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12/02/85

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: COPPER PRINCE

ALTERNATE NAMES:

PIMA COUNTY MILS NUMBER: 578

LOCATION: TOWNSHIP 17 S RANGE 13 E SECTION 30 QTR. NE
LATITUDE:N 31DEG 55MIN 00SEC LONGITUDE:W 111DEG 03MIN 37SEC
TOPO MAP NAME: TWIN BUTTES - 15 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:

COPPER-PRIMARY

BIBLIOGRAPHY:

ADMMR COPPER PRINCE FILE
ADMMR ROLLED MAPS FILE: PIMA MINING DIST.
1917, T.N. STEVENS
ADDITIONAL WORKINGS SEC. 31 & T17S-R12E
SEC. 25

YELLOW GROUP

AITAMIRANO

25 BUTCH

I.B.S. No 3

I.B.S. No 2

I.B.S. No 1

I.B.S.

JUANITA

VICTORIA

PALO VERDE

TORIENO

SOCA RICA

LA CALARA
TWIN BUTTE
ARIE MIN
AURORA
EL BOLEO

ALASKA

MARIA

ITALY

VEVA

LONE VALLEY No 1

LONE VALLEY No 2

LONE VALLEY No 3

LONE VALLEY No 4

LONE VALLEY No 5

LONE VALLEY No 6

GARFIELD 2640

JAMES GBAIN 2640

ADMIRAL DEWEY 2640

THE MCHINLEY COPPER 2640

HOBSON COPPER 2640

MARGARETA

COPPER HILL 2640

NEW ZEALAND

CONGO

SUDAN

CYNTHIA

OTTAWA

TRIPOLI

HABBE

ANTAGON

NATAL

VIC

BEN

COPPER PLATE
COPPER MEDAL
COPPER MINT
COPPER PRINCE
CORONA BUTTE

FEVE

SEAL

T 175, R 13E, sec 30
T 175, R 12E, sec 25

THE COPPER PRINCE GROUP

TWIN BUTTES DISTRICT

PIMA COUNTY

see REPORT TWIN BUTTES GROUP COPPER MINES by
Howard H. Fields, dated March, 1950 -
(Northern Group)

TWIN BUTTES MINES (file)

ABM Bull. 180, p. 122, 149

Map upstairs: Pima Mining District, Pima Cty.
Rolled map files

MILS COPPER PRINCE
MILS LONE VALLEY MINE GROUP

THE COPPER PRINCE GROUP

TWIN BUTTES

ARIZONA

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8-21-1918

LOCATION

The COPPER PRINCE GROUP of mining claims is situated about one mile north of the town of Twin Buttes, the terminal of the Twin Buttes Railroad and adjoining the property of the Twin Buttes Mining Company, whose patented claim, the Copper Prince, is contiguous to this group on two sides.

CLAIMS

The original group consists of four unpatented mining claims but some new locations have recently been made by the owner, Mr. Charles P. Reiniger, to take in some fractions and other open territory, and consist of the following:

The Copper Plate, Copper Matt, Copper Medal and the Butch.

TOPOGRAPHY
and
ACCESSIBILITY

The claims are situated at an elevation of approximately two thousand feet above sea level in a rolling country of low, gently sloping hills, none of which exceed 100 feet in height above the average level. Timber is scarce, with only an occasional mesquite or palo verde tree, but grass is plentiful. Water for drinking and camp use is found in a 60' shaft on the adjoining La Salara Claim.

A good wagon and automobile road connects with Twin Buttes in the south one mile, and with Tucson on the north twenty-five miles over level country.

Wagon haulage for ore to the railroad at Twin Buttes will cost not over one dollar a ton.

LABOR Plenty of good Mexican miners are always available in the

district and can be had for \$2.50 a day and labor troubles so far are unknown in the camp. The low cost of labor, together with the close easy wagon haul, to the railroad make it possible to mine very low grade of ore at a profit.

OTHER MINES
in the
DISTRICT

About a mile south of this group are a string of mines which are for the most part in operation at present.

The Glance is the best known of these and is at present shipping a large tonnage of copper ore monthly and is being operated by Ed. Bush. Further west on the same contact-metamorphic belt is the Minnie which is now closed down, but which has a record of several hundred thousand dollars production all in a very short time. The Senator Morgan is the deepest mine of the district and is a mile westerly from Twin Buttes. One stope in this mine alone produced about 100,000 tons of good copper ore. This mine is developed to about 900 feet and is at present being operated by Lee Wood and associates and is making weekly shipments of copper ore to the smelter. There are a number of other small shippers in this belt and several most promising prospects undergoing development. The Queen will soon be on the producing list with a large tonnage from all indications. Northerly from the Copper Prince Group about five miles is another group of producing mines. The Mineral Hill, the Plumed Knight, the San Xavier, Vulcan and San Xavier Extension are all producing mines. The latter is a new mine having only recently been opened but has developed into one of the most spectacular strikes of late in the district. The surface showing was very poor but the operators are being well paid for their courage in going ahead on what looked like a forlorn undertaking.

Drilling and other development work is going on in the flat

country in all directions with encouraging results in many cases.

Adjoining the Copper Prince Group on the north and west is the Yellow Group now being developed by Harris Mackenzie and associates of Honolulu, Hawaiian Islands, and under the directions of the writer. This is of importance to the Copper Prince Group as the vein there is of the same type as one of the veins on the latter and if the work on the Yellow Group proves up well, as it has every promise of doing, it largely proves up the Copper Prince Group and will make it a very valuable and desirable property.

GEOLOGY

South of the group is a broad belt of old granite which opposite this group is about 3/4 of a mile thick and extending roughly, east and west. The southern edge of this belt which passes through Twin Buttes is in contact with metamorphosed sediments in which are situated the producing mines before mentioned. The northern contact of this granite belt passes through the Copper Prince Group along the southern corner of the Copper Medal claim and the northern corner of the Copper Matt Claim, the greater part of which is all in the granite.

Later a large mass of what was once porphyry was intruded through the granite and interposes as a broad blunt wedge between the granite and the lime on this group of claims. This material came later than the granite, as is proven by the shaft at "D" (see map) on the Copper Medal which is sunk directly on the contact and shows the junction of the two bodies very plainly with the granite hanging wall sloping off to the south at an angle of 45 degrees. It is shown again very plainly at "B" on the accompanying map near what is known as the Dead Cow Shaft.

The material of this intrusive at present is almost entirely quartz and only rarely is there any indications to show its igneous origin and might easily be mistaken for a metamorphosed sediment which it resembles closely. Its contact with the

granite is little prospected, and while it has possibilities of ore bodies, the lime contact vein is so much better that I would not advise development of this contact at present.

The shaft at "B" is close to this contact and has the best showing. The shaft is full of water and I am informed that it stays full the year around. Some good silicious copper ore lying near the shaft shows some ore was encountered here and if at a later time it is decided to prospect this contact I would advise the sinking^{of}/a shaft about 40 feet south of this shaft which is now in the silica about 25 feet north of the granite contact and in the foot wall.

The lime contact extends roughly the length of the Copper Plate Claim and is by far the most important.

At "A" is an incline shaft about 40 feet deep. This shaft is badly caved in but is decidedly the best location for further development on the property. I would most decidedly recommend that the new development take place here or as the ground is so soft and the collar so badly caved, it would be better to make a new shaft in the firmer ground some little distance to the west as the vein dips westerly about 50 degrees.

The foot wall is established in this working but the hanging is not definitely established. The vein is probably 20 feet thick here and is so leached and altered that it can easily be worked without drilling. Some copper stain and a few nodules of copper ore have survived the intensive leaching of the vein. This leaching has carried the copper which once was present, closer to the surface, to lower levels, and in carrying the development work down on this vein it is reasonably certain that pay ore will be encountered. Probably a very rich secondary enrichment will be found beginning anywhere from 100 to 300 feet in depth which will be of great importance as the vein is of

considerable width. After this a comparatively barren zone will likely be encountered after which a steady primary body will likely persist for a greater depth. This latter will be lower in grade but more uniform. This vein runs in a northerly direction and is probably connected with the big vein on the adjoining La Calara where seven cars of copper ore have recently been shipped, although they have not yet gone there beyond the leached horizon.

Covering the southern end of the Butch and the White Apron location is an oblong hill of silica of igneous origin intruded through the lime. Along the southern and western side of this silicious hill is a narrow arm of limestone about 150 feet across. On the north easterly contact of this arm of limestone with the silicious intrusive, no work whatever has been done as no surface mineralization has been noted due to a covering of wash but this contact holds possibilities of ore bodies.

On the south western contact of this lime belt with the main body of the silica intrusive and at about the middle of the Copper Plate Claim, is the main workings of the group. Here is found a 70 foot shaft dipping 60 degrees to the south west and directly on the contact and all in a soft, altered leached material similar to the vein at "A" close to the Copper Prince line.

Several shallow pits and shafts are found along this contact north of "B" on or close to the contact and all showing a little copper ore.

Silumtaneous with the development of the vein at "A" this ("B") should be developed by continuing the present shaft down as it is in fairly good condition and is the second best showing on the property.

The silicious material which makes up the hill at the White Apron fractional location, extends northerly and westerly across the Butch. The contact zone between this material and

the limestone extends roughly east and west across the middle of the Butch at some distance south of the location pit. As all this part of the Butch is covered with wash, the exact contact could not be located, but since the location hole at "F" is in the lime, the contact must be south of it. A mineral zone runs northerly through the Butch under the wash from the La Calara and into the Yellow Group and I consider the Butch of great potential value and would advise the development on this claim to be undertaken by first trenching north and south at a point 100 feet south of the discovery shaft, and thus expose the mineralized contact zone where a shaft would be sunk.

In considering the future development of this property it is not necessary to plan for a mill as the ore will be straight shipping with concentration unnecessary as ore as low as 4% copper can be mined at a profit under favorable mining conditions, due to the cheap labor and wagon haulage. It is the history of the district that concentration of copper ores is not necessary.

COSTS

Sinking the two shafts at "A" and "B" for the next 100 feet should not cost over \$8.00 a foot in the soft material and not over \$10.00 a foot for the next 200 feet after hoisting equipment is erected, provided water in volume is not encountered. A little water may be expected in both shafts at "A" and "B" but not enough to make a problem. Nowhere in the district has a water problem developed.

I would not advise putting in a compressor and air drills at present as hand work will be efficient and cheaper in the soft contact veins.

If it is decided to develop at "A" and "B" simultaneously I would advise for equipment two 8 to 10 N.H. gas engine hoists which will be ample to do the work required during the prospecting stage and larger and fuller equipment can later be installed.

No precise depth can at this time be recommended for the shafts, but this should be guided by conditions as they are found and the work progresses, but a depth of at least 300 feet should be prepared for.

The cost of equipment for the initial work as outlines, with two hoists, blacksmith outfit, timber, tools, head frames and lumber will cost approximately \$2,000.00. A fund of \$10,000.00 should be sufficient to develop the property to a point where it is to be expected it will take care of itself by ore shipments. Of course it is possible and even probable that a good body of ore will be developed at "A" before half this sum is expended.

In this estimate I did not figure on developing the granite-silica contact mineral zone which I have advised to be left for the present.

In checking up the location of the Butch claim in relation with the patented Copper Prince claim, I noticed that the location was badly placed and about 20 degrees out of line, and according to the location monument and corners, leaves an open wedge between it and the La Calara. I strongly advise an amended location for the Butch claim to make it conform to the La Calara location. Some of the corners on the other claims are also badly placed and out of line and should be rectified. As the La Calara claim is very conflicting, I would advise a careful instrumental survey of the whole group and the monuments be properly established and amended locations be made where necessary.

East of the Butch and cornering into the Copper Plate on the south is the La Calara claim. As the veins of the Copper Plate and the Butch both run into this claim where the showing is unusually promising with some shipping ore in sight, I would advise that this claim be acquired and added to the Copper Prince Group where it properly belongs. I am informed that the owners are not unreasonable in their terms for this property and it will make a

valuable addition to the group.

CONCLUSION

I consider the Copper Prince Group together with the adjacent property to the east and west as the best undeveloped mineral zone, in the district and the writer's faith in this mineral zone is illustrated by his recent endeavor to acquire and operate the Copper Prince Group personally, as well as the present development on the adjoining Yellow Group under his care and promotion. These conclusions are drawn only after long and close study of the district. It would indeed be surprising if good ore was not encountered below the soft altered material in the veins of the group and the cost of development is comparatively cheap in this ground.

The general conditions are almost ideal, in that labor is as cheap as is found anywhere in the southwest, where for the most part \$4.00 and \$5.00 is the usual day wage and is even higher in some of the big camps. Closeness to the railroad, good roads, freedom in the ores of zinc and other penalizing impurities, adjacent supplies of all kinds (Tucson) as well as a choice of at least five customs smelters at a distance not prohibitive, as well as the lack of an expensive water problem, all go to make the Copper Prince Group a very desirable property, but what is perhaps the most important of all is that this group of claims is situated in the heart of a well proven district which has fewer failures to its credit than any mining district that the writer is acquainted with and makes it well called a poor man's camp.

Respectfully submitted,

A. ROOS

Consulting Mining Engineer,

Roos & Tovote

Tucson, Arizona

November 15, 1917.

Tucson, Arizona
July 7th, 1917.



COPPER PRINCE GROUP

The Copper Prince Group of four claims is located about one and one half miles North of the town of Twin Buttes, and is accessible over good automobile roads, either from Twin Buttes Tucson or Sauhairita.

The geology of the district is similar to that of the Twin Buttes producing properties, being within a limestone belt, with East and West fracturing and North and South faulting.

At the Copper Prince there is a limestone belt of from fifty to one hundred feet in width, underlaid and overlaid with quartzite which is highly altered and in places showing a very schistose condition and possibly having some intrusions of eruptive rock; the whole belt of limestone and quartzite being overlaid with a great intrusion of grano-diorite or granite prophyry of unknown thickness.

The East and West-South dipping fracturing shows a slight amount of garnet and some very high grade oxide and sulphide copper ore, which, while small, seems to be persistent in a depth of sixty feet, which is the deepest working on the ground.

A second shaft of thirty feet sunk at the intersection of the East-West fracturing and a North-South fault, also shows the same ore and also a large amount of oxidized material showing some copper carbonate.

This property has every indication of developing into a valuable property, if developed to a point below the oxidized zone, which should be approximately 200 feet in depth.

COPPER PRINCE GROUP
CONTINUED

As the terms and price upon which this property is offered are unusually reasonable, it may be considered as one chance in a life time, with every indication of making good and with a very small investment to prove or disprove the prediction.

I cannot recommend the Copper Prince group too highly as a development proposition, and can only say that it looks as good, or better, for the amount of work done, than the best producers in the district looked with the same amount of work done.

Very truly yours,

A. B. RICHMOND