feet deep, and a level driven off on the 100 ft level, on the surface there is a short tunnel through the ridge on the vein.

On the south veins is two shafts and short amount of drifting. In one of these water was developed, which would be good for mine work.

For camp use water has to be hauled in from a well about 4 miles down the road.

Shipments

No shipment made as yet, but some ore is in the ore bin at the shaft.

Equipment

Consists of boarding house, four bunkhouses, so men stay at the property, 210 cu ft compressore, 20 HP hoist, atugger hoist, Koalor light plant, all gasoline driven, and the necessary small equipmen t.

Remarks

The company claim to have two mining engineers reports to guide them, The are working on their own money, know they have the ore and am not looking to anybody for help.

Alp Nebeker

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Joe *all*

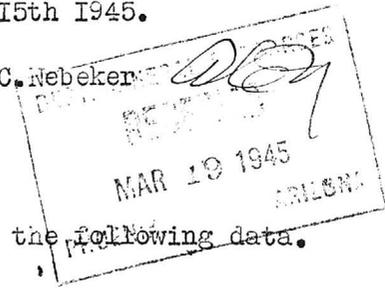
Mine Copper Belt Mining Co.

Date Mar 15th 1945.

District Big Horn

Engineer A. C. Nebeker

Subject: Operation report



Mr. T. L. Swink a part owner of the operations furnishes the following data.

The company is known as the Copper Belt Mining CO. Mgr. H. J. Thomas
address all at Aguila, Arizona.

This company has a lease and option on the old Tri-Metal ~~and~~ owned by
Mr R. C. Davis of Glendale, Calif.

Location is 20 miles south of Aguila and the roads are fair. The property consists
of 21 mining claims. The formation is said to be a Monzonite granite and the ore
is making in a fissure having a dip of 65 degrees and has a width of 3 feet.

Equipment consists of a 210 C. Ft. Compressor, 20H.P. hoist. Machine drills etc

The shaft is now down 125 feet and will be sunk to the 225 foot level and there
drifts and crosscuts will be run off and prepare for stoping.

At Present 11 men are employed in mine work and construction of the Camp.
Bunkhouses and boarding house is being constructed, so the men can stay at camp.

Water is hauled in at present, but company is planning a well by the camp.

Working one shift now but expect to double up when the camp is finished.

Copper ores will be produced.

MINERAL RESOURCES

Arizona
Fairgrounds
ARIZONA



Mr. R. C. Davis

Glendale

Calif.

DIRECTORY SERVICE DISCONTINUED
Non-delivery due to failure of sender
to supply complete correct address
DO NOT REUSE THIS ENVELOPE.
AUG 28 1958
3 1 PM
CALIF.



ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA

August 26, 1958

To the Owner or Operator of the Arizona Mining Property named below:

Copper Belt (Maricopa Co.)

copper, gold

(Property)

(ore)

We have an old listing of the above property which we would like to have brought up to date.

Please fill out the enclosed Mine Owner's Report form with as complete detail as possible and attach copies of reports, maps, assay returns, shipment returns or other data which you have not sent us before and which might interest a prospective buyer in looking at the property.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report

Old Nevada Mining Corp. has sold three copper-gold mines, 20 miles southwest of Aguila, to a group of investors headed by Philip J. Allor of Las Vegas, Nevada. Cost of the deal which included the Copper Star, Blue Sahara, and Horseshoe mines was \$200,000.
E&MJ Nov. 1960 p. 134

Went to the Gold Belt mine of Jim & Bob Mining Co. Neither Mr. White (Bob) nor Mr. McEwen (Jim) were present, but Mr. "Rusty" Routon said they were driving a 125-130 ft. crosscut to a 3 ft. that assays 0.5 oz. Au and 4% Cu; the cross is in grano diorite and has been advanced about 90 ft. The men (4) were trying to get a scrubber installed on a rubber tired frontend loader at the time of the visit. Mr. Routon said Jim & Bob has leased the 12 unpatented claims from Roy Hudson of L.A. GW WR 6-14-71

The road to the Gold Belt mine is washed out and no one in Salome or Wenden knew of the progress there. GW WR 9/10/71

A dozer arrived on the property as Mr. Laughlin and I were leaving to visit Jim & Bob Mining Co at the Gold Belt (Copper Belt) mine. The Gold Belt trail is still impassable about 2 miles from the Aguila-Hassayampa road. GW WR 10/13/71

OLD NEVADA
Sunset Mine

Maricopa County

reference: Arizona Dept. of Mineral Resources
(~~Sunset Mine~~ OLD NEVADA file)

present owner:

minerals: gold, copper, malachite, azurite,
cuprite, tenorite

history of the area:

in 1964 Melvin Jones made a reconnaissance
geology report on the ~~Sunset Mine~~ ^{OLD NEVADA} for the
Magnet Mining Company. He estimated that
the mine should have at least 300,000 tons
of mineable ore. He suggested that a mill
sample should be taken. He concluded
the property could probably be operated
at a profit.

geology:

The mine is located in shales and
limestones, plus quartzites of Mesozoic
age. There is a cuprous vein which
strikes E-W and dips 85° N. There are many
cuprous outcrops.

there is an old mill site and four old
concrete lined processing pits on
the property

assay: 1964

Au .03 to .27
Cu 1.44

MELVIN H. JONES
Mining Geologist

Box 1196
Wickenburg, Az. 85358.
Feb., 2, 1979.

Mr. John Jett,
Chief, Department of Mineral Resources,
State of Arizona,
Phoenix, Arizona.

Dear John:

Reference is made to a copy of a geology report given to your office many years ago written by me. It is on the Sunset Mine, Harquahala Mountain, Maricopa County, SW of Agila, Arizona, written on October 20, 1964.

I have recently learned that this report is not on the Sunset Mine. I was miss-informed years ago on this at the time by the purported owner. Actually it is the 'Old Nevada' mine (which is in the same general location as the Sunset mine. Actually, there are many old mines in this region.

Request you have someone in your office with pen and ink line out the name 'Sunset Mine' and add 'Old Nevada' Mine' in its place. A copy of this letter might be added to the old report to explain the changes.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "Melvin H. Jones". The signature is written in a cursive style with a large, sweeping flourish at the end.

1

K

MAGNET MINING CO., INC.

FIELD OFFICE, ARROWHEAD STATION
BOX 87 - CONGRESS, ARIZONA

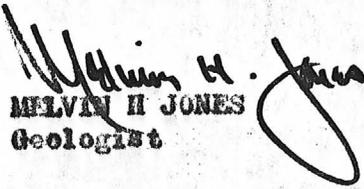
October 20, 1964

Mr. Daniel C Jacobs,
President, Magnet Mining Company,
Box 53, Congress, Arizona.

Dear Dan:

As requested by you, I have made a reconnaissance geology report on the ^{218 NEV 401} ~~Sunset Mine~~ located in the Harquahala mountains out of Aguilera, Arizona. Mr. W. J. Salisbury, Mining Engineer accompanied me during this examination and he can verify the information outlined in the report.

Respectfully yours


MELVIN H JONES
Geologist

1 Incl

Reconnaissance Geology report.

cc W.J. Salisbury ✓

Melvin H Jones
Geologist
Box 386, Yarnell, Arizona

GEOLOGY RECONNAISSANCE REPORT

On October 16, 1964, accompanied by W. J. Salisbury, Mining Engineer, I visited a mine known as the ^{ON NEVADA} "Sunset" located in the Harquahala mountains about 28 miles Southwest of Aguila, Arizona. This property is close to the border line of Yuma and Maricopa counties and I suspect that it is in the latter. For about 23 miles, an excellent gravel road is traversed to go there from Aguila, and then a poor mountain road goes 5 miles to the mine in a Northerly direction.

This mine is located in shales and limestones, plus quartzites of Mesozoic age. Remnants of an old mill site and four old concrete lined processing pits remain as evidence of ancient operations. They are at the bottom of a canyon with steep and sharp ascending sides. Two drifts are on the East slope of this canyon, that follow a cuprous vein into the mountain; both are up from the valley floor and the upper one is about 150 feet above the lower one. The bottom adit (drift) has a length of about 280 feet (paced) and follows the cuprous vein that has a width of 3 feet, strike E-W, dip 85 Deg. N (almost vertical). This vein material is visually of good copper and Malachite, Azurite, Cuprite, and Tenorite, combinations are readily discernable. Obviously this ore is in an oxidation zone and is of supergene origin, sulphides should be encountered at depth.

Near the entrance to the bottom adit, is a shallow shaft (about 20 feet) and about 200 feet in from the entrance, is a deep winze, plus many stopes along the drift, from which ore has been removed in the past. The upper adit (drift) has a length of about 1000 feet (it was not paced nor closely examined). This upper drift is believed to be on the same vein as the lower one.

There are many cuprous outcrops and some prospect holes on the property, all of which show good copper. I have been told that the main vein has a length of at least 4000 feet. One prospect hole that is about 30 feet to the South of the mentioned vein, follows a cuprous stringer (small vein) into the mountain for about 50 feet. This is about a 5 inch vein and it pinches out. Time did not permit detailed examination of the claims, but it is quite probable there are several paralleling ore veins of mineable quantities, in addition to the main vein that has been described.

The main cuprous vein is on a normal fault structure and the contact on the one side is a narrow stratum of basaltic appearing rock. Other contact rock appears to be tactites.

From the rather cursory examination made, as outlined in this report, only a small part of available ore has been removed by past mining. Another individual (Wright) reports there is a strike length of 11,000 feet, but this is believed to be an extreme estimation. Mr. Salisbury says he has observed a strike length of 4000 feet, and he agrees, that it could be much longer.

Samples were taken as follows: (See attached assay reports)

Sample No. 1 is a grab sample from a small tailings pile from a prospect hole about 200 feet above and East of lower adit. Results are Au \$9.45 (not tested for Cu)

Sample No. 2 is from a prospect hole with a ^{2'} cuprous vein about 75 feet above place of Sample No. 3. Results are: Au \$1.05 (not tested for Cu)

Sample No. 3 is from an outcrop showing a 3 foot vein that is about 50 feet above lower drift. Obviously, this is a continuation of the same vein that is in this drift. Results are: Au \$3.85, Cu \$9.52 .

The writer can visually determine the copper content of the cuprous veins will average above 2% Cu. Only gold assays were made on samples Nos. 1 and 2 (and to save assay costs). Samples #2 and #3 were carefully taken channel cuts, but they were intentionally taken on the "lean" side. (Richer portions of the vein were avoided in this case).

This mine should produce a minimum of 1500 tons of ore per vertical foot (assuming a vein depth of only 200 feet and a length of 4000 feet). There is at least 300,000 tons of mineable ore, and possibly many times this amount.

A mill sample of this ore should be taken to determine its accurate mineral content and its amenability to normal ore dressing processing. Also further exploration should be accomplished to determine probable paralleling cuprous veins and an accurate length of the strike. With the present high price of copper, and assuming the ore can be simply and inexpensively concentrated, I can see no reason why this mine cannot be operated at a profit.

Melvin H. Jones
MELVIN H JONES
Mining Geologist

September 10, 1947

Mr. H. D. Clever
Fullerton, Calif.

Dear Mr. Clever:

We know of nothing new regarding the Copper Belt since the report we sent you in October 1945.

In June 1946 they did, however, report that they had recently shipped a few cars that averaged \$16.00, mostly in copper.

We know of no drilling having been done, but we will check up with our field engineer when he comes in and if there is any further information we can give you we will do so immediately.

Yours very truly,

Chas. H. Dunning
Director

CHD:mh

Fuller, Cal
Sept. 3rd '47

Dept. of Mineral Resources
Phoenix, Arizona

Does your field engineer have
a recent report on the Copper Belt
Mining Co (Old Tri Metals) situated
near Aguila, Arizona?

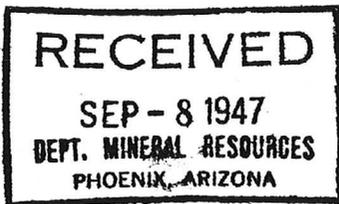
Has it been diamond drilled?

Has it changed hands and
if so is it being operated by whom?

Any information you could give
me regarding this will be appreciated.

Very Truly Yours
H. D. Clever

Pt. I. Box 311-B.



July 12, 1946

Damascus Milk Co.
3342 Southeast Morrison Street
Portland 15, Oregon

Attn: Mr. E. J. Allman /
Credit Manager

Gentlemen:

Referring to your letter of July 5, the only Copper Belt Mining Company we have listed is one which gives its principal address as Agula, Arizona. Harold K. Thomas is General Manager.

Agula is approximately 20 miles southwest of Congress Junction and the mine is located approximately 20 miles southwest of Agula.

Yours very truly,

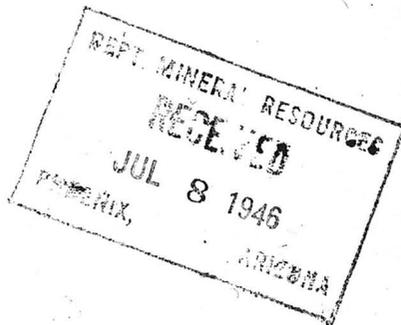
Roger I. C. Manning,
Field Engineer

RICM:LP

Damascus Milk Co. R9

3342 SOUTHEAST MORRISON STREET
PORTLAND 15, OREGON
EAST 2131

July 5, 1946



Mr. Roger I. C. Manning
Field Engineer
Department of Mineral Resources
304 Home Builders Building
Phoenix, Arizona

Dear Sir:

Will you kindly advise if there is a company named "Copper Belt Mining Company" at Congress, Arizona? If so, will you kindly give us the address of their head office and the name of the President and General Manager, if you have same. We have written to the Copper Belt Mining Company several times at Congress, Arizona, and the mail has been returned marked "Unclaimed".

We enclose self-addressed, stamped envelope for your reply for which we thank you.

Yours very truly,
DAMASCUS MILK CO.

By E. J. Allman
Credit Manager

EJA:le

October 10, 1945

Mr. Homer D. Clever
Rt. 1, Box 311-B
Fullerton, California

Dear Mr. Clever:

We have your letter of October 4 in regard to the Copper Belt Mining Company near Aguila.

We have a recent but brief report by our field engineer, Mr. A. C. Nebeker, on this property and are enclosing a copy.

In regard to smelting facilities Aguila is fairly well situated, the rate on low grade ore to the Clarkdale smelter being about \$1.50 per ton.

We cannot advise you in any way as to the value of the stock or the project as an investment. All mines in their initial stages are speculative and money should not be put into them in an amount, or by persons, where its loss might be serious. There are also many factors that often cause mines to fail even when they have a good prospect.

We feel that the future outlook for copper is fairly good, especially for low cost producers. The consumption of copper will probably be very high for several years.

Trusting the above answers your questions.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP
Enc.

Fullerton, Cal
Oct. 4th 1945

Mr. Charles L. Dunning.
Phoenix, Arizona

Dear Sir:

I read an article in the
Los Angeles Times last Monday, naming
you as director of Mineral resources of Arizona
so I thought you would be a proper
person to write to for a little infor-
mation.

What is the future for coffee? will
there be a good demand for it the
next few years at a good price?
Do you know anything about the "Coffee
Belt Mining Co."? The mine is near
Aguila, Arizona.

How close to a sweetie is it?
Would stock at \$6.00 per share be a
fair price?

A gentle man by the name of Edward
Webb is selling shares in that mine &
while I think he is O.K., I wish to satisfy
some of my family, friends who are
skeptical.

Any contribution you might give me
will be greatly appreciated.

I am enclosing self addressed envelope
hoping to hear favorably from you

I am Very Truly Yours

Horner D. Clever

P.O. Box 311- B

Duquette, Cal

August 24, 1944

MEMORANDUM

TO: Elgin B. Holt

FROM: Chas. H. Dunning

Herewith are copies of a certain line of correspondence which is self-explanatory. This includes:

Copy of letter from M. F. Otto to J. E. Layton
Copy of letter from J. E. Layton to me
Copy of letter from myself to Mr. Otto

Please look into this as soon as you have an opportunity.

CRD:LP
Enc. 3

August 24, 1944

Mr. M. F. Otto
Box 774
Trona, California

Dear Mr. Otto:

Mr. J. E. Layton has forwarded to this office your letter of August 14 to him.

This office is certainly anxious to keep the mining business clean but naturally has to be very careful in injecting itself into any such matters.

Mr. Elgin Holt is our field engineer in the district you mention. He is at present on vacation but we will supply him with the information you have furnished and have him investigate the matter as soon as he is again in that district.

Yours very truly,

Chas. H. Dunning
Director

CHD:LP

CC: Mr. J. E. Layton
Mr. Elgin B. Holt

Chloride, Arizona
August 22, 1944



Mr. Chas. H. Dunning
Phoenix, Arizona

Dear Mr. Dunning:

I am enclosing a letter I received from Mr. M. F. Otto of Trona, California. He is a Mining Engineer and a very good man.

I will not make any suggestion but will ask you to use your judgement and do what you think is best.

However I will tell him that his letter has been sent to you.

I am unable to say much as I had never heard of that mine before.

Yours very truly,

J. E. Taylor.

Box 774
Trona, California
August 14, 1944.

Mr. J.E. Layton:
Chloride, Arizona.

Dear Jess:

I hope hearing from one of the old Chloriders will not be too much of a shock, but we often think of you people and look forward to the day when we can have sufficient gas to visit our old friends back there again.

As I see by the Mohave Miner that you have close contact with the Small Mine Operators Association and as you are in a position to know something about the operating mines, possibly you could help me out and further the purposes of the Association.

Realizing that some crooked promoters can create far more unfavorable publicity than the promoting of legitimate mining ventures are able to produce favorable publicity. A crooked deal publicized makes the public dubious even when a legitimate venture is presented.

What I am getting at is that; a Mr. Webb and a Mr. Webber who are supposed to own the Golden Eagle Mining Company comprising 4 claims located about 21 miles from Aguila in the Harquahala Mountains. The claims were formerly called the Tri-Metal Group of Arizona. Mr. Webb says that the county is putting a road into their property and that several men are at present employed at the property. There is supposed to be a shaft down about 65 feet. The values are in gold and copper.

Webb is selling \$1000.00 shares in it and offering 7% interest on the \$1000 payable at the end of three years and then at the end of that time 2% interest in the property. He says a certain consulting mining engineer who is not registered or in any directory made a \$10,000 examination of the property and the ore averages \$5 to the shovel full in spots and averages over \$100 per ton.

I like to see money spent in the mining game but, like yourself I like to see the investors get a run for their money, or the investing public will become leary and when we do have a good legitimate proposition we will not be able to raise capital.

Will you please look up this outfit if possible and give me what information you can about them, and if it is a crooked deal, which it sounds like, we can save these men who will be willing to invest in legitimate mining deals, though who personally know nothing about mining.

Thanking you for what ever information you can give me.
Find inclosed self addressed envelope for reply.

Give my regards to Mrs. Layton and Jana Lee.

Sincerely yours,

Phelan H. Otto
P.S. The Golden Eagle Mining Co address is box 35 Aguila, Ariz.

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

DEPT. MINERAL RESOURCES
PHOENIX
JUN 17 1946
ARIZONA

Date June 14, 1946

TSN R10W

1. Mine: Copper Belt
2. Location: Sec. 16 & 17 Twp. 10W Range 5W Nearest Town. Aguila
Distance 20 miles Direction S.W. Road Condition poor
3. Mining District & County: Ellsworth (Kingman) Maricopa Cty.
4. Former Name of Mine: Tri Metals
5. Owner: Copper Belt Mining Co
Address: Aguila, Ariz.
6. Operator: same
Address: same
7. Principal Minerals: Copper - Gold
8. Number of Claims: 38 Lode yes Placer
Patented no. Unpatented
9. Type of Surrounding Terrain: mountainous
10. Geology & Mineralization: granite, some limestone.
ore occurs in 40 to 50 narrow veins
12" to 20" in a silica gangue. Sulphides
at 125' to 150' deep. Makes a little water at 150'.
The walls are hard. Veins dip 70° - strike varies
11. Dimension & Value of Ore Body: Veins are very true and can
be traced in some cases for 1/2 mile on surface.
Average value based on 200 samples over
15 veins, mostly surface samples showed
\$12.50 per ton

12. Ore "Blocked Out" or "In Sight": There is one 300' drift on the 125' level but the vein does not average 12" and so is not commercial at this point

Ore Probable: no reasonable estimate can be made without diamond drilling.

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts	3	400	good
Raises	none		
Tunnels	5	1500	good
Crosscuts	none		
Stopes	4	2000 sq. ft.	good

14. Water Supply: a little water in the shaft nearest supply - Tiger well 5 miles distant.

15. Brief History: periodic & haphazard development by inexperienced promoters.

A few carloads have been recently shipped which averaged \$1.60 per ton. mostly copper.

Previous shipments totaled probably 10 carloads.

16. Signature: *Gerald K. Thomas*

17. If Property for Sale, List Approximate Price and Terms: \$50,000 cash or straight royalty of 10%.

GEOLOGICAL AND GEOPHYSICAL SURVEY

of the

COPPER BELT MINE
AGUILA, ARIZONA

by

ERNEST D. FOSTER, GEOLOGIST
AND
MARSHALL FOSTER, ASS'T GEOLOGIST & PROD. ENG.

INDEX TO CONTENTS

	Page
I Location.....	1
II Topography.....	1
III Property & Titles.....	2
IV Transportation & Accessibility.....	3
V Water Conditions.....	3
VI Historical Geology.....	4
VII Economic Geology.....	6
VIII Ore Occurrence.....	10
IX Sampling.....	11
X Assay Charts	
1. Vein A1.....	13
2. Vein B3.....	22
3. Vein B5.....	24
4. Vein B1.....	26
5. Vein B6.....	27
6. Vein A4.....	28
7. Vein B4.....	29
8. Misc. A & B Veins.....	30
XI Tonnage Indicated.....	33
XII Geophysical Survey.....	34
XIII Zonal Phenomena.....	36
XIV Mineralization.....	37
XV Development Plans.....	37
XVI Mining Plans.....	41
XVII Selective Mining.....	43
XVIII Milling Plans.....	43
XIX Management.....	45

REFERENCE MAPS

- I BOUNDARY MAP
- II WORKING MAP
- III MAGNOGRAPH
- IV SECTION A-A1
- V SECTION B-B1
- VI SHRINKAGE STOPE

(The above maps are not included with this report but can be obtained if requested from the Copper Belt Mining Company.)

maps in separate file

GEOLOGICAL AND GEOPHYSICAL SURVEY
of the
COPPER BELT MINE
AGUILA, ARIZ.

LOCATION

The Copper Belt Mine is located in the Ellsworth Mining District, of Maricopa County, Arizona, in Sections 16 and 17 Township 5 North, Range 10 West, Salt River and Gila Base and Meridian. It lies on the southeasterly slope of the Harquahala Mountains, 20 miles southwesterly from Aguila, a service station and small supply point on U.S. Highway No. 70. Aguila is 25 miles west of Wickenburg, Arizona, principal supply point for the mine, 70 miles from Prescott, and 79 miles from Phoenix. Ample mining supplies are available at both points. The Santa Fe Railway maintains a station and shipping point at Aguila on the Parker Cut-off. The elevation at the mine is 3100 feet above sea level; at Aguila and Wickenburg about 2500 feet.

TOPOGRAPHY

Several isolated peaks rise to an elevation of 3400 to 3600 feet and one ridge to a height of 3850 feet with a long ridge to the southwest about 3600 feet. In between these ridges lie canyons covered with a growth of Ocotillo, Saguaro, and Mesquite brush. The Harquahala Ridge rises to the north to a height of 4100 feet. A few prominent landmarks and peaks were accurately surveyed as control points. All other points were determined by Brunton Survey.

The rocky washes that traverse this area finally join with a wide wash southeast of the property generally known as the old dry bed of the Hassayampa River.

PROPERTY AND TITLES

The property consists of 38 full quartz mining claims, properly surveyed and monumented in accordance with Arizona and Federal Mining Laws. The course of the location veins is North 83 degrees and 16 minutes east, but several other vein systems exist. No contests of title exist. The property has just been surveyed by a licensed U.S. Mineral Surveyor, Barney Packard, Civil Engineer. Work has been done in strategic places, enough to develop the mine to a point where the whole group of claims could be patented, but a patent is not contemplated while work and operation sufficient to keep up the annual assessment work is going on. The policy of the Western States to tax ore in place on patented properties makes a patent undesirable unless a property is shut down or abandoned.

The property was formerly owned by the Tri-Metals Mining Company, but was fully quitclaimed to present owners. Prior to that ownership the property was located and worked by various owners. The writer visited the property in 1910, but at that time it was inaccessible for economic operation.

Of the 38 claims, 17 are owned by the Copper Belt Mining Company, a Nevada Corporation domiciled in Arizona, the balance of 21 are leased with an option to purchase them. Payable out of 10% of the gross royalty, \$20,000.00 is still due on the purchase price.

TRANSPORTATION AND ACCESSIBILITY

A good automobile and truck road has now been built to the mine from the County road 6 miles distant. This County road is a well-improved and well-maintained dirt road over comparatively level land. The Copper Belt road crosses the old dry bed of the Hassayampa River and then enters the mountain area where a few steep rises and sharp turns exist; but the Company has recently purchased a 60 HP bulldozer and is now widening the road so that a truck and trailer can be economically operated over the entire route. The previous cost of hauling ore to and freight from Agulla was \$3.50 per ton; but with the widened road it is expected this cost can be reduced to \$2.00 a ton or less.

A bin holding a carload of ore is now installed at the shaft known as the Tri-Metals Shaft No. 1.

WATER CONDITION

Plenty of water exists in the various mine shafts to supply all mining and wash water purposes. It is slightly sulfated; containing zinc as Goslarite, and Magnesium as Epsomite in slight quantities. Water for domestic use is hauled from a well in the old Hassayampa River gravels 5 miles away where water privileges have been obtained. Water can be obtained in the gravels of a big wash about 3 miles distant and raised by pump 500 feet to camp if and when desired. Drinking water can never be expected in this property due to the presence of copper throughout the area.

When needed, water for all extensive mining and milling purposes will be available in the mine workings. An excess

of water is not likely above the 2,000-foot level. The water situation below that level may become a problem as it has in many Arizona Mines.

HISTORICAL GEOLOGY

This area has apparently been out of the ocean bed since Cambrian time. A few patches of Cambrian Limestone still exist, floated on top of Monzonite or lying on Pinal Schist also floated on Monzonite. The Monzonite is of a batholithic character. The Schist and Limestone were almost entirely engulfed and digested as roof pendants in the Monzonitic magma, which must have occurred early in the Cambrian Period. Since Devonian sedimentaries exist in many regions around the Harquahalas, and even sedimentaries as late as Triassic exist in areas some distance away east and west; it would appear that this mountain range existed as an island in the Geosynclines generally credited to this area by Palaeogeographic Authorities. Due to the steep terrain not even detrital remains of later sedimentation exist. The topographical relief is too great to permit of the theory that large masses of later sedimentaries could have been removed by erosion; and the absence of residual materials of later origin in the lower and flatter areas around the Harquahalas proves their non-existence in the picture. A few miles away other types of crystalline rocks are observed but in this area no igneous rock of any kind but Monzonite are exposed. In the surface of this Monzonite occur a few small lenticular and foliated masses of quartz-porphyry, a later and more acidic phase of the magmation developing in its roof; and in a few places

this quartz-porphyry has been injected into the contact zones between the Monzonite and the Pinal Schist. Where the quartz-porphyry came into contact with the Cambrian limestone, Wollastonitization developed. Where the Schists were fully digested, the Monzonite was soft and black; and where the limestone was partially digested, the Monzonite was more basic and the limestone silicified. Where the monzonite intruded the Schist to contact or partially digest the limestone, the limestone is black. Where the limestone was unaltered it is white and sugary.

Large and small blocks of Schist and limestone have been distorted and oriented into all sorts of relationships while floating in the Monzonite magma. One block of Schist as observed several hundred feet in extent almost completely engulfed in the Monzonite.

The Monzonite is very homeogenous thus showing that no large masses of sedimentaries had been digested and absorbed by it, otherwise, a more basic magma would have resulted. There is little fracturing in the Monzonite between faults or veins, a few open horizontal fissures were observed in the Monzonite near the old stope in the A-1 vein. In the entire mineralized area the Monzonite has been slightly silicified, but to the north and beyond the zone of intense faulting the Monzonite is coarsely crystalline. It is possible that large areas in the Monzonite between veins will be silicified and even possible that the veins themselves in many places, especially at junction points will have coalesced. This will be discussed under Geophysics.

The fact that the Monzonite exhibited no change in character between the highest points in the faulted zone observed and those in the lowest area, indicated there will be no change in the mass for considerable depth. Undoubtedly it was acidic in its deeper phase but was rendered monzonitic near the surface from its digestion of the Cambrian limestones in its roof. The silicification has occurred in the faulted zone from acidic solutions rising along the faults from its deeper and acidic basement. Evidences of silication exist in many places where no mineral is exposed, indicating that the general silication may have been pre-mineral, the silication accompanying the deposition of gold and copper being a later phase probably the differentiation of an ore magma in the acidic rock magma at great depth, and its release along the solution channels formed by faulting. What became of the usual zones of zinc, lead, silver, gossans, and more volatile metallics and non-metallics is obscure, but the gold-copper zone is so deep, apparently more than a mile in depth, that it indicates that the long or deep zone of Algonkian type of ore deposition must have at least continued into the Cambrian Period.

ECONOMIC GEOLOGY

For all practical purposes we can consider the mine as consisting of a major fracture system, formed when the cooling magma hardened to a point where the rock slipped and crushed as the still viscous magma accommodated itself to new and changing pressure conditions.

The faulting and slipping followed definite shear lines

and usually ground up the adjacent wall rock for a width of 18 inches to 12 feet. The major shears are N. 74° W. and N. 83° E., the latter cutting the former. The veins that strike N. 74° W. are designated as "B" veins and those cutting them on strike N. 83° E. are known as "A" veins. The faulted zone began slipping down at the southerly base of the Harquahala Mountains on a vertical fault now called B-13. This fault has not exhibited any branches to date. Next followed B-10, another vertical fault with the two observed branches, B-11 and B-12, with southerly dip between it and B-13 which lies a few hundred feet to the north. On its southerly side all of the "B" veins from "B" basic to "B"-9 inclusive are apparently branching fissures of B-10; the blocks of Monzonite in between having slipped down in successive steps to form the "B" veins system as the viscous monzonitic mass cooled and contracted. All but "B", B-1, and B-2 have a dip to the north of 70°; "B" has a 55°, B-1 has a 60°, and B-2 has a 65° dip to the north, making branches of B-3.

Later the entire "B" system area was faulted by the "A" system comprising approximately 20 veins. The "D" system N. 28° W. with east dip 65° consisting of five known veins cut both the "A" and "B" systems. Later, a fourth or " " system developed with strike N. 55° W. with a northerly dip of 65°. This cut all three prior systems. This set of five veins spaced across the property show ground up Monzonite, more or less fragmental, and with considerable gouge matter; and when found to cross "A", "B", or "C" veins made ore for a considerable distance on their strike. All other systems

are mineralized and wherever they are exposed for a length of over a mile, and for a width of three-fourths of a mile, they have copper-gold ores exposed or show quartz with the matrix of chalcopyrite leached out. Even the float mapped shows the vugs left by the leached chalcopyrite, the primary ore of copper. This is true of the highest and lowest points studied. Several "C" veins are indicated at the eastern end of the property with westerly dip indicating that the westerly "C" and easterly "C" veins may form a major fissure somewhere along the central part of the property. However, the easterly "C" veins are so obscured by detritus that no float or quartz is exposed; only the scarps of the footwalls showing their character and dip and strike. They have been subjected to so much scouring that no fragment of ore or quartz remains. They do, however, exhibit the same type of low magnetic field that is exhibited by the other veins.

While no ore was found in the vertical faults B-10 or B-13, they lie considerably higher than the veins exhibiting ore, many of which at higher points do not exhibit ore either, but at lower levels are ore bearing for long distances. B-10 and B-13 are both magnetically low veins.

Still lower down and near the easterly end of the property, there are two veins with strike N. 60° E. and with a northerly dip of 65°. These veins lie about 100 feet apart and are called the "E" veins. They expose 5 feet of very red granular quartz or gossan, similar to the gossans of the Yarnell and Congress mines a few miles to the northeast. They may have been the faults that opened the whole area up to mineralization

because they cut all veins so far encountered. These veins not only strike for over a mile across this property, but they also form the vein system of the Copper Prince Group of claims to the southwest of the Copper Belt Mine. In the Copper Prince Area these veins carry copper at the surface. The elevation of the Copper Prince Mine is a few hundred feet lower than the exposures along these veins on the Copper Belt ground. Assays show low values in gold in the gossan. Leached sections of the "A" and "B" systems resemble the "E" veins and upon reaching the static water level, the "E" system is expected to be copper as well as gold bearing.

In a recent survey an "F" system N. 10 E. was uncovered but as yet is not developed sufficiently to determine its value in relation to the overall plans except that it serves to connect up the "A" and "B" systems.

The vein systems were formed without regard to the position of the Monzonite, schist, limestone or quartz-porphyrines. The veins cut all of these formations although in two places the quartz-porphyry was so massive that the veins did not break through but appeared on either side. The dips and positions of these quartz-porphyry blocks did not indicate much depth to them. Where the shearing in the blocks occurred at right angles to the vein systems, the veins did not cut them; but where the shearing was in similar directions the veins came to the surface. These quartz-porphyry blocks play no important part in the scheme, most of them being of only a few tons volume and forming no inhibition to the vein systems. Some hornfel alterations occurred in the shearing

of the quartz-porphyry at an angle to the veins.

Recent surveys have disclosed additional A, B, C, D, E, and F veins to those found in earlier research. The significance of these veins remains to be further developed by trenching and sampling.

ORE OCCURRENCE

All the "A", "B", and "C" veins in the central area of the property as shown on the working map appear to carry from 18 inches to 12 feet in width of GOLD-COPPER ORE. The market value of the two minerals being about equal, based on present price of gold and the pre-war price of copper (12¢ a pound). These values are based on smelter settlements made over a period of years by the Copper Belt Mining Company and previous owners. At the lowest recorded price of copper, the copper values would cover the cost of mining and milling, leaving the gold as a profit. From surface croppings, ore exposures, and underground workings, it appears that the average vein width of the entire vein system as presently developed is approximately 2 to 3 feet. The present development is confined to the Tri-Metals Shaft No. 1 now at the 145-foot level, about 30 feet into the water zone. A station is cut at 125 feet and the 20 feet below the station used as a collection sump for water. A drift is started east on the 125-foot level in good ore with a width of 2 to 3 feet and is now 270 feet east of the shaft. Stoping can now be started on this level and ore can be extracted for the full 125 feet to the shaft level. The area to the east of and above the shaft level has been partially stoped out and shipped by the Tri-Metal Company.

Considerable milling ore still remains in the old stopes.

Veins below the water level now being developed are showing sulphides present in the hornfels. This indicates that the orebodies may become two to three times as wide and large because of this tendency to make ore outside of the vein proper. The vein proper should also increase in value below the zone of leaching. Because of the presence of sulphides in the hornfels found below the water level, we can expect further development to result in larger orebodies at depth because of the prevalence of hornfels on both walls throughout the vein systems.

SAMPLING

A systematic sampling campaign carried on by the writers during the past 60 days has resulted in a well-defined picture of present actual values as well as potential resources.

Over 170 samples have been cut, bucked down, split, and prepared. These final samples as sent to John C. Herr, Assayer at Wickenburg, averaged 50 lbs. each. Rejects from these samples were returned and will be used in making chemical and metallurgical tests for milling and other purposes in the proposed Copper Belt Laboratories.

Veins A1, A4, B1, B3, B5, and B6 were sampled systematically for considerable distances; and veins B, B2, B4, B8, A2, A3, A5, A7, A8, A9, D1, and the C veins although not sampled as extensively give us an indication as to their characteristics and values.

The assay value established for the Vein A1--covering the surface for 1100 feet, the upper drift for 340 feet, the

70-foot level for 55 feet, and the 125-foot level for 200 feet--is \$11.65 for an average width of 26 inches.

While blocks of considerable tonnage of shipping-grade ore could be isolated and stoped, the program would be expensive and definitely would interfere with systematic stoping for milling purposes. The loss in smelting, transportation, and penalties incurred during a shipping program amounts to a good profit on the ore involved as against milling costs. However, a program to temporarily ship ore until such time as a pilot mill is put into operation would not deplete present ore reserves to any extent and would tend to further development work and test mining plans. In fact such an operation might result in a profit and aid in the construction of the pilot mill; the company's primary aim.

Upon the results of sampling to date the milling program seems justified and should prove successful when initiated.

Sampling disclosed values to be fairly equal between the Copper and Gold found in the ore. Carbonate and Oxide ores have a tendency to run slightly higher in the Gold; and sulphide orebodies have a tendency to have more values in the Copper. However, this latter trend is due to the intense leaching of the gold ore at the water level. Samples taken 30 feet above the water level show little leach and samples to be taken below the static level estimated at approximately 50 feet below the 125-foot station should find the return and increase of gold values.

On the next pages are listed the complete initial assay charts covering the 170 assays mentioned above:

COPPER BELT MINING COMPANY

ASSAY CHART--DEVELOPMENT
TRI METALS #1-SURFACE - 315 feet

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
47	20#--25' above drift W. of E. Portal	0.04	\$1.40	0.10	0.07	\$ 1.47	4.7	\$15.98	\$17.45	20"	
48	30#--top of old stop W. of #47	0.21	7.35	0.20	0.14	7.49	1.2	4.08	11.57	30"	
49	15#--25' W. and 25' higher than #48	0.33	11.55	0.50	0.35	11.90	6.7	22.78	34.68	12"	
50	60#--60' W. of and same level as #49	0.18	6.30	0.40	0.28	6.58	3.3	11.22	17.80	54"	
51	40#--W. of and same level as #50--C vein crossing	0.09	3.15	0.10	0.07	3.22	2.5	8.50	11.72	24"	
52	25#--15' W. of #51	0.33	11.55	0.40	0.28	11.83	1.4	4.76	16.59	12"	
53	40#--25' W. of #52	0.38	13.30	0.50	0.35	13.65	1.9	6.46	20.11	20"	
54	30#--30' above W. Portal	0.105	3.68	0.20	0.14	3.82	3.4	11.56	15.38	20"	
TOTAL ASSAY INCHES						<u>1320.86</u>		<u>1942.76</u>	<u>3255.52</u>	<u>192"</u>	
AVERAGE						\$6.84		\$10.11	\$16.95	24"	

Shipping ore was already stoped out for approximately 75 feet between the above samples and could not be included in the above average.

COPPER BELT MINING COMPANY

ASSAY CHART--DEVELOPMENT
TRI METALS #1-315 feet
UPPER DRIFT

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
1	30#--25' E of shaft 10' in drift	0.46	16.10	0.70	0.49	16.59	1.5	5.10	21.69	20"	
2	25#--15' in drift-- 5" of ore shoot not in	0.345	12.08	0.20	0.14	12.22	1.6	5.44	17.66	15"	
3	15#--25' in drift min. H wall not in	1.02	35.70	0.20	0.14	35.84	3.9	13.26	49.10	12"	
5	60#--35' in drift- F wall sulphides	0.82	28.70	0.40	0.28	28.98	1.8	6.12	35.10	24"	
6	10#--Leached min. H. wall not in--W. edge large open stope--45' in drift	0.08	2.80	0.20	0.14	2.94	2.2	7.48	10.42	20"	
7	10#--50' in drift W edge large stope	0.15	5.25	0.10	0.07	5.32	1.4	4.76	10.08	20"	
8	10#--55' in drift 6' up in stope--3' W of 4' vein N 28 W--dip E 70 deg.	0.055	1.93	Tr	.00	1.93	1.2	4.08	6.01	20"	
9	30#--65' in drift	0.36	12.60	0.20	0.14	12.74	4.8	16.32	29.06	20"	
10	25#--70' in drift	0.245	8.58	0.20	0.14	8.72	5.4	18.36	27.08	20"	
11	10#--75' in drift	0.325	11.38	0.30	0.21	11.59	7.8	26.52	38.11	10"	

Assay Chart--Continuation

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
12	15#--80' in drift	0.04	1.40	0.30	0.21	1.61	1.3	4.42	6.03	12"	
13	13#--3' sample--10" ore shoot 85' in drift W edge stope	0.185	6.48	0.20	0.14	6.62	5.7	19.38	26.00	36"	
14	60#--115' in drift --E edge stope	0.15	5.25	0.40	0.28	5.53	2.4	8.16	13.69	36"	
15	40#--120' in drift	0.18	7.30	0.20	0.14	7.44	2.6	8.84	16.28	36"	
16	30#--125' in drift	0.11	3.85	0.10	0.07	3.92	1.8	6.12	10.04	24"	
17	50#--130' in drift	0.09	3.15	0.20	0.14	3.29	1.4	4.76	8.05	30"	
18	50#--135' in drift	0.095	3.33	0.20	0.14	3.47	1.4	4.76	8.23	36"	
19	70#--140' in drift	0.045	1.58	0.10	0.07	1.65	1.0	3.40	5.05	31"	
20	50#--150' in drift 15' up in E edge stope	0.08	2.80	0.20	0.14	2.94	2.7	9.18	12.12	30"	
21	50# in pinch in low spot--155' in drift	0.05	1.75	0.10	0.07	1.82	0.6	2.04	3.86	20"	
22	10# in pinch 165' in drift	0.115	4.03	0.10	0.07	4.10	1.5	5.10	9.20	30"	
23	20# in pinch--170' in drift	0.03	1.05	Tr	.00	1.05	1.3	4.42	5.47	30"	
24	30# in pinch--175' in drift	0.035	1.23	Tr	.00	1.23	Tr	.00	1.23	20"	

Assay Chart--Continuation

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
25	40# coming out of pinch--180' in drift	0.52	18.20	0.50	0.35	18.55	2.8	9.52	28.07	20"	
26	50#--185' in drift --W edge stope	0.085	2.98	0.20	0.14	3.12	1.4	4.76	7.88	36"	
27	125#--195' in drift	0.08	2.80	0.20	0.14	2.94	1.8	6.12	9.06	48"	
28	50#--200' in drift 7' in stope	0.21	7.35	0.40	0.28	7.63	1.6	5.44	13.07	36"	
29	50#--210' in drift 7' in stope	0.055	1.93	0.10	0.07	2.00	1.5	5.10	7.10	20"	
30	30#--220' in drift --edge of small stope	0.15	5.25	0.30	0.21	5.46	3.5	11.90	17.36	36"	
31	40#--225' in drift	Tr	.00	Tr	.00	.00	0.5	1.70	1.70	36"	
32	50#--230' in drift --W edge Big stope	0.015	0.53	Tr	.00	0.53	0.7	2.38	2.91	36"	
33	80#--240' in drift --W edge pillar	0.08	2.80	0.10	0.07	2.87	1.2	4.08	6.95	36"	
34	30#--245' in drift --E edge Pillar	0.03	1.05	0.10	0.07	1.12	1.1	3.74	4.86	24"	
35	40#--260' in drift	0.03	1.05	Tr	.00	1.05	1.2	4.08	5.13	36"	
36	30#--265' in drift	0.11	3.85	0.30	0.21	4.06	3.2	10.88	14.94	24"	
37	60#--270' in drift	0.165	5.78	0.30	0.21	5.89	1.7	5.78	11.67	30"	

Assay Chart--Continuation

No.	Description	Gold OZ.	Value	Silver OZ.	Value	Total	Copper %	Value	Total	Width	Rmks.
38	50#--275' in drift	0.035	1.23	0.10	0.07	1.30	2.0	6.80	8.10	30"	
39	50#--280' in drift	0.075	2.63	0.10	0.07	2.70	1.6	5.44	8.14	30"	
40	50#--285' in drift	0.14	4.90	0.20	0.14	5.04	1.2	4.08	9.12	30"	
41	50#--290' in drift	0.13	4.55	0.20	0.14	4.69	1.9	6.46	11.15	30"	
42	50#--295' in drift	0.13	4.55	0.20	0.14	4.69	1.7	5.78	10.47	30"	
43	35#--300' in drift	0.045	1.58	0.10	0.07	1.65	1.4	4.76	6.41	30"	See 43 $\frac{1}{2}$
44	50#--305' in drift	0.035	1.23	0.10	0.07	1.30	0.5	1.70	3.00	30"	See 44 $\frac{1}{2}$
45	35#--310' in drift	0.035	1.23	0.10	0.07	1.30	0.6	2.04	3.34	30"	See 45 $\frac{1}{2}$
46	50#--315' in drift E mouth of drift	0.025	0.88	0.10	0.07	0.95	0.6	2.04	2.99	30"	Check above
TOTAL ASSAY INCHES						6093.21	7820.64	13913.85	1240"		
AVERAGE						\$4.91	\$6.31	\$11.22	28"		

Shipping ore was already stoped out for approximately 100 feet between the above samples and could not be included in the above average.

COPPER BELT MINING COMPANY

ASSAY CHART--DEVELOPMENT
TRI METALS #1-70' DRIFT - 55 feet

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
55	50#--5' in drift	0.045	\$1.58	0.10	0.07	\$ 1.65	1.1	\$ 3.74	\$ 5.39	30"	
56A	50#--10' in drift W. edge stope	0.05	1.75	0.10	0.07	1.82	1.3	4.42	6.24	24"	
57B	25#--10' in drift W edge stope up 10'	0.11	3.85	0.20	0.14	3.99	3.4	11.66	15.65	20"	
58	20#--50' in drift E edge stope	0.205	7.18	0.30	0.21	7.39	1.4	4.76	12.15	18"	
59	50#--55' in drift at face	0.18	6.30	0.20	0.14	6.44	3.2	10.88	17.32	20"	
TOTAL ASSAY INCHES						434.80		754.76	1189.56	112"	
AVERAGE						\$3.88		\$6.74	\$10.62	22"	

Approximately 40 feet of shipping ore was already stoped from the above area and with no sorting was assayed at \$16 by the smelter for a width of 36", the shipment totaling 36 tons.

COPPER BELT MINING COMPANY

ASSAY CHART--DEVELOPMENT
TRI METALS #1-200 FEET, 125' DRIFT

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
63	80#-30 ft in E Drift	0.06	\$2.10	0.10	6.07	\$ 2.17	2.5	\$ 8.50	\$ 10.67	36"	
62A	50#-47 ft in E drift	0.035	1.23	0.10	0.07	1.30	0.9	3.06	4.36	20"	
61A	50#-57 ft in E Drift	0.06	2.10	0.20	0.14	2.24	2.5	8.50	10.74	30"	
60A	50#-67 ft in E Drift	0.065	2.28	0.10	0.07	2.35	2.9	9.86	12.21	24"	
62	25#-81 ft in E Drift	0.045	1.58	0.10	0.07	1.65	2.3	7.82	9.47	20"	Sulphides
61	25#-83 ft in E Drift	0.02	0.70	-	-	0.70	2.2	7.48	8.18	24"	Sulphides
59	40#-85 ft in E Drift	0.025	0.98	-	-	0.98	0.5	1.70	2.68	20"	Recheck taken
60	50#-95 ft in E Drift	0.04	1.40	0.10	0.07	1.47	3.3	11.22	12.69	30"	Sulphides
59A	30#-103 ft in E Drift	0.035	1.23	0.10	0.07	1.30	1.9	6.46	7.76	20"	Sulphides
58B	50#-115 ft in E Drift	0.04	1.40	0.10	0.07	1.47	1.9	6.46	7.93	30"	
64	40#-123 ft in E Drift	0.075	2.63	0.20	0.14	2.77	0.4	1.36	4.13	20"	Pinch

61

Assay Chart--Continuation

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
65	40#-133 ft in E Drift	0.01	0.35	-	-	0.35	2.8	9.52	9.87	20"	Pinch & Leached
66	40#-143 ft in E Drift	0.01	0.35	-	-	0.35	0.4	1.36	1.71	20"	Badly Leached
67	50#-153 ft in E Drift	-	-	-	-	-	-	-	0.00	20"	Badly Leached
68	40#-163 ft in E Drift	0.015	0.53	-	-	0.53	0.3	1.02	1.55	20"	No Vein 3 cuts
69	50#-173 ft in E Drift	0.02	0.70	0.10	0.07	0.77	2.6	8.84	9.61	30"	
70	20#-191 ft in E Drift	0.025	0.88	0.10	0.07	0.95	2.7	9.18	10.13	20"	2 cuts
71	20#-200 ft in E Drift	0.055	1.93	0.10	0.07	2.00	12.0	40.80	42.80	20"	Sulphides
TOTAL ASSAY INCHES						573.41		3418.36	3991.78	424"	
AVERAGE						\$1.35		\$8.06	\$9.41	24"	

Ore is leached on this level because of continual fluctuation of the water table about 25 feet above and some distance below.

COPPER BELT MINING COMPANY
 ASSAY CHART--DEVELOPMENT
 TRI METALS #1-SURFACE, VEIN A1
 Spot Assays East of Upper Drift

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks
100	25#--20' E. of E. Portal M. Trench	0.035	1.23	0.10	0.07	\$ 1.30	trace	\$ -	\$ 1.30	20"	Recheck to be taken
101	10#--150' E of 100' on slope of hill trench	0.015	0.53	trace	-	0.53	trace	-	0.53	20"	Recheck to be taken
102	50#--500' E of 101 top offset vein at C5-10' shaft	0.17	5.95	0.30	0.21	6.16	1.6	5.44	11.60	20"	
103	30#--E dump junc. 1A + A3	0.36	12.90	0.40	0.28	13.18	1.8	6.12	19.30	48"	
104	40# top--50' E of 103, E of junc. of A1 + A3	1.11	38.85	0.60	0.42	39.27	1.2	4.08	43.35	20"	
TOTAL ASSAY INCHES						<u>\$1577.84</u>		<u>\$484.16</u>	<u>\$2062.00</u>	<u>128"</u>	
AVERAGE						\$12.33		\$3.78	\$16.11	26"	

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
VEIN B3

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
1	20#--Lower Test Tunnel above D2 Hang Wall	0.065	\$2.28	0.20	\$0.14	\$ 2.42	2.3	\$ 7.82	\$ 10.24	20"	
1A	20#--Below D2	0.02	0.70	trace	-	0.70	1.2	4.08	4.78	18"	Ore shoot
2	30#--W Side Apex Crossing with E Vein	0.22	7.70	0.40	0.28	7.98	2.2	7.48	15.46	36"	
3	50# Apex	0.12	4.20	0.30	0.21	4.41	2.3	7.82	12.23	36"	
4	40# Lower E Cut	0.085	2.98	0.20	0.14	3.12	1.7	5.78	8.90	36"	
5	40#--50' W of old shaft	0.185	6.48	0.20	0.14	6.62	1.4	4.76	11.38	36"	
24	30#--300' W of W Ridge	0.045	1.58	0.10	0.07	1.65	1.2	4.08	5.73	20"	Leached
1X	200#--C Vein Crossing with B3	0.16	5.60	0.30	0.21	5.81	1.2	4.08	9.89	48"	
7	40#--Portal Tunnel	0.195	6.83	0.30	0.21	7.04	1.8	6.12	13.16	30"	Leached
8	40#--10' in Tunnel	0.20	7.00	0.30	0.21	7.21	1.7	5.78	13.00	36"	Leached
9	30#--20' in Tunnel	0.035	1.23	0.10	0.07	1.30	0.4	1.36	2.66	72"	Leached
10	30#--30' in Tunnel	0.14	4.90	0.20	0.14	5.04	1.2	4.08	9.12	30"	Leached

Assay Chart--Continuation

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Rmks.
11	30#--40' in Tunnel	0.02	\$0.70	0.10	\$0.07	\$ 0.77	0.1	\$ 0.34	\$ 1.11	36"	Leached
12	30#--50' in Tunnel	0.235	8.23	0.40	0.28	8.51	1.8	6.12	14.63	36"	Leached
13	40#--60' in Tunnel	0.025	0.88	trace	-	0.88	0.4	1.36	2.24	36"	Leached
14	50#--70' in Tunnel	0.06	2.10	0.10	0.07	2.17	0.6	2.04	4.21	36"	Leached
15	50#--80' in Tunnel	0.035	1.23	0.10	0.07	1.30	0.4	1.36	2.66	60"	Leached
16	50#--90' in Tunnel	0.07	2.45	0.20	0.14	2.59	1.0	3.40	5.99	60"	Leached Badly
17	50#--100' in Tunnel	0.02	0.70	trace	-	0.70	0.4	1.36	2.06	30"	Leached
18	50#--110' in Tunnel	0.045	1.58	0.10	0.07	1.65	0.9	3.06	4.71	60"	Leached
19	50#--120' in Tunnel	0.025	0.88	trace	-	0.88	0.2	0.68	1.56	60"	Leached
20	50#--130' in Tunnel	0.05	1.75	0.10	0.07	1.82	1.2	4.08	5.90	60"	Leached
21	40#--140' in Tunnel	0.025	0.88	trace	-	0.88	0.2	0.68	1.56	48"	
21A	20#--30' W of Portal 75' up 8' Shaft	0.06	2.10	0.10	0.07	2.17	1.7	5.78	7.95	36"	
TOTAL ASSAY INCHES						2964.76		3441.16	6405.92	976"	
AVERAGE						\$3.03		\$3.52	\$6.55	41"	

-23-

23

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
B5 VEIN

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Remarks
1	30#--300' E of Apex	0.06	2.10	0.10	0.07	\$ 2.17	4.8	\$ 16.32	\$ 18.49	20"	Leached
2	20#--100' in from 1 crop- ping	0.245	8.58	0.30	0.21	8.79	1.1	3.74	12.53	20"	Leached
3	20#--200' W of 2	0.15	5.25	0.20	0.14	5.39	3.1	10.54	15.93	20"	Leached
4	30#--200' W of Long Tunnel in Scarp	0.025	0.88	-	-	0.88	0.5	1.70	2.58	20"	
5	30#--Upper Tunnel Foot Wall	0.03	1.05	-	-	1.05	1.3	4.42	5.47	20"	Hornfels
6	30# Portal	0.025	0.88	-	-	0.88	1.3	4.42	5.30	30"	Leached
7	30#--10' in Tunnel Hang Wall	0.065	2.28	0.10	0.07	2.35	2.5	9.18	10.53	20"	
8	20#--20' in Tunnel over Winze	1.38	47.30	0.60	0.42	47.72	2.0	6.80	54.52	20"	Badly Leached
9	30#--30' in Tunnel	6.255	8.93	0.30	0.21	9.14	1.7	5.78	14.92	20"	Leached
10	30#--40' in Tunnel	0.235	8.23	0.30	0.21	8.44	1.2	4.08	12.52	20"	Leached

Assay Chart--Continuation

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Remarks
11	30#--50' in Tunnel	0.70	24.50	0.50	0.35	\$ 24.85	1.2	\$ 4.08	\$ 28.93	20"	Leached
12	30#--200' W of Tunnel 50' up	0.835	29.23	0.50	0.35	29.58	2.5	8.50	38.08	20"	Leached
TOTAL ASSAY INCHES						2833.60	1615.40	4449.00	250"		
AVERAGE						\$11.34	\$6.46	\$17.80	21"		

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
VEIN B1

No.	Description	Gold Oz.	Value	Silver Oz.	Value	Total	Copper %	Value	Total	Width	Remarks
1	20# Lower Tunnel	0.445	\$15.58	0.40	\$0.28	\$15.86	3.4	\$ 11.56	\$ 27.42	20"	
2	20# Middle Cut	0.025	0.88	Tr	--	0.88	Tr	--	0.88	20"	
2C	30# Crossing with C Vein 100' W of #6	0.015	0.53	Tr	--	0.53	1.6	5.44	5.97	60"	Partly Leached
3	20# Upper Cut	0.03	1.05	0.10	0.07	1.12	0.6	2.04	3.16	20"	
4	30#--100' W of #3	0.01	0.35	Tr	--	0.35	1.6	5.44	5.79	20"	Leached
5	20#--100' W of #4	0.025	0.88	Tr	--	0.88	0.5	1.70	2.58	20"	Leached
6	20#--300' W of #5	0.80	28.00	0.50	0.35	28.35	5.3	18.02	46.37	20"	
TOTAL ASSAY INCHES						980.60		1101.60	2082.20	180"	
AVERAGE						\$5.45		\$6.12	\$11.57	26"	

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
VEIN B6

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Remarks
1	100# W End of Dump	0.06	\$2.10	0.20	\$0.14	\$ 2.24	1.1	\$ 3.74	\$ 5.98	30"	
2	50#--50' E of #1-- 10' E of old shaft	0.23	8.05	0.30	0.21	8.26	1.4	4.76	13.02	20"	Leached
3	30#--20' E of #2-- 12" F W--18" HW	0.28	9.80	0.30	0.21	10.01	1.7	5.78	15.79	30"	
4	20#--10' E of #3 FW--2' Horse	0.125	4.38	0.20	0.14	4.52	0.8	2.72	7.24	20"	
5	30#--200' E of #4 above A4 Vein	0.045	1.58	0.10	0.07	1.65	1.5	5.10	6.65	30"	
6	20#--75' E of #5	0.02	0.70	0.10	0.07	0.77	0.1	0.34	1.11	20"	Leached
7	30#--75' E of #6	0.025	0.88	Tr	--	0.88	1.1	3.74	4.62	36"	Leached
8	40#--10' E of #7	0.06	2.10	0.10	0.07	2.17	0.9	3.06	5.23	20"	Leached
9	20#--10' in Tunnel	0.025	0.88	Tr	--	0.88	0.2	0.68	1.56	30"	
10	40#--20' in Tunnel	0.04	1.40	0.10	0.07	1.47	0.2	0.68	2.15	30"	Leached
11	30' in Tunnel	0.035	1.23	0.10	0.07	1.30	0.1	0.34	1.64	30"	Leached
12	40' in Tunnel	0.025	0.88	Tr	--	0.88	0.9	3.06	3.94	30"	Leached
13	30#--50' from face of Tunnel--2 cuts	0.195	6.83	0.20	0.14	6.97	0.2	0.68	7.85	20"	
TOTAL ASSAY INCHES						1038.38		948.24	1986.62	346"	
AVERAGE						\$2.98		\$2.76	\$5.74	27"	

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
VEIN A4

No.	Description	Gold oz.	Value	Silver oz.	Value	Total Copper %	Value	Total	Width	Remarks	
1	Edge Webb Dump	0.015	\$0.53	Tr	\$ --	\$ 0.53	0.7	\$ 2.38	\$ 2.91	20"	Leached
2	30#--75' W & 25' up Webb Dump under trail	0.02	0.70	0.10	0.07	0.77	1.6	5.44	6.21	20"	
3	30#--10' W of 2-- Croppings 10' higher than 2	0.025	0.88	0.10	0.07	0.95	0.4	1.36	2.31	20"	Leached
4	40#--20' W of & 10' higher than 3	0.04	1.40	0.10	0.07	1.47	0.3	1.02	2.49	20"	
5	40#--75' W of & 30' higher than 4--5' W of B5 Vein	0.12	4.20	0.20	0.14	4.34	0.6	2.04	6.38	20"	
6	40#--25' W of 5--HW not in	0.04	1.40	0.10	0.07	1.47	0.4	1.36	2.83	20"	
7	40#--25' W of & 5' higher than 6	0.06	2.10	0.10	0.07	2.17	0.5	1.70	3.87	30"	
8	50#--5' W of 7	0.25	8.75	0.40	0.28	9.03	2.2	7.48	16.51	20"	
9	50#--110' W of 8	0.035	1.23	0.10	0.07	1.30	0.4	1.36	2.66	20"	Leached
TOTAL ASSAY INCHES						462.30		499.80	962.10	190"	
AVERAGE						\$2.43		\$2.63	\$6.06	21"	

COPPER BELT MINING COMPANY
 ASSAY CHART--DEVELOPMENT
 VEIN B4

No.	Description	Gold oz.	Value	Silver oz.	Value	Total Copper %	Value	Total	Width	Remarks	
1	30# over long tunnel --2 cuts and dump	0.315	\$11.03	0.40	\$0.28	\$11.31	1.3	\$ 4.42	\$15.73	20"	Leached
2	30# face of long tunnel	0.015	0.53	Tr	--	0.53	0.1	0.34	0.87	30"	Leached
3	30#--30' E of face	0.09	3.15	0.10	0.07	3.22	0.1	0.34	3.56	30"	Red
4	30#--65' E of face	0.14	4.90	0.20	0.14	5.04	0.3	1.02	6.06	30"	Leached
TOTAL ASSAY INCHES						489.90		139.40	629.30	110"	
AVERAGE						\$4.45		\$1.27	\$5.72	28"	

29

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
MISCELLANEOUS A VEINS

No.	Description	Gold oz.	Value	Silver oz.	Value	Total Copper %	Value	Total	Width	Remarks
1	A9--10# in saddle	0.20	\$ 7.00	0.30	\$0.21	\$ 7.21	Tr	\$ --	\$ 7.21	20"
1	A8--D1 tunnel	0.30	10.50	0.40	0.28	10.78	2.8	9.52	20.30	20" Leached
1	A3--300' W of old shaft--50#	0.02	0.70	Tr	--	0.70	0.4	1.36	2.06	48"
1	A7--50# 20' N of B3 #5	0.02	0.70	0.10	0.07	0.77	0.8	2.72	3.49	48" Leached
1	A5--20# E end dump	0.125	4.38	0.20	0.14	4.52	Tr	--	4.52	(20")
10	A2--50# in wash	0.03	1.05	Tr	--	1.05	0.5	1.70	2.75	20" Leached
TOTAL ASSAY INCHES						541.76	420.24	962.00	176"	
AVERAGE						\$3.07	\$2.40	\$5.47	29"	

COPPER BELT MINING COMPANY
 ASSAY CHART--DEVELOPMENT
 MISCELLANEOUS B VEINS

No	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Remarks
1	B2--10# 100' W of Saguara 8' Vein	0.015	\$ 0.53	Tr	\$ --	\$ 0.53	0.3	\$ 1.02	\$ 1.55	20"	Footwall Kaolinized
1	B8--20# E End Dump	0.035	1.23	0.10	0.07	1.30	0.1	0.34	1.64	(20")	
1	B--20# 100' W & 50' S of B1 #4	4.30	150.50	1.00	0.69	151.19	2.2	7.48	158.67	20"	
2	B--20# 100' W of 1	0.01	0.35	Tr	--	0.35	1.6	5.44	5.79	20"	Badly Leached
TOTAL ASSAY INCHES						3067.40		285.60	3353.00	80"	
AVERAGE						\$38.34		\$3.56	\$41.90	20"	

COPPER BELT MINING COMPANY
ASSAY CHART--DEVELOPMENT
MISCELLANEOUS SAMPLES

No.	Description	Gold oz.	Value	Silver oz.	Value	Total	Copper %	Value	Total	Width	Remarks
1	D1--Crossing 8' shaft on B3 N 55'--10#	0.015	\$0.53	Tr	\$ --	\$0.53	Tr	\$ --	\$ 0.53	15"	
2	D1--D Tunnel--30#	0.02	0.70	Tr	--	0.70	Tr	--	0.70	20"	Leached
8A	Pyrites in X Vein 58' in Tri Metals #1 Upper Drift	0.01	0.35	Tr	--	0.35	Tr	--	0.35	60"	
8B	Pyrites--60' in Tri Metals #1 Upper Drift 40#--HW above #8	0.005	0.18	Tr	--	0.18	Tr	--	0.18	30"	
15A	20#--120' in Tri M #1 Upper Drift Hang Wall (Special)	0.01	0.35	Tr	--	0.35	Tr	--	0.35	24"	
20	20#--155' in Tri M #1 Upper Drift Hang Wall (Special)	0.015	0.53	Tr	--	0.53	Tr	--	0.53	12"	
58A	15#--42' E of jig on 125' level 10# HW & 12" FW--2" Horse	0.055	1.93	0.20	0.14	2.07	4.7	15.98	18.05	24"	
43½	Upper Drift--Recheck of 43--25# Tri Metals #1	0.08	2.80	0.20	0.14	2.94	2.6	8.84	11.78	12"	
44½	40# Upper Drift-- Recheck of 44	0.055	1.93	0.10	0.07	2.00	1.7	5.78	7.78	20"	
45½	15# Upper Drift-- Recheck of 45	0.105	3.68	0.20	0.14	3.82	1.1	3.74	7.56	30"	

TONNAGE INDICATED

Many openings have been made in the various veins on the property, all showing milling and/or shipping grade ore. Many other veins, while not yet trenched, or prospected, show the leached copper primary minerals and should show ore within a few feet of the surface. Several of the veins in the "A" and "B" systems and all the veins in the "C" systems where they cross the "A" and "B" veins show widths of from 18" to 5' of milling grade ore. It seems probable that A-1, 2 and 3 can be brought into the A-1 mining program by a short crosscut and proper drifts at various levels. Since the A-1 vein has been uncovered at regular intervals for more than 2,000 feet showing milling grade ore, and since many evidences of similar ore are exposed in the trenches and croppings on A-2 and 3, it is safe to predict enough ore available in these three veins alone to pay for the property, for all development, for a 1,000-ton milling plant, and leave a substantial margin for dividends. Geologically there seems to be no reason why these veins should not extend to a depth of a mile or more. The potentialities of this "A" system in these three veins alone is immense.

This system, however, represents but a small fraction of the ore resources of the property. The "B" veins that can be brought into the mining program around Tri-Metals Shaft No. 2 is many times that indicated in the "A" system. The following paragraphs on Geophysics will clearly show why. This program will not only include 6 of the "B" veins but will include four of the best "A" veins, all cropping in many

places within an area 800 feet in width by 3500 feet in length, and by geological projection extending to a depth of from 3500 feet to a mile. Geophysical analysis shows this area to be more heavily and consistently silicified than any other area in the mineralized zone. Further, since the mineralization is associated with the silicification, and since all exposures of ore are in this type of condition, it appears to be the most favorable area for exploitation early in the Company's development. Enough tonnage of mill-grade ore exists in this area alone to keep a thousand ton plant operating a lifetime. This area has been prospected and developed more thoroughly than any other with approximately 1138' of shafts, drifts, crosscuts, and open cuts.

Based upon the geological survey alone, this area would justify the recommendations as herein made. The additional data obtained from the geophysical survey eliminates all unknown factors in the geological study and corroborates fully the interpretation and recommendations as given above. This area will take its place along side the great mines of Arizona.

GEOPHYSICAL SURVEY

It is necessary for intelligent development to determine the strength, depth, and extensions of orebodies even though their position is known. It is also necessary for the same reason to trace the orebodies out under detritus. Having once established by geophysical survey the pattern made by a vein, it is possible to follow it along its strike to its end and evaluate its relative merits. It is also possible to evaluate the strength, size and shape of the orebodies along

the strike and dip. In this property the sulfide zone is so near to the surface that the negative pole of the electric field generated by the oxidation of the orebody is weakly developed. Though feeble reactions are obtained over the exposed orebodies, the self potential method of surveying orebodies offers slight value in this deposit. The leached croppings and strings of float yield the best results when surveyed by the magnetometer, which entirely corroborates the geology.

By examination of the magnograph furnished herewith it is possible to follow the trends of silicification and mineralization and pick the best spots for early development and operation. Many favorable areas exist when extensive development is justified but one outstanding zone mentioned previously demands first attention and lends itself to the first economical and practical operation of the property.

In most mining regions the country rocks, usually most sedimentaries with small dikes, sheets, etc., are denser than the shears, faults, or veins. In such cases the veins will yield high magnetometer readings while the country rock will remain near normal. In every case a vein or fault will yield a characteristic profile which will cling to that vein throughout its length. But, in a few districts the reverse is true, the country rock will be porous and open to the travel of the vertical magnetic field or flux from the magnetic center of the earth to the crust. This vertical flow as measured by the magnetometer produces the anomalies which by proper interpretation furnish the magnetic patterns necessary

in determining underground structures. In this case the veins are highly silicified by thermal solutions which brought in the gold and copper. This has made the veins more dense and less susceptible to the penetration of the magnetic flux through them, thus building up on the foot wall side of the veins a magnetic pressure zone that has to equalize itself in front of the veins. This gives rise to higher magnetometer readings than those obtained over the veins themselves. The monzonite is homogenous and porous while the veins have become silicified and dense. The differentiation between the readings obtained over the veins and those over the monzonite make it possible to distinguish the veins even when covered by detritus. The degree of silification is also well interpreted and the trends of silification are well illustrated. Some of these trends are so apparent that they can be recognized by the layman. In the case of the Copper Belt ore deposits these trends have definitely shown where all efforts are to be concentrated for large scale operations. It also illustrates the relative value of the various zones and the limits of their development.

ZONAL PHENOMENA

In the Algonkian type of ore invasion the zones have great depth. In this case the gold and copper being about equally divided in value indicates that the copper zone has been partially eroded, particularly in the lower and central part of the mineralized area; and that the gold zone has encroached on it or overlapped it. The existence of copper in the main shears and in the branching fissures proves the

existence of copper at least to the junction point which would lie 3500 feet below for most of the branches. Since we are now in the top of the chalcocite zone it is probable that secondary copper ore can be expected for at least 1,000 feet in depth at which point primary sulfides should extend to the junction of the branches with the main shears. If, as generally known and accepted, the Algonkian zones are a mile long vertically, then we would have the lower part of the gold zone continuing to still greater depths. Many primary orebodies are not profitable, but in this case the ore in the chalcocite zone is high grade. Further, since the small fragments of primary ore encountered are of profitable grade without the secondary enrichment, it seems likely that both the primary sulfides and the gold may be followed profitably to a great depth.

MINERALIZATION

The gold so far found in this area is free and could be extracted commercially without recovery of the copper and silver present.

The copper occurs in primary form as chalcopyrite, which, in the oxidized zone, has been altered to carbonates, oxides, chlorides, oxy-chlorides and sulfates, with secondary minerals like bornite, covellite and chalcocite.

DEVELOPMENT PLANS

At the present time the Copper Belt Mining Company has completed its initial phase of development.

This period saw the following work completed:

Shafts

521 feet of development including the 140-foot Tri Metal Shaft #1 (70°) fully equipped and now in operation; the 183-foot Tri Metals Shaft #2 (Vertical) being enlarged for future operations; the 100-foot Tri Metals Shaft #4 (70°) now being timbered for sampling and mining; and miscellaneous exploration shafts throughout the property.

Drifts, Crosscuts, and Tunnels

1262 feet of development, including 710 feet of drifts on Vein A1, blocking out approximately 5000 tons of ore; 50 feet of tunnel on vein B5, blocking out approximately 200 tons of ore; 150 feet of tunnel on Vein B3, blocking out approximately 2000 tons of ore; plus numerous prospect tunnels, drifts, and crosscuts.

Open Cuts

44 open cuts, giving a clear idea of vein systems and values present on the surface.

Development should proceed through two advancing stages.

The first or primary stage should see the following development take place coordinated with primary mining and milling development.

Work should be concentrated upon the A1 Vein System which should be further developed to the 250-foot level by the sinking of the working shaft from the 140-foot level to the 270-foot level, allowing a 20-foot sump for the collection of water. This level should see the moderate production of water ample for all mining and milling purposes planned for the primary mining and milling stage.

Drifting should be continued on the 125-foot level east for 300 additional feet at which time a raise should be made to the surface allowing for an additional mine exit and hoisting unit if necessary. This operation would complete the blocking of the 10,000 tons of ore above that level.

Upon completion of the shaft to the 270-foot level and the installation of a station on the 250-foot level, drifting should begin both to the east and to the west for a distance of 500 feet and stope raises made to join with the 125-foot level to the east and with the surface to the west. This development would block out approximately 20,000 additional tons of ore, and allow exploitation of sulphide orebodies indicated at that depth. If additional ore is desired development can be continued on the 100-foot Tri Metal Shaft #4 on Vein B6 in which two feet of high-grade milling ore is ready to be blocked. Upon completion of the timbering of the shaft, drifting could be started both to the east and west and should proceed at a ratio of two units blocked for every one unit mined until approximately 10,000 tons of ore have been blocked out.

Extensive trenching should be undertaken in an effort to further learn the exact proportion and value of the orebodies and veins.

The above primary development would:

1. Provide approximately 40,000 tons of ore blocked and ready for mining.

This ore reserve based on a production of from 50 to 100 tons per day would mean a reserve of over two years as based upon the primary milling plans.

2. Provide water in quantity enough to supply all mining and milling needs.
3. Give an indication of the size and the value of sulphide orebodies at depth.
4. Give the Copper Belt Mining Company a better basis for the formulation of secondary development plans. Development costs for the primary period are estimated at 94¢ per ton of ore blocked based on past cost records.

Secondary development plans coordinated with secondary mining and milling plans should for the most part be dependent upon the success and findings in the primary period.

However, it should be the Copper Belt Mining Company's purpose to do such development in this period to assure a large-scale output, and provide for continued increases in the production rate.

This development should consist of the completion of the Tri Metals Shaft #2 to the 500-foot level with transportation levels crosscutting all veins; stations also cut at 125, 250, and 375 feet; and egresses made to the surface at strategic points. This development would bring into production all veins on the property for a distance of 2500 feet north and south and 3500 feet east and west.

Tonnage developed upon the completion of the above development would exceed 10,000,000 tons.

In conjunction with the above development would be a program of diamond drilling to the 3000-foot level in order to locate and identify massive orebodies anticipated by the

Coalescing of the branching fissures. Should such orebodies be found, tonnage figures would increase tremendously and final development plans would be increased proportionately. Diamond drilling should be undertaken in the primary period if possible in order to locate the better areas for development and production.

MINING PLANS

To date mining operations by the Copper Belt Mining Company and prior owners consisted of open stoping, sorting, and shipping. Little effort was made to standardize operations and to develop plans and schedules.

However, with the construction of a production unit during the primary milling period, mining operations should be scheduled to fit into milling schedules.

Mining should be done initially in the Tri Metals Shaft #1 on the 125-foot level in preferred locations carrying the highest grade of ore. These areas should be mined by shrinkage stoping methods designed especially for this property to save time and money and maintain a high rate of production with safety. Stopes should be installed and completed within approximately 35 working shifts and the average tonnage from one stope completed and one stope under construction would be approximately 25 tons per day. Production would be increased by the addition of stoping units and for the anticipated tonnage milled of 50 tons per day two such stopes would be in operation daily.

Mining costs--which will include 3 miners, 1 trammer, 1 hoistman, powder, timber, and other supplies--are estimated

to be \$1.25 per ton of ore mined.

Existing hoisting facilities should be used with minor rework of the shaft above the 125-foot level.

Additional airconditioning facilities should be installed in order to properly ventilate two stopes or two drifts simultaneously.

Upon completion of the extraction of all ore blocked above the 125-foot level, or when desired, stoping should begin on the 250-foot level.

Upon the increase in tonnage milled from 50 to 100 tons per day, the Tri Metals Shaft #4 can be put into production to work equal tonnage with the Tri Metals Shaft #1. Suitable hoisting equipment, compressor, blower, and small tools can be installed for this purpose. Production would continue in the above manner until such time as the company desires to go into the larger scale operation of the secondary period.

During the secondary period of mining development the Tri Metals Shaft #2 should be fully equipped with large-scale hoisting equipment, a large compressor and suitable receivers, adequate air conditioning, adequate stations for ore bins, and two compartment operation. Transportation tunnels should contain adequate train operation, switching facilities, repair centers, and standardized bin unloading.

Mining should be done by means of shrinkage stoping with operations and jobs standardized as to drilling, loading, shooting, mucking, tramping, timbering, etc.

Detailed production figures should be maintained by stope and sampling should be done before each round to enable

the engineers and mine foremen to maintain production and values.

Should massive orebodies be found in this period of development, the size of the orebodies discovered should be analyzed to ascertain if block caving or sub-level caving would be practical. If so they should be mined in that way, taking advantage of the low costs arising from that type of operation.

Mining costs for this secondary period of mining are estimated at \$1 per ton of ore produced and delivered to the mill.

SELECTIVE MINING

Mining should be as selective as is possible considering the shrinkage method advised. Poor ore should be left in the stopes in the form of pillars; and stope widths should be as near to the width of the ore shoots as possible.

Sorting should be undertaken on all ore mined; this sorting to be done exclusively on the surface after hoisting.

Conveyor belts are preferred for sorting together with washing in the case of wet ores.

Inasmuch as Copper Belt ore is easily picked out from the monzonite and/or schist country rock; and inasmuch as the country rock is barren of values; sorting should prove profitable regardless of the scale of operations.

MILLING PLANS

Primary milling plans call for a pilot mill to be installed having a capacity of from 10 to 100 tons per day.

Extraction methods should consist of suitable leaching

equipment for the oxides and carbonates of copper, and a suitable extraction method for the sulphide copper and gold ores.

Primary plans should include a complete chemical analysis of the ore by several commercial concerns and mill runs of a small scale in sample extraction units either built by the Copper Belt Mining Company or furnished by local engineering houses.

Actual mill requirements should be based on extraction units that are found most practical and have the highest per cent of recovery.

Excavation of the mill site should proceed upon the completion of metallurgical tests and conclusions. Equipment and supplies should then be purchased, and the building erected. Initial mill runs should call for 5 to 10 tons per day with the mill working one shift per day. As soon as practical production should be increased to 25 tons per day and subsequently to 50 tons per day.

Concentrates should be shipped as accumulated and as much gold as possible should be brought down to bullion form.

When an increase in production is required, additional extraction units should be added to bring the capacity to 100 tons per day. Crushing and grinding units also should be converted to that capacity.

Upon the desire of the company to go into large-scale production, metallurgical problems solved by the pilot mill should be incorporated into the large-scale milling plans and a milling unit of from 250 tons to 1000 tons per day

installed near the Tri Metals Shaft #2.

Milling costs anticipated for pilot mill operations are \$1.25 per ton which cost would be lowered to approximately 75¢ per ton on the large-scale unit.

Milling plans should be made in the secondary period to coincide with the amount of sulphide ore developed for milling purposes.

Should sufficient sulphide ore be available to maintain the proposed large-scale milling unit, the mill might be set up as a concentrating plant and carbonate and oxide ores above the water level might continue to be worked by the pilot mill.

MANAGEMENT

The management of the Copper Belt Mine appears to have the ability to pick competent men and properly delegate authority, a basic factor in mine success.

The camp facilities and mine equipment, while not extensive, are ample to carry the mine development to the point where operations can be standardized and costs reduced.

Respectfully submitted,

Ernest D. Foster
Ernest D. Foster, Geologist

Marshall Foster
Marshall Foster, Production Eng.

September 20, 1945

SHRINKAGE STOPE FOR COPPER BELT MINE
AGUILA, ARIZ.

Designed by MARSHALL FOSTER, Production Engineer.

STANDARDIZED STOPE - BILL OF MATERIALS.

<u>No. Req.</u>	<u>Drawing No.</u>	<u>Name</u>	<u>Dim. & Description</u>		
6	1	Chute Posts	4"x4"x5'-4"	Doug.	Fir
3	2	" Plates	4"x4"x3'-6"	"	"
12	3	" Side boards (can be lined)	2"x8"x3'	"	"
6	4	" Bottom (" " ")	2"x12"x4'-8"	"	"
6	5	" Cleats front	2"x4"x2'-6"	"	"
6	6	" " back	2"x4"x2'	"	"
3	7	" Gates (can be lined)	3"x24"x148"	"	"
6	8	" Stulls (Permanent)	10"x10"x5'	"	"
3	9	" Top Guide (bracketed in)	3"x10"x2'	"	"
6	10	" Laag (permanent spiked)	3"x12"x4'	"	"
16	11	Inclined floor sills	4"x 4"x4'	"	"
9	12	" " " (St.L.)	2"x12"x11'	"	"
1	13	1/2" ga. 6" dia. St. Pipe, 2-5' lengths, 1-2' length, 24-4' lengths, 2 nipples 6", 2-45 deg. L ^s , 1-90 deg L, 25-6" couplings			
1	14	7" return bend 1/2" ga St. Pipe			
12	15	Inclined floors (optional)	2"x12"x6'	"	"
24	16	Roof support stulls	12"x12"x4'-3"	"	"
3	17	Pillar caps	8"x 8"x3'-6"	"	"
9	18	Inclined floor boards	2"x12"x9'	"	"
2	19	Bottom ladder uprights	4"x 4"x6'-9"	"	"
1	20	" slide board	1"x12"x6'	"	"
2	21	Ladder splicers angled 16 ga. 4" wide 4-5/16" holes punched to instructions			
1	22	Water line from drift pipe - 1/2" line 1-90 deg. L, 26 Couplings, 1-nipple, 1 pc 8'-3", 23 pcs 4', 1-90 deg. angle valve, 1-globe valve, 1-nipple 6", 1-T			
	23	2" air line from drift pipe line. 1-6" nipple, 1-angle valve, 1-globe valve, 1-short nipple, 1-90 deg L, 1-T, 23 couplings, 23 pcs 4', 1 pc 11'			
2	24	2nd section ladder	4"x4"x9'	"	"
120	25	Dressed ash ladder rungs	1 1/2"x3"x3'	"	"
52	26	Ladder splices 16 ga stampings with 4 holes per instructions			
25	27	Slide boards	1"x12"x4'	"	"
1	28	Slide board	1"x12"x9"	"	"
105	29	Manway laags	2"x12"x38'-6"	"	"
50	30	Ladder sets	4"x 4"x4'	"	"
1	31	Snatch block 5/8" rope			
50	32	Hanging wall posts	4"x4"x4'	"	"
75	33	Square set spacers	4"x4"x2'-4"	"	"
300	34	16 ga 90 deg brackets 4" wd. 50 with 5/16" holes 1" from end with ends 5" long. 250 with 5/16" holes 1" from end with ends 4" long.			

BILL OF MATERIALS FOR COPPER BELT MINE SHRINKAGE STOPE - contd.

<u>No Req.</u>	<u>Drawing No.</u>	<u>Name</u>	<u>Dim. & Description</u>
1	35	Block support	4" x 6" x 3' Doug. Fir
	36	Covered by 33	
3	37	Chute floor sills	4" x 6" x 3'-6" " "
186		3/8" by 5" laag screws for laags and floors	
24		Bolts 1/2" x 5" for chute cleats	
12		3/8" x 3" laag screws for guide boards and brackets	
2		1/8" x 1" steel straps to support exhauster pipe. 24" long, 1/4" hole at each end for spikes.	
3		Racks and pinions for gates unless standard metal gates are substituted. If substituted, necessary bolts to bolt them to No. 8 timbers.	
236		3/8" x 6" bolts for ladder rungs	
236		U clips for safety on ladder rungs	
866		3/8" bolts x 4 1/2" for ladder splicers and brackets	
2		3/8" x 11" bolts for block support	
125		3/8" x 5" bolts for spacer brackets	
1		Chain with 5/16" links 30" long with bolt 1/2" x 1 1/2" for block	
250'		5/8" manila rope	
1		Safety hook	
2		4' x 5/8" timber ropes	
		Mine wedges	
1000		3/8" out washers	
1000		1/2" out washers	

Drill timbers in jig to make all interchangeable and fit brackets and splicers. When stope is empty, withdraw timbers and equipment and use in new stope. Replace sections injured by blasting. Suggest a storage crosscut be run at each manway to facilitate supplying tools and timber.

COPPER BELT MINE

MARICOPA COUNTY

BIG HORN MINING DIST.

8 (EIGHT) MAPS

Copper Belt Mine (aka Old Nevada Mine) (aka Old Blue Belt)
Sec. 16, 17 T. 5N., R. 10W. (aka Gold Belt Mine)
Maricopa County

reference: Arizona Dept. of Mineral Resources
Copper Belt Mine (file)

present owner: Bob White + Jim McEwen (leasing from
Ray Hudson of Los Angeles) (1971 info)
minerals: copper, gold

history of the area:
the property located prior to 1910. It was
then owned by the Tri-Metals Mining Company.
By 1945 the property was owned by the
Copper Belt Mining Company. In 1946 a
few cars that averaged (\$16.00) (mostly copper)
were shipped. By late 1946 the property was
idle. By 1961 the property was owned by
the Nevada Corporation. Some work was
done but it was decided that the property did
not warrant any further work. By 1971 the
property belonged to Ray Hudson of
Los Angeles. The property then was called
the Gold Belt Mine and was leased to
the Jim and Bob Mining Co. (Bob White
and Jim McEwen).

geology of the area:

granite, some limestone; ore occurs in
40 to 50 narrow veins which are 12" to 20"
wide in a silica gouge.

assays:

1946	\$12.50 per ton
1971	0.5 oz. Au, 4% Cu