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07/24/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BROWNELL MINE

ALTERNATE NAMES:

CENTURY-CLIFF MINE
INDEX GROUPS
CONCORD CLAIM
CENTURY CLAIM
ANNEX CLAIM
WINDSOR
COPPER TOP
ARIZONA QUEEN
STAR CLAIM
WACO
WACO #1
VICTORIA

PIMA COUNTY MILS NUMBER: 252

LOCATION: TOWNSHIP 13 S RANGE 2 E SECTION 35 QUARTER SE
LATITUDE: N 32DEG 15MIN 05SEC LONGITUDE: W 112DEG 14MIN 24SEC
TOPO MAP NAME: QUIJOTOA MTS - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER OXIDE
COPPER OXIDE
GOLD LODE

BIBLIOGRAPHY:

AZBM BULL. 189, P. 140
ADMMR BROWNELL MINES FILE

C O P Y

REPORT ON

ARIZONA-CALUMET COPPER CO. PROPERTY

(BROWNELL MINES)

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Hauling.
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REPORT ON
ARIZONA-CALUMET COPPER CO. PROPERTY

SITUATION This property is situated fifty-four miles south of Casa Grande on the Southern Pacific Railroad. Thirty eight miles west of Imperial Copper Company's property.

Ten miles north of Quijotoa.

DISTRICT Quijotoa Mining District, Pima County, Arizona, Tucson, county seat.

MAIL Mail service to camp twice a week from Casa Grande.

CONTEMPLATED The survey for Port Lobos Railroad passes within five miles of this property.

RAILROAD Tucson-Ajo Railroad-- The survey for this projected railroad passes within three miles north of this property and there is every anticipation that this road will be constructed, bonds having already been negotiated for same.

HAULING The cost of hauling freight is ten dollars per ton from Casa Grande.

WOOD

Mesquite, ironwood and palo verde grows in quantities adjacent to the property, and contracts can be made for \$2.50 per cord delivered at the plant.

WATER

Domestic water is obtained from a well on the Arizona Queen claim.

The well is sixty feet deep and the water is pumped by a 3 H. P. Fairbank horse gasoline engine and geared pump into a rock cement tank situated on the slight eminence above the well, from this tank the water gravitates to the camp.

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SURFACE IMPROVEMENTS

1 four roomed lumber building, two rooms used for general office and two for assay office.

The assay office has scales and balances and almost complete outfit for assaying.

1 adobe building used for dining room and kitchen.

1 adobe building, used for store and post office.

1 row of adobe bunk houses comprising ten rooms.

Hoist house and gallows frame at two hundred thirty foot vertical shaft.

1 geared steam hoist, blacksmith's shop and all fittings.

1 Moore and 1 Worthington pump

1 40 H. P. boiler

200 cords of firewood, depreciated by weathering

1 large lumber store house.

1 large lumber building containing engine and samples.

1 Fairbanks nusse charge weighing scales.

1 circular water jacket blast furnace, 50 ton capacity

Ore bin, Blake No. 8 Crusher, counter shafting, etc.

1 80 H. P. boiler, never been fired.

1 Green No. 5 blower

1 vertical engine

Slag pots and hearths

Water tanks

2 6000 gallon steel tanks above smelter.

1 gallows frame and shaft house at two hundred sixteen foot shaft.

DESCRIPTION OF WORKINGS

CHIEF CLAIM Shaft at smelter said to be two hundred feet deep. Dump shows dark blue and brown birds eye porphyry, some diabase and rhyolite. With no visible suggestion of mineralization. 215's shaft, unable to explore on account of being nearly filled with water. Open cuts and shallow shafts close to shaft exposes altered rhyolite, yellow and brown ferruginous oxide stained. Formation altered and silicified in places and greatly fractured. The main dump also shows the varying alteration of the rhyolite. I was informed that at the 200' level in the 216' shaft a cross cut is run east for three hundred feet. If this is so, the cross cut courses in a direction opposite to that of the suggest ore area.

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Sample No. 9 was taken from the dump at this shaft on east side of hill from 230' shaft, several shafts and open cuts, in altered and decomposed rhyolite, with red and yellow iron oxide stains.

230' shaft--This shaft is filled with water to within eight feet of its collar, so it was only the portion of the workings above that level that I was able to explore.

Forty feet from the collar of the shaft a drift courses east for thirty-five feet. At the same level a drift is driven west for a distance of one hundred and twenty feet to an old shaft, which is inaccessible, and contains some water, this shaft was evidently sunk to catch the dip of the ore body.

There is some ore on the dump.

The dip of the ore body as near as can be ascertained in the present workings is 35° west.

ORE BODY

A silver copper ore body, constituted of altered rhyolite, commences in the shaft twenty feet below its collar and extends in depth to the level of the water in the shaft, it also extends for ten feet in the east drift and for sixty feet in the west drift, samplings were taken from this drift and marked from 1 to 5, respectively.

This ore body is visible in an open trenching thirty feet north of the shaft, extends into the shaft as explained and evidently rakes to the south.

The ore body as exposed, has dimensions fully fifty feet north and south, fifty foot depth in the shaft,

and seventy-five feet from east to west in the cross cuts, and according to information this is all the development it has received.

I am informed that at a lower depth in the shaft a cross cut has been driven east, if so, it has been run in a direct opposite direction and away from the ore body. The ore dumps at this shaft are of good appearance and evidently of fair value.

CONCORD CLAIM

12' shaft in rhyolite, showing irregular streaks of mineralization and colorations of copper carbonate and silver bromides.

The rock is generally brown ochrous stained.

Other shafts thirty and forty-five deep, showing silver bromides and copper carbonate stains.

The dumps suggest the ore being of good quality.

Shaft twelve feet deep shows pocket of silver copper ore on surface, dump shows same class of ore.

Wide open cut shows slight copper stain.

Other shallow shafts in cemented gravel without any appearance of mineralization.

CENTURY CLAIM

Fifteen foot open cut, with incline west to shaft 45' deep and shaft on east forty feet deep.

The formation shows stringers and bunches of silver bromides and copper carbonates.

The dumps show ore of this nature.

The formation is an altered rhyolite, frequently kaolinized and generally stained with iron oxide.

Open Cut from ten to twenty feet deep and one hundred fifty feet long with cuts and various shafts, showing the formation to be white and brown altered rhyolite. An inclined shaft sixty feet deep is sunk in unaltered blocky ground, the altered area lying above it.

ANNEX CLAIM

100' shaft with whim and tripod. Shaft dips north, shaft not examined but evidently sunk on an E. W. movement plane.

40' shaft fifteen feet east of 100' shaft sunk in red stained ground, with blue diabase dyke on south.

COPPER TOP

Located on gray silicious lime reef coursing east and west.

Lime Kiln and entrance directly under reef.

Twenty foot open cut through apex of hill, all in lime, showing slight copper carbonate stain.

Shaft 12' little east of cut shows streaks and seams of copper carbonate.

ARIZONA QUEEN

Well eighty feet deep.

Trench three feet deep, eight feet wide, seventy-five feet long.

Shaft in trench twelve feet shows six feet of copper carbonate and silver bromide stained ground with a slight dip north in red ferruginous altered rhyolite.

East end of trench 12' shaft showing red stained broken and crushed ground, with copper carbonate streaks and seams.

STAR CLAIM

12' shaft in crushed and crumpled rhyolite and lime, ferruginous stained, and showing small nodules and seams of copper carbonates and silver bromides.

WACO

10' shaft in rhyolitic porphyry showing rounded pebbles, the result of movement, and small nodules of copper carbonates.

VICTORIA

10' shaft in crushed and broken rhyolite.

WINDSOR

Open cut 10' x 25' in altered kaolinized rhyolite, 12' shaft and several open cuts and shallow shafts, all in similar ground.

WACO NO. 1

10' shaft in unaltered rhyolite.

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DESCRIPTION AND RESULT OF SAMPLING

No. of Samples

CHIEF CLAIM, Main shaft

- 1 Drift west forty feet deep from collar of shaft, five feet along south side of drift, ten feet from shaft, copper and carbonate stain and silver bromides.
- 2 Five feet along north side of drift, fifteen feet from shaft, character of rock same as No. 1.
- 3 Five feet along south side of drift, twenty feet from shaft, ground the same as previous samples.
- 4 Five feet along north side of shaft, twenty-five feet from shaft ground of same appearance.
- 5 Offset near west side of mineralization on south side of drift fifty feet from shaft, strong colorations of silver bromide.
- 6 Picked sample across roof in incline shaft in open cut.
- 7 East side of open cut, two foot offset, red and yellow ferruginous seams, picked sample.
- 8 West side of trench, six foot face, white and red stained altered rhyolite.
- 9 From piled dump of 216' shaft, directly east of office yellow stained rock.

Century Claim.

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COPE OF ASSAY CERTIFICATES

NO.	<u>SILVER</u>	<u>VALUE</u>	<u>GOLD</u>	<u>VALUE</u>	<u>TOTAL VALUE</u>
	<u>OZS. HDTHS.</u>	<u>AT 60¢ PER OZ.</u>	<u>OZ. HDTHS.</u>	<u>AT \$20. per oz.</u>	<u>GOLD & SILVER</u>
1	3.60	2.16	trace		2.16
2	3.50	2.10	trace		2.10
3	2.80	1.68	0.04	.80	2.48
4	6.00	3.60	trace		3.60
5	5.20	3.12	0.04	.80	3.92
6	9.20	5.52	0.07	1.40	6.92
7	5.40	3.24	0.08	1.60	4.84
8	2.80	1.68	trace		1.68
9	76½20	45.84	0.04	.80	46.64

No.	<u>PERCENTAGE COPPER</u>		<u>GOLD, SILVER & COPPER</u>	
				<u>TOTAL VALUE</u>
1	4	at 25¢	20.00	22.16
2	4.80	"	24.00	26.10
3	3.20	"	21.00	18.48
4	3	"	15.00	18.60
5	3.10	"	15.50	19.42
6	0.40	"	2.00	8.92
7	0.60	"	3.00	7.84
8	0.50	"	2.50	4.18
9	4.20	"	19.60	67.64

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GEOLOGICAL FORMATION

As my reconnaissance of the property was so brief, it is impossible to give any definite sequence or exact relative relationship of the formation.

By appearance there has been periods of intrusions by rhyolite subsequent to the formation of the porphyries.

These have uptilted the lime formations which course prominently along the northern boundary of the property.

The mineralization forms along the western line of the rhyolites following the metamorphism along the movement plane.

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SUMMARY AND CONCLUSION

As the development on the majority of the claims discloses, the work has been accomplished as assessment work only.

All the shafts and main workings of any moment are on the Chief Claim.

The 200' shaft near the smelter, as far as the dump discloses, has no mineralization whatever, or does the formation on the east side of the rhyolite dyke suggest any ore deposition.

In the 216' shaft, I am given to understand, all the cross cutting has been done to the east, and in this direction a cross cut has been run for three hundred feet, and entirely opposite to where the possibilities of any ore might exist.

The piled dump at the collar of this shaft shows that some very good ore has been cut some where in the workings, (See assay value in sample No. 9); Probably it would be wise to ascertain where this ore comes from and learn of the general extent and conditions.

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The ore is evidently constituted in fine veinlets and seams of ttrahedrite in altered rhyolite.

The principal ore showing is at and in the 230' shaft on the Chief Claim, as previously explained.

It is in this ground where all the attention should be concentrated. If cross cuts at lower points in the shaft have not been driven west it is difficult to understand why work has not been done in this direction, for the dip of this ore body is distinctly to the west.

This is an exceedingly good and promising prospect, and as the assay results explain, carries substantial values and thoroughly warrants work being performed for its more extensive development.

This exploratory work should be pursued westerly and to the south, and in a manner that the formation suggests. Probably the most effective and least expensive way would be by works from the present shaft, and then if the ore body is proven to extend, churn drilling might prove the ground in an effective and less expensive manner. But which ever way is decided upon, development work is surely warranted, for the ground holds substantial favorable features. The work should be in the hands of some practical and intelligent mining man, and avoid the extraordinary waste of money in worthless and aimless work, such as previously has been done.

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The prospect is undoubtedly meritorious, and fully warrants the work and attention as outlined.

Assay sheet and plat accompanies this synoptic
statement.

S/ W. E. Defty

Mining Engineer.

Dated at Phoenix, Arizona,

February 16, 1912.

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