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Hotel de la/o
BANNING (ALIFORNIA

Robert Wentworth, Manager Mr. Les. M. Colverores 1108 Lukes Tower. Phoeny aligona. Hear Dir: your letter in regard to our Mining property received and e Can only say that we are ready to deal with outside interests on any equitable basis. map prepared this last spring, also a report by a. R. Wheeler. most of our

# New Property Will Produce

er man.

1. Jan 15th 1939.



CHAS. A. DIEHL

Phoenix, Arizona, , April 28.1941.

# OFFICE

Phone 3-4001

This Certifies That samples submitted for assay by

315 North First Street . Mr. G. M. Colvocoresses.

ARIZONA ASSAY

P. O. Box 1148

contain as follows per ton of 2000 lbs. Avoir.

VALUE (0z.) TOTAL VALUE VALUE (0z.) PERCENTAGE SILVER GOLD REMARKS Of Gold and Silver Ounces Tenths Ounces Hundths \$1.05 \$.70 \$1.05

Charges \$ 5.00

Assayer Arizona Passy Office

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P. O. Box 1148 contain as follows per ton of 2000 lbs. Avoir.

		VALUE (0z.)	GOLD	VALUE (Oa)	1	BED		1	
SILVER Ounces Tenths		VALUE (0z.)	GOLD Ounces Hundths		Of Gold and Silver	PERCENTAGE			REMARKS
			.03	\$1.05					
			.1.4	\$4.90					
			.02	\$.70					
			.03	\$1.05					
			.06	\$2.10					
								-	,
				02	.14 \$4.90 .02 \$.70 .03 \$1.05	.14 \$4.90 .02 \$.70 .03 \$1.05	.14 \$4.90 .02 \$.70 .03 \$1.05 .06 \$2.10	14 \$4.90 02 \$.70 03 \$1.05 06 \$2.10	14 \$4.90 02 \$.70 03 \$1.05 06 \$2.10

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Assayer Arizona Assay Office

6AD

#### ARIZONA COPPER QUEEN GROUP

The Arizona Copper Queen Group (near Bloody Basin) and now known as the Legal Tender, consists of ten unpatented claims owned by Bob Smart of Los Angeles and associates. Visited in company with W. W. Rhodes on January 19th, 1936 and shown over property by Tom V. Hatfield. Camp has an elevation of 3700' and is reached by a fair road nineteen miles from Cordes and it is three miles further to the rim of Bloody Basin, rocky barren land with no timber.

The country is granite with some intrusions of porphoritic rocks and the veins which are mainly quartz and crushed rock occur in the granite or along a contact with one of the intrusive dykes. Some of these may be gash veins and close up at shallow depth, but they appear to be fairly strong and persistant on the surface. There are a series of these veins traversing the claims in northerly and southerly directions, and they show iron and copper stain with iron oxide and copper silicates and carbonates. Much of the quartz is honeycombed with crystals and secondary deposition of copper in the seams and vugs where it is presumed that the gold also occurs as very fine grains or colors.

The most interesting showing is at the Sunshine shaft blue (see/print) which was/a depth of 65' to 80' and apparently was sunk in 1916 or 17. The water stands within 25' of the collar but timbers are good and sound except at the top. Vein is vertical and strikes N 15 degrees E. and it is very narrow near the surface, having a width of only 8" at a depth of 12' but increasing to 2' at a depth of 20' and it is said to be 4' wide near the bottom of the shaft. Vein appears to be on a contact between the granite and a quartz porphyry and can be traced for several hundred feet.

My sample #1 was cut from the vein on both sides of the shaft at depth of 18'.

Value

My sample #2 was taken from the pit marked #6 on the map.

Muck brought up in bucket from bottom of shaft is said to have averaged \$7.20 gold per ton. Hatfield promises to send me more data regarding the vein and values in depth or such information as might be obtained by Rhodes from a man named White in Phoenix. It is essential that this should be obtained in order to consider the advisability of unwatering and sampling the shaft which together with a sampling of other showings on the surface would serve to determine the probable value of the showing which looks fairly promising.

The main shaft (see map) is located 20° to the west of a strong quartz vein which outcrops for a considerable distance with strike N. 10 degrees W and width 5° to 6°. The vein contains considerable carbonate of copper.

The shaft is said to have a depth of 300 to 375' and has a hoisting compartment  $4\frac{1}{2}$ 'x  $4\frac{1}{2}$ ' and good manway. Timbers appear to be in good condition and water stands 80' down.

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mined out in '29 a carload of sorted ore which ran 17% copper, has about 8 tons on the dump which samples 12% cu.

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The equipment at the main shaft consists of a small head frame (the original frame has rotted out) and in a corrugated iron building (in bad repair) there is a Leyner boiler, forge, steam hoist with cable in fair shape and steam compressor (no good) Also there are several buckets and some old drills. Good camp buildings, sufficient for a small crew.

terms by Smart and while I do not believe that any substantial body of copper ore is likely to be developed, no very definite opinion can be formed without examination of the vein in the main shaft. The Sunshine vein seems to hold some promise of developing into a small producer of gold, but it would hardly be interesting unless the average values would exceed \$10.00 per ton.

About 3/4 mile to the south of the Copper Queen is located the old shaft of the Arizona United where considerable work was done several years ago with no good result.

The Brooklyn Mine lies some three miles to the south and also appears to have been a flop as it was based on a stock swindle.

The caretaker at the Brooklyn, D. I. Duncanson, claims that some molybdenum was found in this property at a depth of some 600' and has some samples of this ore, but it is doubtful if it would whave any importance.

# 2/12/36

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William White called and said that he was part owner of this property for over fifteen years and that all of the development work had been done under his direction.

He thinks that the main shaft, if sunk to over 1000' depth, might develop a big copper mine but this would cost some \$200,000. (Chance would be a very poor one in my opinion)

As to the Sunshine Shaft he says that this is still only 45' deep and that the ore found there was only a small lense in a fault fissure and the higher grade material had a width of only 2" or 3" in the bottom and it was all worked out in '17 by Cartwright who shipped 17 tons to Humboldt.

Practically no pay ore left there and no reasonable prospect of finding anything more. Except for the small lenses or pockets the gold values from all parts of the property are very low, --not over \$2.00 or \$3.00 per ton.

There never was any ore developed by the United Arizona shaft or elsewhere in that vicinity.

#### ARIZONA COPPER QUEEN

1/16/39

Now called the Piedmont and a lot of money has been spent on the surface during the past few months but no development work done underground although the shaft has been unwatered. Portions of a mill have been secured and brought as far as Cleator.

Project will probably be a flop although a little ore may be produced from the Sunshine vein near the surface and there are remote chances that new ore will be found there or in some of the other veins.

G.M.C.

## ARIZONA COPPER QUEEN

4/20/38

According to Dusty Rhodes, Smart has sold a controlling interest in this mine to some paint company in Los Angeles and these people are now retimbering the main shaft and have purchased equipment for a 100 ton mill which is now being installed. Since they have not done any underground work or developed any ore it is not likely that they will last very long.

G.M.C.

## ARIZONA COPPER QUEEN

DISTRICT:

Squaw Creek

LOCATION:

16 mi. S. E. Cordes 72 mi. Horseshoe Ranch. Copper Creek Mining District. Elevation 4390'.

OWNERS & OPERATORS:

Arizona Copper Queen Mining Co. W. B. Douglas, Mgr. Lon Cartwright operating the Sunshine claims under lease from the A. C. Q. Co. Rest of the property idle for lack of coal.

DATE VISITED:

July 24th, 1917, probably by L. F. S. Holland.

#### NOTESL

Sic Claims. Bradshaw granite with schistose compression belts, called dikes, and quartz veins. General strike of belts and veins N-S. Shaft 250' in which is 200' water. At collar of shaft quartz ledge 69 wide, probably gash vein, showing chrysocolla and a little chalcopyrite. Another smaller quartz ledge joins it to the South. Two others about parallel. Cartwright stated that on the 150' level, now under water, there is 60' drift and 70' crosscut, showing quartz vein 6' wide from which copper values have been largely leached. Near bottom quartz assays 62% copper for width of 6', according to Cartwright.

On the Sunshine claim, which Cartwright is working under lease, is a 45' vertical shaft, on and 18" quartz vein showing chalcopyrite, hematite and glance. Cartwright expects to make a trial shipment running about 15% copper. Apparently no development work has been done on the schist belts which show some porphyritic intrusions and may have possibilities of making ore in depth.

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The property will be bonded and leased on reasonable terms by

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probably by L. F. S. Holland

#### REPORT ON

# THE ARIZONA COPPER QUEEN MINE YAVAPAI COUNTY, ARIZONA

## HOLDINGS:

This property consists of nine full mining claims 600 x 1500 feet each, comprising nearly one hundred and eighty acres.

# LOCATION OF PROPERTY:

This property is situated in the Copper Creek Mining District of Yavapai County, Arizona, about twenty-five miles southeast from the smelter town of Mayer, and twenty miles due east of Cordes Siding a railroad shipping point on the Crown King branch of the Santa Fe Rail-road. A good road, suitable for motor hauling, now connects the mine with the railroad and daily trips are now being made with five ton trucks.

The climatic conditions of this portion of Arizona are so equalized that out door work can be prosecuted throughout the entire year, and at no time are the roads between the mine and railroad or smelter closed to transportation.

# GENERAL DESCRIPTION AND VEIN SYSTEM:

On the several claims of this property are found numerous quartz veins, varying in width from twelve inches to fifteen f et, highly mineralized with copper, gold and silver. The outcrop of these veins is very prominent, and in some instances stand many feet above their surroundings. The veins are highly mineralized with copper bearing minerals, of which the predominating mineral is a chalcocite with azurite and malachite crystals interspersed in the cracks and seams of the gangue.

# THE SYSTEM OF VEINS:

On this property are two very distinct structural trends or courses and are plainly to be observed. That the ore bodies are separate and distinct so far as their physical appearance upon the surface would indicate, is true, but geologically they are one and the same ore body that has been cut through by a strong porphyry intrusion, giving to these ore bodies the appearance as of cross fissures coming together at a very obtuse angle, but showing very conclusively to my notion

that the original veins before they were severed by this porphyry dyke had a natural course of from the northwest to the southeast.

GEOLOGY

In the area in which this property lies, and to a greater or less extent both to the north and south, is an area of quartz monzonite. frequently called granite, which is intruded by a later aplitic granite and rhyolitic porphyry. Dykes of late Tertiary monzonite porphyry cut the granite, forming a double system of vein fractures, but showing conclusively that both fractures are one and the same ore bodies. Rhyolite porphyry so common to this area, has its groundmass microcrystalline, and it might be rightly classed as granite porphyry. Quartz, monzonite, and porphyry, which contain all the ores of this area, are phases of a great bathymetrical area pertaining to this section of Arizona, and although the rocks of this batholith are in general of comparatively uniform composition, the quartz-monzonite is a somewhat more basic phase. The mineralized area has been extensively crushed and faulted by a series of fractures, the main fracturing evidently taking a northwest and southwast direction and dipping to the west. Subsequent other fracturing has taken place, and no doubt deep and intensive faulting occurred, and it is my opinion that through this later faulting that the present system of mineralized veins were formed. The relation of these fractures to each other is not clearly shown, owing to lack of deeper development on the property, but in the adjoining property at a depth of 800 feet and the fold is clearly in evidence, where faulting has caused a fold in the structural magma to assume an angle of 45 degrees, after continuing from the surface at an angle of only five degrees from the perpendicular.

The volcanic outbreak which caused the Rhyolite porphyry intrusions, occurred subsequent to the vein fissuring, but the relation of these dykes to the different periods of fracturing I could not tell, only that the intrusion was accompanied by more or less fracturing is plainly discernable. It is therefore, not improbable that this secondary fracturing has a very important bearing on the enrichment of these copper veins. A careful and minute examination of the veins on this property has clearly shown them all to be fissure veins and not

gash veins. Chalcocite, Enargite, and Bornite, are the principal copper minerals, and where hydroprecipitation is most in evidence, crystal masses of Azurite and Malachite are impregnated throughout the gangue.

The gangue minerals are those of the associated rocks, chiefly monzonite. Named in the order of their importance, they are the feldspars, andesine (a complex of Silicate of Soda, alumina and lime), quartz, biotite mica and hornblende. There can be no doubt but that chalcocite is the primary ore of this district, as a careful microspopic research has failed to disclose either a sulphide or foliage in the general texture of samples from all parts of the property.

The Chalcocite is clearly of two periods. One confined to the upper portions of the veins more recent than the filling and network of minute fractures in the bornite; the other contemporaneous and intergrown, often crystallographical y, with it. There is no evidence that any of the bornite is of secondary origin, therefore, I place the Chalcocite as the primary mineral entemporaneous with the bornite, and in no way derived from it or from any other copper bearing mineral by process of secondary alteration. Chalcocite, by many engineers considered an alteration of sulphide protores, has in many cases been without a question of doubt, the primary ore. F. L. Ransome, and others of the U. S. Geologocal Survey, mention many instances substantiating this.

#### GENERAL CONDITIONS:

This property, as has been stated, is easy of access, and only a short distance from railroad and smelter. The road from Mayer or Cordes to the mine, although in fairly good condition, can be made suitable for heavy traffic at a ver small expense. This property is now equipped with a steam hoisting plant, capable of sinking the present shaft to the thousand foot level. A compressed air plant with sufficient power to handle the air drills for the development work, and also the pumps. Buildings on the premeses comprise beside the shaft-house and gallows frame; a blacksmith shop, carpenter shop, a Superintendent's house, three bunk houses for the men, cook-house and store room, house and office for the foreman, and many other small buildings.

At present the watersupply is ample for all camp purposes, being supplies by two living springs, and a further supply sufficient for a small mill and concentrating plant can be developed in Copper Creek, about one mile above the camp. An inexhaustible supply of water sufficient for extensive milling can be brought from the Agua Fria River, distant about seven miles.

At present a five ton Mack truck is used in hauling ore to and bringing in supplies from the railroad.

## DEVEL OPMENT

The development on the property consists of three shafts and numerous small prospect holes. The main working shaft has now reached a depth of 300 feet while the two other shafts do not exceed eighty feet in depth. This main working shaft is so located that it will eventually be used as the main shaft of the group, as its location is such as to command the easy working of all the various veins to either side. At the present depth, the vein and ledge filling are well defined, permanent in structure, and have increased both in width and values as depth is attained, a general sample from the lowest workings, giving a return of 9.8 per cent copper per ton. Chalcocite is the principal copper mineral at this depth, with the gangue showing extensive leaching.

To the north and west of this main shaft is located the oldest and first shaft to be sunk on this property. The ores from this shaft were mined principally for their high silver-cooper contents, but when the slume in both minerals occurred in 1907, the shaft was abandoned and the workings allowed to cave.

## PROPOSED\_DEVELOPMENT.

It is the purpose of the management of the property to sink
the main shaft to a depth of at least 500 feet before cross cutting to
the various ledges and I unquestionably recommend this proceeding;
as the veins are in such close proximity the one to the other, that upon
the cross cut reaching one of the ledges and drifting being started
upon this ledge, there will be nothing to interfere with the entinuance
of the cross cut to the second ledge, start drifting on second ledge,
and so on, cross cutting and drifting, until sufficient ground has been

has been opened up to warrant the time to begin breaking down the ore and either milling it on the premises, or shipping to the nearest smelter.

The already proven rich contents of the various veins would warrant this, and the development of the property to this depth 500 feet - would again warrant the erection of an extensive milling and concentrating plant on the premises. Thus the mine would be opened up, the ore bodies would be measured, sampled, and the tonnage of ore in reserve calculated, thereby giving the management and the mine a basis for future development. The continued sinking of the main shaft is essential to the life of the mine, for there cannot be a doubt as to the existence of an underlying body of high grade copper bearing mineral. As depth is attained it will be shown that many of the now separate ledges will unite, forming one large main ore body, and as I have already stated that chalcocite being the primary ore, an increase in values is sure to attain.

From my personal observations of more than seven years in the field, in the State of Arizona, and from having had occasion to visit every large copper camp within this State, I can unhesitatingly say that no one of the big coppers of today can show, or did show, such a wonderful series of veins and richness of outcrops as is today to be seen on the property of the Arizona Copper Queen.

Observing this property as a disinterested party, and reporting on it solely as a mining engineer, I cannot help drawing a comparison between this property and the great Quadrangle of Butte, Montana. Here we find almost the replica of conditions as they are to be found in the Butte, Montana, district. First, the great area of quartz-monzonite, the dykes of tertiary Rhyolite, the monzonite-porphyries, the crushing and faulting that can only be compared to the Mountain View, the Anaconda, and the Blue system of fault fissures of the Butte system. Second, all these and others are to be found here, and there can be no reason why another great Butte Camp should not spring into existence in this great Southwest.

That this property is destined to be one of the big Copper producers of this State is without question, and with proper development can be made the big mine of sutheast Yavapai.

Respectfully submitted,

A. Arnold Wheeler,

E.M.

Formerly Field Engineer with the London-Franco Mines Company and James D. Hague of New York, ex-Geological Survey, U.S.A.

Prescott, Arizona, Sept. 10th, 1918. (copy)