



CONTACT INFORMATION

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Arizona Department of Mines and Mineral Resources Mining Collection

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10/16/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PINE MOUNTAIN

ALTERNATE NAMES:

TURNBULL
MIDCO RESERVES
BOARDMAN

MARICOPA COUNTY MILS NUMBER: 620C

LOCATION: TOWNSHIP 7 N RANGE 9 E SECTION 5 QUARTER NE
LATITUDE: N 33DEG 58MIN 47SEC LONGITUDE: W 111DEG 26MIN 53SEC
TOPO MAP NAME: RENO PASS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

MERCURY

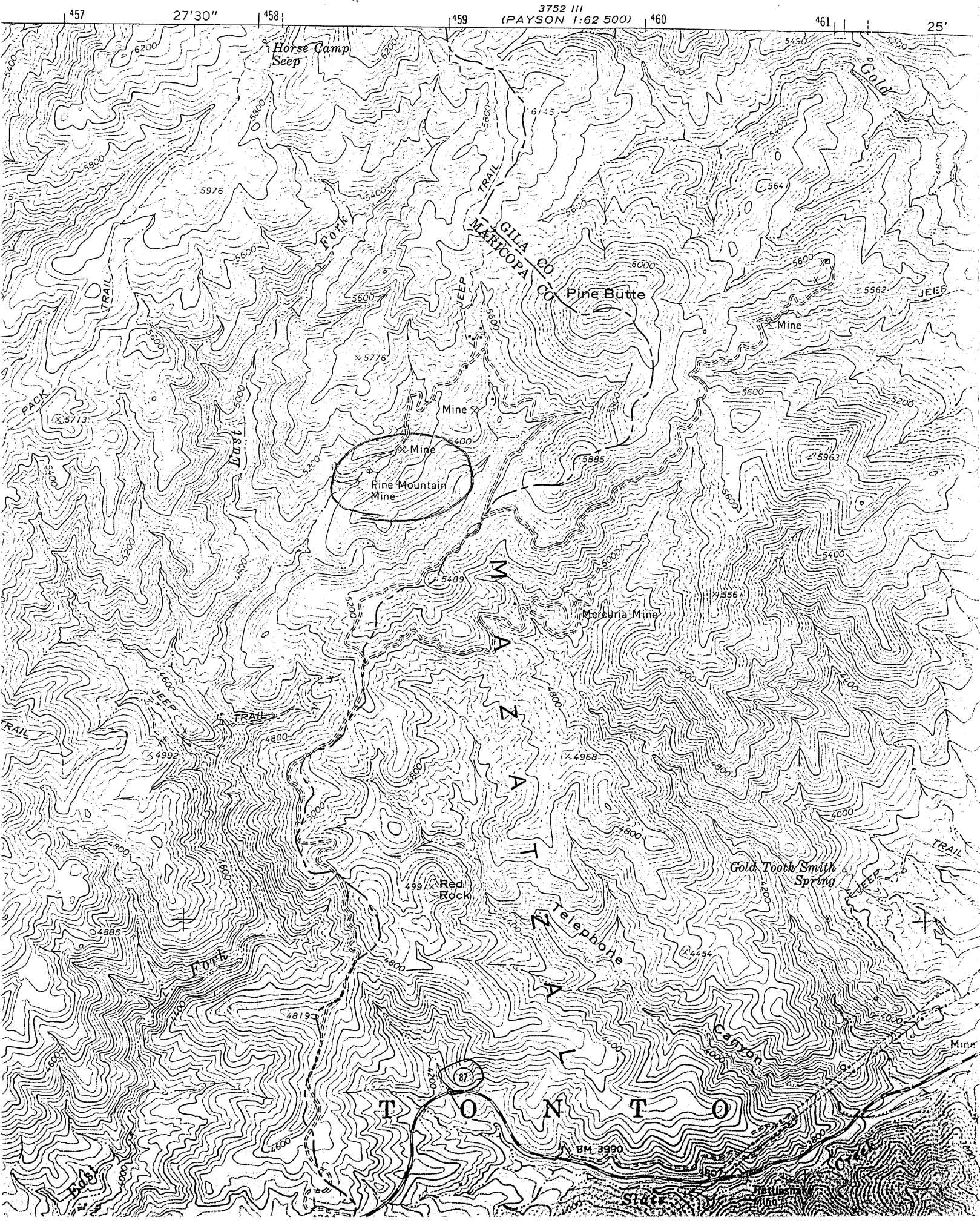
BIBLIOGRAPHY:

ADMMR PINE MOUNTAIN FILE
ADMMR "U" FILE
USBM IC 8252 P 66
AZBM BULL 180 P 228
AZBM BULL 122 P 87-89

MARICOPA COUNTY

IC 8252 p. 66

1. Name: DAVID G. ...
2. Address: ...
3. City: ...
4. State: ...
5. Zip: ...



Q-5

MINERAL SPECIMEN CARD DEPARTMENT OF LIBRARY AND ARCHIVES

K097

(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.)Specimen No. 3, collected by Newton Wolcott

Field Engineer

Name of ore Cinnabar (Quicksilver)Operator Wm. Reynolds, Grady Harrison,
and Boardman Bros.Minerals contained CinnabarMine active or inactive Active

If inactive, when operated

Gangue SchistSpecimen presented by Boardman Bros.Depth at which taken 100 feetDate Sept. 25, 1939.Approximate mineral content (in terms of
average per ton) $\frac{1}{2}$ to 1 Oz. MercuryNotes (Any general information regarding
the history of the property.) This property
has been in the process of development forName of mine or claim Pine Mountain Cinnabarsome time. Two veins now exposed, one 15 feet
in width, and one 5 feet. Two tunnels show ore
extends vertically for more than 100 feet.

Group

Owners building road in to property.District Sunflower Mining DistrictLocation (distance and direction by high-
way from what town Bush Highway.If more space is desired for notes, use
other side.Owner of property Same as operators.

This specimen is now in the ADMR Museum see K number

15.5 x 10.0 x 6.0 cm

1-4-40

MINERAL SPECIMEN R DEPARTMENT OF LIBRARY AND ARCHIVES

(Do not write
in this space)(Wrap each specimen separately, or place it in a substantial
bag, by itself, with a number attached, identical with the
number on this card.)

Ore _____

Cabinet _____

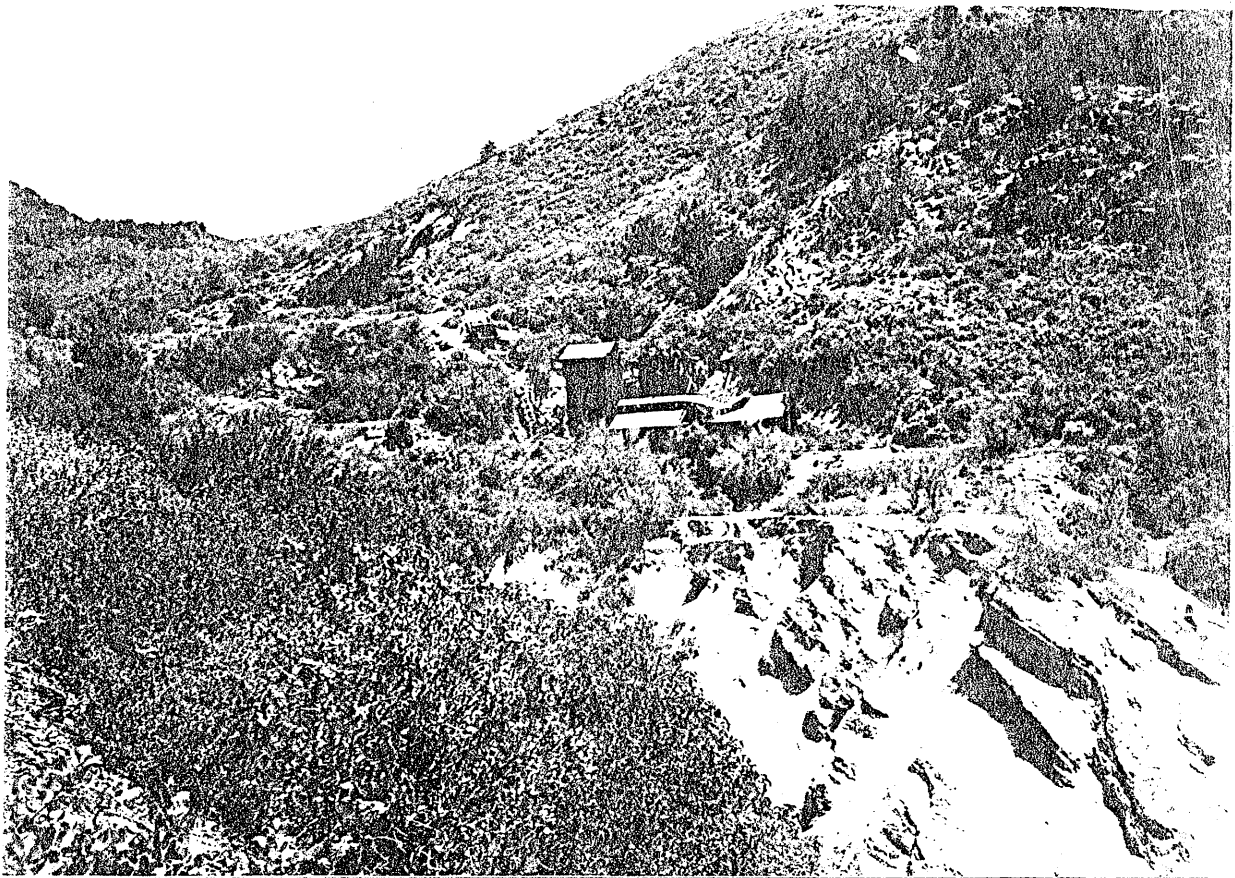
No. _____

Specimen No. 1, collected by Joseph Akron (from Charles Brunson)
Field EngineerName of ore SinobarOperator Bill ReynoldsMinerals contained mercury and silverMine active or inactive activeGangue shist

If inactive, when operated _____

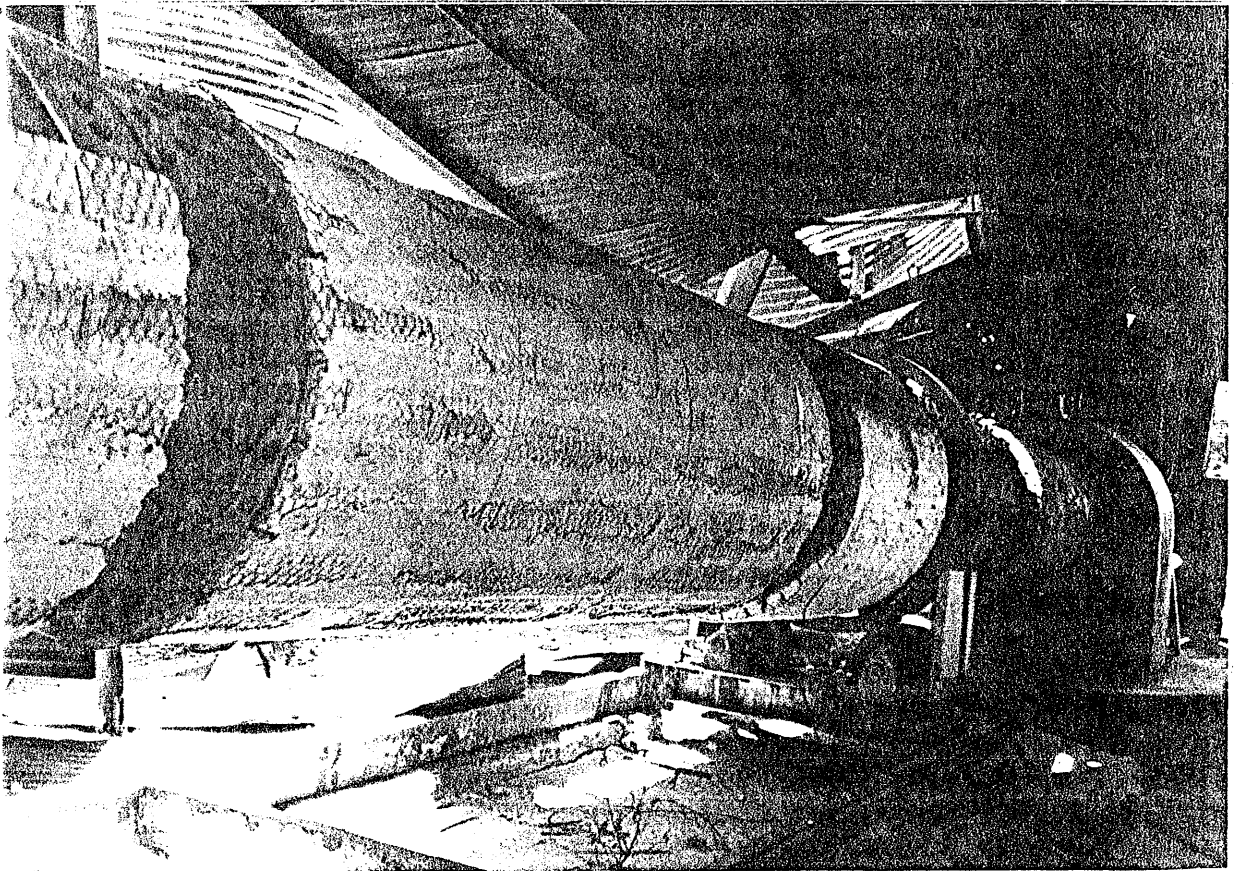
Depth at which taken 187 ft.Specimen presented by Bill ReynoldsDate 18 December, 1939Approximate mineral content (in terms of
average per ton) 10 lbs.Notes (Any general information regarding
the history of the property.)Ore body traceable one mile. Runs 35° off of N - NE.
Vein 24 ft. wide.Name of mine or claim Boardman mineGroup Pine Mountain claimsDistrict SunflowerLocation (distance and direction by high-
way from what town 72 mi. from Phoenix7 miles N. of Colcord River Station on Santa Fe Highway.
3 miles N. of Sunflower River Station.Owner of property Reynolds, BillIf more space is desired for notes, use
other side.

1-2-40

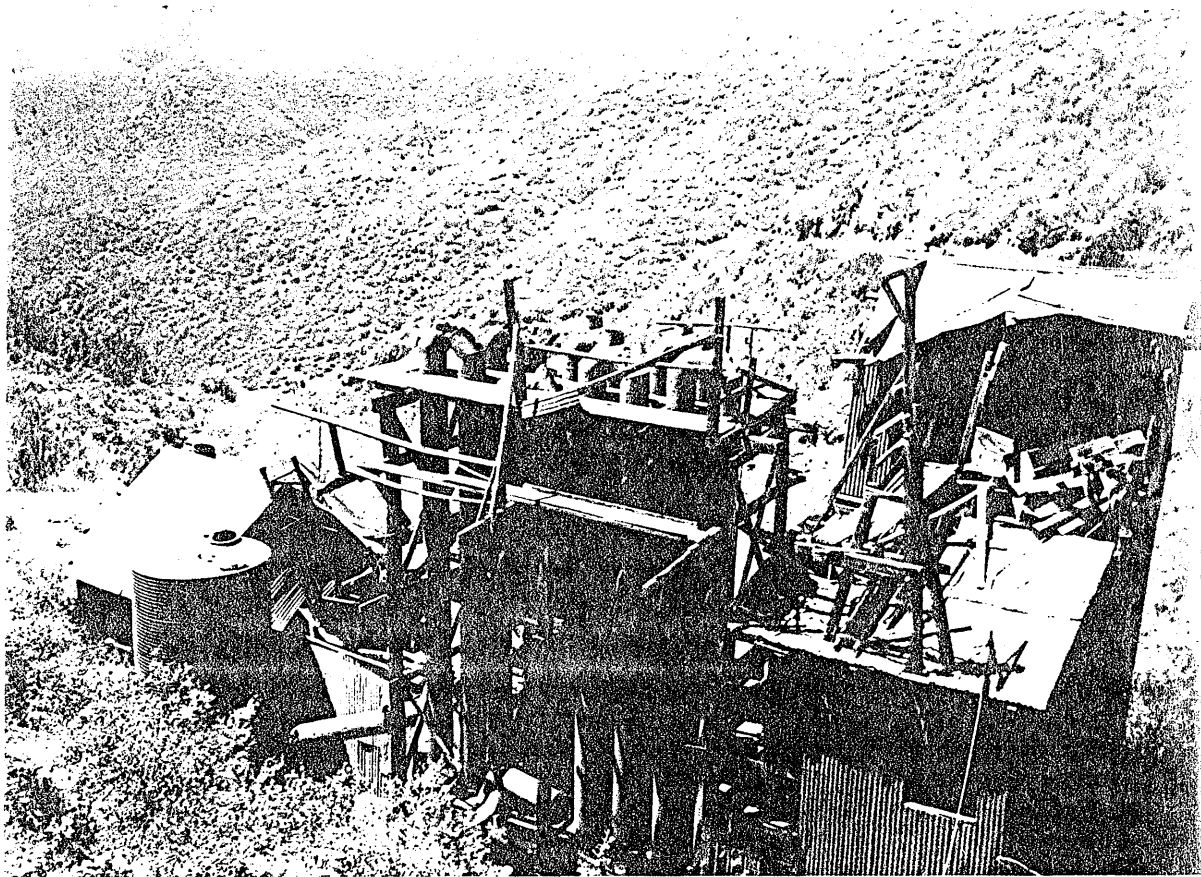


A-151-40

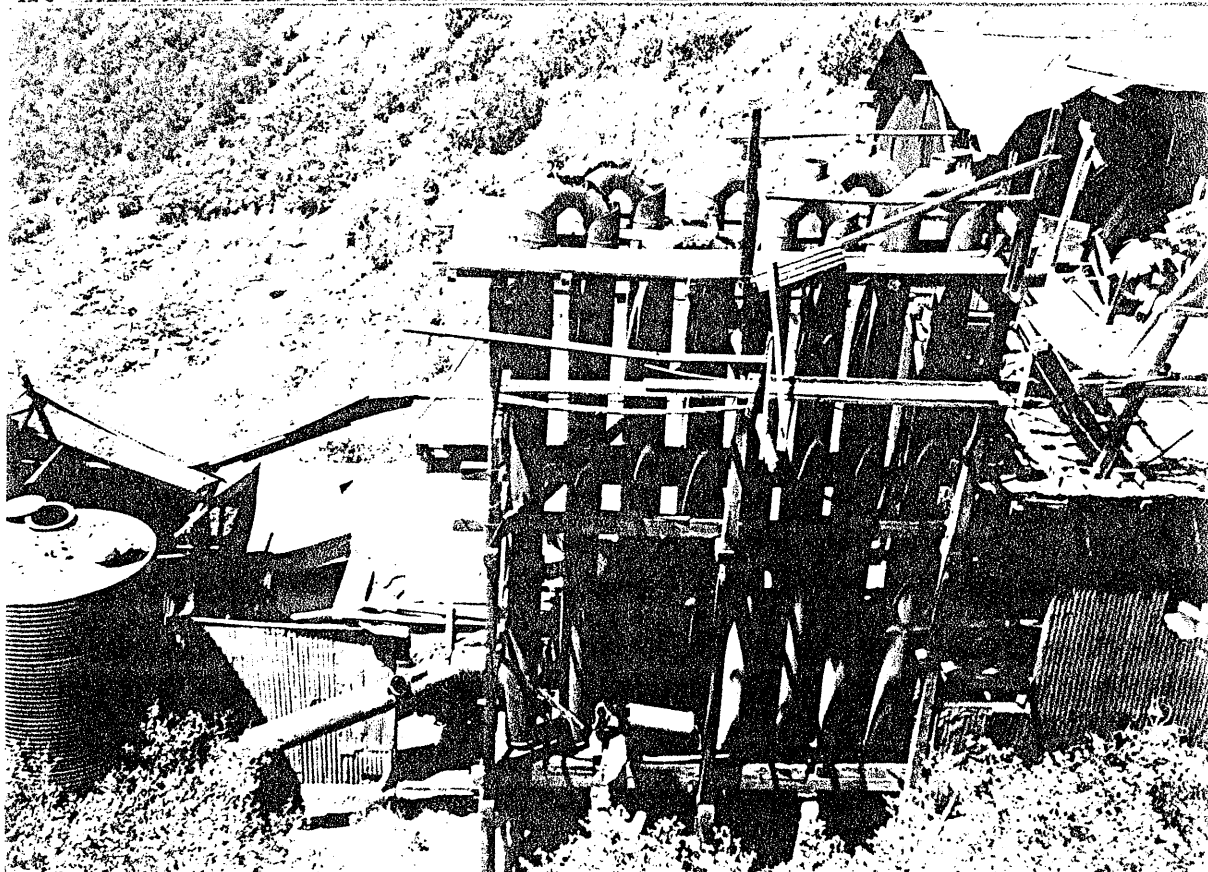
4/69



A-150-41



A-150-42



A-150-43

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

ARIZONA

MARICOPA

Gila Co.

Sunflower Dist.

Pine Mountain Cinnabar Mine

MM-K097 Cinnabar

MILS # 620C

PINE mountain (file)

Arizona Department of Mines and Mineral Resources

INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MM 7310 Cinnabar in quartz
7314 " " "

Maricopa County

Mazatzal Mountains

Pine Mountain Mine

MILS # 6200,
3- AKA's

~~Pikes Peak Iron~~ (file)
Pine Mountain

HEAD OFFICE
231 SOUTH LA SALLE STREET
CHICAGO 4, ILLINOIS

MIDCO RESERVES, INC.

MINE OFFICE

BOX 311

MESA, ARIZONA March 28th, 1944

Mr. J.S. Coupal,
Arizona Department of Mineral Reserves,
Phoenix, Arizona.

Dear Mr. Coupal:

We have just received notice from the Metals Reserve Company that they have reconsidered our application for confirmation as a "qualified" producer and that they have granted such confirmation because our application was in the mail before Dec. 31st.

I am sure that your efforts in our behalf were a large factor in influencing this decision.

We wish to thank you and the Department for your interest and help in this matter and to assure you that your co-operation is deeply appreciated.

Very truly yours,

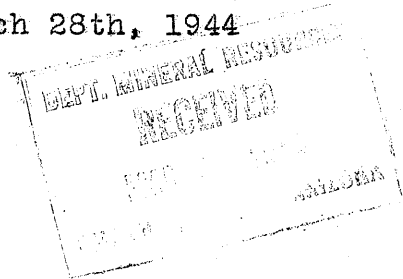
MIDCO RESERVES INC.,

By

B. M. Hulbert

Superintendent.

cc to H.C. Orton



304xxx

April 5, 1944

Mr. B. N. Hulbert, Superintendent
Midco Reserves, Inc.
Box 311
Mesa, Arizona

Dear Mr. Hulbert:

Many thanks for your letter of March 28 and
I am glad to hear that you got under the wire as a
"qualified" producer.

I talked with Mr. Ira Joralemon after his
visit to your property and hope that they have somewhat
eased up on your operations and made an adjustment which
has been satisfactory.

I would be pleased to be advised of any
changes in your plans and your progress at any and all
times.

Very truly yours,

J. S. Coupal, Director

JSC:LP

Bob Kidd
Eng. in charge

Subscribed
J. S. Coupal
Director

February 28, 1944

Mr. B. N. Hulbert, Superintendent
Midco Reserves, Inc.
Box 311
Mesa, Arizona

Dear Mr. Hulbert:

I have just received a memorandum from W. C. Broadgate, Assistant Director for the Department in Washington, saying that he had taken up the question of an adjustment for the Arizona producers of mercury and after some decided effort, had been able to arrange through Messrs. Carlisle and Joralemon to have an engineer named Sampson make careful examination of your property so as to report facts which would justify some modification of the proposed settlement made on January 31 regarding your production of mercury up to December 31, 1944.

I would be pleased to know the results of such examination and be of any further assistance possible to you.

Yours very truly,

J. S. Coupal, Director

JSC:LP

Planned Mercury

February 7, 1944

Mr. B. N. Hulbert, Supt.
Midco Reserves, Inc.
Box 311
Mesa, Arizona

Dear Mr. Hulbert:

While in Denver at the war metals conference I had chance to discuss the unfairness of the recent cutting off of qualified mercury producers as of January 31, 1944. We discussed this situation in full and the general statement was that all producers should have known the conditions under which they were operating and this cut-off was definitely stated in the granting of the premium to qualified producers. Further discussion on this subject followed, however, and we have obtained a more favorable attitude.

I wish to quote from a memorandum just received from W. C. Broadgate, who is assistant director of the Department located in Washington. He was with us in Denver and on his return by train to Washington had chance to discuss settlements with the chief of the Mercury Section. I would like to quote his comment as follows: "I asked him about settlements and he said in his opinion where there was less than 11 months ore showing in the mines reserves Metals Reserve Company would probably take the delivery rather than pay the penalty."

My suggestion to your company is that you write to Metals Reserve Company, Washington, D. C., attention DeWitt C. Smith, stating that a grave injustice would be done to your operations if the Metals Reserve Company would not receive the mercury your company produced up to and including December 31, 1944.

In any such letter I would state approximately the tonnage of ore that you have actually blocked out in your mine at the present time. When we speak of blocked out ore it means it is opened on three sides ready for sampling. This condition rarely exists in small mine operations and from what I have seen of your property I would say that there is very little ore that can be considered positively blocked although there may be a large tonnage reasonably in sight.

Yours very truly,

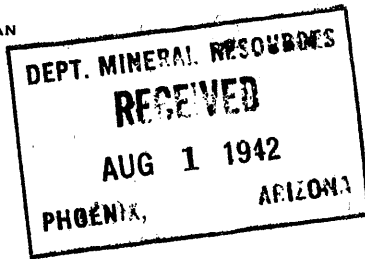
J. S. Coupal, Director



ARIZONA CORPORATION COMMISSION

THE CAPITOL
PHOENIX

AMOS A. BETTS
CHAIRMAN



July 31, 1942

File 325.

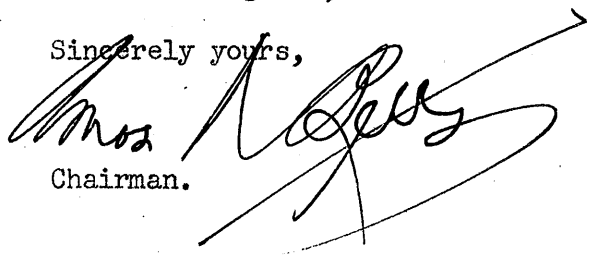
Mr. J. S. Coupal, Director
Department of Mineral Resources
413 Home Builders Building
Phoenix, Arizona

My dear Sam:

Thank you ever so much for
your letter of July 29th giving me the latest
report on the operations of Pine Mountain
Mercury Mine. I have transmitted a copy of
your letter to the representative of the Govern-
ment at Nogales (Captain C. B. (Bert) Smith) who
made the inquiry of me.

With kind regards, I am

Sincerely yours,


Chairman.

AAB:DP

July 29, 1942

Mr. Amos Betts
Corporation Commission
Capitol Building Annex
Phoenix, Arizona

Dear Amos:

Mr. Arthur J. Theis, who is in charge of the operations of the Arizona Quicksilver in the Sunflower District, was in today and I questioned him about the work going on at the Pine Mountain Mercury Mine nearby him. He states that a Mr. Martin is now general superintendent and a Mr. Adams is mill superintendent. He has talked with both of them and find them very capable and doing an excellent job at mining and milling.

At present they have about 25 men in the mine and mill and are producing at the rate of 50 to 70 flasks of mercury per month. The old workings in the mine were left in rather bad shape, but the former operating staff and the present crew are putting the mine in nearly workable condition. It is stated that an engineer is to be out shortly from Chicago to look over and decide on plans for sinking a new working shaft.

Recent developments are reported to have opened up some fine ore in the lower levels which seem to justify the proposed new shaft.

I hope this information may be of value to you.

With best wishes and kindest regards, I am

Yours very truly,

J. S. Coupal, Director

JSC:LP

PINE MOUNTAIN MINE

MARICOPA COUNTY

Carlson stated that Pine Mountain (Turnbull) Mine was active but was not producing much quicksilver. LAS WR 3-31-67

Active Mine List April 1967 - 10 men

Visited Pine Mountain mine - United Nuclear are moving out. FTJ WR 6-30-67

Visited Pine Mountain mine - everything closed tight. FTJ WR 6-27-69

Exploration at Pine Mountain has ceased and company (Dixilyn) was moving out. FTJ WR 2-27-70

AWB WR 8/2/80: David Riley, 1321 E. Hubbell, Phoenix, Arizona 85006, collected cinnabar from the Pine Mountain Mine dump, Maricopa County, Sunflower District. Making mineral sets for dealers.

KAP WR 7/10/81: In the company of H. Mason Coggin, traveled to Pine Mountain Mercury mine in the Sunflower District. There was no sign of recent physical activity. Many of the openings no workings have caved. All of the buildings have been destroyed. The rotary furnace and retort plant is still standing but in a state of deterioration. The deposit has been suggested to be a strata bound-massive sulfide by the author of a paper on such deposits in Arizona. — By his admissions that conclusion was drawn from a map reconnaissance study and the property was not visited. During an admittedly brief visit by Mr. Coggin and myself we were unable to find any evidence to conclude that the Pine Mountain Mercury deposit is a strata bound precambrian massive sulfide deposit. The deposit contains cinnabar in quartz veins and disseminated cinnabar in sericitic schist. More study is needed.

NJN WR 4/6/84: Provided information to Martha Combecic of the Phoenix District IRS office. She is investigating a loss claim related to a cave in at the Pine Mountain Quicksilver Mine, Maricopa County. The claim was filed by an undisclosed party who bought the property after the Dixiwin Corporation had it.

Interview with C. O. Carlson

Carlson said that the recent option, from George Cline, that included H. A. Lee, (Scottsdale) had been rescinded and the property leased to J. A. Bacon, Wm. Brunson, and Peter MacKenzie.

The latter group have repaired the Pine Mountain Mill and are now scheduled to begin retorting about Friday, 10-11-63. Carlson said also that they had cleaned overburden off of a considerable area south of the old shaft. The Gould furnace is reportedly in good shape, considering that it has not been run for many years.

Memo LAS 10-7-63

Active Mine List Oct. 1963 - 3 men working

Conference with Gordon Grimes and James McFarland

These men stated that a few flasks were produced by Bacon and Brunson early in 1964, but that at present the operation was reported to be down. They were not sure when they would resume. Oliver Brunson, who with Hugh Nichols, was trying to open the Mercuria, is now at Pine Mountain (see Mercuria). Memo LAS 2-27-64

Mrs. Mark Kellog, Jr., 259 W. 21st St., Merced, Calif., called to say that she has the job of handling the Pine Mountain (Turnbull) Mine financing for A. Bacon and Wm. Brunson, who optioned it sometime ago from George T. Cline, of Tonto Basin. Cline acquiesced in the arrangement. LAS WR 3-23-64

Mrs. J. A. Bacon, wife of J.A. Bacon, of the Pine Mountain (Turnbull) Mine, was in for any information we might have on the mine. J. A. Bacon and Oliver Brunson have operated the retort since Feb. 1, 1964 and have obtained about 30 flasks of mercury. This is sold to Braun Chemical Corp. of California. They have uncovered a new ore body that is reportedly very good in grade next to a transverse rhyolite dike. Due to the cold weather and technical difficulties (mainly poor oil firing conditions) the extraction was not as good as desired. It seems that the oil was not preheated before being used in the furnaces. The oil that does not properly ignite absorbs quicksilver "flower". The retorts need jet feeding according to Mrs. Bacon. Flux (CaO) is commonly necessary in the Sunflower District in order to counteract the arsenic etc., that locally is troublesome. So far little flux had been used in some operations there. H. F. Frederick, registered California geologist, has been retained to map the mine area. LAS WR 5-11-64

Mr. Bolich said that Pine Mountain was being worked mor or less sporadically and had produced some quicksilver since the first of the year. LAS Memo 10-1-64

According to Grimes the Pine Mountain is operating sporadically, having been hampered by bad weather early in the year. The road is passable for four-wheel drives, but soon should be better as it dries out. Memo LAS 2-24-65

PINE MOUNTAIN MINE

SUNFLOWER DIST.
MARICOPA COUNTY

Lee stated that the Pine Mountain Mine is optioned to J. A. Bacon, Wm. Brunson, and himself. He said that the mine has a large reserve (possibly 1,000,000 tons) of all grades ranging from 3.5 to 30 pounds per ton, mainly composed of schist with cinnabar. The old mill has little value except for the Gould furnace which is a very good piece of machinery. His furnace consists of a cylindrical tube containing 20 tubes in two 10-foot compartments, 10 tubes in each half. The ore is fed into the tubes and retorted by jetted propane gas flames from both ends. Each compartment has a vapor outlet, at the top, which is directly connected to condensing tubes. It will heat to 2000 degrees.

The lessees agreed to pay a 10 percent royalty on gross value to George Cline until Cline had received \$300,000.

The mine has a 300 foot main shaft with water up to 100' from the surface. Three adits have been driven in the past three years:-

- (1) 450 feet. (This connected with the old workings).
- (2) 210 Feet
- (3) 110 feet (this has a 70 foot-winze).

Lee Stated that they may undertake a \$17,000 sampling project.

Interview with H. A. Lee, 8220 Camelback Rd. Scottsdale 2-15-63

MEMO - LEWIS A. SMITH

William Brunson and J. A. Bacon are repairing the old retort at the Pine Mountain Mine, and plan to retort stockpiled ore from the tunnels reported on in the Memo of 2-15-63 (H. A. Lee interview). All three persons agreed that more depth prospecting is indicated by the presence of good ore in the bottom level of most mines in the area. The Pine Mountain Mine is considered to be one of the best in the District for future development due to the apexing of the Jasper dikes, that seem to delimit the quicksilver mineralization both to the east and west. This apex appears to be characterized by a relative concentration of dikes (mostly rhyolite porphyry and some diorite) in the area as well as intensified transverse fracturing. Several such fractures, according to Grimes, were encountered in the 450 foot tunnel, driven last year, and some made lenses of ore. The bulk of the dikes and fractures are premineral.

Conferences with James McFarland, Gordon Grimes and C. O. Carlson. 2-27-63

MEMO - LEWIS A. SMITH

Interview with C. O. Carlson

Carlson said that Bill Brunson and Bacon were still prospecting at the Pine Mountain but only on a limited basis.

MEMO LEWIS A. SMITH 6/27/63

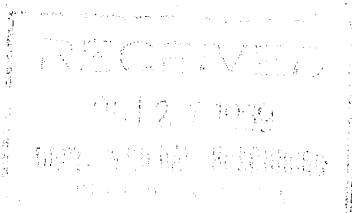
The lower tunnel has now been connected with the old Pine Mountain workings. Some good ore was encountered in this tunnel but no lateral work has yet been done on it. Some of this is now being milled at Rattlesnake Mill. It averages about 8-10 pounds to the ton. The price being paid for the last shipment to Chase Chemical Co. was \$192 per flask. This is a little higher than the last quoted price. The ore is mostly schist impregnated by cinnabar, native mercury, calomel, metacinnabarite and a canary yellow mercury mineral. Small lenses and pockets are relatively high grade. They wished information on how to beneficiate the ore at the mine so as to cut down haulage cost. They were referred to George Roseveare at Tucson. It would seem that with the variety of minerals present, a gravity method of some sort would be most applicable. Ore under 5 pounds to the ton is now being stored on a stock dump with future beneficiation in view. Present work will be mainly to repair the old Pine Mountain mine workings. Four people were working. Some custom ore (about 40 tons) from the Ord Mine was treated. This ran only about enough to pay for the milling.

Memo LAS 2-7-62

Gordon stated that development work was continuing at the Pine Mountain Mine but that the mill had not operated since April because the last ore batch had run only 4-5 pounds. 90 tons of ore had yielded only 3 3/4 flasks. Some new ore, from the Old Pine Mountain working is better (estimated at 8-10 pounds). A run may be made in May. He said that a California Quicksilver Group was negotiating for the Pine Mountain, Mercuria and Bernice. So far nothing concrete has developed. LAS 6-6-62

Mr. Grimes said that Ward and Son, and William Brunson were continuing to develop the Pine Mountain Mine and were figuring on rehabilitating the old Pine Mountain Mill. He also said they had some fair ore developed and felt that rehabilitation of the old mill would be quite a job. LAS 9-15-62

Active Mine List Oct. 1962 - 3 men working



October 23, 1969

State of Arizona
Mineral Resources Department
State Fairgrounds
Phoenix, Arizona

Dear Sir:

I am a project manager with Dixilyn Corporation, P.O. Box 3427, Odessa, Texas 79760, and I am going to examine the Pine Mountain Mercury Mine in Maricopa County for mineral potential. We intend to drill the property from the surface then do underground work if our drilling warrants it. For the immediate future, we will probably be hiring approximately ten men. I would like all pertinent information and regulations governing our operations in Arizona.

Sincerely,

A handwritten signature in cursive script that reads "J. M. Clapton".

J. M. Clapton
Dixilyn Corporation
P. O. Box 456
Payson, Arizona 85541

STATE OF ARIZONA
DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING, FAIRGROUNDS
PHOENIX, ARIZONA 85007



October 28, 1969

Mr. J. M. Clapton
Dixilyn Corporation
P. O. Box 456
Payson, Arizona 85541

Dear Mr. Clapton:

In response to your letter of October 23, 1969 we are sending you a copy of Laws and Regulations Governing Mineral Rights in Arizona under separate cover, and are enclosing a Bibliography of Arizona Quicksilver and an old but helpful paper, Pertinent Data for New Mining Operations. The Laws and Regulations booklet also give pertinent general information in addition to its coverage of mineral rights.

The bibliography may or may not offer anything new to you.

If you have time when in Phoenix, it is suggested that you take a look at our information on the Pine Mountain and talk with our field engineer Ted Johnson, who covers the area - or with John Soule', who is familiar with it.

We wish you success in your venture and are ready to help as we may be able - our services are without charge but necessarily limited.

Sincerely,

FRANK P. KNIGHT,
Director.

FK:p
Encs

C
O
P
Y

ARIZONA DEPARTMENT OF MINERAL RESOURCES
Mineral Building, Fairgrounds
Phoenix, Arizona

1. Information from: Mrs. Clapton
Address: Box 456 - Payson Phone 474-2130
2. Mine: Pine Mountain 3. No. of Claims - Patented _____
Unpatented _____
4. Location: _____
5. Sec _____ Tp _____ Range _____ 6. Mining District Sunflower
7. Owner: _____
8. Address: _____
9. Operating Co.: Dixilyn Corp.
10. Address: Box 456 - Payson
11. President: _____ 12. Gen. Mgr.: Jeff Clapton
13. Principal Metals: _____ 14. No. Employed: _____
15. Mill, Type & Capacity: _____
16. Present Operations: (a) Down ☐ (b) Assessment work ☐ (c) Exploration ☒
(d) Production ☐ (e) Rate _____ tpd.
17. New Work Planned: Sampling and exploration drilling.

18. Misc. Notes: _____

Date: Oct. 24, 1969

(Signature)

F. T. Johnson

F. T. Johnson
(Field Engineer)

PINE MOUNTAIN MINE

SUNFLOWER DISTRICT
MARICOPA COUNTY

Mine and mill visit and conference with James Popovich.

A severe fire wiped out the supply building and tool shed (10-24-66) on the P.M. shift. Fortunately the brush fire started by this fire was contained by those present before it reached the shaft or the mill, although it came very close to the shaft. The damage is roughly estimated at \$20,000 to \$25,000, but fortunately there were no injuries to employees.

During the past quarter (July 1st to Sept. 30th) production amounted to about 80 flasks of mercury, but only a very few have been obtained in October. The mill heads were low grade (2-5 lbs. per ton) but extraction was said to have been very good. Popovich said that he believed the heads should average 5-7 lbs. in order to make a good profit. The main shaft, previously reopened to 241 feet below the collar by late June, now has been sunk to 325 feet. The 235 foot level was reopened for about 285 feet and the last 150 feet was very heavy, requiring considerable spilling. The new 325 foot level drift was driven 125 feet of the projected 325 feet to get under the ore zone on the bottom of the 235 foot level around a 20-25 foot winze. The bottom 235 foot level drift is in ore for at least 125 feet. The ore assays from a very few lbs. to 40 lbs. per ton in Hg. If a similar ore zone is present on the 325 foot level, the ore situation will be much improved. The ore contains considerable native mercury, cinnabar and some metacinnabarite. The mill has been improved during the August slow down and should be ready to go shortly. A new "condenser mud" retort has been constructed of fire brick and 3 steel tubes. It, as far as tested, is very satisfactory. New condenser tubes are needed since the old ones have been extensively repaired and patched. They have worked well so far, but it is proposed to replace them later on, if ore developments warrant it. Thirteen men were at work. (It was suggested that a good cousin Jack would never hire 13 of anything.) The tunnel levels (110 foot, 160 foot and 180 foot) are now shut down, but a considerable tonnage of low grade ore was extracted from them beforehand. It is now believed that the shaft will produce a cheaper access from now on.

A new hoist house is nearly finished. The new storehouse will be NW of the shaft on a dump where it will be at a safe distance from other facilities.

MEMO - LAS - 10-25-66

FILED
JUL 25 1966

PINE MOUNTAIN MINE (or TURNBULL)

SUNFLOWER DISTRICT
MARICOPA COUNTY

Mine Visit and Conference with James Popovich, P.O. Box 619, Payson, in charge for Harpoon Inc., (474-3388) branch of United Nuclear Corp., P.O. Box 199, Grants, New Mexico, D. D. Turberville, Mgr.

WORK: The shaft has been repaired to the bottom and is 241 feet deep, the bottom level being the 235-foot (although a deeper level was reported, Popovich is dubious about it). An incline, west end of mine, extends from the surface to below the 235-foot level. The 180-foot level takes off of this incline, connects with the main shaft and reportedly continues eastward for a limited distance. The 160-foot level also originates at the winze but is short and does not come close to the main shaft. Higher up the hill a short incline, from an adit goes down to the 110 foot level which connects with the shaft and continues eastward for some distance. (This data came off of a sketch map and may not be too reliable). Other workings are shown on the sketch map but are not verified yet. At the east end of 235-foot level a winze of uncertain depth is reported to have been sunk. The shaft has a steel head frame (about 50-feet high), A Denver-Engineering single drum hoist equipped with about 300 feet of 7/8" or 1" cable. The hoist drum is 4 feet in diameter and 3 feet wide, powered by a Catapiller D-337 power unit. A Michigan front loader was working near the shaft. The air is furnished by a Chicago Pneumatic Power Vane (No 94).

The heads, at the Mill are running now, at about 2-4 lb. per ton and 35 tpd are run through the furnace, 31 flasks from 1000 tons of ore was made in a recent month. So far, better than 5,000 tons have been treated. Part of the muck came from old dump, part from gobs, and partly from the tunnels. 18 Men are now working.

✓Mr. Popovich said that now that the shaft is repaired, he plans to accelerate the new underground prospecting, included some long-holing, and speed up repairs of older workings.

MEMO IAS 6/29/66

PINE MOUNTAIN

MARICOPA COUNTY
SUNFLOWER Dist.

Conference with Gordon Grimes and C. O. Carlson, 2/23/66 and Tom Bolich 2/24/66.

The bad road from the Mercuria turnout to Pine Mountain and the shortage of time prevented a visit. However, Grimes, Carlson and Bolich had been up there fairly recently and said that they were working steadily, 8-10 men, and were pouring 50 tpd through the retort. According to Bolich the capacity of the retort is reported to be about 35 tons of reasonably dry feed. The ore at present is not very dry, and was even worse before. Some dissatisfaction was felt by United Nuclear (Harpoon Division) supervision, with the not too good extraction. This may have been caused by trying to force too much ore through the furnaces without long enough contact time.

This furnace is on an old dump and is not too well footed. Much of the ore had been mined from four tunnels, but according to Bolich and Grimes, it is planned to repair the main shaft, said to be 200 feet, or more, deep. Like everyone in the area, wet haulage roads have hampered the operation somewhat. Despite variable conditions this operation has been steady for some time.

Tom Bolich reported that their heads were assaying about 4-5 pounds to the ton, but he did not know what their recovery was. However, they were recovering roughly a flask per day. A man by the name of "Popovick" is mine foreman and according to Bolich he appears to know his business.

MEMO LAS 2/23/66

Mr. Tom Bolich said that Pine Mountain was busy and making $1\frac{1}{2}$ flasks per day when retorting.

5/13/66 LAS WR

PINE MOUNTAIN (Turnbull)

SUNFLOWER DISTRICT,
Gila County

Mine and Mill Visit and Conference with J. A. Bacon, Operator 6/23/65.

Mr. Bacon stated that he, and his associates, during the past 4 years had driven roughly 2500 feet of openings mostly in tunnels. Two tunnels, originating in the canyon below the mill are 1000 feet or more, long in a westerly direction and the other in an easterly direction. The east tunnel a winze that in turn connects with a tunnel that intercepted the old Pine Mountain workings. He said that he was able to get into a considerable length of the old workings.

Presently the ore is being mined by open cut at the westerly trending tunnel. It consists of white sericitic, very thin bedded schist, that is well impregnated with cinnabar and probably other mercury-bearing minerals. The average heads are of good grade (1 percent or more).

Reserves: Definitely are not known but Bacon states that they are substantial at the present price for quicksilver.

The ore is trucked up to the crusher where it is reduced to $1\frac{1}{2}$ inches in diameter or less. It is then conveyed 100 feet to a retort. The retort is now being run at a rate of 35-40 t.p.d. but can handle more. The temperature of retorting is controlled by ore character. The retort is a rotary Gould that is about 65 feet long. It, according to Bacon, probably doesn't make more than 50 percent extraction. Bacon is not too pleased with long (65-foot) Gould retorts, and believes he could handle more tonnage with two 30-35 foot ones, and probably would get better extraction. He said that he was considering putting in dust removers between the retort and the condensers. This is calculated to prevent the loss of some "flour" mercury. The ore is often taken from two or more places and blended. The ore, from different places, varies in character and grade somewhat, depending upon gangue character and mineral distribution in the schists. No figure was given for head assays but much of the ore looks as if it could run well over 1 percent. Production is about $1\frac{1}{2}$ to 2 Flasks per day for 35-40 tons of ore, but with better ore has run over 2 flasks. The Mercury is sold to a California Chemical firm.

LEWIS A. SMITH 6/23/65

Mr. C. O. Carlson said that the Pine Mountain and National were operating.

LAS WR 9/3/65

Visit and Conference with Dick Robbins 10/28/65 *No one in authority was at the mine.

Robbins said that the property had been sold by George Cline and J. A. Bacon to United Nuclear Corp., Mining & Milling Div., P.O. Box 166, Santa Fe, N. Mex. They are reportedly moving new equipment into the area shortly. The purchase price was variably reported at \$1,000,000 to \$2,000,000. The sale of the mine and equipment was verified by several in the area.

MEMO LAS 10/28/65

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA FIELD ENGINEERS REPORT

Mine ' Pine Mountain Mine (Quicksilver)

Date October 4, 1961

District Sunflower Dist., Maricopa Co.

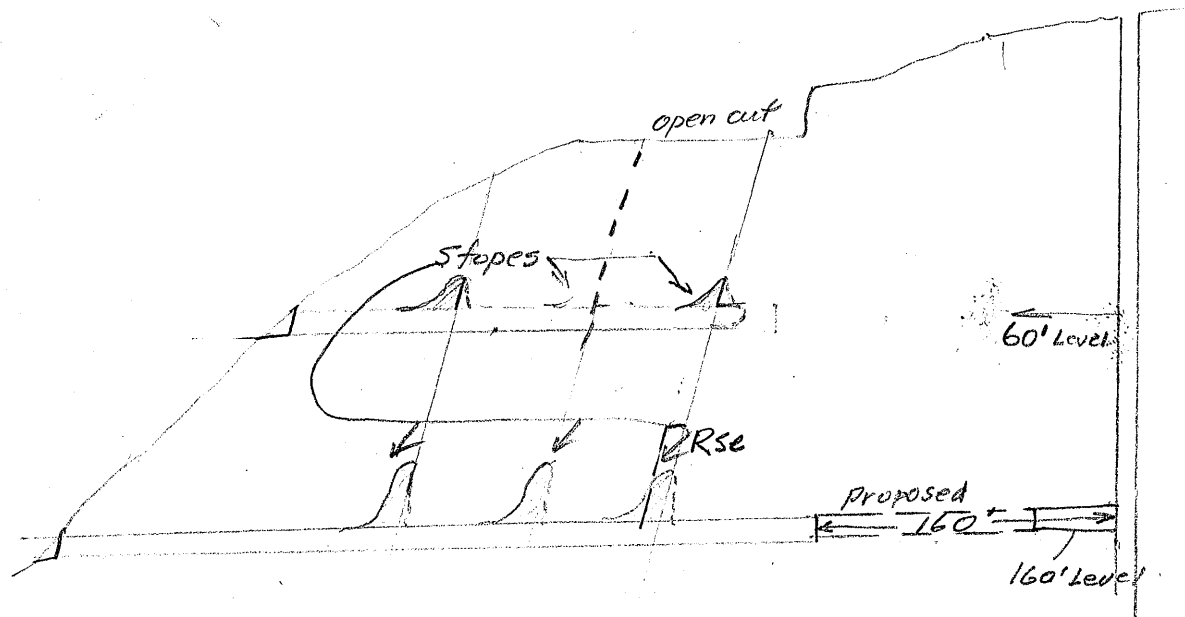
Engineer Lewis A. Smith

Subject: Interview with Gordon Grimes at the Rattlesnake Mill.

Grimes stated that they had curtailed somewhat because the price at the mill had dropped from \$220 to \$190 per 76 pound flask. However, his last 10 flasks went for \$192 to Chase Chemical Co., at Los Angeles. He said they had reached a maximum operation of 11 persons, but now were down to 6. However, they are driving the lower tunnel toward the old Pine Mountain Mine shaft and will connect at around 160 feet below the collar. They have found some very good ore in this tunnel, which was also encountered in the upper tunnel, 100 feet higher. These (three) ore shoots were found in rolls in the schist where fractures transverse to the schist trends, were encountered. The upper tunnel is now in about 220 feet and the lower tunnel is in about 400 feet. The lower tunnel requires 160 feet more to intercept the old workings. Considerable native mercury was encountered in some places along with cinnabar. Mr. Grimes stated that the old Pine Mountain Mine is reported to have occasionally found large pockets of native mercury. The accompany sketch cross-section was outlined by Mr. Grimes.

SKETCH MAP OF NEW PINE MOUNTAIN
MINE WORKINGS

AS OUTLINED BY GORDON GRIMES.



The ore appears to favor a contact between a rhyolitic schistose rock and sericite schist. The ore varies considerably in grade. (3-4 pounds to the ton between the stopes and up to 1 1/2 percent in the better lenses.)

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Pine Mountain Mine

Date June 7, 1961

District Sunflower Dist., Maricopa-Gila Counties

Engineer Lewis A. Smith

Subject: Interview with Gordon Grimes at the Rattlesnake Mine.

Mr. Grimes stated that the tunnel had now passed the old Pine Mountain shaft. This shaft had been reported to be 300 feet deep, but the collar is in bad shape and it was felt that by intercepting it at about 200 feet, much work and expense could be saved. Grimes said that it would be too expensive to repair the shaft. He said that an old timer who had worked on the 300 level, said that some high grade ore had been encountered next to a strong fault. The old timer also stated that the ore ran as high as 15 percent mercury in the best showings, but would average over one percent over a width of 4 feet. Grimes said they planned to connect with the shaft at a later date. According to him the group now have 4 working stopes along the new adit on a well defined lead. Two of these he estimated were running about 8 pounds to the ton. Two truck loads were crushed while I was at the Rattlesnake Mill. This material was mainly sericitic schist impregnated by native mercury, cinnabar, some metacinnabarite, orange limonite and quartz in stringers, podlike bunches and stains. The rock on the whole had a pink cast. The Gould furnace was operating at 650°F. The yield, according to Grimes, was about 85 percent. He felt that a better yield might be had if the ore was crushed to 1/2 inch instead of the 1 inch size now being obtained, but the additional cost would probably offset the gain. Forty pounds of crushed ore was obtained for Hammons for his specimen kits.

Grimes stated that H.C. Smith of Globe was negotiating for a lease on a portion of the Bernice claims, but this had not materialized to date.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Pine Mountain Mine & Rattlesnake Mill Date February 8, 1961
District Sunflower Dist., Maricopa Co. Engineer Lewis A. Smith
Subject: Conference with Oliver Grimes at Rattlesnake mill.

Mr. Grimes reported that the tunnel being driven to intercept the quicksilver bearing vein (or lense) exposed in a deep cut, had encountered good ore. The material is very similiar to that previously uncovered by the cut. Another adit will be driven 75-80 feet deeper to intercept the same lense. The ore here consists of a very thin laminae type of sericite schist which has been impregnated by cinnabar on the laminae planes. This ore, according to Grimes, treats quite satisfactorily in the retort, yielding about 86 percent of the mercury content. The mill was run for 6 days and the mine for 20 days during January. The best run was during September 1960, when 180 tons of ore yielded 26 flasks of mercury. The ore being mined at present ran approximately 6-7 pounds per ton. However, the newly exposed ore in the adit runs about 10 pounds. Some ore is also being extracted from the older Pine Mountain workings. 5 men are now working at the mine, and 2 at the furnace. (These are part time employees.) The road to Pine Mountain has been partly surfaced.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Pine Mountain Mine (& Rattlesnake Mill) Date October 5, 1960
District Sunflower Dist., Maricopa-Gila Counties Engineer Lewis A. Smith
Subject: Interview with Grimes and Mrs. Brunson.

The Pine Mountain mine is showing much better grade than it did 6 months ago. Recent lots from the mine indicated, by treatment at the Rattlesnake Mill, an average of between 8 and 10 pounds of quicksilver per ton. A new adit, calculated to intercept the ore zone in the cut, will add 50 feet of depth. The ore in the cut is estimated to run from 4 up to 20 pounds of quicksilver per ton, while that encountered in the tunnel is estimated at 10-18 pounds per ton. Thirty-seven and one-half tons were treated recently and yielded 12 flasks at a calculated grade of 18 pounds. The zone over adit width runs 10-12 pounds. Presently it is figured that grades from 4 pounds (up) per ton can be handled profitably. The ore consists of a gangue of sericite schist which contains veinlets, blebs, specks and impregnations of cinnabar, metacinnabarite, and native mercury. Mr. Grimes figures that the tunnel ore runs higher in native mercury than was present in the cut. The present ore zone trends NW-SE and closely follows the structural trends of the schist. It is believed that the extra quicksilver concentration is in a long roll, in the schist, produced by a NW-SE transverse fracture. It is also believed that a relatively large tonnage of ore can be developed.

PINE MOUNTAIN QUICKSILVER MINE

MARICOPA COUNTY
SUNFLOWER DIST.

A postcard from Bill Grimes (Sunflower Dist, Maricopa-Gila Counties) indicated that the Pine Mountain, Little Daisy, Mercuria and Onieda mines and the Rattlesnake and Onieda mills are active in the Sunflower area. All of these operations are periodic.

LEWIS A. SMITH, Weekly Report - 9-30-60

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Pine Mountain Mine

Date February 3, 1960

District Sunflower Dist., Maricopa Co.

Engineer Lewis A. Smith

Subject: Conference with Gordon Grimes.

Bill Brunson and Gordon Grimes, along with Russ Bacon, have obtained a lease from George Cline, Tonto Basin, on part of the Pine Mountain Group of claims. They have discovered a new ore zone, which lies 200 feet south of the mill. The zone trends north-south and is therefore transverse to the general schist trend. The laminae have been broken and crinkled along this break. Cinnabar in very fine bands parallels the laminae. They mined 2 trucks of this material from a cut. The ore was treated at the Rattlesnake Mill and yielded $5\frac{1}{2}$ flasks of mercury. This, according to Grimes, indicated a recovery of more than 85% and an average grade of between 7 and 9 pounds per ton. The lead varies from 2 to 3 feet wide. As soon as the road can be conditioned, the partners will begin operations there. They plan to stockpile a large supply of ore before opening the mill. The mill will probably treat the ore from the Rattlesnake discovery on a custom basis.

✓ PINE MOUNTAIN QUICKSILVER MINE

MARICOPA COUNTY

According to "MINING YEAR BOOK 1958" the WESTMINISTER CORPORATION purchased THE PINE MOUNTAIN PROPERTY in 1957.

(Westminister Corp., Denver Dolorado)

✓ PINE MOUNTAIN QUICKSILVER MINE was purchased in October, 1957 from GEORGE CLINE, by EDWARD M. WAGNER & ASSO., 930 Rosaline Road, San Marino, California. 2-6-58

The Pine Mountain Mine has reverted back to George Cline, Tonto Basin, Arizona. The Wagner interests are out, having lost a recent court judgment to Cline. LEWIS A. SMITH, 10-10-58

See: ARIZ. BUREAU OF MINES BULL. #122, M. T. Ser. #29

PINE MOUNTAIN MERCURY MINE

MARICOPA COUNTY

ARIZONA

George A. Warner
GEORGE A. WARNER P.E.
ALBUQUERQUE, NEW MEXICO
MAY 1957.

37
** A **

SUBJECT INDEX

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SUMMARY & RECOMENDATIONS

The International Mercury Company's property has been shut down since 1955. Unfortunately the mine itself is caved and inaccessible. The camp site and mill is fast deteriorating. The property, other than the mining claims, will have very little if any value if it is not rehabilitated in the near future.

The mine is located in the Mazatzal Mountains, Pine Mountain district, just about two hours automobile drive from Phoenix. Phoenix is the capitol city of the state of Arizona. The district enjoys an ideal year round climate, never too cold in the Winter time or is allways cool in the Summer months.

Unfortunately, at this time control of the property is suffering from legal entanglements. Those who wish to reactivate the mine are confident that the legal differences can be settled to the satisfaction of all concerned. Both side wish to see the mine in operation. This opinion is shared by the attornys representing both sides.

The geology of the district has been worked out by many dependable geologist. Allthough geology is not an exact science, enough information is available to greatly assist the Mining Engineer and Mill Superintendent.

An examination of the underground workings is impossible at this time because the shaft has been allowed to cave. Sampling would be limited to the surface outcrops. Estimating ore reserves would be a wild guess based on optomistic abservation of geological features, structures, and lithology,

George A. Warner

The market for quicksilver and future economics is directly dependent on the U.S. Government ideology. At the present time the market price is controlled by a floor price purchase program approved by the United States Congress. This purchase program is to run through December 31st., 1957. Indications point to an extension of this date principally because it protects the foreign producers as well as the domestic mercury mines.

The value of the surface plant and equipment is estimated at \$180,000.00. This equipment is itemized in the report.

It is recommended that this property be considered as a favorable prospect. A modest exploratory program is outlined, which can be expanded if ore discoveries warrant further exploration before re-habilitating the the camp and furnace type mill and condenser.

George A. Warner
George A. Warner
Albuquerque, New Mexico
May 15th., 1957.

REPORT ON
PINE MOUNTAIN MERCURY MINE
MARICOPA COUNTY
ARIZONA
5/5/57

INTRODUCTION

The International Mercury Company's property was brought to my attention early in January 1956. I have visited the property several times, once in February 1956, then again in April 1956, and just recently in 1957.

The Pine Mountain property has had a stormy history since 1910, beset by fluctuations in the market for quicksilver, and different combinations of ownership or management.

At the present time the most interested parties are Tom Donalson and Jess Lochousen of El Paso, Texas. These two gentlemen came into the Pine Mountain organization since 1945. It is apparent that considerable mismanagement plagued the operation since the Reconstruction Finance Corporation (RFC) advanced financial aid in 1943. Absentee ownership and management and lack of interest in the property has resulted in litigation to decide which ones of three or more groups have the authority to negotiate a working agreement whereby the mine can be activated.

The United States Government has placed a floor price on mercury in order to stabilize the domestic production. The Pine

Mountain property is the most progressive in the district. There is twenty-one claims, all tied together, some 400 acres, of potential mercury mineral land. Only 30 acres have been explored. There is also a modern extraction furnace and condenser on the property.

The mercury mining operation up to date has not been a financial success, although the production record for this mine has been favorable.

The mine property is for sale or lease.

LOCATION AND GEOGRAPHY

The Pine Mountain Mercury Mine is within easy auto-driving distance from Phoenix Arizona. The distance is about 70 miles over a well kept road, more than forty miles of which is hard surfaced. Drive east from Phoenix and intercept the Bush Highway north of Mesa. This is the main highway from southern Arizona to the high country and towns of Sunflower, Payson, Pine and the railroad town of Winslow. The Pine Mountain Mercury mine road is or starts about seven miles beyond the Village of Sunflower. The mine is five miles west of the Bush Highway. The mine road is a so called primitive access road maintained by the federal Forrester Service.

Pine Mountain, a prominent igneous stock, lays on the west side of the Mazatzal Mountain Range. The Mazatzals are one of many parallel mountain ridges that border the southwest side of the high Arizona Plateau. Pine Mountain is approximately 5000 feet in elevation, jutting out from the side of the Mazatzals. The mine camp lays on the southwest slope of the Pine mountain plug.

The topography of the mining area is rough and rugged. The southwest side of the Mazatzals intercept snow and rain clouds causing considerable moisture to favor the area. Sometimes the heavy snow or rain handicaps access to the mine from the main highway. This situation can be easily remedied by widening and gravel surfacing the mine road. Fortunately transporting mercury is not a serious problem. Supplying the mine with fuel and timber is easily managed even though the road is a primitive type.

HISTORY-LEGAL-PRODUCTION-FINANCIAL

The Pine Mountain property consist of Twenty-one contiguous lode mining claims, known as the Mercury Claims One to Twenty-one. All the claims were reported by Mr. Lochousen to have been surveyed in 1954.

No effort was made at this time to check the legal history of ownership of the property, such as land and mineral titles and deeds, transfer of title or recorded documents such as, rentals, leases, royalty agreements, sale contracts, or any long time agreements. The scope of this examination did not warrant such research.

Along about 1940 the company then in control negotiated a RFC loan from the Reconstruction Finance Corporation. It is assumed that the titles and deeds etc., up to that date were cleared to the satisfaction of the Federal Government lending agency.

The following information with respect to the legal status of the ownership of the property from 1940 on is based on conversations with interested parties.

The company in control in 1942 was the Midco Reserves, Inc.,

George A. Warner

Midco Reserves failed to perform annual labor for two or three years, so George Cline, a local rancher located what was then known as the Turnball Group of claims. Mr. Cline also claimed ownership of the machinery and equipment on the property on the theory that it was part of the real estate.

Mr. Cline leased and optioned the mining claims with the equipment to The International Ore Corporation. A Mr Simpson, who was a stockholder and officer and local agent for International borrowed \$ 30,000.00 from A.R. Buell on a note against International Ore Corporation. This note was secured by a chattle mortgage on International's interest in the Machinery and equipment on the Cline Claims. It is reported that this money was secured by the mining property without the authority from International Ore Corporation, and used for other than corporate purposes.

There are now four lawsuits pending;- George Cline has brought suit against Midco Reserves, Inc., and a Frank C. Buffin, to quiet title in the Turnbill Claims plus equipment etc.,- International has brought suit against Midco Reserves, Inc., to quiet its interest in the Mining claims, machinery and equipment. These two suits have been consolidated; the trial judge has ruled in favor of George Cline and the International Ore Corporation. Midco Reserves has sixty days and two years to appeal the decision.

A.R. Buell has a suit against International to foreclose his chattel mortgage on the machinery and equipment located on the claims.

A Ralph W. Rich has brought suit against International Ore Corporation. It involves a pledge of shares of International in the name of Sam Donaldson and some of Tom Donaldsons friends. These shares were pledged to secure some type of indebtedness.

George A. Warner

In addition the State of Arizona and the Federal Government have Tax liens amounting to approximately \$ 7000.00 against International Ore Corporation.

There is also a question whether or not International is in default under its lease with George Clins.

It is the belief of the various lawyers representing both the plaintiffs and defendants, that if a responsible concern is interested in the property, the litigators could settle their differences. However this would still leave unsettled the other two lawsuits and the Federal and State tax liens.

It is questionable if a Federal agency such as the Defence Minerals Exploration Association (DMEA) would approve an exploratory loan with any type of litigation shadowing the title to the property.

Production

The only production records made available to me covered a period of four weeks. Apparently the property operated on a "Feast or Famine" manner, they either had plenty of ore for the furnace, or they were without reserves or mill heads.

Old mill records are reported to show that ore processed in 1943 and 1944, coming from 200 or 300 feet below the surface, assayed from 8% to 12% of mercury to the short ton of ore. Another old mill record reports 90 tons of ore assaying an average of 25% per ton, indicating a grade of 1.25% mercury. A recent report made available to me, and based on 885 tons, indicate a recovery of a little more than 3% per ton. The daily mill head indicate an average grade of just under four pounds per ton.

George A. Warner

These reports do not cover a long enough period of time to be of great value. They do indicate that the grade of ore is variable, and the ore deposits are small and separated by lean streaks.

Production from surrounding mines has been going on since 1900. Because of the unstable mercury market, deep workings are few. Only two mines in the district have been explored to a depth of 300 feet. Production records are unreliable, but the State bureau of mines report a fair amount of mercury as having been produced from the district.

Financial

Very little information is available regarding the financial structure of the Medco Reserves, Inc., or the Continental Ore Corporation. A yearly statement regarding either company is not available.

MANAGEMENT

The mine and mill plant has been shut down two years or more. The camp and mill site at the time of my visit in April 1956, and again in April 1957, were clean and neat. The mine shaft was caved. We were unable to get underground.

From all reports on the operational difficulties since 1942, the property suffered from absentee management from as far away as Chicago, Illinois. Development was always far behind. Proven ore was seldom if ever blocked out. Ore reserves were based on 'possible' and 'probable' information. Operational planning was more or less limited to a week or two weeks ahead. A "feast or famine" operation results in a lack of interest by the employees from the local manager down through the least important employee.

George A. Warner

GEOLOGY

This district first came to the attention of the USGS in 1910, and again in 1915. Both Lingren and Ransome and Gale investigated and reported on the Mazatzal Mercury mines during those years. These geological reports made by the oldtimers are excepted as factually representing the district even by todays USGS Investicators. The Arizona State Bureau of Mines put out Bullitin # I22, and Circular # 9. Bull.# I22 is a short history of Mercury mining in Arizona up to 1927. Circular # 9 deals with production and geology specifically regards to the Mazatzal Mountain district and the Pine Mountain area. Just recently John Faike of the Arizona Bureau of Mines has studied the area around the Pine Mountain an is compiling a report.

There are three private reports on the International property. One by Dr. Razor made for RFC and Midco Reserves, Inc., and just recently a report was made for International Ore Corporation by Geoprofessional Services of Salt Lake City.

All of these reports are available for study. It must be remembered that geology is not an exact science, but the viewpoint of these several geologist is the best information available and would be of great help to the Mining Engineer in Charge as well as the Mill Superintendent

SAMPLING

Sampling records are few and apply to eras of peak production. They are convincing only with respect to the fact that commercial mercury deposits have been found and can be mined profitably. Samples of surface outcrops are very encouraging.

George A. Warner

ESTIMATE OF ORE RESERVES

Information available is not conclusive as regards blocked out or porbable ore. A very extensive exploratory program would nodoubt indecate a fair sized 'possible' ore body. This type of exploration should be limited to surface 'Bulldozer'work, and core drilling for information below the surface.

MINING AND CONCENTRATION

The shape and size of the ore body if discovered would determin the mining method. Judging from the historical records of mined out ore bodys, if the ore is close to the surface, 'Open Pit' would be the answer. If ore is found at depth it is suggested that 'Glory Hole' would be the least expensive and safe as well as practical.

Mercury concentration is a matter of roasting the ore and condensing the fumes. Sucessful operators state "if you cannot afford to roast the ore, you cannot afford to float it". Roasting is the accepted method of winning quicksilver from mercury ores.

MARKETING

Mercury or quicksilver has always been in use, possibly because it amalgamates readily with a large number of metals.

The most important use at this time is in the field of electronics. The minor market is pharmacology, pest control and explosives.

Since 1920, consumption in the United States has practially doubled. Producers expect consumption to double again in the next few

George H. Warner

years. This assumption is based on the needs of the expanding electronics and nuclear energy technology. Although substitutes are known or could be developed for most of the uses, the efficiency of quicksilver will more or less prevent competition from this direction.

The selling price for mercury in the domestic market has always been erratic. No doubt the reason for the up and down trend could be traced directly to the Spanish-Italian Mercury Cartel. This foreign group more or less control the supply of available mercury so therefore control the price. The Spanish-Italian Cartel has less control on the American market at this time than it did in the past. Spain and Italy produce 60% of the mercury consumed in the United States.

The United States quicksilver prices from January 1947 through December 1955 as reported by the Dailey Metal Reporter is made part of this report (see summary A, following page). The Spanish-Italian Cartel was formally disbanded January 1, 1950. Revival of this Cartel has been constantly denied by the principals. Mercury imports from Spain and Italy pay only 25¢ per pound. This duty has been in effect since 1922.

The DMEA and GSA have joined in a support price of \$ 225.00. per flask (76#) or approximately \$3.00 per pound until December 31st., 1957. The price in the United States has remained steady through 1956 @ \$255.00- \$257.00. Very little if any mercury has been sold to the GSA. The date December 31, 1957 is expected to be extended for another 18 months after the end of 1957.

George A. Warner

U. S. QUICKSILVER PRICES

Monthly, Annual Average Prices at New York
In dollars per 76-lb. flask, as published in Daily Metal Reporter

	1947	1948	1949	1950	1951	1952	1953	1954	1955
Jan.	89.00	80.09	90.095	70.50	199.18	208.19	214.88	189.60	324.88
Feb.	87.49	76.97	87.079	70.50	218.05	201.74	207.37	190.00	324.68
Mar.	87.25	76.75	76.63	70.50	216.92	208.79	199.92	201.63	322.61
Apr.	87.25	76.30	73.50	70.50	217.14	205.08	197.90	221.36	318.14
May	85.18	75.52	71.591	70.50	214.482	201.81	196.50	251.20	306.62
June	84.50	76.50	70.50	70.50	211.00	196.38	193.42	273.46	286.98
July	84.50	76.50	70.50	72.84	207.46	192.154	192.21	287.40	268.22
August	84.50	76.50	70.50	77.56	199.24	188.115	190.42	290.71	255.18
Sept.	82.24	76.50	70.50	82.18	208.55	190.76	187.04	314.08	263.70
Oct.	81.46	76.50	70.50	89.52	220.02	194.00	184.62	328.50	279.02
Nov.	80.50	77.80	70.50	99.35	217.87	202.64	186.00	321.17	282.50
Dec.	80.50	83.42	70.50	126.24	214.82	215.50	188.38	319.96	282.27
AVERAGE	84.53	77.45	74.37	80.89	212.03	200.50	194.89	265.84	292.80

SUMMARY 'A'

PLANT & EQUIPMENT

The surface plant and mine equipment consist of:-

<u>UNIT</u>	<u>EST. VAL IN PLACE</u>
Twenty one surveyed claims	\$ 21,000.00
Note: All present work on one claim. Quicksilver outcrops reported on all claims but little if any development work on other claims	
Five miles of Mine access road	5,000.00
Twelve cabins at campsite	12,000.00
Change House and office at Mine	1,000.00
Compressor House and Compressor at Mine	5,000.00
Power Plant, for Mine Mill and Camp	10,000.00
Cat.D 318-104 HP at sea level Generator 74 KVA-60 KW	
Mill Plant-Roaster and Condenser	125,000.00
300 feet of 18 gage track to coarse ore bin	
Five ton steel coarse ore bin	
10" by 12" Cedar Rapids Jaw Crusher powered by 20 HP electric Motor	
Seventy five foot belt conveyor to fine ore bin	
8' by 10' steel fine ore bin	
Ten foot Shaker conveyor to Gould Furnace	
Gould Roasting Furnace (3 ft.Dia by 40 ft, 50 ton per 24hr. capacity	
Fumes go to Sixteen Stack Condenser	
Cinder to waste dump	
Miscellaneous	1,000.00
Total	\$180,000.00

Note:- This value is the estimated worth
of the equipment in place. The
figure placed on the Claims is based
on their potential mercury value.

MISCELLANEOUS

Apparently the property has no other value other than its quicksilver potential. It does have a wonderful setting at a healthy elevation, and not far from Phoenix, Arizona.

Mine labor must be imported into the camp along with Union contracts. The local government officials would be helpful as far as road maintenance, and tax assessments were concerned. Ranch type labor is available. The property is somewhat isolated with very little if any neighbor problems.

Up until recent years the United States imported practically 95% of its needs. This is a recognized adverse factor in case of war. Because of the World situation as it is, it is doubtful if the United States will continue to be dependent on European sources such as Italy and Spain for the increasing demand for Mercury.

Early in June 1954, the Bureau of Foreign Commerce announced new export restrictions on quicksilver. Up until January 26, 1951, the Office of Price regulation restricted the price of quicksilver. Since that date the price has more or less stabilized at \$ 3.00 per pound.

George A. Warner

ECONOMIC SITUATION

Very little information is available to base an estimate on the profit and loss factors on the Pine Mountain Mercury Mine. Future earning power would depend directly on an exploratory program that would develop some potential ore reserves.

Altho this property has operated and produced mercury in the past, actual ore reserves are not evident at this time. Geological predictions are speculative. Test drilling and open pitting, plus a study of factual information is recommended before an estimate of the economics is attempted.

The near future for mercury may include a wide range of possibilities from overproduction and falling prices, to sharp expansion in consumption, and raising prices. The far future appears to be more consumption and higher prices.

RECOMMENDATION

It is recommended that the various outcrops on the other claims be opened up using a 'Bulldozer' for excavation. A core drilling program be scheduled at favorable locations to determine subsurface geology. If new ore discoveries warrant same, the property should be activated.

George A. Warner
George A. Warner
Albuquerque, New Mexico
May 1957.

235-1
2146

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine PINE MOUNTAIN QUICKSILVER MINE

Date May, 1957

District SUNFLOWER, MARICOPA COUNTY

Engineer B. J. Squire

Subject:

LOCATION: Mine is located 5 miles north of turn off from the Payson-Sunflower road at Slate Creek Pass.

HISTORY: Owned by H. J. Stromsen, Chicago in 1944.

Relocated by George Cline and others of Payson in 1953 or 1954.

Sold to International Ore Corporation - 1954.

PRODUCTION: The International Ore Corporation produced about 130 flasks of mercury from an open cut above the mill and pillar robbing.

Shut down Dec. 1955. A 60 ton Gould Furnace is on the property.

OWNERS: International Ore Corporation - D. W. Simpson, Wickenburg, Pres. until 1955.

Mr. Lochausen of El Paso, Texas, President - 1956.

Mr. Root - mill supt. and watchman 1955-56.

APR 12 B.M.
BULL. #122
MT. SER #29

MINE Pine Mountain Mercury

DATE January 12, 1944

DISTRICT Sunflower District

Engineer J. S. Coupal

SUBJECT: Present condition of Operations

The Pine Mountain Mercury was purchased by H. J. Stromsen of Chicago, and on July 1, 1943 the operations were incorporated under the name of Midco Reserves, Inc., of which H. J. Stromsen, 1218 North Well Street, Chicago, is president; H. C. Orton, 231 South LaSalle Street, Chicago, vice-president; and H. A. Stromsen, 1218 North Well Street, Chicago, secretary and treasurer. The property is controlled by H. J. Stromsen, president. B. N. Hulbert, Box 311, Mesa, is superintendent.

I have no definite figures for the amount of capital invested in this operation, as I was only able to contact the superintendent, but it is stated that over \$200,000 has been invested in the property. On October 5, 1943 an R.F.C. mine loan of \$30,000 was released of which \$20,000 is now available and development work is being performed.

On December 8, 1943 a notice was mailed this company stating that no further applications for "qualified" producers would be received after December 31. This letter was mailed to a post office box in Phoenix which the company had never used and it was finally received by the superintendent on December 24. The Superintendent immediately tried to phone his principals but could not contact them so wired his message. Due to the holidays it was not received until December 28 and the superintendent was instructed to proceed and make application. It may be noted that B. H. Martin, former superintendent, was advised by his office to look into the question of making application for qualified producer but no action was taken at that time.

The superintendent contacted Mr. William Snow, Metals Reserve agent here in Phoenix, and was advised by Snow that he could not receive the application. Application was forwarded airmail to Washington on December 29.

This company has sold its mercury production to the Belmont Smelting and Refining Works, Brooklyn, New York. In 1943 they produced 216 flasks of mercury. Their production for the last six months up to December 31, 1943 has been 137 flasks. They expect to produce 45 flasks in January and to continue at that rate.

B. N. Hulbert has been on these operations for two years, first as miner, then as foreman, and now as superintendent. He states that production for the past year has been low due to the fact that the major efforts have been centered on the development work. About \$5,000 has been spent on revamping the furnace.

Recent developments on a 50 foot winze on the 225 foot level 300 feet north of the present shaft show an ore body 20 feet in width of which from 3 to 4 feet in width assays 4% mercury and the balance about .2 of 1%. On the 225 foot level this ore body shows about 40 feet in length of high grade. In sinking the 50 foot winze they have taken out about 60 flasks of mercury, have done no stoping or drifting, are

just now 50 feet depth and will continue to sink another 50 feet. At the 50 foot level crosscut and sub-level drifting will be carried on. Between the 225 foot level and the 150 foot level on this same ore shoot they claim to have about 6,000 tons of ore blocked which will average .3 of 1%.

To date that have spent \$17,000 out of the R.F.C. mine loan of \$30,000, of which \$20,000 was made available. This does not include the addition to the fund of returns from 68 flasks sold.

Hulbert states that he can maintain an average of 50 flasks production per month for the balance of the year. The average for the past six months has been 23 flasks per month (during this time one month production was out due to relining furnace). They have a 50-ton Gould furnace installed but are unable to put through more than 40 tons at the present time. The bottleneck on production is the lack of compressed air.

They are working only one shift in the mine and have two compressors, one large one and one small one, but due to shortage of labor have been unable to get additional operators to run the big compressor three shifts and thus step up production. They employ a total of 20 men, mainly local labor having ranches or other local interests which keep them in this particular district. The furnace operations require two men per shift.

If the section 8 "B" elective of Metals Reserve on "qualified" producers is made effective and if a firm market at advanced prices does not develop for mercury, this operation will be unable to either payback its R.F.C. loan or make an equitable return on the capital invested.

10

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine PINE MOUNTAIN QUICKSILVER MINE

Date October 1st, 1942

District

Engineer FRED H. PERKINS

Subject: PRODUCTION POSSIBILITY SURVEY

Pine Mountain Quicksilver Mine - Henry Stompson and Harold Stompson, Owners, 1214-18 West Bell Street, Chicago, Illinois. Bill Martin, Superintendent, P. O. Address: Mesa, Arizona, % Sunflower Store.

The Pine Mountain Quicksilver Mine is located on the N. E. fork of Sycamore Creek and about 33 miles south of Payson, Arizona.

The production of this mine is all in quicksilver and is producing three flasks per day of quick, with twenty men working in the mine and mill. The mine run of ore produces about seven pounds of quicksilver per ton of vein matter treated.

The vein is a good strong one, being from 9' to 14' thick. This vein dips 45° N. W.

The mine is equipped with a twenty-five ton Gould Rotary Furnace.

The Pine Mountain ground consists of twenty claims.

PROBLEMS:

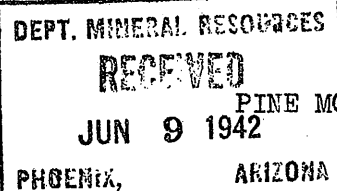
The owners are not mining men and are unwilling or unable to increase the output of this Quick property. They say they lack mining experience and the operation is too far from their present employment.

They are father and son and are the owners of the Kinzie Manufacturing Company 1214-18 North Wells Street, Chicago, Illinois.

To materially increase the output of this operation more development work should be done, thus insuring plenty of a good grade of mine run ore could be kept on its way to the mill.

SURVEY OF OPERATING MINES

By: Fred H. Perkins



June 4, 1942

PINE MOUNTAIN QUICKSILVER MINE

Pine Mountain Quicksilver Mines

Henry Strompson

Harold Strompson

Owners

1214-18 N. Well St., Chicago, Illinois

Bill Martin, Superintendent

P.O. Address: Mesa, % Sunflower Store

Pine Mountain Quicksilver Mine

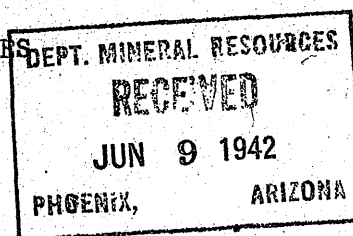
Located on N.E. Fork of Sycamore Creek and about 33 miles South of Payson

1941 Production all in Quicksilver. I made two trips to camp and found Martin gone elsewhere. So my information comes from W. D. Boardman, one of the former owners and who is being paid out of royalties. The mine produces 2 flasks per day. I was not able to learn where product was sold. During this year 23 to 25 men worked in the mine and mill.

1942 About the first of this year Bill Martin took over the Superintendency of the property and with a few mill changes he has produced $2\frac{1}{2}$ flasks per day with 20 men. The vein is from 9 - 14 ft. thick and the mine run is 7 lbs. of quicksilver per ton of ore. The mine is equipped with a Gould Rotary Furnace of 25-ton capacity. There are 20 claims in group. Vein dips 45° N.W. and 14 ft. thick.

SURVEY OF OPERATING MINES

By: Fred H. Perkins



June 4, 1942

PINE MOUNTAIN QUICKSILVER MINE

Problems:

Lack of money to increase prospecting and tonnage. Labor is scarce too.

The owners are unwilling or unable to increase the output of this property - because of a lack of mining experience and distance from their home and other business.

They are owners of the Kinzie Manufacturing Company of 1214-18 North Wells Street, Chicago, Illinois.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

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Date June 4, 1942

District

Engineer Fred H. Perkins

Subject: Pine Mountain Quicksilver Mines

Henry Strompson

Harold Strompson

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1214-18 N. Well St., Chicago, Illinois

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DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine **PINE MOUNTAIN QUICKSILVER MINE**

Date **May, 1957**

District **SUNFLOWER, MARICOPA COUNTY**

Engineer **B. J. Squire**

Subject:

LOCATION: Mine is located 5 miles north of turn off from the Payson-Sunflower road at Slate Creek Pass.

HISTORY: Owned by H. J. Stromsen, Chicago in 1944.
Relocated by George Cline and others of Payson in 1953 or 1954.
Sold to International Ore Corporation - 1954.

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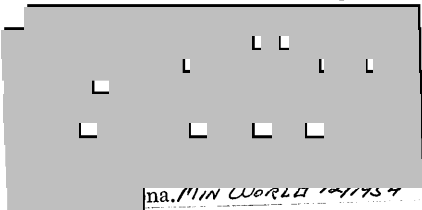
C O P Y

Received in office Oct. 14, 1954

NEWS ITEM

International Ore Corp., D. W. Simpson, Pres. and Genl. Mgr.
2nd. and Jackson Street,
Wickenburg, Arizona

The above company has also acquired the Pine Mountain Quicksilver property near Sunflower, has revamped the old plant, and is about ready to start producing. 14 men are employed. (I have not been able to contact Mr. Simpson. I called at the Monte Cristo recently but he was at Sunflower. The above information was given by one of the employees)



Mark Gemmill

NAME OF MINE: PINE MOUNTAIN MERCURY

COUNTY: MARICOPA

DISTRICT:

METALS: HG

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

5/1/44

B. N. Hulbert, Box 311
Mesa, Arizona

(Midco Reserve)

1/45

D. D. Dodd, mgr. Sunflower

6/45

L. W. Cates, Mgr.

8/43

28 men employed

8/43

RFC \$30,000 Loan

DATE:

5/1/44

Shipping

4/45

Developing

1/47

Idle

HULBERT, B. N.

~~Box 311~~

Box 35

~~Mesa, Ariz.~~

Klondyke (9-13-44)

1-12-44

See PINE MOUNTAIN MERCURY - Re Field Eng. Rept.

STROMSEN, H. J. (OWNERS)

1218 North Well Street

Chicago, Ill.

MINE - PINE MOUNTAIN MERCURY MINE - N.E. fork of Sycamore Creek and
about 33 miles south of Payson,
Ariz.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Pine Mountain Mercury
District Sunflower District
Subject: Present Condition of Operations

Date January 12, 1944

Engineer J. S. Coupal

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INCREASE PRODUCTION SURVEY

October 1st, 1942

By: FRED H. PERKINS

PINE MOUNTAIN QUICKSILVER MINE

✓ Pine Mountain Quicksilver Mine

✓ Henry Strompson,
Harold Strompson, Owners.

1214-18 West Bell Street
Chicago, Illinois

✓ Bill Martin, Superintendent
P.O. Address: Mesa, Arizona
% Sunflower Store

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The vein is a good strong one, being from 9' to 14' thick. This vein dips 45° N.W.

The mine is equipped with a twenty-five ton Gould Rotary Furnace.

The Pine Mountain ground consists of twenty claims.

INCREASE PRODUCTION SURVEY

October 1st, 1942

By: FRED H. PERKINS

PINE MOUNTAIN QUICKSILVER MINE

PROBLEMS:

The owners are not mining men and are unwilling or unable to increase the out put of this Quick property. They say they lack mining experience and the operation is too far from their present employment.

They are father and son and are the owners of the Kinzie Manufacturing Company of 1214-18 North Wells Street, Chicago, Illinois.

To materially increase the output of this operation more development work should be done, thus insuring plenty of a good grade of mine run ore could be kept on its way to the mill.

September 19, 1939,
Flagstaff, Arizona.

REPORT ON PINE MOUNTAIN GROUP** CINNABAR
SUNFLOWER MINING DISTRICT
MAZATZAL RANGE ARIZONA.

18 claims eighty miles from Phoenix, Arizona -- Three miles from Bush Highway (two miles air line) with good pack trail surveyed on easy grade suitable for trucks if widened--Elevation 5400 feet.

DEVELOPMENT

No. 1 tunnel--two hundred feet
No. 2 tunnel--two hundred twenty seven feet, crosscut by seventy-five foot drift along trend of vein also surface cuts, one open cut on surface cross cuts same vein two hundred eighty seven feet Northerly from tunnel site, good living spring two hundred feet above tunnel site enough for camp and mine supply.

TIMBER.

Cypress on claims and Yellow Pine up to twenty inches in diameter about one-half mile from claim also Jack Pine, suitable for props and lagging, if necessary although the ground is holding up well in present development.

GEOLOGY

Geology as given by Mr. C.P. Benedict of United Verde, Chief Geologist under Mr. W. Val De Camp, Rhyolite quartz porphyry on foot wall. Hanging Wall Pre Cambrian Slate--Ore is making in silicified schist--disseminated throughout two ten-foot veins. These veins are separated by fourteen feet of silicified schist that carries small particles or crystals of cinnabar--very low grade and could not be classed as commercial ore. The two ten-foot veins assay ten pounds per ton--mine runs. The ore body being so disseminated that the sorting of this ore is impossible. Ore blocked out comprises about 20,000 tons with 250 tons of ore on dump assaying same as ore in veins. Ore is still in all faces and at same width. Ore is increasing in grade slowly at depth. Trend of Ore Body is about 25° East of North--45° westerly Dip. Enclosed you will find crude map of workings of both the pine mountain and Murcuria groups. Both of these groups are new discoveries--virgin ground and have never been operated.

MURCURIA GROUP.

The murcuria group of five claims has not been developed to the extent of the pine mountain group but it has a higher grade of ore. There being 5 feet of cinnabar in lenticular veins evenly distributed and about on a 50-50 basis in relation to the gangue.

There are portions of this that will pan Native in fact specimens brought to the surface have shown Native in Gobules the size of buck shot--10 pounds of this ore that had been freed from the waste and run in a sample retort operated on the property gave a return of 1 1/2 pounds of quick--a pan of ore picked at random from the ore dump will pan native.

If you decide to send your engineers to inspect this property they will find this report true in every respect.

I am holding the pine Mountain group at \$ 100,000.00, and the Murcuria group at \$ 60,000.00. Convenient terms can be arranged that will be satisfactory.

Yours very truly,

✓
Carl Thayer,
123 W. Phoenix Ave.,
Flagstaff, Arizona

Various.

Flagstaff Range

Smelter Mining District

Murcuria Group,

Pine Mountain Group