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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: PIEDMONT MINE

ALTERNATE NAMES:
- COPPER CREEK
- COPPER QUEEN CLAIMS
- BLOODY BASIN MIN. DEV. CO.

YAVAPAI COUNTY MILS NUMBER: 763

LOCATION: TOWNSHIP 10 N RANGE 4 E SECTION 33 QUARTER NW
LATITUDE: N 34DEG 12MIN 24SEC  LONGITUDE: W 111DEG 56MIN 51SEC
TOPO MAP NAME: BROOKLYN PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
- COPPER  SULFIDE
- COPPER  OXIDE
- SILVER
- GOLD

BIBLIOGRAPHY:
- USGS BROOKLYN PEAK QUAD
- ADMMR PIEDMONT MINE FILE
- WEED, W.H. COPPER HANDBOOK VOL XI 1912-1913  P 75
- ADMMR PROD. POSS. MARGINAL COPPER MINES IN AZ 1941  P 81
- UNITED ARIZONA COLVO FILE
A really interesting Arizona mineral occurrence has recently come to my attention. It is the Piedmont Mine in Bloody Basin, Bradshaw Mountains, Yavapai Co.

The mineral that is found there is malachite which occurs as pseudomorphs (after azurite and perhaps other minerals), and these are coated with clear to milky quartz. These specimens are very attractive with crystals over an inch in size.

All of this material was collected in the 1950's by Bonnie and Ed Speck, who once had a rock shop at South Mountain called Arizona House of Rocks, and by Wayne Thompson, the uncle of the Wayne Thompson most of us know.

For some reason a number of these specimens surfaced at our club show last November. Which was unusual as I had never seen them for sale before. Les Presmyk had several pieces which he had obtained from Everett and Bonnie Thompson, who either collected with Wayne Thompson or got the specimens from him. Bill Pancerzner had a specimen which he had gotten from the Specks long ago and had taken out of his own collection, and Dave Shannon had some in his exhibit at the show. Dave had recently bought Wayne Thompson's collection and had quite a few pieces for sale.

When I inquired about the locality, I found out that Sandi Ashton of Carl's Rock Shop in Phoenix has the best collection of Piedmont Mine material. She obtained this material from Bonnie Speck whose collection she bought several years ago. She has several dozen specimens of this very interesting material.

Before you rush out to the find the Piedmont Mine be warned that you may have trouble finding any specimens, because many have looked for the past thirty years. The mine is full of water and as far as I can determine all the material was collected over a very short time perhaps all in one day or two and no specimens have been found since.
A geological, geophysical, and geochemical survey of the Piedmont mine, near Cordes, Yavapai County, Arizona, has been completed by Ernest D. Foster, consulting engineer for the Foster Engineering Company, 2641 West Avenue 31, Los Angeles 41, California. Report of the survey indicates that a substantial zone of secondary enrichment as well as commercial leaching ore is found throughout the area. Development of the Piedmont during and after World War I had reached a depth of 1,000 feet in Shaft No. 1, disclosing four large veins of high-grade copper sulphide ore. Shaft No. 2, where a depth of 400 feet was reached, disclosed commercial copper ore in two veins, and Shaft No. 3 at a depth of 350 feet encountered shipping grade ore. Many shallow shafts, tunnels, open cuts, and croppings disclosed an extensive vein system carrying commercial grade copper-bearing ore, oxidized to water level, and sulphide below. During the period of the 1920's the shafts were neglected and allowed to cave. There was little activity at the mine during the years of World War II, inasmuch as the cost of its rehabilitation far exceeded the amount of the loan offered by the government for that purpose. The Foster Engineering Company is making plans to reestablish the mine as a copper producer.
REPRINT FROM

WHO'S WHO
IN ENGINEERING

FOSTER, Ernest D., 2611 W. Ave., Los Angeles, Cal. Off. 437 Consolidated Bldg. Mining, Geology, Geophysics, technological law; b. Crogan, Lewis Co., N. Y., July 6, 1877; s. Durrell T. and Edwinna A. (Freeman) Foster; edn. Pub. Schs., N. Y. State; Fulton, N. Y. High School; English High, Somerville, Mass.; Boston Univ. LL. B., 1903; Admitted Mass. Bar, 1901; many courses in geol. and eng., m. Ethel Twycross, Oct. 1, 1903, same class at B. U. with honor degree; ch.: Dean, Earl, Warren, Marshall; Wkd. in many shops and factories, B. & M. Ry., N. Eng. Structural Co., Norcross Bros. as Cfi. Clk.; reporter on Somerville papers and Boston Globe; chf. law clk. to Shephard, Stebbins and Storer, Boston; private practice, closed up bucket shops in Boston 1904; removed to Los Angeles, 1904, forming law firm of Foster & Alexander; operated several mining camps and acted as cons. engr. to several eastern syndicates until 1907; formed partnership in N. Y. C., with Maj. E. P. Brqwn of N. Y., noted Corp. Atty.; began bldg. 500 ton custom smelter in Calif., 1907, but was stopped by depression of 1907-8; engaged in mech. wk. till 1917, bldg. plant and putting portable compressors on market (part of eqipt. taken over beginning W. War by Emergency Ship Cor.), apptd. on exec. com. in chge. of jigs and fixtures for 35 plants in So. Calif. area, balance of war; following war engaged in min. research, discovering Metallogenic Province at Shadow Mt., Calif. (San Bernardino County); carried on extensive devel. wk., enlarging mineralized area by use of magnetometer and micrometer, trenching and underground devel. until now owns or controls 2370 acres in which vast tonnage of gold, silver, copper, lead ore has been explored, involving upwards of a billion tons of mineralized shear zone in which several blocks of ore have been delimited. Associated in this with J. B. Marston, Chicago, Ill.; built pilot mill and proved it by mill runs to be commercial; 2 blocks now organizing for large scale open pit operations. Been engr. and atty., in several major cases inc. Malibu Rancho, (Rindge Estate), litiga- tion and survey involving 23,000 acres at Santa Monica, Calif.; 2 yrs. survey of Randsburg Dist., Calif., and discovery and dev. Natural Steam Zone a East Randsburg; other natural steam operations in Calif.; discovered extensive iron and gold ore deposits in Stookey Ranch, 6000 acres, Tehachapi Mts., Calif.; 2 yrs. survey of mother lode and coastal gold bearing stream bed and shore gravel de- posits in Calif. & Ore., testing and drugline opera- tions; geomagnetic survey of Yarnell Mining Dist., Ariz.; many geomagnetic and geoelectric surveys in 6 states; now tech. director for "Geosid," a Los Angeles Geophysical Unit, in research and com- mercial surveys for min. and oil resources. Now cons. engr. for Georgia Lyn Mine, Lakeside Mts., Utah; Glenn Olive Min., Bodfish, Calif.; Hamilton Mine, Rosamond, Calif.; Bruneau Consolidated Mine, Northern Nevada, and others; in chge. of devel. and operation Glory-Tintic Mine; Mem., Los Angeles Bar and other State Bar Comms.; Mem., Los Angeles Bar Assn.; (formerly mem. A. I. M. E.); Active in campaign against blue sky legislation and Retaliatory Corpn. Acts.; Inventor Pneumatic Cushions Rotary Types of machinery, gasoline jackhammer, fluid drive motors and brakes, combined turbine and air lift pumps for deep wells; Author: many articles in mining journals. Hobby: landscape painting; politics, liberal.
UNITED ARIZONA COPPER MINING & SMELTING CO. ARIZONA

Office: 123 Liberty Street, New York City.
Mine Address: A. Syverson, supt., Mayer, Arizona.


Property: 22 claims, 440 acres, on Copper Creek, 26½ miles E. of Mayer, by a good road and 16 miles E. of Horseshoe ranch on Agua Fria river. The group is in a belt of sheared granite 1½ miles long, showing quartz veins containing masses and bands of copper ore; these quartz veins grade into wider zones of sheared and schistose granite, characterized by uralite and chlorite. Surface showings are attractive and recent work, at a depth of 980' disclosed high grade bornite-chalcopryite ore. During 1920-21 about 3,500' of diamond drilling, which was done on the tract, proved the continuity of the veins, and the downward continuance of mineralization, though the cores do not show high grade ore like that cut by the shaft. The Arizona Copper Queen Co. owns the group to the north, the Rosalie Copper Co., the group to the south, with the Brooklyn mine beyond.

Development: by 1,020' shaft with levels at 150, 300, 400, 600, 800, 900 and 1,000'.

Equipment: includes 25 h. p. Foss gasoline hoist, also 3,000 cu. ft. compressor and 60-gallon pump. Examined 1921 by G. W. Miller and A. G. Marsh.

"Austin G. Marsh, acting cons. engr. of the company, estimates that water level is 200 ft. below the bottom of the shaft, now 1,020' deep, and that 'the fact that ore has been discovered at the present depth, the high grade of this ore and the occurrence in a fissure vein is very promising, indicating continuation to great depths as well as widespread occurrence throughout the extensive quartz vein system.'

"The personnel of the company is an excellent one, and the local superintendent capable."
DESIGNED FOR SMALL MINES

TYPICAL HYDROTO LEACHING PLANT

Foster Engineering Co.
Los Angeles, Calif.

SIDE ELEVATION

SCALE 1:4

[Diagram of a hydroto leaching plant with various components labeled for operation and design details.]

LOW PLANT COST

REQUIRES POWER MOTORS, PUMPS, LABOR TO LEACHING CYCLE, VOLUME LEACHING SOLUTIONS.

ELIMINATES BORING, PUMPING, CONDITIONERS, THICKENERS, FILTERS, ETC.

PERMITS COMPLETE CONTROL OF SOLUTIONS AND CHEMICAL REACTIONS, TEMPERATURES, AND PRESSURES, WITH AUXILIARY TANKAGE. PERMITS USE OF ALTERNATING SOLUTIONS—ACID, FLUOR-BRAZE, CYANIDE, ETC.

ALL EQUIPMENT AND REPLACEMENTS STANDARD AND INEXPENSIVE.

Ernest A. Foster—sole licensor, Mason patents, 681 W. Avenue 31, Cann, 7600, Portland.
NJN WR 9/16/83: Matt Pecharich, P.O. Box 638, Clarkdale, AZ 86324 visited. He reported that he and brothers, Raymond and Joe have 41 Claims, The Goldflower 9-48 (AMC lead file 193338) located in T10N R4E Sec. 32, 33, 28, 29 plus the patented claims which include the Piedmont Mine and Goldflower Group, Yavapai County. Mr Pecharich believes the Piedmont produced during 1914-16 and shipped to the Humboldt smelter. (A check with the B&MT shows no recorded production.) Recent sampling on one shoot or pipe assays 7% copper and 4 oz Au/ton. The Pecharich's would like to lease the property to an interested party.
DEPARTMENT OF MINERAL RESOURCES  
State of Arizona  
MINE OWNER'S REPORT

Date: June 15, 1946

1. Mine: Piedmont

   Distance: 82 miles    Direction: Southeast    Road Condition: Graded dirt road

3. Mining District & County: Copper Creek Min. Dist, Yavapai County, Ariz.

4. Former Name of Mine:

5. Owner: Piedmont Gold Mining Co.
   Address: Cordes, Ariz.

   Address: 2641 West Avenue 31, Los Angeles, 41, Calif. Capitol 7800

7. Principal Minerals: Gold and Copper

8. Number of Claims: 16 Lode Yes Placer
   Patented Unpatented Yes

9. Type of Surrounding Terrain: Rolling and sloping toward Copper Creek. Southerly end runs up onto a steep mountain.

10. Geology & Mineralization: Ancient granodiorite, no sedimentaries
    Granite has been fractured and 26 veins or solution channels brought in quartz carrying copper and gold. At the north end a silver vein.
    Veins run generally northerly and southerly but two major cross veins connect up the whole vein system. Chalcopyrite was primary copper ore

11. Dimension & Value or Ore Body: Self Potential showed a profound sulfid zone.
    covering an area 2,000 feet wide by 4,000 feet long and coinciding with a definite anomaly in the Magnetic Field considerably below Magnetic normal, and both coinciding with the considerable development data.
    accruing from 3 shafts, one to 1,000 foot level with 800 ft. diamond drill crosst cut showing 4 wide commercial ore bodies at bottom, one 450 foot shaft and crosst cut and drifting and a 250 ft. shaft and drifts all in ore.
12. Ore "Blocked Out" or "In Sight": Shafts are caved, but authentic data show
commercial ore from 4 to 10 feet wide in all workings

Ore Probable: For milling grade ore there appears to be an extensive
supply of ore that will average 2-4% copper and from $3 to $5 in gold.
Writer sampled 2 parallel veins for 500 feet with average widths of
4 feet and copper averaged 4%. These veins have never explored. Damp ore
13. Mine Workings—Amount and Condition:

<table>
<thead>
<tr>
<th>No.</th>
<th>Feet</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shafts 1</td>
<td>1,000</td>
<td>Caved, 800' dia. drill hole at bottom exposed 4 wide veins of sulfid copper gold ore.</td>
</tr>
<tr>
<td>Raises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tunnels</td>
<td>160' 4' vein 1,000 ft. of backs 4% cu.</td>
<td></td>
</tr>
<tr>
<td>Crosscuts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stopes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shafts No. 2 and 3 described above.

14. Water Supply: Sample water for large operations 65' below bed of Creek

15. Brief History: This property developed in 20's and before caved when
copper dropped and owned by inexperienced people since and Govt. would not grant $5,000 loan because it would not be sufficient to dewater and repair shafts, so Class "B" loan was impossible. Some leasing done by outsiders during war, one or two carloads of 6% copper shipped.
Property down at heel, equipment stolen, etc. Has the making of a great mine.

16. Signature: 

By Ernest C. Foster

17. If Property for Sale, List Approximate Price and Terms: Long term lease, on 10% royalty with option to purchase on price to be agreed upon.
Gentlemen,

Enclosed find your questionnaire filled out. The Piedmont Mine has been examined by several well-known engineers in past and their judgment is unanimous that the property has the making of a great mine. A combination of circumstances put the property in its present down at the heel condition, but the real merit of the deposit is apparent and the geophysical survey corroborated the geological facts. We have complete records of former surveys and reports available on request.

We are also interested in another Arizona mine, viz: the COPPER BELT MINE 20 miles southwest of Aguila.

We have full data on that also having spent the better part of a year in a geological and geophysical survey of it and a complete assay map.

In this property are more than 40 veins. The "A" system N 83 E. is composed of 20 parallel with usual dip of 70 deg. to north. The 2 southerly veins have a flatter dip. There has been considerable work done on "A 1" and considerable ore blocked of a grade around $12 a ton in gold and silver, the gold representing about one-third of the value. Two parallel veins close by can be brought into dev. program.

About 400 feet south is the junction of several "A" veins and the "B" vein system N 74 W. with northerly dip. Thirteen veins in this system. "B" 10 is vertical, "B 11-12-13" have southerly dip 70 deg. B and "B 1" are 50 and 55 deg. northerly dip, "B 2" 65 and all the others 70 deg. to north, branching fissures of "B 10." A third system N 28 W. dip to east and west forming another major branching system. A "D" system N 55 W is later and shows ore at junctions. A still later system "E" is N 60 E. and exposes two parallel veins about 300 feet apart at lower end of property and probably brought in copper. It is badly leached but the other systems all carry the copper-gold ore. At the main junction point south of the main shaft on the "A 1" system a shaft has been sunk to 180 feet into the water zone and chalcopyrite cutting several of the A and B veins and a crosscut 400 feet to south would bring in 11 A and B veins into the picture with from 300 to 600 feet of backs. A crosscut 400 ft to north would bring in "A 1", and 2 and 3 with backs of 250 feet. "A 1" has been trenches on surface for 2000 feet and shows an average grade of ore for width of 26" of $12. In leached zone, the walls being completely leached, but at 125 foot level a 250 foot drift shows more leaching right at water level, but the walls show chalcopyrite and average for this drift was 36" of ore with average of $9.80 and walls not sampled, looks like the several feet of wall rock would make into pay ore within another 100 feet to make the veins from 5 to 12 feet in width. A drift west on "B 5"
1,000 ft. would bring the workings under a tunnel at an elevation 200 feet above the collar of the 180 foot shaft. This tunnel shows 20 inches of ore, and the vein with trenches above it for 150 feet more in elevation with a value in gold of $12 and $6 in copper. Here again the wall rocks for several feet are badly leached but the veins are wide and if at the water level are mineralized would give large ore bodies. Near the 180 foot shaft are several shallow shafts and tunnels all carrying commercial ore in widths from 20 to 36 inches. Same grade of ore is found in same conditions as far south as "Bland" and both of which are about 800 feet higher in elevation than the 180 foot shaft.

This is a case where a little concentrated work will cut the better part of a complex and highly mineralized vein structure. The ore is rapidly leached in HYDROS and cyanided, so that a cheap and rapid process is demonstrated.

Vein structure is in Algonkian Monzonite with a few patches of Algonkian schist, Cambrian Limestone existant. The Silicification accompanying the mineralization has rendered the veins resistant to the flow of the vertical Magnetic Field so that the veins can be readily traced even where covered by detritus or dense brush and several large areas exist where the magnetic field is so low that there is suggested an extensive zone of secondary enrichment at the water level or slightly below where the vein junctions may have induced complete silicification and deposition of copper bearing ores.

Plenty of ore exists in present workings to pay all costs of dev. and equipment for 100 ton plant and for the crosscutting and drifting above suggested.

The Self Potential survey indicated this area to be heavily pyritized. Enough chalcopyrite exists in surface ores to concentrate and roast for SO2 gas for regenerating sulfuric acid and ferric sulfate. The crosscutting and Drifting on 180 foot level would develop water enough for plant operation. Drinking water would have to be brought in from outside. Good road, fine operating conditions exist. Fully 2,000 feet of work done all in mill grade ore with some shipping grade, but the $10 required for hauling, smelting and transportation is too much profit to throw away on a shipping program and a milling program is more feasible.

We have complete data and assay chart on this property which we will send on request. The Copper Belt Mining Co., has insufficient capital to carry on and the property is open for long term lease on 10% royalty with option to purchase. Terms and conditions on request.

We felt so sure of it as a big producer that we invested a considerable sum in the preliminary development and my son Marshall is now a director in the Company.

Sincerely

[Signature]

Ref. to Chas. Fitches for my Record.
Mine     Piedmont Mine (Copper Creek Mine)  Date April 28, 1944
Formerly, Copper Queen
District  Copper Creek District, Yav.
Engineer  B. W. Brown
Subject: Preliminary report on the recent operations at the Piedmont Mine
(Formerly the Copper Queen) which is located in the Copper Creek Mining District of Yavapai County, Arizona.

On April 26, 1944, this engineer visited the Piedmont mine for the purpose of making a preliminary investigation of the new operations. The mine, which was formerly known as the Copper Queen, is located about 18 miles by road in a southeasterly direction from Cordes in what is commonly called the Copper Creek Mining District. The mine is reached directly by the Bloody-basin road which is a good dirt road and connects the property with the town of Cordes. Cordes is situated eight miles by State highway south of Mayer, a terminal station in the Santa-Fe rail system.

The property was originally located in 1892 and has had a long promotional history. It was advanced as the Copper Queen under W. B. Douglas, and it is said that Mr. Douglas capitalized on his ancestral name in a state made famous by the clan. The mine subsequently became the Piedmont under N. F. Stevens. It is now the property of the Piedmont Gold Mining Co., with Roy W. Biddlecom of Los Angeles, Cal., as president and is leased for ten years on a purchase contract to the Copper Creek Mining Co., Duard Crockett Wray and Charles E. Messick, address Cordes, Arizona.

The property consists of thirteen unpatented lode claims with considerable development work reported. The main shaft, said to be 330 feet deep, is now inaccessible due to caving at the collar. Present mining operations are being carried on at the Sunshine shaft a few hundred feet to the southwest of the main shaft. The Sunshine shaft is said to be 53 feet deep. Operations which now consist of drifting and mining the ore are being carried on at the forty foot level where a twelve inch vein of siliceous copper ore is exposed. The following assays were reported by Mr. Wray from samples he had taken in the Sunshine workings:

<table>
<thead>
<tr>
<th></th>
<th>Au</th>
<th>Ag</th>
<th>Cu</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Drift</td>
<td>.17 oz</td>
<td>1.70 oz</td>
<td>5.20%</td>
</tr>
<tr>
<td>South Drift</td>
<td>.02 oz</td>
<td>None</td>
<td>8.40%</td>
</tr>
</tbody>
</table>

At the time of my visit the company was working five men and preparing a car-lot shipment of this type ore. The mine is equipped with compressor, hoist, pump, and mechanical ventilation, all appearing to be in efficient operating condition. Four buildings on the property furnished living quarters and there were, also, two machine buildings. Other improvements included a dug well which furnished domestic water and a steel water tank installed at the mine which had a roughly estimated capacity of around 10,000 gallons.
the east of north. A strike was taken on another vein outcropping by the main shaft which appeared to have a trend roughly N 20 W. No dip measurements were taken but the vein in the Sunshine shaft appeared to be nearly vertical. Epidote was observed in the country rock and it is believed that a zone of contact will be found somewhere in the vicinity.

In conclusion, this property demands more careful consideration and it is the judgement of this engineer that it has an excellent chance to make a producing mine under the present good management.

/s/ B. W. Brown
B. W. Brown
Old reports state that the main shaft produced water at the rate of 800 gallons per hour. This has not been verified. However, the Sunshine shaft with its short drifts and shallow depth makes considerable water in a wet season and requires frequent pumping.

No attempt was made to study the geology in any detail at this time. The property lies in a trough of gently rolling, brush covered, granite hills. The higher granite ridge to the east and south is capped with basalt and there are extensive "malpais" flows in the vicinity. The property appears to be in a shattered zone within the granite and numerous quartz filled fissures from 12 inches to 8 feet wide showing good copper mineralization outcrop on the surface. The Sunshine fissure-vein strikes slightly to the east of north. A strike was taken on another vein outcropping by the main shaft which appeared to have a trend roughly N 20 W. No dip measurements were taken but the vein in the Sunshine shaft appeared to be nearly vertical. Epidote was observed in the country rock and it is believed that a zone of contact will be found somewhere in the vicinity.

In conclusion, this property demands more careful consideration and it is the judgement of this engineer that it has an excellent chance to make a producing mine under the present good management.
QUESTIONNAIRE
Relating to survey of potential copper production from Arizona small and marginal mines for national defense purposes;

Name of mining property: Piedmont Gold Mining Company

Location: Copper Creek, Yavapai County - Arizona

Ownership: Corporation

Name of Manager: Jack P. Beasley

Post Office address: Cordova, Arizona

Copper production (pounds) during each of the past five years:

<table>
<thead>
<tr>
<th>Year</th>
<th>1936</th>
<th>1937</th>
<th>1938</th>
<th>1939</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1941 rate of copper production based upon first four months:

How much copper could this property produce annually

<table>
<thead>
<tr>
<th>Price</th>
<th>Copper (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 cent</td>
<td>1,000,000</td>
</tr>
<tr>
<td>16 cent</td>
<td></td>
</tr>
<tr>
<td>18 cent</td>
<td></td>
</tr>
<tr>
<td>20 cent</td>
<td></td>
</tr>
</tbody>
</table>

What price copper is necessary for this property? Fourteen cents per pound?

What plant facilities would be required and how much is the estimated cost in the event a 14 cent price could be assured? 50-ton mill and additional mining equipment. Total cost estimated 25,000.00

For what length of time would assurance of price and sale of full production be necessary? Three years.
How long would it take, after financing has been provided, before production on the above basis could be reached? **Ninety days.**

Does your organization have the facilities for raising the necessary capital to increase production to the amount stated? **No.**

If not, do you believe that your company would be amenable and agreeable to government financing? **Yes.**

Do you believe that you could finance the capital investment yourself on some such basis as a guarantee of sale of output at a fixed price and for a definite period, with damages to cover unamortized portion of capital investment in the event the government failed to take the output for the agreed upon time - or some similar arrangement? **Yes.**

Please let us have your comments on the probability or possibility of your organization participating in such a program for national defense purposes.

The organization would be willing to cooperate to the extent for National Defense.

What would be your ideas on financing and carrying out such a plan as is indicated by these questions? **The most direct and quickest way to accomplish the ends desired would be for the Government to advance the necessary capital against production to liquidate the funds advanced.**

Kindly list names and addresses of other potential copper producers in Arizona whose operations should be included within this survey.

Date **June 26th, 1941.**

Sincerely, **President.**
DEPARTMENT OF MINERAL RESOURCES.

News Items

Date: July 3, 39

Mine: Piedmont
Location: 18 miles east of Cordes
Owner: Piedmont Gold Mng Co Inc
Address: Cordes

Operating Co.: Same
Address: Cordes

Pres.: Frederick Beutel
Cntl. Mgr.: Thos. Hatfield, Treas
Mine Supt.: 1949 N. Wilton Place, L.A.

Mill Supt.
Principal Metals: Cu - Ac
Men Employed:
Production Rate:
Mill, Type & Capacity:

Power, Amt. & Type:

Signed: [Signature]

(Over)
Present: Operations

Re-conditioning
Surface plant
Retimbering
325 ft. Shaft

New Work Planned:

Clearing drifts
on 160 to 270 ft
levels

Misc. Notes:

Automobile engine
Powert
Moisture Compressor

Good mechanical job

Veins - Tie Cambrian
in Granite

Questionable
<table>
<thead>
<tr>
<th>NAME OF MINE</th>
<th>PIEDMONT MINE (COPPER CREEK MINE) FORMERLY COPPER QUEEN</th>
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<tbody>
<tr>
<td>COUNTY</td>
<td>YAVAPAI</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>COPPER CREEK</td>
</tr>
<tr>
<td>METALS</td>
<td>AU, AG, CU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATOR AND ADDRESS</th>
<th>MINE STATUS</th>
<th>DATE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5/1/44</td>
<td>Preparing to ship</td>
</tr>
<tr>
<td>Owner: Piedmont Gold Mining Company</td>
<td></td>
<td>5/1/44</td>
<td>Shipping</td>
</tr>
<tr>
<td>Lessee: Copper Creek Mining Company, Duard Crockett, Wray and Charles E. Messick, Cordes, Ariz.</td>
<td></td>
<td>5/2/44</td>
<td></td>
</tr>
<tr>
<td>2/46 Ernest (D.) Foster, 2641 West Ave. 31, L.A. 41</td>
<td></td>
<td>6/37/44</td>
<td>Quit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2/46</td>
<td>Surveying</td>
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Beutel, Frederick - President | Piedmont Gold Mining Company | 1949 N. Wilton Place |
Cordes, Arizona | | Los Angeles, Calif. |

See PIEDMONT MINE - Owners Mine Report
Name of property. PIEDMONT GOLD MINING COMPANY.

Location and accessibility of property. Eighteen miles Southeast of Cordes, off Black Canyon Highway; accessible by county and Forest Service Road open the year round.

History of ownership. Purchased from locators by the Arizona Copper Queen Mining Company, an Arizona corporation.

Development began in 1914. Mine closed down as result of World War No. I in 1917.

Production history. The property produced some shipping ore during its early period of development, but production and shipping of ore came to an end when property closed on account of lack of fuel and labor during World War No. I.

General geology (brief) "The country rock of the area is altered by stress of shearing, the intrusion of veins, and dykes of varying composition. The vein system occurs on the surface of quartz and quartz porphyry, veins out-cropping strongly, with a strike north and south and with no apparent dip. The veins are well-defined fissures, with granite or porphyry walls. The outcrops on the surface are from 12" to 15' or more wide and extending the length of the property - in some cases may be traced for over a mile".

"On several claims of this property are found numerous quartz veins varying in width from 12" to 15' highly mineralized with copper, gold and silver. The outcrops of these veins are very prominent and in some instances standing many feet above their surroundings."
Ore occurrence. "On this property are two very distinct structural trends, the courses plainly to be observed. That the ore bodies are separate and distinct so far as their physical appearance on the surface would indicate, is true; but geologically they are one and the same ore body, which has been cut through by strong porphyry intrusion, giving the appearance of cross-fissures coming together at a very obtuse angle."

Ore reserve (quantities and values).

"There can be no doubt as to the existence of an underlying body of high-grade copper-bearing minerals. As depth is attained it will be shown that many of the now separate ledges will unite, forming one large, main ore-body - chalcopyrite being the primary ore - and increase in value will attain with depth.

"This property is destined to be one of the big copper producers of Arizona, and with proper development can be made the big mine of southwest Yavapai."

Accessory metals of value.

"Gold, silver, copper, iron and silica".

Development work done.

Main Shaft, 320 feet;
Sunshine Shaft, 65 feet;
Two smaller shafts, 25 and 35 feet;
Tunnel, 250 feet;
Numerous open cuts.

Plants (with capacity) already on property.

The property is equipped with hoist and mining machinery, but no mill equipment is installed.

Date: July 7, 1941
Signed: [Signature]
The hoist houses for Shafts 2 and 3 are in good condition. There is an air compressor and tanks and all piping for air and water is in 350 foot shaft, water stands at 70 feet, some leaching saved. Vein about 2' but very rich ore encountered. Open during war and one carload shipped ran 8% copper some gold. In the 450 foot shaft the collar has saved and the 50 foot headframe sagged in about 15 feet. This is near 10' vein and crosscuts bring two veins into the workings, good mill grade ore and some ore shipped in early days. Hematite at surface carrying gold and a little chalcopyrite. Crops boldly for mile. There is an old double friction hoist, steam driven, on this yet with 1,000 ft of 7/8 fairly cable. Last operation this hoist was operated with flexible coupling by gasoline engine. Good tool house, fairly good bunk house and a good cook house. Good well.

My plan is to sink a shaft on the two veins east of the 450 foot shaft which are exposed by workings for 500 feet and yielded an average of 4% copper, no gold or silver, for widths of 4-5' each, ore 80% leaching type, and my tests in my HYDROTOS leacher gave 80% recovery of the copper in 35 minutes leaching using weak solution of sulfuric acid and a few lbs of sodium nitrate per ton of solution, using 1-1 dilution. The other 1% is chalcopyrite and could be roasted to give SO2 gas for regenerating the ferric sulfate and sulfuric acid solvent. At the point where I would sing this shaft one of the major cross veins intersects the 2 parallel veins which are about 30 feet apart at that point. I would go down to the water level about 120 feet at this point and put in some shrinkage stopes and use the ore from development and stoping in HYDROTOS to pay expenses of sinking and laterals and operations A raise at proper point would give necessary safety protection.

Several thousands of tons of 4% ore is thus indicated or enough to pay for the rehabilitation of the various shafts and such new exploration as may be desired. When the surface ores now exposed in the 26 veins and shallow workings to the water level are worked out, which would take several years with a 100 ton plant then I would adjust the metallurgy to fit the sulfid zone conditions and meantime sink on the sulfid zone and probable zone of secondary enrichment and develop that ready for large scale operations.

A 50 ton HYDROTOS leaching plant is inexpensive, about 1/2 that of the usual leaching plant and requires minimum of labor. By running the ore over a table before leaching the sulfids can be saved and shipped. The carbonates, oxides, sulfates and chlorides and oxy-chlorides can be rapidly and cheaply leached and a $6 ore should show a profit of at least $2 a ton for small scale operations.

The operations of FOSTER ENGINEERING CO., are all directed to dressing up these marginal and broken down properties and proving them up so that they may get into the hands of financially able and experienced operators. The Mason Patents on HYDROTOS were taken over in furtherance of this service.

We consider the Piedmont one of the super prospects on the market today. Long term lease is available with option to purchase.
MEMORANDUM

To: J. S. Coupal, Director
From: B. W. Brown, Field
Subject: Draft deferments at the Copper Creek Mining Co's Piedmont mine located 18 miles easterly from Cordes Arizona.

I was very favorably impressed upon my recent visit to the Piedmont property with the obvious sincerity of purpose in the operation. Hard work and mining know-how appear to have been combined in an efficient effort. I believe that, if let alone, this operation has a reasonable chance to succeed. I further believe that this department should render all of the aid possible in forwarding this work.

Mr. Duard Crockett Wray and Mr. Charles E. Messick are in charge of operations. Mr. Wray is a "Transfer" to the Arizona Selective Service Appeal Board and his case should come up before them very soon. Mr. Wray and Mr. Messick are both indispensable to the operation. Mr. Wray is 37 and an ex-service man and is in no way desirous of evading duty. But he believes as I believe that he can serve his country best where he is.

The mine is preparing a shipment of ore. A brief preliminary report will follow this letter.

It is with great pleasure that I welcome this operation into the Central District.

B. W. Brown

cc: / Duard C. Wray
July 9, 1941

Mr. Fredrick Beutel
1949 N. Wilton Place
Los Angeles, California

Dear Mr. Beutel:

I want to thank you for the second questionnaire regarding the Piedmont Gold Mining Company. I am very sorry that you did not give me a more concise answer on the question of ore reserve, quantities and values, as this has a great bearing on the willingness of the government to assist in bringing the property into production. It is only the intent of the present survey to cover the properties with known ore reserves.

We have been delayed in getting this report into Washington because the information is still coming in, but from what we hear we feel very confident that we will get a better price for copper.

Thanking you again, and with kindest personal regards, I am

Yours very truly,

Chairman, Board of Governors
Arizona Department of Mineral Resources

CFW:LP
March, 18th, 1941

Dear Mr. Carpenter:

Mr. Keith Knight, of QUIJOTOA, (He writes a very poor pen hand, and I am uncertain about the Post Office) But he refers me to you regarding his mining property.

As a matter of fact I have had several replies to the adv. which was in Pay Dirt, but very few of them can submit an Engineers Report on their claims, so that it will be waste of time to fool with them.

I deal with real purchasers of worth while mining property and I am also interested in a Syndicate who deal in mining property of merit, so do not try to sell through any Brokers.

If this party has something really worth while, will be pleased to have details.

Today wrote the State Bureau of Mines, sent it to Phoenix, is the State Bureau located in Tucson?

I wrote about the PIEDMONT MINE, submitted by Jack P. Beasler, Cordes who sent me a large "booklet" of reports, made several years ago, BUT in order to sell this property, I must know what has been done with the Mine since, it became idle.

It would seem that Mine was at one time quite profitable, but just what condition is it in at present.

What will it cost to unwater, put in condition to operate also cost of new equipment.

Will appreciate hearing from you.

Very truly yours,

S.R. RAMSAY,
September 29, 1942

Mr. E. A. Garrett
1225 4th Avenue
Los Angeles, California

Dear Mr. Garrett:

In reply to your letter of September 28 I am
sending under separate cover a copy of the "Production
Possibilities of the Marginal Copper Mines in Arizona" and
in it you will find on the page with the corner turned all
of the information we have available on the Piedmont property.

I hope you will find this information of value.

Yours very truly,

J. S. Coupal, Director

JSC:LP
1225 4th Ave.
Los Angeles, Calif.

Sept. 28th, 1942

Arizona Dept. of Mineral Resources
528 Title and Trust Bldg.,
Phoenix, Arizona.

Gentlemen:

As I and my associates are considering the purchase of the property owned by the Piedmont Gold Mining Company, situated in the Copper Creek Mining District of the County of Yavapai, State of Arizona, we would like to know if you have information as to the mineral resources of this particular mine.

I understand that one of your engineers has looked over this property recently and we would greatly appreciate any data pertaining to it.

Yours very truly,

[Signature]

E. A. Garrett
Mine: Piedmont

District

Former name: Copper Queen

Owner: Piedmont Gold Mining Co.

Operator: Same (Treasurer - Thomas Hatfield)

President: Frederick Beutel

Mine Supt.

Principal Metals: Cu - Au

Production Rate

Power: Amt. & Type

Operations: Present: Reconditioning surface plant

Operations Planned: Clearing old workings

Number Claims, Title, etc.: 15 unpatented

Description: Topog. & Geog.: Rolling granite hills

Mine Workings: Amt. & Condition

Shaft: 325'

160' level 75' south
270' " 100' "
open

Sunshine shaft: 60' deep

Date: 1

Location: 16 miles east of Corde

Address: Corde

Address: 1949 N. Wilton Place, Los Angeles

Gen. Mgr.

Mill Supt.

Men Employed: 2

Mill: Type & Cap.
Geology & Mineralization: Pre-cambrian quartz vein in granite

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet:
200 ft. I.R. Compressor - gas engine driven - gas engine driven friction hoist

Road Conditions, Route: 18 miles dirt road

Water Supply: Well in Copper Creek

Brief History: Unknown

Special Problems, Reports Filed

Remarks

If property for sale: Price, terms and address to negotiate.

Signed: Jack L. Strout - Director & Mechanical Engr.

By: Carl G. Barth, Jr.

Use additional sheets if necessary.
Department of Mineral Resources
State of Arizona
Owners Mine Report

Mine: Piedmont

District

Former name: Copper Queen

Owner: Piedmont Gold Mining Co

Operator: Same (Treasurer)

President: Frederick Beutel

Mine Supt.

Principal Metals: Cu - Au

Production Rate: ?

Power: Amt. & Type

Operations: Present

Reconditioning Surface Plant

Operations Planned

Clearing old workings

Number Claims, Title, etc.

15 Unpatented

Description: Topog. & Geog.

Rolling Granite Hills

Mine Workings: Amt. & Condition

Shaft 325', 160' level 75' south, 270' - 100' - open

Location: 18 miles east of Cordes

Address: Cordes

Gen. Mgr.:

Mill Supt.

Men Employed: 2

Mill: Type & Cap.

Date

Address: 1949 N. Wilton Place

Los Angeles

(over)
Geology & Mineralization

Pre-Cambrian Quartz Vein in Granite

Ore: Positive & Probable, Ore Dumps, Tailings

Mine, Mill Equipment & Flow Sheet

200 ft. I.R. Compressor Gas Engine Driven Gas Engine driven Friction Hoist

Road Conditions, Route

18 miles dirt road

Water Supply

Well in Copper Creek

Brief History

Unknown

Special Problems, Reports Filed

Remarks

If property for sale: Price, terms and address to negotiate.

Signed: Jack D. Stout - Director

Use additional sheets if necessary.
Illustrations of surface croppings of ore veins on the property of the Arizona Copper Queen Mining Co.