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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ORPHAN BOY

ALTERNATE NAMES:

SUNSET
SILVER QUEEN

PINAL COUNTY MILS NUMBER: 181

LOCATION: TOWNSHIP 2 S RANGE 12 E SECTION 31 QUARTER SW
LATITUDE: N 33DEG 12MIN 27SEC LONGITUDE: W 111DEG 09MIN 37SEC
TOPO MAP NAME: MINERAL MTN - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

LEAD
SILVER
ZINC
GOLD LODE

BIBLIOGRAPHY:

ADMMR ORPHAN BOY FILE
ADMMR AJAX MINE FILE
ADMMR WOODPECKER MINE FILE
ADMMR MOON CLAIMS

NAME OF MINE: ORPHAN BOY

COUNTY: Pinal E
DISTRICT: Jumbo
METALS: LEAD

OPERATOR AND ADDRESS:

MINE STATUS

DATE:

DATE:

5/1/44

Vic Lamb, Jr, Florence Jct.

5/1/44

Will investigate

8/44

Pending

11/44

Developing

ORPHAN BOY GROUP
(SILVER QUEEN GROUP)†

PINAL COUNTY
MINERAL HILL DIST.

See: MINERAL BUTTE MILL(file)

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

July 9, 1958

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

<u>Orphan Boy (Pinal County)</u> (Property)	<u>Lead</u> (ore)
--	----------------------

MINERAL RESOURCES
of Arizona
Fairgrounds
ARIZONA



Possibly Mesa.

Mr. Vic Lamb, Jr.
Florence Jct.
Arizona

by which we would like to have

Report form with as complete detail
as possible, assay returns, shipment returns
before and which might interest a
company.

Frank P. Knight

FRANK P. KNIGHT,
Director.

Enc: Mine Owner's Report



The property was idle but had been visited since the rains stopped. The road is still in fairly good condition from the Ajax. The Orphan Vein trends more nearly west than the Ajax vein and seems to follow the contact between rhyolite on the north and basic dike material to the SW. The basic dike material seems to be both diorite and diabase. The "dike" or "dikes" persistently trends across two ridges for at least $\frac{1}{2}$ mile. The width of the strongly iron stained zone was not determined but could easily be over 75 feet in places. The vein on the contact in an inclined adit and a bulldozer cut is about 4 feet. The rocks here are intensely altered and contain sphalerite and lead oxidized minerals (anglesite and cerussite). No galena was seen, but according to Waughtel some was found at a depth of 75 feet on the incline. This zone should be tested by drilling to a greater depth. The vein does not contain nearly as much quartz as was present in the Ajax and the few more silicified areas to the west of the workings, form small sporadic cupolas along the outcrop. Calcite is present also. The principal accessory minerals are iron oxides or limonites.

Mine visit with George A. Tweedy, Tax Commission 11-9-64

W. A. Payne, Director Mineral Mountain Mining & Milling Co., Inc. (also called 4-M's) advised that a group comprising the owners of the Woodpecker, Silver Pick, Badger, Grandfather, Jumbo, Apache, Ajax and Orphan Boy, Mineral Hill District, will hold a meeting May 28 to determine what to do about a \$19,000 royalty deficit incurred by Roy Waughtell et al, which group had optioned the preceeding mines. It is expected that the \$19,000 will be written off. The option has been dropped by Waughtell's group. In the process, Payne, et al, acquired the Ajax mill and this is held as collateral for certain unpaid loans against the equipment. While Payne, et al, are not involved in the latter indebtedness, they are anxious to remove the deficit stigma so as to make their properties more attractive to investors. LAS WR 5-21-65

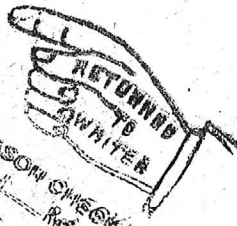
RRB WR 2/24/84: Visited the Orphan Boy Mine, Sec 31, T2S R12E, Pinal County.
No activity.

ORPHAN BOY GROUP
(SILVER QUEEN GROUP)*

PINAL COUNTY
MINERAL HILL DIST.

See: MINERAL BUTTE MILL(file)

MINERAL RESOURCES
of Arizona
Mining, Fairgrounds
ARIZONA



REASON CHECKED
Unclaimed
Unknown
For better address
Mailed last year address
Possibly Mesa.

Mr. Vic Lamb, Jr.
Florence Jct.
Arizona

JK
2

7/58

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

July 9, 1958

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

<u>Orphan Boy (Pinal County)</u>	<u>Lead</u>
(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

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ORPHAN BOY MINE

Date 6/24/64

District Mineral Hill Dist. Pinal County

Engineer Lewis A. Smith

Subject: Conference with Roy Waughtel, Florence Jct. 6/24/64.

This property was described by Travis Lane (file) and Gerald A. Russel, Consultant, Alba Mines, Ltd., Toronto, Ont. Canada. They covered the general geology, etc. up to 1955.

Since this time Roy Waughtel, Arizona Silver Mines, Inc., sunk a 60-foot incline in the Orphan Boy Vein which here, is 4-5 feet wide. The ore in the lower part of this incline is composed predominantly of argentiferous galena, with somewhat less sphalerite. Concentrates, mainly from here, and from old dumps were shipped to Toelle, Utah, and El Paso, Texas. These contained about 6-7 oz silver to the ton. 37-40 per cent lead, and 9-10 per cent zinc. Toelle paid 3.4 cents per pound of zinc and El Paso paid nothing. These were Wilfley table concentrates. Waughtel concluded that he should install selective flotation and a regrind ball mill, etc., and that this would cost around \$30,000, which they do not have.

Tests by Denver Equipment Company's Laboratory, indicated a similar conclusion. They ran both jig and flotation tests.

T 2435 R 11E

MEMO

ORPHAN BOY MINE
Mineral Hill District,
Pinal County

Information from "Red" Williams, Field Eng. for Dept. of Mineral Resources,
1-24-63

William Sloan, Chief Engineer for Iron King (Shattuck-Denn Corp.)
has been examining the Orphan Boy east of the Ajax mine. This is one of
the group of mines controlled by Charles Wingfield and Roy Waddell who
are now operating the Martinez mine to the southeast.

Lewis A. Smith, Field Engineer, 1-25-63

ORPHAN BOY

PINAL COUNTY

See report on the Ajax for June 19, 1963, where the Orphan Boy's
relationship to the Ajax operations is discussed.

MEMO LEWIS A. SMITH 6/19/63

R E P O R T
on
MINERAL MOUNTAIN MINING & MILLING CO.

Mineral Mountain Mining District
Pinal County, Arizona

Prepared and submitted

by

Travis P. Lane
Consulting Mining Engineer
Phoenix, Ariz.

March 20, 1951
Copy

MINERAL MOUNTAIN MINING
and
MILLING CO.

Property and Location

The property of the Mineral Mountain Mining and Milling Co., an Arizona Corporation (Sept. 28, 1948), is located in the Mineral Hill Mining district in Pinal County, Arizona. The Holdings consist of the "Woodpecker" patented claim and the "Hall-Gorham" (also known as the "Silver Pick") group of six unpatented claims surrounding the Woodpecker claim, and the "Orphan Boy" (also known as the Silver Queen) group of four unpatented claims. The latter group is located some 4 miles distant northerly from the Woodpecker claim. The patented claim is owned in fee and the unpatented claims are held by the company by the performance of annual work.

The camp and the presently active workings are reached by 10 miles of rough dirt road from a point on Highway 60 and 70, 20 miles southerly by paved road from the smelter of the Magma Copper Co. at Superior, Arizona, and 29 miles easterly from Mesa, Arizona, the nearest supply point. The roads are passable at all seasons of the year.

The region is typically southwest arid desert with light rainfall and scant vegetation and no timber. The topography is moderately rugged with sharp gulleys and ridges and few flat areas. Elevation at the property ranges from 2500 to 3000 feet above sea level.

History and Production

The first work in the district dates back to the early eighties and the first production was made from the Silver Bell mine followed shortly afterward by production from the Woodpecker mine. Each of these properties is credited with a large early day production of high grade silver ore.

Another substantial producer in early days, and again in recent years, is the nearby Rayment mine credited with over 2 million ounces of silver. A modest production, old and recent, has been made by a considerable number of other properties in the immediate vicinity of the Mineral Hill Mining and Milling

Company holdings.

The ore of the district because of its highly silicious character is desirable as a smelter flux and for this reason it has generally been accorded favorable treatment rates at the smelters at Superior and Miami. The ores all carry an appreciable amount of lead, and often zinc also, and except for a few lots sent to a lead smelter, the ore has all been sent to Copper Smelters as "dry" silver ore and no payment was received for the base metal content. No serious attempt has been made to concentrate the ore and thus realize something for the base metals because until quite recently the market for these metals was not sufficiently favorable to warrant the treatment procedure. The ore does not respond readily to cyanide treatment for the recovery of the silver because of its manganiferous character and for this reason and also because of the proximity of the smelter and the favorable treatment rates offered no cyanide plants have been built.

Recorded production in recent years from the properties now held by the Mineral Hills Mining and Milling Co. has amounted to approximately 450 tons most of which was sent to copper smelters as silver ore and assayed 16 oz. Ag. and about 3.5% Pb per ton; and three lots sent to a lead smelter averaged 7.7 oz. Ag and 11.9% Pb. Also several hundred tons of silver ore were shipped from the property by another operator just prior to the acquisition of the property by the present company. No settlement records are available regarding these shipments, but the ore is said to have been of about the same grade as the silver ore shipments noted above. All of the ore shipped by the present owners was derived from exploration of the veins at different places on the claims and no systematic mining operations have been undertaken. Because of unfavorable transportation and treatment costs for crude lead ore most of this class of material, which constitutes the greater part of the developed ore, was stock piled or left in the dumps. The present operators propose to build a mill on the property and concentrate the ore and ship a lead concentrate to El Paso. Occasional high grade bunches of silver ore will be shipped as direct smelting ore.

Geology and Mineralization

The county rock of the region in which is located the Woodpecker claim and the surrounding Hall-Gorham group of claims is a micaceous schist. The schist is intersected by numerous sillicified mineralized shear zones the general trend of which is NW-SE with southwesterly dips varying from 40 deg. to nearly vertical.

The shear zones or "veins" range from several feet to thirty feet in width and are readily traceable on the surface because of their reef-like croppings which often rise many feet above the surface. The walls are well defined and the structure of the vein is of the "ribbon rock type" i.e. parallel longitudinal banding of alternating types of vein material. Quartz and coarse-crystalline calcite are the most common constituents of the veins with, however, much manganese and limonite occurring as coatings and as powdery fillings in cavities in the veins. Amethystine quartz in drusy cavities is a common occurrence in the veins.

The veins all carry an appreciable amount of silver in the form of cerargyrite and probably some argentite, and lead in the form of cerussite, anglesite and galena. Some zinc as sphalerite is present also. Portions of the veins which carry a substantial amount of silver are more silicious than those parts which are higher in lead content and where calcite, generally manganese stained, is the principal gangue mineral. Leaching and oxidized mineralization is evident on the surface in all the veins. At shallow depth, however, and often on the surface, galena is the predominant lead mineral. A sprinkling of galena is often present with low silver values across the full width of the vein, but the better mineralization is generally found in a band several feet wide against the hanging wall with a clay gouge seam on the wall. Some oxidized copper mineralization is seen in the veins, but the occurrences of copper are sporadic and unimportant in amount.

A small amount of development on the Orphan Boy group discloses at one place two closely parallel shear zones in rhyolite. The veins are separated by a small intrusive mass of monzonite, and the mineralization is similar to that of the Hall-Gorham group except that there is less manganese and an appreciable amount of zinc is present in the form of sphalerite of the "rosin jack" type. The surface here is covered by a heavy mantle of gravel wash and detrital material from high bluffs, and vein cropping are rare.

Development and Sampling

There are many veins throughout the claims and practically all have been developed to some extent. The principal development, however, has been done on the Woodpecker vein and on four prominent veins in the Hall-Gorham group of claims, and shipments of ore have been made from each of these veins. Also, some work has been done on two veins on a claim of the Orphan Boy group and a small production made from them.

The more interesting working places in the property were sampled by the writer and the developments (excepting the Orphan Boy) were compass surveyed. Most of this development and all of it is described in the following paragraphs:

Woodpecker vein The workings here are very old and are of the shaft dump is evidence of fairly extensive underground development. There are no other important surface openings on the vein. The production from this vein appears to have been made from a large lens or pocket of high grade silver ore. No maps or production records are available.

Grandfather vein This ledge which has an average width of about 12 ft. courses through a large portion of the Woodpecker claim with a NW-SE strike and a dip of approximately 45 deg. southwesterly. It is developed by cuts and pits and trenches, and a shaft 52 feet deep (vertical plus incline) in about the center of the Woodpecker claim. A drift extends southerly from the bottom of the shaft for a distance of 50 feet. The drift is driven in the hanging wall portion of the vein and in its most southerly part it passes out of the vein into the barren hanging wall. A carload assaying approximately 22 oz. of silver per ton was shipped from this dump. No lead assay is available.

At a distance of some 350 feet south from the shaft a cut has been opened on the vein for a length of 40 feet and width of 4 feet and average depth of 6 feet. A small lot (3 tons) assaying 5.3 oz. Ag and 39.0% Pb and a carload (46) tons assaying 1.7 oz. Ag and 9.25% Pb were shipped from here. The work was done on the hanging wall side of the vein. The condition of the working place did not permit taking a sample which would be representative, but mineralization with continuity was clearly evident.

Sampling in the shaft area gave the following results:

Sample No.	Width	Oz. Ag.	% Pb	Remarks
11	37"	38.4	14.20	3 cuts combined on level
12	38"	5.4	4.6	across vein in shaft
13	dump	30.2	5.7	dump-approx. 75 tons

Silver Pick vein The croppings of this vein show prominently along the border between the Woodpecker and the Silver Pick claims with strike about the same as that line. An incline shaft has been sunk to a slope depth of 100 ft. on the vein with

a level at 85 feet where drifting and stoping south of the shaft connect with an old vertical shaft. Several carloads of ore were shipped from the stoping here, but no settlement records are available. The workings in the stoped area are partially caved. The incline of the shaft (50 deg.) is somewhat steeper than the vein and passes through the vein a short distance below the collar. A cross-cut in the west wall of the 85 ft. level drift encounters the vein at 15 feet. A sample here assayed 2.60 Oz. Ag., 3.5% Pb across 45".

The vein is opened on the surface by a cut extending 150 feet southerly from the shaft, and the old stoping from below holes through into the cut in its central position.

At a distance of approximately 200 feet northwesterly from the shaft and some 50 feet lower a tunnel has been driven 50 feet northwesterly on the vein. A carload from here assayed 22 Oz. Ag. (no lead assay available). It is reported that the good ore here is present in the lower part of the tunnel. The upper part is dirt and leached vein material. The floor of the level was covered with debris and it was not possible, therefore, to sample there. The dump has been segregated into two piles, one in which the values are predominantly lead, and the other from the foot wall of the vein with values predominantly silver.

The sampling results from the workings on the Silver Pick vein are tabulated as follows:

Sample No.	Width	Oz. Ag.	% Pb	Remarks
1	dump	6.4	1.80	Incline shaft dump
2	"	6.8	2.60	Vertical shaft dump
3	"	1.6	6.30	Tunnel dump - 75 tons
4	"	8.2	2.80	" " 100 tons
18	42"	22.8	14.90	End cut south of shaft
23	45"	2.6	3.5	Vein in 85' level cross-cut

Badger vein This vein is characterized by bold croppings on the north end of the Silver Pick claim and the south portion of the Badger claim. A crosscut tunnel has been driven northwesterly in the bank of a gulley near the south end of the Badger claim and short drifts extended on the vein in both directions. Also a shallow pit has been excavated on the hanging wall side of the vein north and above the tunnel workings. A carload of 17 oz. of silver ore was shipped from here. Sampling here gave the following results:

Sample No.	Width	Oz. Ag.	% Pb	Remarks
14	72"	81.6	11.90	Face S drift
15	44"	.40	4.90	" N "
16	dump	.60	10.50	Tunnel dump
17	26"	2.40	10.80	Pit above tunnel

Jumbo vein A crosscut into a steep hill in the southwest corner of the Jumbo claim intersects the Jumbo vein which is drifted upon for a distance of 50 feet northwest, and 175 feet in the southeast end. The vein strikes N 65 W and dips approximately 70 deg. SW. The mineralization of the vein is irregular and the vein material shows considerable movement. Sampling here indicates the presence of two short ore shoots, one at the raise being partly mined. The sampling in this working place is tabulated below:

Sample No.	Width	Oz. Ag.	% Pb	Remarks
5	54"	49.6	4.7	Wall of raise 12' up
6	16"	.8	5.7	Split vein
7	33"	10.8	3.2	Vein in drift below # 5
8	41"	2.4	3.9	Vein 20' NW from # 7
9	29"	4.2	4.9	2 cuts vein, 62' NW from #8
10	dump	3.8	9.5	Vein material on dump

Blue Bell vein An incline shaft has been sunk to a depth of approximately 60' at 65 deg. dip SW in croppings of the Blue Bell vein which courses through a large part of the Blue Bell claim with occasional prominent croppings. The shaft was inaccessible. A sample of a small pile of vein material on the shaft dump assayed 17.6 Oz. Ag. 7.70 % Pb. Several shallow cuts have been made along the vein croppings, but there are no workings of importance other than the shaft.

Orphan Boy vein There is only one working place of note in the Orphan Boy group of claims. Here a crosscut tunnel enters a low hill of rhyolite and at 150 feet opens into the bottom of a small pit. A small amount of high grade lead-silver ore was selectively mined in this pit which measures 30 feet long by 30 feet average depth and 10 feet average width. A contact vein striking E.W. and dipping 60 deg. southwest is exposed here with rhyolite hanging wall and a monzonite foot wall. The monzonite is a thin dike-like intrusion in the rhyolite with width of a proximately 30 feet. A foot wall contact vein parallel to the hanging wall is opened in a cut on the foot wallside of the monzonite. The veins have the same mineral characteristics i.e. each contain a sprinkling of coarse galena and some canary yellow sphalerite

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with some oxidized mineralization of lead and zinc. The gangue minerals are quartz, brown calcite, and limonite in gouge seams. The veins are covered by detrital material on each side of this working place and no determination of its continuity is possible. The discard vein material from the workings on both veins is combined in two dumps containing a total of some 100 tons. The vein in the large cut was sampled in two sections. The cuts were somewhat caved and the floors filled with debris. Sampling results here are tabulated as follows:

Sample No.	Width	Oz. Ag.	% Pb	% Zn	Remarks
20	7.5	131.80	5.25	1.75	Hanging wall of vein.
21	7.5	16.80	2.45	3.15	Foot wall " "
22	dump	25.20	7.00	2.30	Combination 2 dumps.

Mining

The ground is firm and will not require timber for support. The veins show good continuity of values and good stopping widths with dips steep enough for gravity flow of ore. The logical mining method will be shrink stopping. These factors all favor a low mining cost which here ought not to exceed \$6.00 per ton including an adequate scale of development ahead of ore extraction.

Milling

Mill tests on the ore here show a recovery of 83.7% of the silver and 93.4% of the lead by gravity concentration on coarsely ground material (50% on 35M).

The company owns some milling equipment including a crusher, a set of rolls etc. They propose to install a gravity concentration plant of 100 tons per day capacity. During the early development and production stages of the enterprise anticipated tonnage milled is expected to be 1/3 or 1/2 of this capacity. It is believed that with a coarse grind and a simple gravity circuit the milling cost will not exceed \$2.00 per ton.

The tests show that concentrate containing 38.4% lead (or 768 lbs.) will be made. At the prevailing price for lead (17¢ per lb.) the smelter will pay for $(768 - 30) \times .90$ or 664.2 lbs. @ 15¢ per lb. or \$99.63 for the lead in the concentrates. Smelter charges plus transportation costs will be approximately \$12.50 per ton and net value to the mine, therefore, will be \$87.13 per ton or 11.3¢ per lb. of lead contained in the concentrates. This is not a figure which is exactly applicable for estimating ore values

but it is reasonably correct for purposes of estimation. The smelter will pay for 95% of the Silver at 88.5¢ per ounce and a figure, therefore, of 84¢ per ounce can be used for purposes of estimation.

Finer grinding and flotation treatment would result in better recoveries and a higher grade of concentrate and eventually, if upon further development the present promise of the property is realized, the more costly flotation installation would be justified.

Ore Reserves and Values

It will be seen from the above that the cost of mining and milling is estimated at \$8.00 per ton. If to this is added \$1.00 per ton for overhead and general expenses the total estimated cost is \$9.00 per ton. With recoveries as shown in the tests the economic cut-off grade would be about \$10.00 per ton, and in the following estimates of reserves only material of this grade or better is considered to be ore.

Sampling at various places on the veins has indicated the presence of several ore shoots and the probable presence of others. At no place, however, has sufficient systematic work been done to permit the designation of any tonnage as "Blocked" or "Proven" ore in the accepted sense of being bounded by openings on three sides. The sampling, nevertheless, shows enough continuity of values at places to justify a classification of "Reasonably Assured" ore for blocks of ground at a number of places. Values are seen to extend to slope depths of approximately 100 feet in the incline shaft on the Silver Pick vein and 50 feet on the Grandfather vein, and 135 feet on the Jumbo vein. It is assumed, therefore, that the values shown by the sampling will extend to a depth on the vein of at least 100 feet. It is assumed also (where there is no evidence to the contrary) that the length of the ore shoots will be 25% greater than that now exposed, and these assumptions are used in estimating tonnages of Reasonably Assured ore.

In estimating "Probable Ore" it is assumed that the ore shoots will continue 200 feet further (or 300 feet from the outcrop). This depth would correspond to the approximate depth at which the permanent water table was reached in some neighboring properties. This limit is arbitrary, however, since ore is known to extend into the water zone in other properties in the district without diminution in values. In fact there is a good possibility for finding some secondary enrichment at this horizon.

"Possible Ore" would depend upon greater extensions laterally and in depth than those assumed in the above estimates and since such extensions would be entirely conjectural in the present state of development of the property no attempt is made to estimate tonnage for this classification.

The Grandfather vein has been opened at a number of places with continuous ore showings for a length of over 350 feet. Samples taken in the shaft and from the shaft dump show an average of 24.5 Oz.Ag. and 8.16% Pb. Shipments from this place contained moderately high silver values with low lead content and shipments from the south end of the shoot assayed low silver with moderately high lead. If the average of the shaft assays is averaged with the shipment assays from the south end the general average is 13.3 Oz.Ag. and 9.7% Pb. Assuming a length of 435 feet and depth of 100 feet and width of 3.5 feet the tonnage in the block (at 12.5 cu.ft. per ton) would be 12,180 tons.

The Silver Pick vein is opened by a long cut, a vertical shaft and a tunnel, and smaller openings throughout a distance of 400 feet. Assuming a shoot length of 500 feet, depth 100 feet and width 3.5 feet, the block would contain 14,000 tons. Samples across the vein (samples Nos. 18 and 23) show an average of 12.7 Oz.Ag. and 8.20% Pb. Samples Nos. 1, 2, 3 and 4 represent discard material from shipments amounting to several hundred tons. A car from the tunnel on the north end of the shoot assayed 22 Oz.Ag. with estimated 3% Pb and shipments amounting to several hundred tons from the shaft workings are said to have assayed 15 to 20 Oz.Ag. and 5.3% Pb. Since this average includes much discard dump material after sorting the figure may be considered to be conservative.

The Badger vein is opened by a tunnel and a small pit above and beyond the tunnel face. These openings show an ore shoot length of 100 ft. It will be noted that one sample (NO. 14) shows a quite high silver assay. Silver content of these veins is quite erratic and since this assay is far out of line with the other assays here it would seem to be safer to assign a silver assay to the sample no higher than that of the carload shipped from here i.e. 17 oz. per ton. The average then of the 4 assays, including the dump, would be 5.1 Oz.Ag. and 9.5% Pb. A block here having the dimensions: 125' x 100' x 4' would contain 4500 tons.

The Jumbo vein is opened by a drift from a crosscut 135 feet below its croppings. Samples (5 and 7) and 8 represent an ore shoot length of 30 feet with average assay of 16.3 Oz.Ag. and 3.9% Pb. Sample No. 9 represents an ore shoot length of 20 feet

with assay of 4.2 Oz. Ag. and 4.9% Pb. The ore blocks from here to the surface would contain in the first shoot approximately 1100 tons and for the second 540 tons. The total for the two shoots is 1636 tons with weighted average assays: 12.4 Oz. Ag. and 4.2% Pb.

Summarizing the above ore estimates and calculating net values on the basis outlined under "milling" (pages 8 and 9):

Vein	Tons Reas. Assur.	Probable Tons	Total	Oz. Ag.	% Pb	Net Value p.t.
Grandfather	12,180	24,360	36,540	13.3	9.7	\$ 31.92
Silver Pick	14,000	28,000	42,000	8.1	5.3	18.78
Badger	4,000	8,000	12,000	5.1	9.5	25.75
Jumbo	<u>1,640</u>	<u>2,440</u>	<u>4,080</u>	<u>12.4</u>	<u>4.2</u>	<u>19.91</u>
Totals & Av.	32,320	61,800	94,620	9.8	7.5	\$ 25.18

In addition to the above blocks of Reasonably Assured and Probable ore the chances seem very good for developing a volume of ore in the Orphan Boy workings where sampling shows substantial values and good widths of ore. Also, the values in the dump sample (No. 19) from the shaft on the Blue Bell claim suggest that something worth while might be developed here. There are many vein showings on the surface other than those discussed in this report and with producing operations in progress some of these will deserve prospect exploration. It is worth noting that values are generally present, but not developed, in broader vein widths than those sampled and undoubtedly there will be places where mining will be profitable over these greater widths.

Indicated Profit

If 15% is allowed for dilution the ore estimated above will have a net value at the mine of approximately \$21.50 per ton, and with a mill recovery of 85 to 90% the recovered value will be approximately \$19.00 per ton. With working costs estimated at \$9.00 per ton the indicated profit, therefore, is \$19 - 9 or \$10.00 per ton.

Equipment

The principal items of equipment are listed as follows:

- 1 Le Roy Rix Compressor with a 15-30 D International Eng.
- 1 Ingersoll-Rand Compressor - 210 cu. ft/min.

- 1 30 HP Hoist
- 1 Small Deming 2-stage water pump with gasoline engine
- 1 Mine car
- 1 Ingersoll-Rand Jack hammer
- 1 " " stoper
- 1 10 K.W. Light plant
- 1 Wheeling jaw crusher - 15" x 17"
- 1 3-deck Denver vibrating screen
- 1 set rolls

Also rail, pipe, water hose, bits, etc. for a modest scale development job.

Water

The region is quite arid and infrequent rainfalls generally occurs as flash floods with quick run-off and little storing of water in the gravels of the washes. Water for the camp is pumped from a well in a nearby narrow wash. The well makes water at the rate of approximately 3 gals. per minute. The company has arranged to pump water from a shaft on an adjoining claim, the Blue Crystal, with output from the shaft reported at about 10 gallons per minute. Additional small sources of water can be developed by shallow wells in gulleys near the mine. It seems probable that enough can be gathered from these sources to supply a mill of 30 to 40 tons per day capacity, assuming careful conservation and efficient reclamation from tailings ponds.

Camp

The camp is located on the Woodpecker claim with accommodations for a crew of 6 or 8 men. Camp buildings consist of a cook house, bunk house, shop building and housing for the electric light plant, and a change house, also a tent.

Recommendations

The writer recommends that the necessary work be done to block out and prepare for mining the estimated reserve of Reasonably Assured ore. This would require:

- 1) Sinking the Silver Pick incline shaft another 50 feet and drifting some 500 feet on a new lower level.
- 2) Sinking the Grandfather shaft 50 feet deeper and drifting some 400 feet on the vein at the bottom.
- 3) Sinking 100 feet on the Badger vein and drifting 100 feet on the vein at that depth.

Cost for the above development is estimated as follows:

Sinking	200 feet (2 compartment)	@ \$ 30/ft	\$ 16,000
Drifting	1000 "	@ \$ 15/ft	16,000
Equipment and camp and contingencies			<u>8,000</u>
	Total		\$ 40,000

With favorable results in the early part of the above development the construction of a gravity concentrating plant as contemplated by the company would be justified, and the balance of the development would become an operating account paid for out of operating income.

Conclusions

It is estimated that approximately 32,000 tons of Reasonably Assured Ore and 62,000 tons of Probable Ore, or 94,000 tons of both classifications, are indicated in the workings in four veins on the property. Sampling shows an average net value at the mine for this estimated tonnage of \$25.18 per ton. After making allowances for dilution and mill metallurgical losses, and after deducting estimated costs the indicated profit margin is approximately \$10.00 per ton. On this basis, therefore, the property offers an excellent promise of becoming a profitable moderate size producer.

The above tonnage estimates are made on conservative assumptions of extensions of ore both laterally and in depth beyond present exposures and do not consider the probability that the veins will in places be mined for greater widths than those shown in the sampling. Also, no allowance is made for the good ore showings in the Orphan Boy workings, and for possibilities in several other untested veins in the property. Altogether then the property might be considered to hold attractive long range possibilities for developing into a quite substantial producer.

Travis P. Lane

March 20, 1951
Phoenix, Ariz.

TPL:rb

DEPARTMENT OF MINERAL RESOURCES

**REPORT TO OPA ON
ACTIVE MINING PROJECT**

over files (142)

Date..... 10/22/44
 Name of Mine..... Cotton Boy
 Owner or Operator..... Rowe & Lamb
 Address..... Mesa Ariz
 Mine Location..... Muncial Hill Dist - Pinal County

Filing Information

File System.....
 File No.....
 This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production.....; Development. ; Financing.....; Sale of mine.....;
 Experimental (sampling).....; Owner's occasional trip.....;
 Other (specify).....

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months
 Approx. present rate per 3 months
 Anticipated rate next 3 months
 If in distant future check (X) here

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
Personal Cars	.....	.....	.....
Light or Service Trucks	<u>1</u>	<u>1500</u>	<u>100</u>
Ore Hauling Trucks	.....	.....	.....
Compressors	<u>1-50HP</u>	<u>100 hrs</u>	<u>500</u>
Other Mine or Mill Eqpt.	.....	.....	.....

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead.

REMARKS:

operators also need rubber.

By Chas. Dunning

COMMODITY INFORMATION

*COMMODITIES PRESENT C10 <CU, WAG, MAU, PR, WZN, >
 *ORE MINERALS C30 <GALENA, ANG, CERRUSITE, SPHALERITE, ARGENT, CERRUSITE >
 *COMMODITY SUBTYPES C41 < >
 *GEN. ANALYTICAL DATA C43 < >
 *COM. INFO. COMMENTS C50 < >

* SIGNIFICANCE

PRODUCER		NON-PRODUCER	
MAJOR PRODUCTS MAJOR <PR, >	MINOR PRODUCTS MINOR <WAG, CU, WZN, >	MAIN COMMODITIES PRESENT C11 < >	MINOR COMMODITIES PRESENT C12 < >
POTENTIAL PRODUCTS POTEN <MAU, >	OCCURRENCES OCCUR < >		

*PRODUCTION

PRODUCER		NON-PRODUCER	
PRODUCTION YES (circle)	PRODUCTION SIZE SML MED LGE (circle one)	PRODUCTION UND NO (circle one)	

*STATUS

EXPLORATION OR DEVELOPMENT

PRODUCER		NON-PRODUCER	
STATUS AND ACTIVITY A20 <H>		STATUS AND ACTIVITY A20 <L>	

*DISCOVERER L20 < >
 *YEAR OF DISCOVERY L10 < > *NATURE OF DISCOVERY L30 *YEAR OF FIRST PRODUCTION L40 <1924> *YEAR OF LAST PRODUCTION L45 <1963>
 *PRESENT/LAST OWNER A12 <MINERAL MOUNTAIN MINING AND MILLING CO. (1949)>
 *PRESENT/LAST OPERATOR A13 <K. POMERY, AZ SILVER INC., G. SWEET (1943), V. LAMB (1942)>
 *EXPL./DEV. COMMENTS L110 <GROUP OF 4 UNPATENTED CLAIMS LATER (1948) BECAME PART OF THE MINERAL MOUNTAIN MINING AND MILLING CO. PROPERTIES.>

DESCRIPTION OF DEPOSIT

*DEPOSIT TYPE(S) C40 <VEIN >
 *DEPOSIT FORM/SHAPE M10 <TABULAR >
 *DEPTH TO TOP M20 < > *UNITS M21 < > *MAXIMUM LENGTH M40 < > *UNITS M41 < >
 *DEPTH TO BOTTOM M30 < > *UNITS M31 < > *MAXIMUM WIDTH M50 <30 > *UNITS M51 <FT >
 *DEPOSIT SIZE M15 <SMALL > M15 <MEDIUM > M15 <LARGE > (circle one) *MAXIMUM THICKNESS M60 < > *UNITS M61 < >
 *STRIKE M70 <E TOW > *DIP M80 <60 SW >
 *DIRECTION OF PLUNGE M100 < > *PLUNGE M90 < >
 *DEP. DESC. COMMENTS M110 <TWO PARALLEL MINERALIZED SHEAR ZONES IN RHYOLITE. THEY ARE SEPARATED BY A SMALL INTRUSIVE MASS OF MONZONITE. MINERALIZATION IS SIMILAR TO THAT >

DESCRIPTION OF WORKINGS

*Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one)
 *DEPTH BELOW SURFACE M160 < > *UNITS M161 < > *OVERALL LENGTH M190 < > *UNITS M191 < >
 *LENGTH OF WORKINGS M170 <150 > *UNITS M171 <FT > *OVERALL WIDTH M200 < > *UNITS M201 < >
 *DESC. OF WORK. COM. M220 <A CROSSCUT TUNNEL OPENS INTO THE BOTTOM OF A SMALL PIT. LARGEST PIT IS 30 FT LONG, 10 FT WIDE, AND 30 FT DEEP.>

GEOLOGY

*AGE OF HOST ROCK(S) K1 <P, R, E, C, >
 *HOST ROCK TYPE(S) K1A <DIORITE, SCHIST >
 *AGE OF IGNEOUS ROCK(S) K2 <T, E, R, T, > *MIOCENE
 *IGNEOUS ROCK TYPE(S) K2A <RHYOLITE >
 *AGE OF MINERALIZATION K3 <T, E, R, T, > *MIOCENE
 *PERT. MINERALS (NOT ORE) K4 <QUARTZ, CALCITE, LIMONITE >
 *ORE CONTROL/LOCUS K5 <FISSURE VEIN, NW TRENDING >
 *MAJ. REG. TRENDS/STRUCT. N5 <TERTIARY RHYOLITE AND QUARTZ LATE INTERUSIONS AND PREC DIORITE NEAR AND EAST OF MINE >
 *TECTONIC SETTING N15 < >
 *SIGNIFICANT LOCAL STRUCT. N70 <MADERA DIORITE IN NW TRENDING OUTCROPS, TERTIARY RHYOLITE AT MINE AND 1/4 MILE EAST >
 *SIGNIFICANT ALTERATION N75 < >
 *PROCESS OF CONC./ENRICH. N80 < >
 *FORMATION AGE N30 <P, R, E, C, >
 *FORMATION NAME N30A <MADERA DIORITE >
 *SECOND FM AGE N35 <P, R, E, C, >
 *SECOND FM NAME N35A <PINAL SCHIST >
 *IGNEOUS UNIT AGE N50 < >
 *IGNEOUS UNIT NAME N50A < >
 *SECOND IG. UNIT AGE N55 < >
 *SECOND IG. UNIT NAME N55A < >
 *GEOLOGY COMMENTS N85 < >

GENERAL COMMENTS

GENERAL COMMENTS GEN < >

ORPHAN BOY MINE

PINAL COUNTY



The property was idle but had been visited since the rains stopped. The road is still in fairly good condition from the Ajax. The Orphan Vein trends more nearly west than the Ajax vein and seems to follow the contact between rhyolite on the north and basic dike material to the SW. The basic dike material seems to be both diorite and diabase. The "dike" or "dikes" persistently trends across two ridges for at least $\frac{1}{2}$ mile. The width of the strongly iron stained zone was not determined but could easily be over 75 feet in places. The vein on the contact in an inclined adit and a bulldozer cut is about 4 feet. The rocks here are intensely altered and contain sphalerite and lead oxidized minerals (anglesite and cerussite). No galena was seen, but according to Waughtel some was found at a depth of 75 feet on the incline. This zone should be tested by drilling to a greater depth. The vein does not contain nearly as much quartz as was present in the Ajax and the few more silicified areas to the west of the workings, form small sporadic cupolas along the outcrop. Calcite is present also. The principal accessory minerals are iron oxides or limonites.

Mine visit with George A. Tweedy, Tax Commission 11-9-64

W. A. Payne, Director Mineral Mountain Mining & Milling Co., Inc. (also called 4-M's) advised that a group comprising the owners of the Woodpecker, Silver Pick, Badger, Grandfather, Jumbo, Apache, Ajax and Orphan Boy, Mineral Hill District, will hold a meeting May 28 to determine what to do about a \$19,000 royalty deficit incurred by Roy Waughtell et al, which group had optioned the preceding mines. It is expected that the \$19,000 will be written off. The option has been dropped by Waughtell's group. In the process, Payne, et al, acquired the Ajax mill and this is held as collateral for certain unpaid loans against the equipment. While Payne, et al, are not involved in the latter indebtedness, they are anxious to remove the deficit stigma so as to make their properties more attractive to investors. LAS WR 5-21-65

RRB WR 2/24/84: Visited the Orphan Boy Mine, Sec 31, T2S R12E, Pinal County.
No activity.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine ORPHAN BOY MINE

Date 6/24/64

District Mineral Hill Dist. Pinal County

Engineer Lewis A. Smith

Subject: Conference with Roy Waughtel, Florence Jct. 6/24/64.

This property was described by Travis Lane (file) and Gerald A. Russel, Consultant, Alba Mines, Ltd., Toronto, Ont. Canada. They covered the general geology, etc. up to 1955.

Since this time Roy Waughtel, Arizona Silver Mines, Inc., sunk a 60-foot incline in the Orphan Boy Vein which here, is 4-5 feet wide. The ore in the lower part of this incline is composed predominantly of argentiferous galena, with somewhat less sphalerite. Concentrates, mainly from here, and from old dumps were shipped to Toelle, Utah, and El Paso, Texas. These contained about 6-7 oz silver to the ton. 37-40 per cent lead, and 9-10 per cent zinc. Toelle paid 3.4 cents per pound of zinc and El Paso paid nothing. These were Wilfley table concentrates. Waughtel concluded that he should install selective flotation and a regrind ball mill, etc., and that this would cost around \$30,000, which they do not have.

Tests by Denver Equipment Company's Laboratory, indicated a similar conclusion. They ran both jig and flotation tests.

T 2435 R 11E

MEMO

Ariz. Silver. Inc.

ORPHAN BOY MINE
Mineral Hill District,
Pinal County

Information from "Red" Williams, Field Eng. for Dept. of Mineral Resources,
1-24-63

William Sloan, Chief Engineer for Iron King (Shattuck-Denn Corp.)
has been examining the Orphan Boy east of the Ajax mine. This is one of
the group of mines controlled by Charles Wingfield and Roy Waddell who
are now operating the Martinez mine to the southeast.

Lewis A. Smith, Field Engineer, 1-25-63

ORPHAN BOY

PINAL COUNTY

See report on the Ajax for June 19, 1963, where the Orphan Boy's
relationship to the Ajax operations is discussed.

MEMO LEWIS A. SMITH 6/19/63

*GENERAL REFERENCES

- REFERENCE 1 F1 < USBM-ABGMT PRODUCTION DATA FILE >
- REFERENCE 2 F2 < ABGMT CLIPPINGS FILE DATA >
- REFERENCE 3 F3 < ARIZONA DEPARTMENT OF MINERAL RESOURCES FILE DATA >
- REFERENCE 4 F4 < USBM FILE DATA - CLUSTER # 776 >

MILIC OF THE GORHAM-HALL MINE. EXCEPT THERE IS LESS MANGANESE AND MORE ZINC PRESENT.

F5 < USGS OPEN FILE REPORT 78-468, 1978 >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < _____ > RECORD TYPE B20 < X, I, M > DEPOSIT NUMBER B40 < _____ >
 REPORT DATE G1 < 82, 03 > INFORMATION SOURCE B30 < 1, 2 > FILE LINK IDENT. B50 < USBM-0040210936 >
YR. MO.
 REPORTER(SUPERVISOR) G2 < LARABA, PETER > (last, first, middle initial) (GEST, DON >) (last, first, middle initial)
 REPORTER AFFILIATION G5 < ABGMT > SITE NAME A10 < ORPHAN BOY MINE >
 SYNONYMS A11 < SUNSET, SILVER QUEEN >

LOCATION

MINING DISTRICT/AREA A30 < MINERAL HILL DISTRICT >
 COUNTY A60 < PINAL > STATE A50 < AZ > COUNTRY A40 < U.S. >
 PHYSIOGRAPHIC PROV A63 < 1, 2 >
 DRAINAGE AREA A62 < 15, 0, 5, 0, 1, 0, 0 >
 QUADRANGLE NAME A90 < MINERAL MOUNTAIN > (1, 9, 6, 4) LAND STATUS A64 < 4, 1, 1, 1, 1, 1, 9, 7, 8 >
 SECOND QUAD NAME A92 < _____ > QUADRANGLE SCALE A100 < 2, 4, 0, 0, 0 >
 ELEVATION A107 < 3, 4, 0, 0, 0, F.T. > SECOND QUAD SCALE A91 < _____ >

UTM
 NORTHING A120 < 36, 7, 4, 1, 1, 0 >
 EASTING A130 < 4, 8, 5, 0, 6, 0 >
 ZONE NUMBER A110 < 1, 1, 2 >

ACCURACY
 ACCURATE (circle)
 ESTIMATED EST < _____ >

GEODETIC
 LATITUDE A70 < _____ N >
 LONGITUDE A80 < _____ W >

CADASTRAL
 TOWNSHIP(S) A77 < 0, 0, 2, 5 > RANGE(S) A78 < 0, 1, 2, E >
 SECTION(S) A79 < 31 >
 SECTION FRACTION(S) A76 < SW OF SW OF SW >
 MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 5.2 MILES NE OF MINERAL MOUNTAIN (ELV. 3351) >

LOCATION COMMENTS A83 < _____ >

* ESSENTIAL INFORMATION
- ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

COMMODITIES PRESENT C10 < C.U. A.G. P.B. Z.N. >
 ORE MINERALS C30 < GALENA, ANG., CERUSSITE, SPHALERITE, ARGENTITE, CERUSSITE >
 COMMODITY SUBTYPES C41 < >
 GEN. ANALYTICAL DATA C43 < >
 COM. INFO. COMMENTS C50 < >

* SIGNIFICANCE

MAJOR PRODUCTS MAJOR < P.B. >
 MINOR PRODUCTS MINOR < A.G., C.U., Z.N. >
 POTENTIAL PRODUCTS POTEN < A.U. >
 OCCURRENCES OCCUR < >

* PRODUCTION

PRODUCTION YES (circle) PRODUCTION SIZE SML MED LGE (circle one)
 NON-PRODUCER PRODUCTION UND NO (circle one)

* STATUS

EXPLORATION OR DEVELOPMENT
 PRODUCER STATUS AND ACTIVITY A20 < H >
 NON-PRODUCER STATUS AND ACTIVITY A20 < L >

DISCOVERER L20 < >
 YEAR OF DISCOVERY L10 < > NATURE OF DISCOVERY L30 < B > YEAR OF FIRST PRODUCTION L40 < 1924 > YEAR OF LAST PRODUCTION L45 < 1963 >
 PRESENT/LAST OWNER A12 < MINERAL MOUNTAIN MINING AND MILLING CO. (1949) >
 PRESENT/LAST OPERATOR A13 < K. POMERY, AZ. SILVER INC., B. SWEET (1943), V. LAMB (1942) >
 EXPL./DEV. COMMENTS L110 < GROUP OF 4 UNPATENTED CLAIMS LATER (1948) BECAME PART OF THE MINERAL MOUNTAIN MINING AND MILLING CO. PROPERTIES. >

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 < VEIN >
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 DEPTH TO BOTTOM M30 < > UNITS M31 < > MAXIMUM WIDTH M50 < 30 > UNITS M51 < FT >
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 STRIKE M70 < E TO W > DIP M80 < 60 SW >
 DIRECTION OF PLUNGE M100 < > PLUNGE M90 < >
 DEP. DESC. COMMENTS M110 < TWO PARALLEL MINERALIZED SHEAR ZONES IN RHYOLITE. THEY ARE SEPARATED BY A SMALL INTRUSIVE MASS OF MONZONITE. MINERALIZATION IS SIMILAR TO THAT >

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 LENGTH OF WORKINGS M170 < 150 > UNITS M171 < FT > OVERALL WIDTH M200 < > UNITS M201 < >
 DESC. OF WORK. COM. M220 < A CROSSCUT TUNNEL OPENS INTO THE BOTTOM OF A SMALL PIT. LARGEST PIT IS 30 FT LONG, 10 FT WIDE, AND 30 FT DEEP. >

GEOLOGY

* AGE OF HOST ROCK(S) K1 < P.R.E.C. >
 * HOST ROCK TYPE(S) K1A < DIORITE, SCHIST >
 * AGE OF IGNEOUS ROCK(S) K2 < T.E.R.T. > MIOCENE
 * IGNEOUS ROCK TYPE(S) K2A < RHYOLITE >
 * AGE OF MINERALIZATION K3 < T.E.R.T. > MIOCENE
 * PERT. MINERALS (NOT ORE) K4 < QUARTZ, CALCITE, LIMONITE >
 * ORE CONTROL/LOCUS K5 < FISSURE VEIN, NW TRENDING >
 * MAJ. REG. TRENDS/STRUCT. N5 < TERTIARY RHYOLITE AND QUARTZ LALITE INTENSIONS AND PREC DIORITE NEAR AND EAST OF MINE >
 * TECTONIC SETTING N15 < >
 * SIGNIFICANT LOCAL STRUCT. N70 < MADERA DIORITE IN NW TRENDING OUTCROPS, TERTIARY RHYOLITE AT MINE AND 1/4 MILE EAST >
 * SIGNIFICANT ALTERATION N75 < >
 * PROCESS OF CONC./ENRICH. N80 < >
 * FORMATION AGE N30 < P.R.E.C. >
 * FORMATION NAME N30A < MADERA DIORITE >
 SECOND FM AGE N35 < P.R.E.C. >
 SECOND FM NAME N35A < PINAL SCHIST >
 * IGNEOUS UNIT AGE N50 < >
 * IGNEOUS UNIT NAME N50A < >
 SECOND IG. UNIT AGE N55 < >
 SECOND IG. UNIT NAME N55A < >
 GEOLOGY COMMENTS N85 < >

GENERAL COMMENTS

GENERAL COMMENTS GEN < >

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

own files (initials)

Date: 10/22/44
Name of Mine: Orphan Boy
Owner or Operator: Rowe & Lamb
Address: Mesa Ariz
Mine Location: Mineral Hill Dist - Pinal County

Filing Information
File System.....
File No.....
This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production.....; Development ; Financing.....; Sale of mine.....;
Experimental (sampling).....; Owner's occasional trip.....;
Other (specify).....

PRODUCTION: Past and Future.

Tons

Approx. tons last 3 months
Approx. present rate per 3 months
Anticipated rate next 3 months
If in distant future check (X) here

EQUIPMENT OPERATED:

Type	Quantity or Horse Power	Miles or Hours Per Month	Gallons Required Per Month
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Light or Service Trucks	<u>1</u>	<u>1500</u>	<u>100</u>
Ore Hauling Trucks
Compressors	<u>1-50HP</u>	<u>100 hrs</u>	<u>500</u>
Other Mine or Mill Eqpt.	.....	.....	.....

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Lead.

REMARKS:

operators also need rubber.

By Chas Dunning