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06/12/86

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: BLUEBIRD GROUP

ALTERNATE NAMES:

RED BIRD GROUP
SLATE CREEK QUICKSILVER

GILA COUNTY MILS NUMBER: 346A

LOCATION: TOWNSHIP 7 N RANGE 9 E SECTION 12 QUARTER SE
LATITUDE: N 33DEG 57MIN 30SEC LONGITUDE: W 111DEG 23MIN 02SEC
TOPO MAP NAME: RENO PASS - 15 MIN

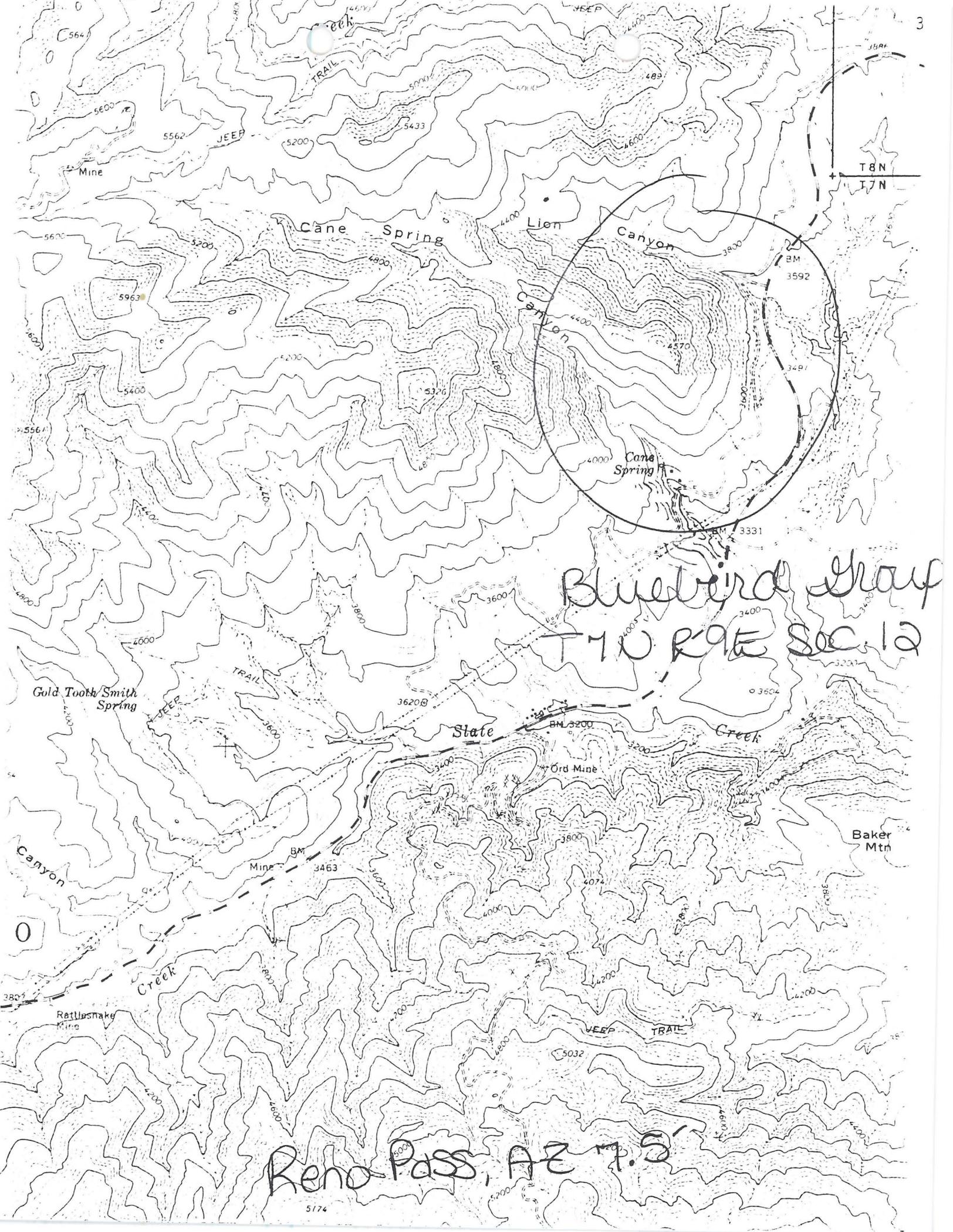
CURRENT STATUS: PAST PRODUCER

COMMODITY:

MERCURY

BIBLIOGRAPHY:

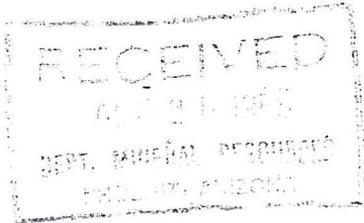
ADMMR BLUEBIRD GROUP FILE
"MERCURY POTENTIAL OF US" USBM IC 8252, P 65;
1965
LAUSEN, C & E.D. "QUICKSILVER RESOURCE IN AZ"
AZBM BULL 122, P 95-97; 1927
MINING WORLD, P. 36; 12/62



T8N
I7N

Bluebird Gray
T10 R9E Sec. 12

Reno Pass, AZ 7.5



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

August 5, 1958

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

Slate Creek Quicksilver Mine (Gila Co.) mercury
(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

I sold the Slate Creek claims to Thornburg along with the Ord mine and turned over all maps and reports.

✓ Thornburg did not do the assessment work for 1956-1957 and a fellow by the name of C. O. Carlson, who lives over in the Sunflower area located it and I understand is doing some development work.

Tom Russell
P.R.

show loc. claim

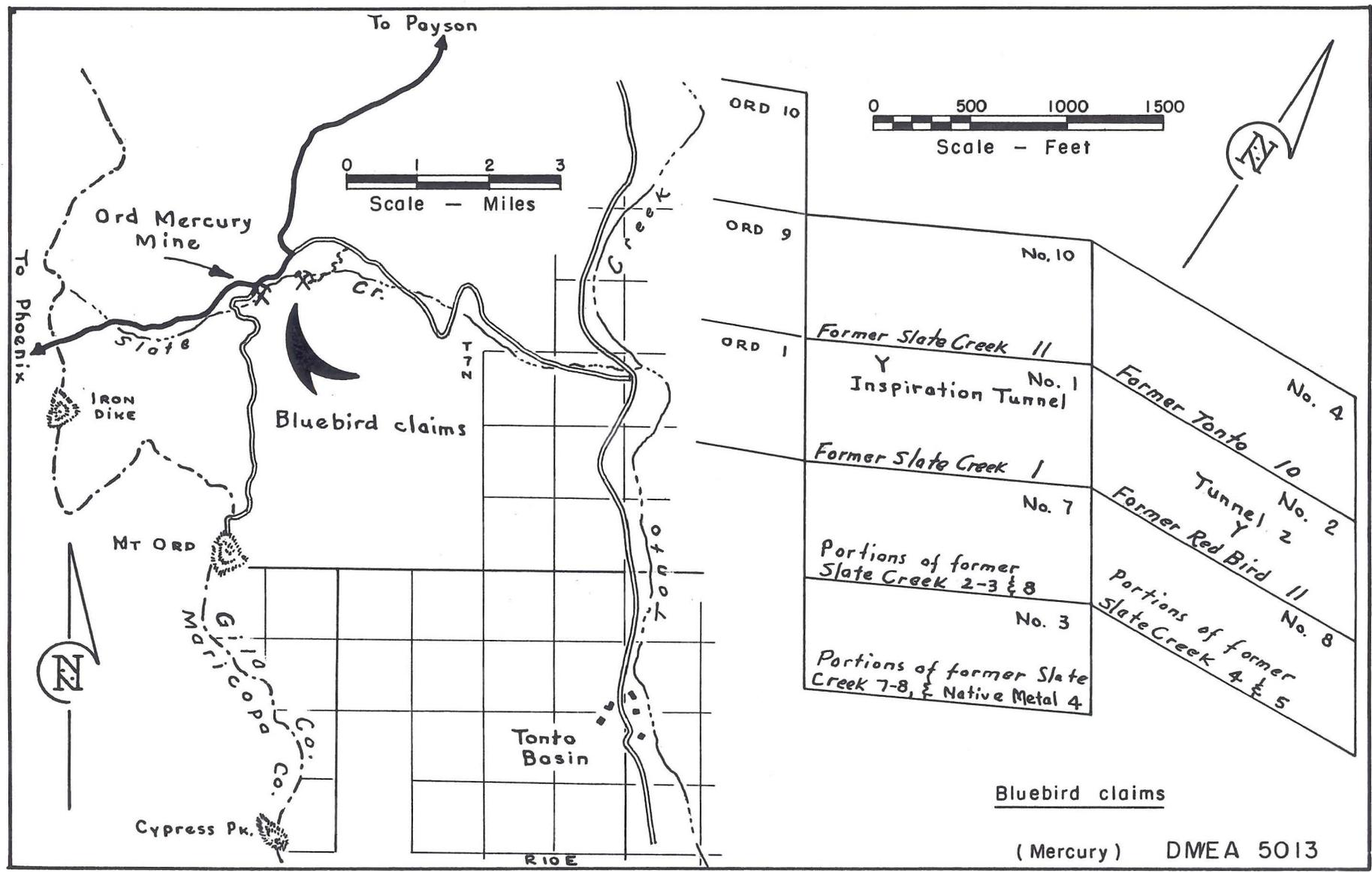


Figure 1 Location & claim map, Beeline Mines, Inc. Gila County, Arizona

748, T7N R10E

BLUEBIRD AND ORD - secs 7, 8 & 12 T7N R8E
9

GILA COUNTY

Conference with James McFarland and Gordon Grimes at Sunflower Store

These men now have secured leases on the Ord and Bluebird Quicksilver mines. The Rattlesnake Mill has been improved. They hope to obtain finances to begin mining at the Ord where some good-grade reserves are said to be available after a little preliminary work. The price of quicksilver is good.

Gordon Grimes address is - P.O. Box 761, Payson
James McFarland address is - P.O. Box 308, Payson
They are contemplating an OME loan. Memo LAS 2-27-64

C. O. Carlson, Sunflower District, reported that the Richfield Oil Company's field mining engineers, had been examining his Bluebird claims and told him they would recommend deep drilling on Baker Mountain. If this proves out then 6 horizontal decked Herreshoff furnaces would be installed. These would handle 75 tpd. The furnace consists of a central drive shaft that turns the decks that are 2½-3 feet apart and are perforated. An independent rake stirs the ore on each deck and is stationary. The furnace is heated by a set of 2-4 jets around the outside of the furnace of each level. Roasting of the ore can be done by direct flame content or indirectly by heating it from the outside in a fire chamber. The latter is very useful in preventing excess dusting, but it probably will use more fuel. This will be worked out, if the mine proves out.
LAS WR 9-3-65

Mr. & Mrs. C. O. Carlson, Sunflower District, were in and stated that they had found some new ore in the Baker Mountain Claims (5-8) pounds to the ton. The specimen is of white quartz with blebs of cinnabar disseminated in it. A large company is looking at it now.
LAS WR 3-31-67

Mr. C. O. Carlson of Sunflower came in to bring the Department up to date on his Mercury activity.

Said he had leased out all of his producing claims, namely the Baker Mountain Group, Bluebird, Inca, South Tonto, also his Red Rock and L & N Claims, located in Secs. 7, 8 & 12, T7N, R7, 8E to the Cornwell Company of Paoli, Indiana, Mr. Steven K. Cornwell, Pres., % Safari Hotel, Scottsdale. GBG WR 11-8-68

He (Alex Singley), however, introduced me to Gordon Grimes who has been doing some fluorspar and copper prospecting when his health allows. GW WR 2/25/72

*Bluebird Group
Baker Mountain Prospect
(E of the Ord mine)*

MERCURY MOUNTAIN MINING CORP.

102 W. MCDOWELL RD. PHOENIX, ARIZ. 85003

(C.O. Carlson is a member or associate)

A. ANTON FREDERICKSON
PRESIDENT PHONE 252-4757 ✓

Interview with C. O. Carlson and A. A. Frederickson

These men said that McFarland (Foreman) was still around. (Attempts to contact him failed). The Bluebird, according to Frederickson has several short adits aimed at reaching the intersection of the Ord shear zone with two large rhyolite porphyry dikes. It is believed that the best ore potential would be at these intersections.

Memo LAS 6-27-63

Interview with C. O. Carlson, part owner and A. A. Frederickson of Phoenix

Carlson and Frederickson have rescinded their option to O. L. Johnson, because he had not met any of his royalty commitments. He said that work done by Johnson had, however, uncovered a very promising ore zone against a rhyolite porphyry dike that crosses the continuation of the Ord Mine shear zone. Carlson said that he believed that shears crossed by other geologic structures had localized most of the Sunflower ore and that along the east zone, ankerite had nearly always been found to be directly affiliated with the ore deposition. (This, upon oxidation, appears to have produced the orange limonite that is considered to be the best ore "indicator" in the area.)

Carlson said that O. L. Johnson no longer had an option on the Ord Mine.

Memo LAS 10-7-63

BLUEBIRD MINE

SUNFLOWER DIST.
GILA COUNTY

Mr. McFarland said that O.L. Johnson had negotiations in progress that promised to provide finance for continued operations. If this come through, further development work would be done on the zone which had been uncovered on the Bluebird claims (on Baker Mountain). According to McFarland, four or more rhyolite porphyry dikes, trending NW-SE to EW cross Baker Mountain. These are generally transverse to the Ord main shear zone that continues from the Ord across the middle of the Bluebird claims. The dikes are believed to be pre-mineral in the district. Apparently the favorable areas are affiliated with the intersections and usually are on the south side of the dikes. Oblique cross fractures are also present and these are believed to be similar to those that isolated the main ore lenses in the Ord. Much orange limonite, generally present in this district, as an oxidized capping, was found within the favorable areas. This limonite could have resulted from siderite which is commonly affiliated with the quicksilver areas in the so-called East Belt. Several specimens of this limonite, under a hand lens, showed an apparent transition from the brown siderite. This was first observed in ore from the Bernice Claims. (This showed orange limonite developing on the cleavage plains of the siderite.) Arthur Flagg thought that the orange limonite originated from siderite which he regarded as an unusual type. His study of this siderite, and its relationship to quicksilver minerals, revealed a decided concentration of it in the better ore zones. If this is true, and no evidence to the contrary was seen, siderite and its derivative, orange limonite, are of considerable value as indicators in prospecting for quicksilver ore. The siderite on the Bluebird with a few exceptions, appeared to be largely converted to orange limonite. However, other limonites are derived from pyrite with some chalcopyrite or mercurial tennantite, as shown by the presence of some azurite. The favorable capping showings range, in location, over a large vertical range, on the side of Baker Mountain (from the canyon bottom to the crest (possibly 500-600 feet). Mr. McFarland had been prospecting some old workings (adits 30-60 feet long) in Baker mountain that had originally been driven by Tom Russell years ago. He calculated that none of these were long enough to reach the main Ord shear zone. Some very good ore was uncovered in a wide cut against one of the rhyolite dikes. This consists of cinnabar and native quicksilver in blebs in white quartz or along the laminae of the amphibolic schist.

MEMO * LAS - 2-27-63 - Interview with James T. McFarland, foreman for
Amity Mining Co.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Blue Bird Claims (old Red Bird)

Date April 5, 1962

District Sunflower District, Gila Co.

Engineer Lewis A. Smith

Subject: Interview with C.O. Carlson, 7045 N. 12th St., Phoenix (owner).

Lessee: O.C. Johnson of Texas.

Property: 35 claims east of the Ord mine.

Work: Considerable bulldozer work has uncovered a zone which is about 10-30 feet wide and which carries quicksilver (native mercury and cinnabar). It lies in schist which has fractures transverse to the schist laminae. The samples ran from 0.5 per cent to 10 per cent Hg but appear to average around 10 pounds in the better areas. The bulldozer work was done by Gordon Grimes who used his cat. Mr. Carlson stated that the showings should be penetrated at some depth by drills or a tunnel.

O. L. Johnson, Imperial "400" Court, 3830 E. Van Buren, Phoenix, is leasing the property. 8 men are working on development work. Gordon Grimes is building a series of terraced roads and cuts from which underground development is contemplated. A few shallow pits and cuts have been made, and some good ore uncovered. The ore is in schist, impregnated with quartz, cinnabar, metacinnabarite; and considerable native mercury is present. The quartz is in veinlets, lenses, and stringer lodes, and varies greatly in width, but in general follows the schist laminae. Cross-fracturing is fairly common, and in places considerable orange limonite impregnates the schist in fairly large lenses. This limonite carries considerable mercury and is usually considered to be indicative of ore lenses deeper. Minor widths of high-grade ore, principally cinnabar bearing, are seen. Development has not yet progressed far enough to establish trends but several ore zones are indicated by limonite-bearing areas, and they appear to trend NE-SW or NW-SE. Other lenses occur where strong schist rolls develop. So far no mercurial tennantite has been recognized, but may occur deeper down.

Mr. Carlson said that this group is reported to have secured a prospective 90-day lease on the adjoining Ord Mine from Vance Thornburg. Considerable 8-12 pound ore is believed to remain in the Ord. Should both mines prove out satisfactorily, a mill would be warranted. A man by name of McFarland is the field boss, but he was temporarily away.

Carlson also stated that the "east" mercury belt generally carries much less antimony and arsenic than does the "west" belt. This is considered to be the main reason why the Ord Mill had high extraction (94 percent). A new mill is considered more practical than attempting to repair the Ord or Pine Mountain Mills, both of which have been damaged by vandals.

Lewis A. Smith - Visit and Conference with C.O. Carlson (one of owners) 6-6-62

BLUE BIRD GROUP

GILA COUNTY

Conway and Carlson now control the Blue Bird (old Red Bird) group of 36 claims which adjoin the Ord on the East. They have built 2 miles of road on them from the Ord road & have done assessment work on the claims. LAS WR 6-11-59

Carlson stated that he plans to begin quicksilver operations on the Red Bird about November 1. LAS

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Bluebird and Ord (Amity Mining & Expl. Co. Date Oct. 24, 1962
Inc.)
District Sunflower District - Gila County Engineer Lewis A. Smith
Subject: Interview with James McFarland

Mr. McFarland stated that operations were temporarily discontinued in lieu of further financing. The recent work uncovered a schist ore zone, on the Bluebird Claims, about 30 feet wide, which assays 7 to 20 pounds in Hg per ton. Two other zones of lower grade (5-7 pounds) were also found. These zones appear to lie on the continuation of the Ord ore-bearing zone. C. O. Carlson stated that the various records indicate that the Ord had produced about 7500 flasks during its history. He also said that Grady Harrison and Tom Russell had excellent ore in the main winze area but had to abandon it because of exceptionally heavy wet ground. The greenish schist slabs readily when wet. McFarland had repaired about 130 feet of the main Ord winze out of 165 feet. He said Tom Russell had said that there is very good ore in the 165 foot level drift which bears west from the winze. The ore occurs in green to dark gray, thin-bedded and chloritic schist laced by narrow quartz, veinlets or kernels, and the schist frequently contains some copper as azurite and malachite stain. This ore is comparatively free of antimony or arsenic and consequently retorts well. Where the ore bearing zone outcrops can be seen, the oxidized cappings over the Ord orebodies are quite similar to those on the Bluebird. A very typical orange-brown limonite is usually associated with the better cinnabar ore outcrops. Siderite is commonly an accessory mineral. This orange-brown limonite could be an alteration product from the siderite as well as pyrite.

In the Bluebird claims, the ore zones are usually closely affiliated with a white opaque quartz. The quartz itself contains veinlets, blebs and impregnations of cinnabar, metacinnabarite and affiliated native quicksilver along with some siderite or ankerite. These same ore minerals are in the intervening schist areas, and the bulk of the mined ore was schist. The Ord ore concentrations are usually at oblique "slip-dip" fault crossings of the schist lamanae. There is considerable indication of similar structural conditions on the Bluebird Claims. Mr. Carlson, who, with A. A. Frederickson, owns these claims, also believes that this is so. He also stated that the orebodies generally are lenses and that the intervening areas between the lenses are considerably lower grade than in the leases.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine ✓ Blue Bird Group

Date 7-15-58

Gila

District Sunflower Dist., ~~Mazicopa~~ Co.

Engineer Lewis A. Smith

Subject: Reported by A.A. Sullivan

Owners: ✓ A.A. Sullivan, 1123 W. 4th St., Mesa, Arizona - W.C. 4-9575
✓ A. W. Hawkins 933 S. Country Club Dr., Mesa, Arizona - W.O. 4-4168
✓ Harold Fredrickson, Mesa
~~Bake Meyer, 202 6th St., Tempe, Arizona - W.C. 7-5056~~
~~George Duncan, Mesa~~

Agent: A. A. Sullivan

Property: 5 claims on east fork of Alder Creek adjoining the Ward and Tom Bolich claims to the north, and the Jack Carlson Claim to the south. (Tom Bolich has part of the Ward claims and 12 new ones.)

Development: Assessment work only.

Minerals: ✓ Cinnabar (Hg)

Geology: Schist is cut by a fracture zone running a little west of north in strike. The cinnabar is associated with quartz stringers and lenses in the shear or fracture zone.

Reserves: Unknown.

Plans: The owners plan to open up along one side of the shear with a bulldozer cut and to improve the access road along with Tom Bolich. This will permit the three people in this area to get to the highway without going over a high hill road which goes into the highway near the Ord Mill. Since both Bolich and Carlson will have retorts, they plan to ship any ore to them at first.

FILED

AUG 8 1958

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Blue Bird Claims Date 2-6-59
District Sunflower District, Gila Maricopa County Engineer Lewis A. Smith
Subject: Mine Visit

Property: 6 claims

Owners: A.A. Sullivan et al, 1123 West 4th St., Mesa, Arizona

Work: Two cuts have been made which are both about 12 feet wide and 25 feet long. In each the highest face is about 12 feet in depth. Both are along shear zones. The first or lowest cut in the bank of Alder Creek, was made in a schistified and jasperized Pre-Cambrian volcanic flow. The upper and most promising cut is in a coarse quartz-mica schist. In the latter case it was decided to deepen the cut in view of the favorable orange limonite capping, which in local spots contains some cinnabar. The capping runs up to 3# per ton in quicksilver.

Geology: The Alder Creek Canyon follows the breccia zone along a strong fault which trends close to north-south, but varies notably. On the east side of the fault the base formation is a schistified Pre-Cambrian lava flow which has been partly converted to jasper in places. It is intensely jointed and locally these fracture planes have been filled by glassy quartz containing some free gold, but the narrowness of these stringers and their wide spacing precludes hope of a commercial enterprise. The east side of the fault exposes, in order of age, a coarse conglomerate (30 feet thick), 200 feet of white and brown volcanic tuff (coarser near the bottom) and late Cenozoic basalt flows. These formations rest upon the schistified Pre-Cambrian volcanic formation. The tuffs show lake depositional character.

On the west side of the fault (the downdropped side) the Pre-Cambrian volcanics are overlain by a great thickness of severely crinkled and shattered Pre-Cambrian schists, all of which are old. The whole column is probably part of the Archean Yavapai or Mazatzal Formation. Both sides of the fault have been cut into blocks which have been moved both southeast and northwest with respect to their neighbors. No notable vertical displacement was observed. The faults are pre-quicksilver and are associated with the Basin and Range faulting of Tertiary Age. They have generally within this district, acted as dams ^{causing} covering local quicksilver concentrations. The quicksilver concentrations are accompanied by strong pyritic limonite, which is of a distinctive orange color. Two shears west of the fault cut the schist laminae at small angles. The orange limonite is concentrated in two zones (10-12 feet wide) and it contains a little cinnabar. It is particularly concentrated against one of the several cross fractures. It was, therefore, recommended that the cuts on these shears be deepened to find out whether the cinnabar content of the limonitic areas would increase. Most usually 12-15 feet of depth, below the outcrop, is required to show this, according to many of those who have a long time knowledge of the area.

FILED
FEB 26 1959

DEPARTMENT OF MINERAL RESOURCES

State of Arizona

MINE OWNER'S REPORT

Date Apr 13-58

- 1. Mine: ✓ Bluebird Group -
- 2. Location: Sec..... Twp..... Range..... Nearest Town Payson Distance 30
 Direction..... Nearest R.R..... Distance.....
 Road Conditions Good - Oilwell Road near Payson
- 3. Mining District and County: Brown Owl - Gila Co -
- 4. Former Name of Mine:
- 5. Owner: ✓ C. O. Carlson
 Address: Payson, Ariz
- 6. Operator: ✓ Tonto Mines
 Address: Payson, Ariz -
- 7. Principal Minerals: ✓ Mercury -
- 8. Number of Claims: Lode 7 Patented..... Unpatented X
 Placer..... Patented..... Unpatented.....
- 9. Type of Surrounding Terrain: Mtns -
- 10. Geology and Mineralization: Slate + Schist Ore Zones
 and Quartzite Dikes -
- 11. Dimension and Value of Ore Body: Several large Ore
 Bodies - 5' to 250' wide -

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective lessors or buyers.

12. Ore "Blocked Out" or "In Sight": *Big Tonnage Hill Ore.*

Ore Probable: *Several Million Tons -*

13. Mine Workings—Amount and Condition: *1,000 ft -*

No.	Feet	Condition
Shafts.....	<i>50</i>	<i>Good</i>
Raises.....		
Tunnels.....	<i>700</i>	<i>Good</i>
Crosscuts.....	<i>300</i>	<i>Good</i>
Stopes.....	<i>None</i>	

14. Water Supply: *Springs + Creek thru Prop -*

15. Brief History: *Property Prospected + Developed -
By Pack Trail - Roads Just Completed -*

16. Remarks: *The largest Hg deposit in State
at this time - Maybe a Strip Mine
and Tunnel Mine operation -*

17. If Property for Sale, List Approximate Price and Terms: *Bond + Lease -
10% Royalty - Time + Terms Maybe Worked
out - 50 to 100 T.P.D. - operation*

18. Signature: *C.O. Carlson*

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

ESQW
9
OCT 7 1946
FHC ARIZO

Date Oct 4 1946

1. Mine: SLATE CREEK QUICKSILVER
2. Location: Sec. _____ Twp. _____ Range N. 10 E Nearest Town Payson
Distance 31 mi Direction N. Road Condition Good
3. Mining District & County: Brown - Gila Co.
4. Former Name of Mine: Ariz. Cinnibar Co.
5. Owner: Tom Russell James W. Hansen
Address: South Basin Ariz.
6. Operator: - ✓
Address: - ✓
7. Principal Minerals: Mercury
8. Number of Claims: 7 Lode X Placer _____
Patented _____ Unpatented X
9. Type of Surrounding Terrain: mt. Rough.
10. Geology & Mineralization: pre Cambrian schist.
11. Dimension & Value of Ore Body: _____

12. Ore "Blocked Out" or "In Sight":.....
.....
.....
.....

Ore Probable:.....
.....
.....

13. Mine Workings—Amount and Condition:.....

No.	Feet	Condition
Shafts.....		
Raises.....		
Tunnels.....		
Crosscuts.....		
Stopes.....		

14. Water Supply: *good.*

15. Brief History: *Several development tunnels all incomplete, good showings 10# to 25# cinnibar in several places.*

adjoins Ord Mercury mine on East End.

16. Signature: *Tom J. Harrell*

17. If Property for Sale, List Approximate Price and Terms: *\$ 20,000.00*

1/4 down Royalty 10% apply Bal purchase price

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

5/10/40

Date

Mine Slate Creek Mercury Mine

Location 86 miles N of Phoenix,
Arizona

Mining District & County - Brown Mining Dist.
Gila County

Former Name

Owner - Tom Russell & James Hanson

Address - Mesa, Arizona
C/o Sunflower Mine

Operator - Tyree Trobaugh (Lease)

Address - Tonto Basin, Arizona

President, Owning Co.

President, Operating Co.

Gen. Mgr.

Principal Minerals - Cinnabar

Mine Supt.

Production Rate - 3 tons, 8 hrs.

Mill Supt.

Mill: Type & Cap. - Batch type
furnace.

Men Employed - 3

Power: Amt. & Type - none

Operations: Present

Operations: Planned - To sink 100 ft. on each end of showing, about 2,000 ft. apart, to justify crosscutting 400 ft. to cut veins at about 400 ft. depth. Surface showing justifies sinking these 2 shafts.

Number Claims, Title, etc. - 7 unpatented claims.

Description: Topography & Geography - Steep hill side at foot of Ord Mountain.

Mine Workings: Amt. & Condition - Three 250 ft. crosscut tunnels

One 60 ft. tunnel

Six opencuts

Condition of all workings open, except for one of the 250 ft. tunnels.

Geology & Mineralization - Ore occurs in a soft schist, also in a hard green schist and quartzite. Mineralization in green schist and quartzite is in quartz stringers in soft schist and occurs throughout rock.

Ore: Positive & Probable, Ore Dumps, Tailings - No ore blocked out. Probable ore is pure guessing - guess would be 1/2 million tons.

Dimensions and Value of Ore body - 3 veins of varying widths 30 ft. to 60 ft. wide. Pay streak in veins from 5 ft. to 20 ft. wide. Insufficient work done to put value of ore body. What work has been done seems to indicate about .40 of 1% ore. Ore 5 ft. to 20 ft. widths.

Mine, Mill Equipment & Flow-Sheet - Property is equipped with a Batch type furnace to furnace high grade ore taken out in course of developing mine.

Road Conditions, Route - Roads are good except during heavy winter rains. From Phoenix go east 8 miles west of Mesa, hence 60 miles N. on Bush highway to Ord Mercury Mine, hence 3/4 miles down Slate Creek to property. Ask at Ord Mine for Tyree Trobaugh

Water Supply - Plentiful supply for 100-ton mill 9 months of each year. 3 months' supply doubtful.

Brief History - Has been worked and prospected since 1926. About \$12,000 has been spent in developing property. 5 flask production.

Speical Problems, Reports Filed - No reports filed. No special problems in mining.

Remarks

If property for sale: Price, terms and address to negotiate. - Property is for sale by owners for \$75,000. Would prefer to raise sufficient capital to develop ore to justify installing concentrating equipment. Contact Tyree Trobaugh, Tonto Basin, Ariz.

SIGNED - Tyree Trobaugh
Tonto Basin, Arizona

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

MINE OWNER'S REPORT

Geology & Mineralization

Date

1. Mine *Slate Creek Mercury Mine*
3. Mining District & County *Brown - Mohave County*
4. Former name
5. Owner *Tom Russell & James Hanson*
7. Operator *Irene Froberg (Lease)*
9. President, Owning Co.
10. Gen. Mgr.
11. Mine Supt.
12. Mill Supt.
13. Men Employed *3*
18. Operations: Present

2. Location *86 miles N. of Phoenix Ariz*
6. Address (Owner) *Mesa Ariz - To Sunflower*
8. Address (Operator) *Tonto Basin, Ariz -*
- 9A. President, Operating Co.
14. Principal Minerals *Cinnabar*
15. Production Rate - *3 Tons .8 hrs.*
16. Mill: Type & Cap. *Batch type furnace*
17. Power: Amt. & Type - *none*

19. Operations: Planned

To sink 100' feet on each end of showing, about 2000' apart - to justify cross cutting 400' to cut veins at about 400' depth. Surface showing justifies sinking these 2 shafts.

20. Number Claims, Title, etc.

Seven - unpatented claims.

21. Description: Topography & Geography

steep hill side - at foot of Arid Mountain.

22. Mine Workings: Amt. & Condition

3- 250' cross cut tunnels - 1- 60' tunnel - 6 open cuts. Condition of all working open, except for 1 of the 250' tunnels.

3. Geology & Mineralization - Ore occurs in ^{soft} shist, also on a hard green shist, and quartzite. mineralization in green shist & quartzite is in quartz stringers. In soft shist it occurs throughout rock.

4. Ore: Positive & Probable, Ore Dumps, Tailings

No ore blocked out. Probable ore is pure guessing. Guess would be 1/2 million tons.

4A. Dimensions and Value of Ore body

3 veins - of varying width. 30' to 60' wide - pay streak in veins from 5' to 20' wide. Insufficient work done to put value of ore body. What work has been done seems to indicate about 40 of 1% ore - on 5' to 20' widths.

5. Mine, Mill Equipment & Flow-Sheet

Property is equipped with a batch type furnace to furnace high grade ore taken out in course of developing mine.

6. Road Conditions, Route

Roads are good except during heavy winter rains. From Phoenix go east 8 miles west of Mesa - hence 60 miles North on Bush highway. To Arid Mercury mine. Hence 3/4 miles down State Creek to property. Ask at Arid Mine for

7. Water Supply Jayne Frobeny

Plentiful supply for 100 Ton Mill 9 months of each year - 3 months supply doubtful.

8. Brief History Has been worked & prospected since 1926. About \$12,000.00 has been spent in developing property. 5 flash production.

9. Special Problems, Reports Filed

No reports filed. No special problems in mining.

10. Remarks

11. If property for sale: Price, terms and address to negotiate. Property is for sale by owners for \$75,000.00. Would prefer to raise sufficient capital to develop ore to justify installing concentrating equipment. Contact Jayne Frobeny, Tonto Basin, Ariz.

32. Signature.....

Jayne Frobeny
Tonto Basin.

33. Use additional sheets if necessary.

MS-666

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

OWNERS MINE REPORT

Date

Mine Slate Creek Quicksilver.

District Brown Mining District, Gila County Location

Former name Arizona Cinnibar Mine

Owner James N. Hansen and Tom Russell

Address Box 502, Mesa, Arizona.

Operator

Address

President

Gen. Mgr.

Mine Supt.

Mill Supt.

Principal Metals Cinnibar

Men Employed

Production Rate

Mill: Type & Cap.

Power: Amt. & Type

Operations: Present Surface prospecting.

Operations Planned Surface work and continuation of tunnels at 3 points to cut veins showing on surface.

Number Claims, Title, etc. 7 claims. Recorded as "Slate Creek" #1 to 7 inclusive.

Description: Topog. & Geog. Claims cover top and North slope of what is known as Baker Mt. on Slate Creek. Adjoin N. E. end of Ord group of 20 patented quicksilver claims.

Mine Workings: Amt. & Condition Nothing of importance except several uncompleted crosscut tunnels about 800 ft. of tunnel work.

Tom J. Russell

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA

Geology & Mineralization Ore bodies occur in sedimentary schist veins, and along side, and in quartzite dikes traversing same, veinlets of quartz and calcite also carry values.

Ore: Positive & Probable, Ore Dumps, Tailings Can only see ore on surface except in 2 or 3 places. Would not venture to give amount of ore. The surface veins are from 1 to 15 ft. wide not infrequently carrying 1% quicksilver across width.

Mine, Mill Equipment & Flow Sheet None

Road Conditions, Route From Mesa via Bush Highway to Sunflower, then 14 miles North on Payson Highway to Slate Creek.

Water Supply Available for camp on property.

Brief History First discovered about 1925--Arizona Cinnibar Company Formed this Company relinquished their rights last year by not doing their annual assessment work. Located by present owners last year. No production to date.

Special Problems, Reports Filed

Remarks This property as yet is undeveloped but has real merit and will develop substantial tonnage of good grade ore.

If property for sale: Price, terms and address to negotiate. Will make reasonable deal based on development - sliding scale royalty - small down payment - price \$75,000.00

Signed..... Tom J. Russell.

Use additional sheets if necessary.

MEMO

Blue Bird and Ord

SUNFLOWER DIST.

GILA COUNTY

Mr. McFarland stated that Amity Mining Co.'s options on the Bluebird (owned by C.O. Carlson, Payson and A. Fredrickson, Phoenix) and the Ord (Vance Thornburg et al) is due to terminate near the end of the year. He said that O.L. Johnson, the principal in Amity Mining Co. was heavily in debt and had failed to meet royalty payments and wages. C.O. Carlson stated that he and Fredrickson had recinded their option as of the termination date, because of failure of Johnson to meet any of the stipulated payments.

Mr. McFarland and Gordon Grimes (Payson) are prepared to seek an option on the two mines as soon as the present options are done, provided the properties are optionable. Mr. McFarland outlined an area, on the Bluebird that lies west of and against a large rhyolite dike and which straddles the Ord shear zone. Here he said they had exposed an ore bearing zone that is 1500 feet long, by means of several adits and cuts. This is said to vary from 4 to 20 feet wide. The No. 6 crosscut adit could be driven further west to intersect this zone at about 300 feet below the surface. Should this intersect ore, a considerable reserve would be inferred. This would have to be further checked by drifting along the rhyolite schist contact to the northwest. This would show whether the 1500 feet in between this crosscut and the lowest ore outcrop is all ore or is composed of a series of lenses associated with the projected Ord shear planes and whether the inferred ore zone has consistent width and grade. McFarland said that the ore zone might be quite variable in width. Should the lense theory prevail, it would then appear important to determine if the intervening spaces between the lenses is of sufficient tenor so that a combination of the lense grade and the intervening grade would make ore. Until these theories are verified, any ore reserve figure would be highly problematical, particularly since the Sunflower District quicksilver ore shoots generally tend to be somewhat lenticular, the lenses forming near or at pre-mineral structural intersections. According to both C.O. Carlson and McFarland, several assays across the inferred ore zone at various intervals, show from a few pound of Hg, up to over 20 pounds per ton.

The ore minerals lie mainly in what appears to be a greenstone schist that contains jasper, brown siderite, or ankerite, and quartz. The ore minerals are cinnabar, and some meta-cinnabarite, native mercury and a "purplish" mineral that may be mercurial tennantite. The outcrop in places shows azurite and malachite, and often shows an orange limonite that is a good indication in this area. There is evidence that this limonite may have resulted in part from alteration of the iron carbonate, which commonly is affiliated with the ore minerals and in part from copper-iron sulphides, such as tennantite (mercurial), chalcopyrite and pyrite. Some blebs of cinnabar up to $\frac{1}{2}$ inch in width were seen in specimens, but much of the quicksilver bearing material is disseminated in the schist laminae or quartz.

Two or three truck loads of this ore is now stored above the Rattlesnake mill. It is, in addition to the minerals previously mentioned, contain considerable calcite that probably was partly instrumental in the formation of the azurite and malachite along with the iron-carbonates.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine **Amity Mining and Exploration Co., Inc.** Date **Aug. 28, 1962**
District **Sunflower Dist., ^{Gila} ~~Maricopa~~ Co.** Engineer **Lewis A. Smith**
Subject: **Interview with the Arizona State Corp. Commission and Hale C. Tognoni, Agent,
411 North Central, Phoenix.**

Properties Optioned: **Blue Bird** (C. O. Carlson, Payson, and A. A. Frederickson, 7045 N. 12 St., Phoenix-Owners), and the **Ward Group** (Onieda Mining Co.-Mrs. Carmelita Ward, 705 Linwood Ave., Phoenix). Option to **Amity Mining & Exp. Co., Inc.**, O. L. Johnson, Pres., 8431 Crenshaw Blvd., Inglewood, California. The other principals are also from Inglewood.

Tognoni stated that, according to Johnson's sampling, some zone on the **Bluebird Claims** ran up to 10 pounds of mercury to the ton. However, Tognoni plans to sample the area himself, as well as map the geology. The **Ward Claims** (Onieda Mining Co.) are in litigation because two employees of Tom Bolich had jumped them, claiming that the assessment work was not done. So until this is settled, Johnson's group cannot move. Hale also stated that Bolich had offered to buy the claims for \$15,000 but Mrs. Ward turned this down. However, Mrs. Ward had an agreement with Bolich whereby he was to do the required work, on the claims.

Johnson plans to erect a modern Gould furnace on the ground, if exploration results prove satisfactory. As now calculated, the ore would have to carry 6-7 pounds per ton for a profit. This seems equitable because of the lenticular character of most of the Sunflower orebodies.

MEMO

9-15-62

AMITY MINING & EXPLORATION CO., INC.

LEWIS A. SMITH

Sunflower Dist., ^{Gila} Maricopa Co.

Interview with James McFarland, Box 308, Payson (Foreman) and Grady Harrison at Payson.

Mr. McFarland stated that Amity has acquired a lease-option on the Ord Mine from the Vance Thornburg interests. Thus far, they have cleaned out the main haulage adit, level with the top of the Ord Mill, and have repaired an old winze down for 100 feet. The winze, according to Grady Harrison, was extended, by Tom Russell and himself, to 165 feet, and a 40-foot drift driven in a westerly direction. (Mr. Harrison stated that this was done immediately before they sold to Vance Thornburg.) Russell and Harrison mined some relatively rich ore from a stope above the cross-cut but the ground was very wet and heavy and the stope was lost. They had started to work back into the area when the mine ownership changed. The winze also contained some 7-15 pound ore. McFarland plans to clean up more of the tunnel and has so far found some of the good ore reported by Harrison.

Further work was done on the Bluebird to the east of the Ord, where cuts have disclosed some good ore in two main zones. 12 men are now employed at the Bluebird and the Ord.

It is also planned to acquire the Rattlesnake Mill. Gordon Grimes, also interviewed, said he had traded his interest in the Pine Mountain and Bernice Mines to Bill Bronson for Bronson's interest in the Rattlesnake Mill. He will then sell or lease the Rattlesnake Mill to Amity. If this all materializes, the Amity Company will improve the mill and increase the capacity to 25 or 30 tons of ore per day.

According to John N. Faich, ("Geology of the Ord Mine, Mazatzal Mountains, Quicksilver District, Arizona": U.S.G.S. Bull. 1042-R, (1958) pp. 685-698) the quicksilver ore occurs in the phyllites and is closely associated with conspicuous zones of bleaching and alteration in which the phyllite has been converted to sericite schist, seemingly by processes associated with ore deposition. These altered zones, called "ore" zones (if they carry appreciable amounts of quicksilver) are localized along inconspicuous shear zones and bedding-plane faults that are, in general, conformable to the foliation of the phyllites. The ore occurs in narrow, small, lenticular bodies most of which strike east-northeast, stand nearly vertical and rake steeply westward. Most orebodies are irregular in shape and rarely have definite walls, some have central parts of comparatively high-grade ore which grades outward into sub-marginal ore or barren

Amity Mining & Exploration Co., Inc.

Lewis A. Smith

wallrock. Most of the ore consists of disseminated cinnabar in altered phyllite. However, Cinnabar also is present in narrow quartz veins, some of which contain considerable amounts of siderite. Some native mercury is found in the upper workings, and mercurian tennantite is abundant in ore exposed in the lower workings.

The deepest ore in the Ord Mines is about 375 feet below the surface, and this relatively shallow depth indicates that considerable caution should be used in future exploration for downward extensions of the ore bodies.

In some areas, the alteration zones are affiliated with pre-mineral rhyolite porphyry dikes such as in the Pine Mountain. In the Bluebird claims east of the ore, mafic dikes appear in places. These are highly altered and may have been associated with ore deposition in that they appear to have been altered by hydrathermal solutions.

Modern History: The Ord mine has produced over two thousand flasks of quicksilver since 1926. Grady Harrison, T. J. Russell, and Tyree Trobaugh (Mercury Mines Co.) under an R.F.C. loan produced 9,082 tons of ore from which 812 flasks of mercury was recovered, an average recovery of 6.8 pounds per ton of ore. This was gross valued at \$126,674. The mine was idle from 1946 to 1952, when the mine was reopened in 1952 by Tom Russell et al, who, under a D.M.E.A. loan did exploration work below the 200-foot level. Around 8 flasks from 14 tons of ore ("black ore") was obtained from the 240-foot level. On July 1, 1954, Uranium Enterprises Inc. (Vance Thornburg, et al) secured a lease option and exercised the option in 1955. This Company treated 2530 tons of ore, yielding 148 flasks of mercury, for an average recovery of 4.48 pounds of quicksilver per ton of ore. Of a total production of 2100 flasks-nearly 1000 tons was obtained since 1946.

The general trend of the Ord orebodies appears to be toward the Bluebird claims, which now are being developed. However, because of the lenticular character of the old or developed orebodies, the prospecting for new orebodies is relatively expensive and should be done under relatively close control by a geologist.