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PRINTED: 11/19/2001

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: LITTLE BUTTE MINE

ALTERNATE NAMES:
ARIZONA PRIDE
IRON TREE MINING CO.

LA PAZ COUNTY MILS NUMBER: 324

LOCATION: TOWNSHIP 7 N RANGE 17 W SECTION 8 QUARTER NW
LATITUDE: N 33DEG 58MIN 11SEC LONGITUDE: W 114DEG 03MIN 38SEC
TOPO MAP NAME: BOUSE - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
GOLD LODE
SILVER
COPPER
IRON
MANGANESE

BIBLIOGRAPHY:
KEITH, S.B., 1978, AZBM BULL. 192, P. 170
ADMMR LITTLE BUTTE FILE
USGS BULL 451,P40-41
USBM IC 8236 P 124
WEED MINES HANDBOOK 1926 P 302
SCARBOROUGH, ROBERT (ADMMR GEOLOGY FILE)
ADMMR LITTLE BUTTE COLVO FILE

Little Butte Mine
ore owned and operated by
United Mines Company / Oregon

NAME OF MINE: LITTLE BUTTE ✓

COUNTY: YUMA
DISTRICT: PLOMOSA
METALS: CU, AU

OPERATOR AND ADDRESS: DATE:		MINE STATUS DATE:	
5/1/44	New World Mining Co. A. de Lisle, G.A.Flading 1517 E. Washington Phx. L. B. Havre, Supt. Bouse, Arizona	5/1/44	Developing
		4/45	Idle
12/44	Martin Julian, Supt., Bouse	12/44	Shipping
2/26/46	Bouse Dev. Co., W. W. Whiting, Supt., Bouse	2/46	Dev. & ready to ship 1 car
10/46	Olin Marshall, Bouse	10/46	Developing

C O P Y

Rialto, Calif. June 8

Mr. Robert Robertson
Jerome, Arigona

Dear Mr. Robertson:

Referring to our former negotiations with the United Verde poeple, would like to submit to them for their consideration another proposition which would not require a very great outlay of capital until they were satisfied it would be worth while to go further with the development. They could put in one of their men as superintendent, and under their engineer.

You will remember at the 300 ft. vertiele level the United Mines Company reported gold $27.00 per ton and 10% copper. Mr. Hess, their Superintendent, wrote me that he assayed it but made it somewhat less than the report of the United Mines Company, and that he did not ship any of it.

Mr. Henry C. Carr, Consulting Engineer wrote Mr. Hess not to ship any of it, but to leave it as an asset until the sulphide ore was reached at permenent water level. As a war measure they were not allowed to sell stock to go ahead.

Mr. Homer B. King of Pasadena, who had charge of the Little Butte and put the shaft to that level, told my son and I that both he and his Superintendent sampled 12' at that level and it assayed a lettle over one ounce in gold and ten per cent copper. So far as we, personally, know this is hearsay, but confirmed as it is by others that are disinterested, we fully believe the ore is there. The map made by the United Mines Co. shows that they never raised to the ore between the 300' and 500' vertical levels. Mr. Hess reported to Mr. Denton at the time they closed down, that he thought they were within 80 to 100' of where thy should encounter the ore body in the 500' vertical level at the 170' north drift (650' incline).

With a few monor repairs to our present equipment, we could dewater to the 650' level (incline), pick up the 20' cavein at the 300' level (vertical), raise to the ore body at the 400' and 500' levels and sink a winz at the 500' level to the 600' level after extending the 170 drift north another 100'. Mr Godbe, E.M., thinks twenty to twenty-five thousand dollars

should be sufficient to do the work.

Should your engineer who examined the property be of the same opinion, and your people would care to risk that amount and, if it should develop as Mr. Godbe and Mr. Hess think, we will then review the former option, and let them go ahead and develop to their satisfaction, or quit if not fully satisfied with the prospects.

Please take this up with your people, and if they feel inclined to take a little gamble they can send me an agreement to be signed, along the above lines, which we will execute and they can get busy.

Sincerely yours,

LITTLE BUTTE AMALGAMATED MINES CO.

by the late W. F. Martin
Prds. & Gen'l Mgr.

LITTLE BUTTE MINE

La Paz County
T7N R17W Sec 8

USGS Bull. 451, p. 40-41
IC 8236 p. 124 - hematite

Northern Yuma Area Mines (file)

MILS Yuma Index #324

Geology File- Scarborough, Robert, "Field Trip to Northern Plomosa Mtns."

Mines Handbook, 1926, p. 302

lenses were exposed, and from this evidence and the general character of the formation the figure is drawn.

These veins contain also some galena and chalcopyrite. Galena has been found in the Harquahala vicinity, and it is possible that the Guadalupe vein is comparable in age to these deposits. It is thought that solutions accompanying the granite intrusion brought in the silica, the carbonates, and the metals, and because of the kind of fissures here present for their deposition formed small gash veins rather than any other type.

THIN FILMS OF GOLD DEPOSITED IN JOINT PLANES IN SHALE.

In several prospects within the area thin films of gold deposited in joint planes in shale were noted. The best-known local examples of this are probably in the Moro prospect, owned by the Clara Consolidated Company, and in the Blue Slate prospect, near the Little Butte. Evidently these deposits are the result of secondary deposition of gold, the original source of which is probably in the near vicinity. In general, deposits of this sort are apt to be of very low grade because of the extreme thinness of the gold flakes; and the saving of the gold is difficult.

COPPER DEPOSITS.

DEPOSITS IN THE PRE-CAMBRIAN SEDIMENTARY SERIES.

The most extensive deposits of iron and copper in this region occur in the series of sedimentary beds and associated amphibolites and chloritic schists which overlie the oldest pre-Cambrian complex of granites and gneisses. The majority of the important examples described in the detailed part of this report are of this character and prominent among them are the deposits at Planet, Signal, various points on Colorado River, and at the Little Butte. These deposits deserve particular mention because of their belonging to a somewhat rare type, the genesis of which is still more or less in doubt. The deposits are generally in two forms. They occur in shear zones in the amphibolitic and chloritic rocks as irregular veins, and in the limestone as replacement deposits, the latter usually appearing at or close to the contact with the underlying older gneisses. Owing to the deep and thorough oxidation which all the deposits in this region have suffered it is often difficult to ascertain the primary constitution of the ore, but it is probable that in all cases the important minerals were specularite, pyrite, and chalcopyrite, containing very small quantities of precious metals. The gangue minerals are quartz, calcite, and, in places, a small amount of siderite. Epidote, chlorite, and amphibole are sometimes present in small quantities. The copper sulphides have been thoroughly oxidized, and the metal now

U.S.G.S. Bulletin #451

appears mainly in the form of chrysocolla, malachite, and allied oxidized ores. It is believed that the deposits were originally poor in copper and that oxidation has caused their concentration. The concentration of gold noted in a few places is probably also the result of oxidation. In general these deposits contain little gold and silver.

As a rule there are no intrusive rocks in the vicinity with which the deposits could be genetically connected. The association of the copper ores with specularite and their frequent occurrence between limestone and gneiss have often led mining engineers to consider them as of contact metamorphic origin, but there is no valid ground for such classification. A characteristic feature is the association with amphibolitic and chloritic rocks. As these are known to contain copper throughout the world, it is suggested that the metals have in some way been derived by concentration from these rocks. The formation of the deposits probably occurred in pre-Cambrian time and apparently during or after the regional metamorphism which the sedimentary series has suffered. The mineral association described is not one ordinarily occurring in regionally metamorphosed rocks, but, nevertheless, it is believed that they were formed as suggested by a concentration from the amphibolitic rocks during the period of dynamometamorphism. The association of beautifully crystallized specularite with sulphides would indicate deposition at elevated temperature and high pressure. It is also to be noted that the usual position of the deposits is in the basal limestone which generally is covered by the amphibolitic rocks.[a]

REPLACEMENT DEPOSITS IN LIMESTONE.

The Planet, the Signal, and the Little Butte properties represent the principal replacement deposits in limestone. In all of them the gangue minerals are chiefly specularite and quartz with some calcite, and the principal ore minerals are chrysocolla and malachite, which are intimately mixed with the specularite. Occasional specks of chalcopyrite, pyrite, and bornite were noted in these deposits, but they form at present a small portion of the developed ore bodies.

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[a] In discussing the genesis of these ores with Mr. A. C. Spencer the rôle of "water of dehydration as a factor in segregating metallic ores during dynamometamorphism" was considered.

The well-established fact that large quantities of water are set free during dynamometamorphism as the result of crystallization and concomitant dehydration warrants the suggestion that waters of this origin may become a controlling factor in the segregation of metallic ores. In the present case the original crystallization of the diabase or related rock has been destroyed and recrystallization of the constituent minerals has taken place, absorbing some of the water of dehydration by the formation of the micas, epidotes, etc. The rest of the water liberated in this recrystallization could have dissolved and segregated the metallic contents of the original diabase. By circulation through the intimately associated limestone strata, these waters may have been the first agent in depositing the minerals, which, through subsequent oxidation by meteoric waters have been still further concentrated into workable deposits.

Van Hise (Mon. U. S. Geol. Survey, vol. 47, 1904, gives considerable information on the subject of dehydration, but fails to point out the availability of the waters set free by recrystallization for segregating and depositing ores. A. C. Spencer, in discussing the copper deposits of the Encampment district, Wyoming, Prof. Paper U. S. Geol. Survey No. 25, 1907, Chapter III), attributes the origin of certain copper ores to segregation during dynamometamorphism but does not discuss the source of the water involved.

The property has been known for over 60 years and has been explored by shallow adits, shafts reportedly as much as 50 feet deep, surface trenches, and pits almost all of which were inaccessible in 1961. There has been no production from the property (4, p. 92).

Little Butte Hematite

Hematite was noted at the Little Butte Copper mine (119, fig. 1), at the north end of the Plomosa Mountains, 4 miles northwest of Bouse and 1 mile southwest of the Atchison Topeka & Santa Fe Railroad, in the NW¼ sec 8, T 7 N, R 17 W, near Little Butte. In the vicinity of the Little Butte incline, Paleozoic limestone has been partly to completely replaced by specular hematite associated with malachite, azurite, and chrysocolla. Small fissures and joints also have been filled by hematite. Underground workings from the old incline, reportedly 385 feet deep in 1910, were inaccessible in 1961. From the little information available the deposit appears small (4, pp. 93-95).

Phoenix and Yuma Groups Hematite

Hematite was noted on the old Phoenix and Yuma group of 33 claims unpatented as of 1922 in the Plomosa Mountains (123, fig. 1), approximately in sec 6, T 5 N, R 17 W, about 8 miles south-southwest of Bouse. The claims were the property of Smith and Ellis of Los Angeles, Calif., during 1942. The area is spotted with stringers and massive bodies of hematite partly covered by debris. The only good exposure was on the Yuma claim. The hematite deposits are in a Precambrian-Paleozoic complex of granite-gneiss-schist, limestone, and sedimentary schist and appear as replacements of metamorphosed Paleozoic limestone. A sample of the best ore, taken by the Bureau in 1942 and more than 20 feet in thickness contained 61.38 percent iron, 0.094 percent sulfur, 0.016 percent phosphorus, and 8.26 percent silica.

During 1917 a total of 19 cars of ore was shipped from the Yuma claim to Columbia Steel Co., at Pittsburgh, Calif.

Black Diamond Magnetite

Magnetite was noted (104, fig. 1) on the Black Diamond group of claims located by W. F. Mitchell in 1957, approximately in sec 18, T 3 N, R 17 W. The deposit is reached by driving 10.4 miles east of Quartzsite on U.S. Highway 60-70 and then south over poor access roads for 7.5 miles towards Black Mesa.

The magnetite occurs as irregular, contact metamorphic replacements in Paleozoic limestone associated with intrusive granite. Magnetite outcrops 5 to 10 feet thick can be traced 300 feet north along a steep hillside high on the west side of Black Mesa wash. The enclosing limestone dips 40° to 60° E.

A character sample of the better magnetite taken by the Bureau in 1961 contained 49.7 percent iron, 0.3 percent manganese, 0.2 percent titania, 0.04 percent phosphorus, 0.13 percent sulfur, and 9.6 percent silica.

LITTLE BUTTE MINE

La Paz

~~YUMA~~ COUNTY

Mr. Petrus (Pete) W. Fleming, Consulting Engineer, 18588 Linnet Street, Tarzana, California 91356, came into office in reference to Barite Mines that he said he had an interest in. They are located in the Bouse District, particularly in Sections 7 and 34, T7N, R17W. Said he has an option on the Scotchman, Little Butte, Teddy "r" and others in that area. GBG WR 11-8-68

It appears Mr. Schaeffer is now trying to sell his lease on John Townsend's Copper Hill properties near Bouse and his leaching process. The figure mentioned to Mr. Chambers was $40,000. Went to Bouse and found John Townsend. Although Jack Schaeffer was not available John said he was continuing to mine and leach some ore from the Copper Hill mine southwest of Bouse. GW WR 2-12-71

Jack Schaeffer continues to operate his copper leaching "process" from ore taken out of the Copper Hill property of John Townsend, four miles southwest of Bouse. GW QR 4-8-71

The Copper Hill Mine near Bouse was operated for a portion of the period by Jack Schaffer what stated he had devised a process for increasing the amount of copper leachable from an ore. GW QR 9/71

USGS Bull. 451, p. 40, 41

IC 8236, p. 124

RRB WR 3/4/83: Shayam Nadkarni, 144 Woodmere Blvd., Woodmere, N.Y. 11598, reports that he has a lease with option to buy on the Little Butte Mine, NW¼, Section 8, T7N R17W. near Bouse, La Paz County. He says that based on the results from 16 drill holes, 90 feet deep, they have 5,000,000 tons of material ranging in grade from .05 to .30 oz/ton gold. The deposit is reportedly a series of small veins and stringers through the nonmineralized country rock which they intend to mine by open pit methods and heap leach. (Our files indicates that it is an oxide copper deposit which would appear to rule out cyanide heap leaching.) Mr. Nadkarni asked about regulations on cyaniding and wanted the names of mineral surveyors so he can take the property to patent.

NJN WR 10/3/86: Perry durning (c) reports that Fischer-Watt Mining Company has dropped the Little Butte Mine (f) La Paz County.

LITTLE BUTTE MINE YUMA COUNTY

Interviewed Jim Townsend. He reported that the Little Butte operation suspended several weeks ago and that Mr. Boyd (of Bakersfield), the principal in the venture, had recently closed the company account at his store. TPL WR 5-23-59

Visited the Little Butte cyanide plant and surface workings (Iron Tree Mining Co.) 5 miles northwest of Bouse. Idle. According to Pat de Williams, Forbes' sampling showed surface values of $2 to $3 over a large area. TPL WR 6-13-59

Visited the Iron Tree Mining Co. workings and plant near the Little Butte Mine. The property was idle and operations apparently suspended indefinitely although most of the equipment is still on the site. The surface over a large area has been cut by interlacing bulldozer swaths attempting to expose surface spots with higher than average gold values. TPL WR 10-17-59

Visited the Little Butte Mine (Iron Tree Mining Co.)

A new company, Loma Grande Mining Co., Inc., Box 2247, Parker, Arizona, has taken over this surface deposit from the former operators. This is a subsidiary of the Freemont Uranium Co., 684 Main St., Lander, Wyoming. Orville Murray, Parker, Arizona, is the supt. in charge, Wesley Van Gordon is mill supt. 6 men are employed remodeling the plant. It will use the gravel screening and crushing plant placed on the property by the former operators but the treatment process will be jig and table concentration of the gold values instead of cyanidation. They speak of a two or three shift operation with capacity of 15 TPH. These people have purchased a number of equipment items from the Wickenburg Mill of Mohave Mining and Milling Co. and at the time of visit were installing this equipment - a jig, classifier, etc., and some tables, and other items are still to be brought in from the Mohave plant. TPL WR 2-13-60

Visited the Loma Grande Mining Co. operation near Bouse. This is the site of the former Iron Tree Mining Co. project near the Little Butte mine. The plant was idle and one man was doing mechanical maintenance work. He said that the principals had gone to Wyoming with a recent plant clean-up (the first). No authentic information was available regarding the outcome. The amount of stacked tailings indicated that some 300 to 400 tons of surface material had been put through the plant. There was considerable evidence of free gold in the lower end of the classifier box and in several middlings buckets. The normal crew is 5 men including the superintendent. TPL WR 4-22-60

The Loma Grande Mining Co., has suspended work at the Little Butte property and adjoining claims. TPL Conf. Bouse 6-16-60

Visited the Smoke Hole - Little Butte property near Bouse, formerly operated by Loma Grande Mining Co., operation now being handled under option agreement by Western Nuclear Co. Three geologists with William A. Street as Chief, are sampling the surface. TPL WR 1-14-61

Visited the Smoke Hole-Little Butte property. The geologist crew had recently completed their surface sampling job for Western Nuclear and no one was present on the ground at the time of visit, and no account was available re the results of the sampling. TPL WR 2-18-61

LITTLE BUTTE MINE

YUMA COUNTY

Visited the Little Butte mine. Schaffer is operating a 50 ton "Schaffer Process" plant here under lease agreement from the Loma Grande Mining Co. (of Wyoming). He has been re-running material which the Loma Grande and its predecessor company, the Iron Tree Mining Co., had run by cyanide and gravity concentration method (with very poor recovery). Mr. Schaffer was not present and the plant was not running. It seems to have produced several pounds of gold in a recent run. The "mill" is actually a 5' x 10' amalgamation in the mill, and on dressed plates and in an amalgam trap. The special "process" feature was not apparent.
TPL WR 6-15-61

Visited the Little Butte mine looking for Schaffer but missed him. Also visited the site of another "Schaffer Process" plant, in Bouse Wash. Several men were installing a mill identical with the one at the Little Butte mine. Mr. Schaffer was not present but a member of the crew told me that the plant was being built to run ore from the Old Dutchman mine. The enterprise is separate from the Little Butte project. It is expected that others will be installed for other investors at other places in the region. I was told that the "process" was a chemical formula known only to Mr. Schaffer. It is claimed that the gold in the region occurs locked up in such a fashion that it cannot be reported by a fire assay. In fact it is claimed that the Loma Grande tailings material which assayed only $7 to $9 as mill feed is actually returning $40 to $50 in the Schaffer Process. If true, this would seem to junk the old adage, "You can't get blood from a turnip." TPL WR 6-17-61

The property is now operated by Bongo Mining & Milling Co. under agreement with Western Nuclear Co. of Lander, Wyoming which in turn holds the property under operating agreement with Loma Grande Mining Co.

No company official was present and the two men on the job had no comment.

The "Schaffer process" mill which was recently installed at the old Little Butte shaft has been moved up to the Smoke Hole site (¼ mile) and a duplicate unit installed. The mill appeared to be complete and ready for start-up. The feed will be the same surface material which was formerly treated unsuccessfully by cyanide persolation leach (the first plant), then by sluice and jig concentration. Denis Doheney is President of thenew company, 684 Main St., Sander, Wyoming. Orville Murray is manager for Loma Grande Mining Co. J. R. "Jack" Shaffer is consulti on the job for Bongo Mining Co. Memo TPL 10-11-61

Active Feb. 1962 - O. L. Murray, Mgr., Loma Grande Mining Co., 684 Main Street, Lander, Wyoming - 3 men working

Visited the Little Butte mine and mill of the Loma Grande Mining Co. The Yuma Mining Co. of Colorado is operating a Schaffer "secret process" mill. 3 men working. TPL WR 2-17-62

Visited the Little Butte Smoke Hole property (Loma Grande Mining Co.) The last lessees (Bob Winkley, Hugh Fisher et al) have quit and the property is idle. TPL WR 6-16-62

Interview with J. C. Townsend

Mr. Townsend stated that Simplot Corp. drilled several holes at the Little Butte during September and then moved off, ude to excessive water. He reported that some pockets of rich gold ore were mined by Wm. McLain and Sigmund Hall 18 years ago. They are said to have mined about $75,000 in gold, before the ore played out. They are said to have had a "merry time" during this period and ended up broke. LAS Memo 10-16-64

DEVELOPMENT
EXAMINATIONS
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TELEPHONE
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CONSULTING MINING ENGINEER
1211 PACIFIC MUTUAL BUILDING
LOS ANGELES
MUTUAL 8258

Copy of Sealed Original.

Brief Report on a Barite Deposit near Bouse, Yuma County, Ariz.

History

Although there had been a noticeable amount of barite (barium sulphate) scattered as float about the hills west and northwesterly from Bouse, there had been no inquiry for this mineral until in the latter part of 1929. In several oilfields in Southern California, well drilling was at its crest and the heavy gas pressure in these fields required special devices to prevent the wells blowing tools out while drilling was in progress. For these special conditions, the use of barite ground very fine and with a specific gravity of at least 4.3 was mixed with a bouyant clay, "Bentonite", and poured into the drill hole in great quantities.

This method was so successful that large quantities of barite of required specific gravity were in demand and a quest for this mineral started. The Bouse District at once became a prospective producer

and work was started in several localities to open up deposits where it occurred. New roads were constructed and unloading arrangements were constructed at the railway station at Bouse.

The most interest in this material came in January of 1930 before the results of the stock slump of the November preceding had been felt much in the oil business, but which began to be evident by the end of February, and specifications as to the quality of barite and the drop in demand due to the curtailment in oil well drilling practically put an end to the possibility of shipments from this territory about the time such shipments were ready to start. There has been no development to speak of on any of these deposits and as a consequence practically nothing is known of the quantity and grade that is to be found with further exploration. So far as the outcrops in general have been observed, the ore shown superficially will run slightly under market specifications, (from 3.80 to 4.10 specific gravity compared with market demand of 4.26 minimum specific gravity), and it will be necessary to raise the grade of ore exposed at present, either by finding a better grade below the present superficial workings or by an economical method of concentration.

During 1930 the deposits in the Bouse District have produced no commercial barite, nor has there been any local work done with the exception of that required by assessment work on the located claims.

A very extensive amount of experimentation, however, has been carried on at the request of Mr. Homer C. Chapin in an effort to bring up the grade (specific gravity) and quality of the present available material with what may be considered to date as a partial success and there are hopes that with a return to normal business conditions, there will be a return of demand for barite and a commercial operation may be worked out.

Little Butte Deposits

The most extensive barite deposits in the district lie within the boundaries of the southerly claims of the Little Butte Amalgamated Mines Company, and one mile south of the company's plant (a copper exploration).

The deposits lie about two miles from the town of Bouse, a station on the Parker division of the Santa Fe Railway, approximately 300 miles east of Los Angeles.

The occurrence is in veins that, on the crests of low hills, appear as filling large vents from which the veins are enclined to radiate and the

barite mineral is found in extensive outcrops throughout a longitudinal distance of three thousand feet and a width of from 300 to 400 feet.

This area shows a wide variety of rock formations in a territory consisting of gravel washes and low rounded hills, forming a low ridge throughout the length of the claims. At the north end of the claim Stillman No. 7, the veins cut up through the shales. South of No. 1 Hill, (see map accompanying this report,) they occur in arkosic sandstone and in shales. No. 3 Hill shows a contact between sandstone and a quartz porphyry. A transverse fault near the south end of the claim appears to have thrown the barite veins a short distance to the west, and the formation south of the fault is largely a conglomerate as the veins ascend to the top of Nill No. 3 in the Stillman No. 9 claim.

In the gulch south of this hill, there is a junction of two narrow barite veins that are, however, persistent to a point in the gulch where they are lost beneath an extensive covering of wash, on the south side of which is a gulch showing several veins with widths of from one foot to three feet. The widest one and the most westerly one, ascends the south bank of the gulch for a distance of about 100 feet, where it

horsetails out into stringers in an andesite breccia. Towards the east side line of this claim is a barite vein that, starting with a width of one foot, crosses the side line of the Stillman No. 9 claim into the claim located a year ago as "Chapin Barite" Claim, where it shows a width of 10 feet, 4 feet of which is a very clean barite that gave a specific gravity of 4.10 on the surface.

The surface samplings of many of the barite veins above recounted are as follows. Reference to map; at points marked in red;

It will be noted from the map that the principal work done so far on these claims was on the crests of the low hills where the barite showed the greatest widths.

The barite veins at the north end of Stillman No. 7 claim were not sampled as no holes or trenches were made across them. These veins vary in width from 2 to 4 feet, and show an average grade barite.

West of Hill No. 1 a narrow vein of barite showed a specific gravity of 4.10.

Two trenches were made near the crest of Hill No. 1 The trench on the east side, 4 feet deep and about 30 feet long, showed barite with specific gravity of from 3.90 to 3.99. A few feet at south end was ferruginous and ran 3.22.

On Hill No. 2 a deep trench was made near the crest about 25 feet in length and 7 feet in depth at deepest point. The barite showed the entire length with specific gravity of from 3.69 to 3.99. Owing to the width of barite at surface, further work at this point should be the sinking of a shaft to determine if an improved grade of barite can be evidenced with depth.

Hill No. 3 is in a conglomerate containing a great deal of iron oxide and the barite found here is very ferruginous, -a cobbed sample ran a specific gravity of 3.96.

In the gulch south of No. 3 Hill where the vein about 2.5 feet wide follows the gulch, an outcrop sample showed but 2.99 specific gravity, and later when opened up showed a specific gravity of 3.87.

In the south gulch on the Stillman No. 9 claim, a prominent vein of barite crosses the gulch, and shows an outcrop width of 6 feet that gave specific gravity of 2.99. Some development here did not show an improved grade but a branch vein running west along the gulch looked more favorable, but was not sampled due to its irregular outcrop.

The best outcrop discovered lies in a gulch and occurs in a shale similar to the occurrence of barite at Hill No. 1. This showed a surface width of

10 feet and is on the new claim, located as the "Chapin Barite" Claim. This outcrop showed 2.5 feet near the foot wall with a specific gravity of 4.10 and 1.7 feet near the hanging wall with specific gravity of 4.28. A trench that was made showed a very white colored barite but a bit more width of mixed ore in bottom of trench. However a further depth may show considerable improvement.

The above descriptions of the extensive occurrences on these claims will give an idea of the possibilities for tonnage if further exploration can determine the depth to which it will go. As you know, it is Mr. Webber's opinion that similar veins can be expected to run to a depth of 100 feet or more, and in such case I think his estimate of 70,000 tons would be very conservative.

The specific gravity of this barite is not up to a commercial grade so far as the little development on it has shown. The want of weight is due to the lime and flourine content that is shown in the analyses so far made from the surface ores. This lime may show much less as depth is attained and may give us a product much more amenable to a successful concentration.

As you have full reports on the concentration test that you have had made, I shall not attempt to include them in this very hurried report, for you have the conclusions of both the Southwestern Engineering Co. and the Engineer's, Inc. as to what can be done.

Los Angeles, California
May 1st. 1944.

Dear Mr. de Lisle;

Just a hurried note, along with the only copy I have of the data. I'm not afraid to send it to you as know you will care for it, and I can get it mailed this eve.

You may not care for part of it, but you may be able to glean something from it.

I'd advise that you see Mr. Harritt the writer of that letter to Paul. He lives in the old Osborn home on the river a little distance from Parker. Far as I know he can give you more direct information of the underground that any other person living. He told Paul also me that there was plenty of ore and he always wondered why they would not ship it. You might be able to see him at the Jap camp as he is one of the supervisors there and there during the gay.

Thanking you I am,

Very truly,

Eva D. Adams

COPY

UNITED MINES COMPANY OF ARIZONA

THE DISTRICT

The district is comparatively new and came into prominence with the completion of the Santa Fe Railroad, between Cadiz, California, and A. & C. Junction, Arizona. It is situated about four miles west of Bouse in Yuma County, Arizona, about 144 miles west of Phoenix, and 315 miles from Los Angeles. This railroad passes within 3,000 feet of the main workings on the property of this company.

The district has developed slowly owing to the fact that the productive areas were in control of a few interests who have not been able to develop them rapidly for lack of capital. The elevation is 1,000 feet above sea level, and is about 600 feet above the bed of the Colorado River, 20 miles distant. Fuel is obtained from the California Oil Fields. Water for ordinary purposes is obtained by driving wells into the sedimentary formations. The country is dry and arid, characteristic of that section. The climate is favorable for operations throughout the year. The nearest custom smelters are at Humboldt, 200 miles distant, and Hayden, 250 miles distant.

THE PROPERTY

The property consists of three contiguous groups of claims that cover a large pertion of each of the three productive areas of the district and are known as the LITTLE BUTTE GROUP, the ARIZONA PRIDE GROUP, and the BULLION GROUP, aggregating 600 acres. The title is free and clear of encumbrances and held by location pending patent proceedings. The claims are the oldest in the district and there are no conflicts.

The improvements consist of substantial buildings for management, office, lagoratory, boarding house, and sleeping quarters for a force of one hundred men; telephone line to Bouse, and hoist and general mines equipment on the Little Butte Group.

The new equipment to be provided includes air compressor, drills, pumps, etc., to continue the main shaft to a depth of 600 feet, or until the sulphide zone is reached.

MINERAL FORMATIONS

The formationss of the district consist of a conformable series of sedimentary rocks (conglomerates, shales, sandstones, and limestone) of great thickness, dipping in all directions from

a central "core" or dome of uplifted granite and gneiss, and entirely surrounding adjacent intrusive masses or lenses of schistose diorite and andesite that incline in the opposite direction and trend northwest and southeast. This core is oblong and has a superficial area of about 350 acres. It forms the central zone of disturbance of the district. On either side and within a radius of a mile or less occur the displacements and systems of fissures which form the ore deposits.

Two distinct series of vein fissures occur, which were formed at different periods. The first is a series of wide fissures which trend northeast and owe their origin to the primary disturbance at the time of the diorite intrusions. These veins originally carried gold but no copper.

The other series were formed at a much later period, following the andesite flows. These veins are gold and copper bearing and follow the course of the eruptives, intersecting the gold veins at right angles and often displacing them.

PRIMARY ORE DEPOSITS

Gold occurs in veins of white and transparent quartz which form conspicuous outcrops in the middle area of the district, but to a lesser extent in other parts owing the erosion. Cavities in the quartz contain small aggregation of wire gold, It also occurs as minute intergrowths in the body of the quartz. The gold veins are closely analagous th those worked in the Congress Mine.

The copper deposits appear at the surface in belts or zones of small parallel filled fissures. The veins range from a few inches to more than a foot in width and are separated by bands of the country rock. Along the main system of mineralization interlacing stringers of quartz and limonite or specular iron unite the copper veins across the belt, forming a gossan or iron capping having a width of from 50 to 300 feet in places and extending for a distance of 3,000 to 6,000 feet in length.

This mineralization follows the course of the eruptives, effecting a partial and often complete replacement of the country rock, due to the circulation of hot mineral solutions. The largest ore shoots or deposits result where a junction of the fissures afforded free circulation of the solutions, or was favorable for dissolution, or replacement. The process was of long duration and on a gigantic scale, and is shown by the great number and extent of mineral-bearing veins, deposits, and ore shoots formed, and indicates the existence of copper mineralization to great depths.

Primary sulphide ore was encountered in the Bullion Group at a depth of 100 feet in tight groung which prevented oxidation. These show the original copper mineral to be a copper iron sulphide or chalcopyrite averaging from 10 percent, to 20 percent, copper contents, and from $2.00 to $10.00 per ton in gold. The

copper also occurs in the form of chalcocite or glance of a primary nature, along the central cores of the banded fissures in the eruptive areas of gossans, indicating permanency with depth.

SECONDARY ORE DEPOSITS

Secondary deposits of copper in the form of Carbonates, Malachite, and Azurite occure throughout the gossan area and in the contact zones between the eruptive and sedimentary formations, as a result of alteration and replacement. These ores occur in irregular bodies and are the remnant portion of large deposits previously existing. These ores have furnished the production of the mines up the present time.n

As is characteristic of all large copper deposits in an arid climate, these have become partially or wholly impoverished by oxidation and leaching velow the surface to a considerable depth and the values have been carried downward by descending circulating waters to be again deposited at or near the permanent water level, thus enriching the primary deposits and producing phenomenally rich ore bodies to an extent commensurate with that of the leached mineralized area.

These gossans and contact zones furnish a most striking illustration of such conditions and give promise of large areas of enriched ore deposits of a high-grade character not exceeded by those of any of the large known deposits in this section of the country.

ORE DEVELOPMENTS

A total of 3000 feet of development work has been done on the property. In addition to proving up extensive bodies of profitable gold and copper ores in the oxidized zone, these workings disclose leached areas of great extent that, with further depth, will undoubtedly prove to be high-grade ore bodies of a primary nature. These results may be summarized as follows:

On the LITTLE BUTTE claim on incline shaft has been sunk to a depth of 380 feet on one of these fissures which trends through an eruptive zone 600 feet wide and 6,000 feet long, covered by this group. The eruptives consist of intrusive masses of diorite and andesite surrounded by limestone, which forms several contacts with the eruptives, in and along which the mineralization has been very extensive.

Levels were driven on thevein at 35 feet, 120 feet, 210 feet, and 310 feet, at which depth the shaft was in the foot wall and again cut the vein at 370 to 380 feet. Water was encountered at 200 feet from the surface, below the level of which the mineral areas have been extensively leached at the depth of 380 feet and

indicate that permanent water level has not yet been reached.

Between the 120-foot level and the surface large remnant bodies of carbonat ores were encountered over a distance of 600 feet along the vein. Several hundred tons of these ores were mined and shipped to custom smelters, showing results as follows, with copper at 13 cents:

250 tons. Av. val.....Gold, $8.20; Copper, 10 per cent; iron, 30 per cent. Total value $5,535.62.

138 tons Av. val.....Gold, $6.50; Copper, 8.5 per cent; iron, 31 per cent. Total value $2,505.47

A recent shipment of 30 tons from a point 600 feet south of the shaft, gave the following results, with copper at 25 cents:

30 tons Av.val....Gold, $1.45; Copper, 10.8 per cent. Gross value, $1,400.

From the 120-foot level a cross-cut was driven through 75 feet of the andesite to a contact with the limestone. The entire area of andesite shows remnant values in gold and copper, although it has been thoroughly leached through the channels of the interlacing seams and fissures; and it is not improbable that this entire mass will become a zone or lens of high-grade commercial ore by enrichment from the leached values at water level. Other large areas of this character will be opened by the extension of these workings.

On the 210-foot level the copper values have practically all been carried away, but the vein shows an average of $7.00 per ton in gold in the drifts for a distance of over 200 feet. At the 310-foot level the same conditions prevail. A short drift on the vein at this point shows an average value of $8.00 per ton in gold.

At 360 feet a noticeable increase in the values of both gold and copperoccurs. At 370 feet samples of the vein matter gave results of $27.60 in gold and 7.6 per cwnt in copper. Sampling at 380 feet gave results of gold $22.00 and copper 10.5 per cent to the ton. From these conditions it is believed that the bottom to the shaft is approaching the zone of enrichment. The increase in the volume of water makes it necessary to equip the shaft with pumping plant to handle it. This will require additional equipment in the way of air compressors, etc, as the climate will not permit of the use of steam underground for pumping.

The following 2 groups are NOT now the L.B. property.

The ARIZONA PRIDE GROUP of claims is located in the central or granite-gneiss area adjoining the Little Butte Group on the south. The veins here are of the gold-bearing or first series. There are a number of veins of this character in the property, on one of which a shaft has been sunk 50 feet deep and a drift extended for 50 feet in either direction, from which 150 tons of ore were

were taken. Ninety tons of this ore yielded $100.00 per ton in gold. Sixty tons averaged $40.000 per ton. Probably 300 tons more exposed in the workings will average $15.000 per ton. The vein faulted at the bottom of the shaft and the fault has not been worked out. On an adjoining claim of this group at the intersection of two large veins a shaft is sunk to a depth of sixty feet, which shows a body of ore 4 feet wide that averages $9.00 per ton in gold. These ores are free-milling and with those opened up in the Little Butte ground can be relied upon to supply a mill of 50 tons' capacity.

The BULLION GROUP of claims covers formations similar to those of the Little Butte Group, consisting of sedimentary shhists, shales, and limestone fissured and intersected by eruptives of diorite and andesite, and traversed by fissure veins which follow the course of the eruptives. At the junction of three veins forming an ore measure about 350 feet in width, a vertical shaft has been suck to a depth of 208 feet, all in leached vein matter. It is the intention to sink this shaft to permanent water level before exploring the ground laterally.

OPERATIONS

The main shaft on the LITTLE BUTTE GROUP is being equipped with pumping plant and compressed air plant to unwater the mine and continue the work of sinking to permanent water level. The upper levels will be extended to further develop the oxidized copper ores, from which shipments will be continued while the work in the shaft is progressing. It is believed that the sulphide zone will be reached within 300 feet, as the country is low and flat and drains to the Colorado River, 20 miles distant, the bed of which is not over 600 feet below the elevation of the shaft.

Other portions of this large mineralized area will be explored by churn drilling, where the conditions indicate probable ore bodies of considerable magnitude. The developed gold ores require only the cobstruction of a 50-ton stamp mill to yield a large revenue independently of the copper ores; this will be erected as soon as operations are under way.

It is from the enriched sulphide zone, however, that the great wealth of this property is expected. With fluxing materials on the ground, the proposition will then become one of direct smelting in which the oxidized ores can be used to better advantage.

EXTRACTS FROM REPORTS OF ENGINEERS

Mr. John Wellington Finch, Consulting Mining Engineer, in an exhaustive preliminary geological report upon this district, summarized the conditions as follows:

"The history of geological events have been ideal for the formation of extensive mineral deposits. Surface indications on the whole give promise of a union of surface vein systems into ore shoots, particularly at certain favorable points. So far as the somewhat fragmentary data obtainable from surface exposures will admit of prediction, the permanency of ore with depth is probable.

"Though not to be regarded as a permanent resource, the gold veins should supply an immediate source of revenue.

"The copper veins, the ultimate and permanent resource, if such exists, may be developed along with the working of the gold veins, which should pay the expense of such operation.

"Not only the Jerome District, which is in many respects precisely analagous, but many other mining regions, demonstrate the adaptability of shists to the receipt of ore deposits, particularly when they have been subjected to disturbances which develop open texture by rupturing the rock along lines of foliation. The cleavage fractures act as open receivers for precipitating solutions. In this region the fissures seldom parallel the schistosity, and the resulting opening of the leaves of rock is emphasized by the diagonal displacement.

"In Arizona there are many instances of minerals bodies in limestone. The Copper Queen, at Bisbee, is a typical illustration. The limestone is to be regarded merely as a favorable receptacle for the ores themselves. Limestone is so soluble that great cavities may thus be formed and ore deposits by precipitated in these or the limestone may be replace d with gangue minerals and metals, or by simultaneous solution and deposition.

"The most conspicuous copper minerals are carbonates, malachite, and azurite, and occasionally a mineral that appears to answer the description of gehrhardite, a rare copper nitrate first discovered in the Unite Verde mine at Jerome. The red oxide, cuprite, is found only occasionally as specimens. The sulphide, chalcocite (glance) is obtainable in many places along the exposures of the larger carbonate veins. By opening the vein for a few inches below the surface this mineral appears as the central core of a banded vein. The bands adjoining the sulphide on either side are carbonates which form the larger portion of the vein.

"The presence of chalcocite, evein in much smaller quantities than are found in this district, is a favorable indication of permanence with depth. Though recent investigations point toward the possibility of a secondary development of this mineral under certain conditions, in this region it shows clear evidence of its primary character. The banded vein structure in a phenomenon of alteration and the central sulphide core of the veins has been the source of the copperfor the growth of the secondary minerals."

"On the whole, the balance of favorabel and adverse considerations inclines strongly toward the former. With the exercise of proper caution the value of the properties can be determined at very small expense, and there is an alluring possiblilty thatone more large Arizona Producer remains to be opened in this district."

In a more recent report on the ore deposits in these properties, Mr. S. T. Godbe, E.M., of Salt Lake City, states:

"A careful study of the gossans of this property from all the information at hand indicates that several of the largest of them originally contained a large proportion of chalcopyrite, auch as to have aferaged in bodies from 10 per cent. to 20 per cent. in copper contents. I have not before seen a district with such conclusive and satisfactory evidence in the surface gossans for large bodies of copper iron sulphide ore of profitable grade as encountered in this property and district.

"While the rich oxidized surface ores in these properties may yield considerable profit, they are only the remnants and redeposit of previously existing and evidently rich and extensive ledges, now impoverished by surface exidation and leaching, and it is therefore from the original sulphide ore below permanent water level that the great wealth of these properties may be confidently expected.

"Another encouraging feature of the situation is that, as the surrounding country is low and flat, thus offering no ready escape from the ledges for the descending surface leaching waters, an important deposit or concentration of secondary enrichment ore is apt to be found at the depth of the sulphide zone.

"There should be no discouragement, therefore, if the permanent sulphide zone is not reached close to the surface, for under the circumstances the greater the extent of oxidation and leaching the larger the deposits of secondary enrichment are apt to be; In my experience few copper districts have offered as much great returns for so little outlay in development."

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EXTRACTS FROM TWO LETTERS WRITTEN BY THE LATE

MR. SAMUEL T. GODBE, E.M.

Early in 1923;- Each time i visit bouse i am more and more impressed with the satisfactory and convincing natureof its mineralization as compared to other districts. I have seen no other localities where the conditions point so conclusively to such large as well as rich bodies of Copper Ore when the sulphide zone and zone of secondary enrichment is reached.

Another letter latew in 1923.

"The evidence at Bouse is that there was no barren minerals, such as Hemitite or Pyrite in the primary mineralization, but that it c consisted entirely of Chalcopyrite. The Chalcopyrite has evidentoccurred as a replacement of amDiorite dyke or dykes of great width and extent; in some places the replacement was only partial, thus forming concentrating ore, but in many casesthe evidence is that the diorite has been completely replaced from wall to wall with Chalcopyrite, a little over a 30% copper mineral; the leaching of this rich primary mineral would form a vast amount of secondary enrichment which would redeposit, forming an average of ore of probubly twice the richness in Copper of the original primary from which it was leached. That the primary was very extensive at Bouse is evidenced by the remarkable width and extent of the Iron Gossans. Another feature of importance in the case is the unusual depth to which the leaching has occurred; the workings show the oxidation and leaching to extend the depth of 500', and it is likely that the permanent sulphide zone and zone of secondary enrichment will be reached 600 feet the same as at Swansea. The leaching of so wide and extensive, as well as rich primary ore down to such as depth, would form a most phenominal redeposit on an already rich primary of Chalcopyrite at and below the leached zone and permanent water level. These conditions are so clearly indicated at Bouse that no term short of 'large' as well as 'rich' properly fits the situation."

My understanding is that Mr Godbe was at one time Consulting Engineer On The Little Batte.

E R A

Below is an extract frommman exhaustive report of the Plomosa District, of some 17 pages made by the late Wm. A Farrish E.M. who was counted one of the best andnwith the Government. He reaches the following conclusion.

" All the geological evidences and facts justify the opinion as UYE that under well directed management the chance of failin the operation as a whole, backed by sufficient capital, will be reducedto a minimum, and therefore they would make one of the greatest gold-copper properties of the United States ".

PORTION OF COPY OF LETTER WRITTEN BY MR. MARTIN

COPY OF PORTION OF LETTER WRITTEN BY MR MARTIN
Mr. Martin was at one time a partner in The Little Butte.

" You will remember at the 300' (vertical) level, the United Mines Company, reported gold $27.00 per ton and 10% copper. Mr. Hess, their Superintendant wrote me that he assayed it but made it somewhat less than the report of the United Mines Compant, and that he did not ship any of it.

Mr. Henry C. Carr, Consulting Engineer wrote Mr. Hess not to ship any of it, but to leave it as an asset until the Sulphide ore was reached at permanent water level. As a war measure they were not allowed to sell stock to go ahead.

Mr. Homer B. King of Pasadena who had charge of the Little Butte and put the shaft to that level, told my son and I that both he and his Sup't sampled 12' at that level, and it assayed a little over one oz. in gold and 10% copper. So far as we personally know this is hearsay, but confirmed as it is by others that are disinterested, we fully believe the ore is there. The map shows that they never raised to the ore between the 500' anad300' vertical levels. Mr. Hess reported to Mr Denton at the time they closed down, that he thought they were within 80' to 100' of where they should encounter ore in the 500' vertical level at the 170' north drift (650'incline). "

What follows in the original 'or rather copy of original' has to do only with discusion of a deal then pending, also mentions a cave-in at the 300' vertical level. The last named was repaired and that being the case no need to copy. However you are at liberty to read it if you wish.

" Also in my posession is a copy of letter written by Mr. Henry C. Carr saying to Mr. Hess to Ship no ore."

" Mr. Homer B. King mentioned above came to the mine in May 1935 wanting to get the property for people that were looking for Copper-Gold; the mine was at that time under option, and he wished to be advised by wire shoupd the deal fall down; before the property was in the clear for a deal, his address was lost, and I did not locate him for three years; when I did he had acquired another property some place in California (I do not remember the address) and had a mill built on it and already to go."

The writer of this letter had charge of the Little Butte Mine in 1928 - 1929 - Now resides in Parker.

COPY

Parker Arizona.
April 13th. 1943.

Mr. Paul Dueker,
Bouse, Arizona.

Dear Paul:

Replying to your request for information as to the 300 and 400 levels in the Little Butte Shaft; about all I can tell you is from memory. I unwatered to the 600 level in 1928 and was extremely busy with water problem as you can well imagine.

The ore on the North 200, on which I sunk a small winze, continues to the 300 on the North side of the Shaft; we sampled on the North 300, and as I remember, the ore showed from 5% to 7% Copper with a fair Gold content, same as on the 200 level- this ore is not large, merely a foot to a foot and one half wide. I think this is the last place the ore shows on the North side of of the shaft, as the shoot rakes very fast to the South.

On the 400 levelthere is quite a body of ore that ran as far as I can remember around 10%; in fact I could never understand why I was not allowed to do some mining there while the unwatering was in progress. When a break-down in the Equipment lost the 500 ft, station, the intention was to hold the water at the 400, and do the mining there, while larger Equipment was installed; I believe that a further delay at this time lost the water entirely (I had been re-called to Mr. Royer, of the Empire Mine, who had loaned me to the Little Butte for the unwatering); and relelved by the late Frank Johnson of Middle Butte Mines at Mohave; I saw Mr. Johnson in 1936 while I was Sup't of the Silver Prince at Mohave and he told me that the 500 showes better ore than the 300 or 400, but ha had no time to look into it very much before losing the water.

In case you attempt to unwater, Remember that the 270 or less, you are unwatering two shafts as well as the 300 and 400 levels and two large skip pockets and the water will recede very slowly to below the 400 levels an old shaft leaves the new one at about the 240 and goes out into the hanging; access to the 300 is through thid old shaft; another connection at about 400. All I can tell you of the 500 is, there is a fine pumpstation there and you will find a Triplex Station Pump that I installed in 1928.

Sincerely,

Signed W. W. Harret.

O & M 11-20-43

Copy

ORE SETTLEMENT

PHELPS DODGE CORPORATION

Contract No. 604

UNITED VERDE BRANCH

REDUCTION WORKS, CLARKDALE, ARIZONA

APR 13 1944

BOUGHT OF New World Mining Co.

ADDRESS 1517 E. Washington St., Phoenix, Arizona

MATERIAL Siliceous Ore **SHIPPED FROM** Bouse, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet	WEIGHT Moisture	WEIGHT Dry
3-15-44	AT	82671	100,560	4.03	96,508

Smelter Lot No. 2801

Shipper's Lot No. 3-16-44

Date Sampled

E. & M. Journal Quotation Average for Week Ending 3-15-44

N. Y. Copper	11.775	c per lb
London Copper	2.50	c per lb
Deduction		c per lb
N. Y. Silver		c per oz
U. S. Silver	$ 34.9125	c per oz
U. S. Gold Price	85% - 2.793	per oz
Deduction		per oz

PER TON OF 2000 LBS.

	Assay	Deduct	Pay For	PAYMENTS	AMOUNTS Per Ton	AMOUNTS Total
Gold	.11 oz.	% -	.11	oz @ $ 32.1195	3.53	
Silver	.08 oz.	%		oz. @		
Copper	2.21 %	= 44.2 lbs. less 10	lbs. = 34.2	lbs. @ 9.275 c	3.17	
				Total Payments		670
	Analysis	Deduct	Charge For	CHARGES		
			Minimum	Treatment Base	2.75	
		Silver - 10% of Payment				
Copper Penalty	10 lbs	lbs.		lbs. @ c per unit		
Zn	0.1 %	%		% @ c per unit		
Fe	22.6 %			% @ c per unit		
CaO	0.4 %					
SiO_2	47.4 %			Total Treatment	2.75	
Al_2O_3	9.2 %		Pay for	LESS CREDITS		
S	0.5 %					
	%			% @ c per unit		
	%			% @ c per unit		
				Net Treatment		2.75
				Net Price per ton f. o. b. Clarkdale		3.95

Gross Proceeds	48.254		Dry Tons	@ $ 3.95	per ton	190.60
Less Freight From	Bouse, Arizon	50.28	Gross Tons	@ $ 1.40	per ton	70.39
Less			3% Tax			2.11
Cost of Umpire for Ag - Root & Simpson						4.00
Paid to: Eva D. Adams, 528 W. 104th St., Los Angeles, Calif. (10% Royalty)						19.06
						95.56
Balance Due New World Mining Co.						95.04

Correct Geo - Checked RH Approved J.B.T.

Manager

11-20-43

ORE SETTLEMENT

PHELPS DODGE CORPORATION

Contract No. 604

UNITED VERDE BRANCH

REDUCTION WORKS, CLARKDALE, ARIZONA

MAY 23 1944

BOUGHT OF New World Mining Co.
ADDRESS 1517 E. Washington St., Phoenix, Arizona
MATERIAL Silicious Ore
SHIPPED FROM Bouse, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet	WEIGHT Moisture	WEIGHT Dry
4-20-44	SP	95173	96,940	2.17	94,836

Smelter Lot No.	2992	
Shipper's Lot No.		
Date Sampled	4-20-44	
E. & M. Journal Quotation		
Average for Week Ending	4-19-44	
N. Y. Copper	11.775	c per lb
London Copper		c per lb
Deduction	2.50	c per lb
N. Y. Silver		c per oz
U. S. Silver		c per oz
U. S. Gold Price	$34.9125	per oz
Deduction	8% - 2.793	per oz

PER TON OF 2000 LBS.

	Assay	Deduct	Pay For	Payments	Per Ton	Total
Gold	.135 oz.	%	.135	oz @ $ 32.1195	4.34	
Silver	.11 oz.	%		oz. @ c		
Copper	1.84 %	= 36.8 lbs. less 10 lbs.	= 26.8	lbs. @ 9.275 c	2.49	
				Total Payments		6.83

	Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
			Minimum	Treatment Base	2.75	
		Silver - 10% of Payment				
Copper Penalty	10 lbs	lbs.	lbs. @	c per unit		
Zn	0.3 %	%	% @	c per unit		
Fe	23.3 %		% @	c per unit		
CaO	0.0 %					
SiO_2	48.2 %			Total Treatment	2.75	
Al_2O_3	8.3 %		Pay for	LESS CREDITS		
S	0.3 %					
	%		% @	c per unit		
	%		% @	c per unit		
				Net Treatment		2.75
				Net Price per ton f. o. b. Clarkdale		4.08

Gross Proceeds	47.418	Dry Tons @ $ 4.08 per ton		193.47
Less Freight From	Bouse On 50.00 (min)	Gross Tons @ $ 1.40 per ton	70.00	
Less		3% tax	2.10	
Paid to: Eva D. Adams, 528 W. 104th St., Los Angeles, Calif. (10% Royalty)			19.35	91.45

Balance Due New World Mining Co. 102.02

Correct *Go* Checked *HS* Approved *JBO* Manager

Form CQ 2070 5 M 11-20-43

ORE SETTLEMENT

PHELPS DODGE CORPORATION

UNITED VERDE BRANCH

REDUCTION WORKS, CLARKDALE, ARIZONA

Contract No. 604

JUN 28 1944

BOUGHT OF New World Mining Co.

ADDRESS 1517 E. Washington St., Phoenix, Arizona

MATERIAL Silicious Ore **SHIPPED FROM** Bouse, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet	WEIGHT Moisture	WEIGHT Dry
6-12-44	AT	172417	98,520	1.00 (Min.)	97,534

Smelter Lot No.	3126	
Shipper's Lot No.		
Date Sampled	6-12-44	
E. & M. Journal Quotation		
Average for Week Ending	6-7-44	
N. Y. Copper	11.775	c per lb
London Copper		c per lb
Deduction	2.50	c per lb
N. Y. Silver		c per oz
U. S. Silver		c per oz
U. S. Gold Price	$34.9125	per oz
Deduction 8% -	2.793	per oz

PER TON OF 2000 LBS.

	Assay	Deduct	Pay For	Payments	Per Ton	Total
Gold	.12 oz.	%	.12	oz @ $ 32.1195	3.85	
Silver	.20 oz.	%		oz. @ c		
Copper	2.265 %	= 45.3 lbs. less 10	lbs. = 35.3	lbs. @ 9.275 c	3.27	
				Total Payments		7.12

	Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
			Minimum	Treatment Base	2.75	
		Silver - 10% of Payment				
Copper Penalty	10 lbs	lbs.	lbs. @	c per unit		
Zn	0.1 %	%	% @	c per unit		
Fe	20.9 %		% @	c per unit		
CaO	0.3 %					
SiO_2	47.8 %			Total Treatment	2.75	
Al_2O_3	8.5 %		Pay for	LESS CREDITS		
S	2.2 %					
	%		% @	c per unit		
	%		% @	c per unit		
				Net Treatment		2.75
				Net Price per ton f. o. b. Clarkdale		4.37

Gross Proceeds 48.767	Dry Tons @ $ 4.37 per ton		213.11
Less Freight From Bouse On 50.00 (Min.)	Gross Tons @ $ 1.40 per ton	70.00	
Less	3% Tax	2.10	
Cost of Umpire for Ag - Union Assay Office		3.00	
Paid to: Eva D. Adams, 528 W. 104th St. Los Angeles, Calif. (10% Royalty)		21.31	96.41
Balance Due New World Mining Co.			116.70

Correct [signature] Checked [signature] Approved [signature] Manager

Washington, D.C.
March 30, 1944

SUBJECT: New World Mining Co
P. J. Dueker,
Transfer of premium title.

I should have written you about this before but had mislaid the scrap of paper I wrote the note on.

This transfer was speeded up and finally made March 21 and the applicant notified.

W. C. Broadgate

LITTLE BUTTE. P. J. Dueker, Leassee, Bouse, Arizona.

Water stands at the 200 foot level of the 700 foot main shaft. The shaft is sunk on an incline on the vein, and ore above the water level is about exhausted. A Preliminary Development Loan was granted late in September for the purpose of re-entering the 300 and 400 foot levels to remove the unmined blocks.

The property will, in all probablility, never be a large or highly profitable producer. It can probably produce 2 cars per week of 6% copper ore of high silica content. Some price stimulant may be required, but the fluxing nature of the ore as well as the copper to be gained warrant it.

from COPPER REPORT NO. 2, DECEMBER 23, 1942, by Earl F. Hastings, for COPPER BRANCH, WAR PRODUCTION BOARD.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LITTLE BUTTE

Date September 28, 1942

District Plomosa, Yuma Co.

Engineer Elgin B. Holt

Subject:

PRODUCTION POSSIBILITY

OWNER: Mrs. Eva D. Adams, 528 W. 104th St., Los Angeles, California;
LESSEE: P. J. Dueker, Bouse, Arizona

METALS: Copper and gold.

LOCATION

The Little Butte mine is located 5 miles west of Bouse, a station on the Santa Fe Railroad, with which the mine is connected by a level desert road, in good condition. This property has been worked from time to time for the last 40 years or more, and has produced a considerable amount of shipping ore, of which there is no record available, excepting for the years 1940-41-42, as set forth below. Area: 21 claims.

DEVELOPMENT WORK

The main two-compartment shaft has been sunk on slope of vein to a depth of 700 feet; but shaft is under water below the 200-foot level. Property was originally worked by a company headed by Charles Denton, around 1909. Nearly all of the ore has been worked out in the Little Butte shaft to the 200-foot level, where water stands, as stated. Lessee, P. J. Dueker, has applied to RFC for a loan of $5,000 with which to unwater part of the shaft in order to open up another level or two in which are unmined blocks of ore.

1940-41-42 PRODUCTION

During 1940, 31 cars of ore were shipped to the Magma Copper company smelter; said ore averaging around $14.00 per ton in copper and gold. During 1941, two cars of ore were shipped, averaging $25.00 per ton in copper and gold. Also, two cars of ore were shipped in 1942, averaging 6 per cent copper and 0.25 ounce gold per ton. All of the above shipments were made from the Little Butte shaft, which produces copper and gold ore.

EVA MAY SHAFT

During 1941 a gold vein was discovered 700 feet west of the Little Butte shaft. The Eva May shaft was sunk on this new vein to a depth of 65 feet, with drifts on the 30-foot and 65-foot levels; the said vein being 15 feet wide in granite. During 1941, 800 tons of ore were shipped from the Eva May workings, averaging $30.00 per ton in gold and 80 per cent silica; this class of ore being needed by smelters as fluxing material due to its high silica content. The 1942 production from the Eva May workings amounted to 400 tons, prior to June 9th, assaying about the same as above noted - $30.00 gold per ton, net smelter returns.

MEN EMPLOYED

Around 7 men are employed at this property; these being mainly sub-lessees.

PROBLEMS

The main problem at this property is to secure new working capital with which to unwater the Little Butte shaft, extend the various levels and block out new ore reserves. As stated, Lessee, P. J. Dueker has applied for a Preliminary Development Loan to RFC to be used in partly unwatering the mine. After this work has been carried out, he will automatically apply for a $20,000 Development Mining Loan from RFC for the purpose of opening new ore reserves. After all this is done the mine can again be put into steady production of copper and gold ore.

This mine will never make a large property; but if reopened in a proper manner, it can be depended upon to produce around 8 car loads of ore per month, assaying around 6 per cent copper and 0.25 ounce gold per ton.

Signed: Elgin B. Holt

Granted

LITTLE BUTTE

Plamosa Mining District

Reconstruction Finance Corporation
Preliminary Development Loan

September 9, 1942

Earl F. Hastings

Docket No.		C-ND-32
Date Application Received		August 31, 1942
Date of Field Examination	February 14, 1940	and June 9, 1942
Date of Report		September 9, 1942

1. Name and address of applicant (correspondent):
Paul J. Dueker, Bouse, Arizona.

2. Character of project and estimated cost thereof:
Unwater and repair all workings below the 200 foot level.

3. Location of property:
Plamosa Mining District, near Bouse, Yuma County, Arizona.

4. Applicant's interest in or ownership of property:
Applicant has lease with option to purchase from Eva D. Adams, owner.

5. Loan requested:
$5,000.

6. Loan recommended:
$5,000.

7. Comments:
(A) Field Engineers of the Department have observed the property under the direction of the present operator many times during the past two years and have noted shipments, all of which have lent credit to the possibilities of the mine.

(B) While the data in connection with the lower levels is vague and incomplete, the record of production and strength of the vein to the water level is of sufficient weight to make the necessary expenditure for unwatering.

(C) The gold bearing vein should be eliminated from any development program for an indefinite time, however, the presence of it (as well as the gold content in the copper ore) is an asset in the consideration of repaying loans on the property.

(D) It is not believed that the docket presentation does credit to the property and this recommendation is based, partially, on other sources.

(E) Added to the docket is miscellaneous correspondence between the Department and the applicant and a copy of a cursory survey of producing mines as applied to this property.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Reviewed and Approved by:

Earl F. Hastings, Assistant Director
and Projects Engineer

J. S. Coupal, Director

ED

NEWS ITEM

June 12, 1942

LITTLE BUTTE MINE

Little Butte Mine, owned by: Eva D. Adams.

Address: Bouse, Arizona.

Property now being operated ~~by~~ under lease by P. J. Dueker, of Bouse, who sub-leases to others; there being seven men employed.

An important gold vein has been discovered at the Little Butte mine located five miles west of Bouse, Arizona, according to a report by Elgin B. Holt, field engineer for the Department of Mineral Resources.

Holt says that the Little Butte mine proper has been worked intermittently for the last 30 or 40 years for gold and copper ore. That during the fall months of 1941 the property was taken over under lease by P. J. Dueker, of Bouse, Arizona, who shipped considerable gold-copper ore from the Little Butte shaft. However, the workmen in prospecting the surface found an outcropping of gold ore occurring in a shear zone in granite at a point around 700 feet west of the Little Butte shaft.

At the present time this new gold vein has been developed by shaft (Eva Ma
to the 65-foot level and by drifts on the 30-foot and 65-foot levels and for a length on the 65-foot level of around 70 feet. The vein stands almost vertical, is 15 feet wide and assays $30.00 gold per ton. Mr. Dueker states that 1200 tons of ore assaying $30.00 gold per ton, net smelter returns, have been shipped from this new discovery to June 8, 1942. Also, as the ore assays 80 per cent silica it is desirable for fluxing material and that one of the smelters has made an offer to purchase the ore for that purpose.

Holt also says that this new vein has all the ear-marks of a large gold mine in the making; but that deeper sinking will be necessary in order to prove the importance of this discovery.

EBH

Elgin B. Holt.

SURVEY OF OPERATING MIN. June 9, 1942

By: Elgin B. Holt LITTLE BUTTE MINE

Little Butte Mine, owned by:
Eva D. Adams,

Address: Bouse, Arizona.

Located five miles west of Bouse.

1941 production, in copper and gold, from Little Butte shaft: 2 cars averaging $25.00 per ton, net smelter returns.

1942 production, in gold and copper, from said shaft: also 2 cars (40 tons each), averaging 6% copper and 0.25 ozs. gold per ton.

1941 production from Eva May shaft, sunk on a newly discovered gold vein, located 700 feet west of the Little Butte shaft. Said gold vein has been developed to a depth of 65 feet by shaft and by drifts on the 30-foot and 65-foot levels; vein being 15 feet wide in granite and averaging around $30.00 gold per ton. During 1941, 800 tons of ore were shipped from said workings averaging $30.00 per ton in gold, net smelter returns.

1942 production from Eva May shaft to June 9, 1942, 400 tons of ore, assaying about the same as above noted: $30.00 gold per ton, net smelter returns.

Men employed: Property is now being operated under lease by P. J. Dueker, of Bouse, Arizona, who sub-leases to others. Total men employed: seven.

Problems:

Nearly all of the ore reserves have been worked out in the Little Butte shaft to the 200-foot level, where water stands; said shaft being sunk on an incline to a depth approximating 700 feet. This was done over a quarter century ago. Money is needed to unwater the mine in order to remove ore from the deeper levels. Owner has been thinking of applying for an RFC loan, but water conditions in the said shaft would no doubt preclude obtaining such loan.

NOTE: I understand that the Class C mine loan bill has passed Congress. If this is true, the Little Butte owners could no doubt qualify, or meet all the requirements in order to obtain funds under this loan in order to unwater and recondition the Little Butte shaft.

E.B.H.

Elgin B. Holt.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine LITTLE BUTTE

Date 2/14/40

District Plomosa, Yuma County.

Engineer Elgin B. Holt,
P. O. Box 288,
Kingman, Ariz.

Subject:

S Y N O P S I S R E P O R T

OWNER: Mrs. Eva D. Adams, 528 W. 104th St., Los Angeles, Calif.

METALS: Gold and copper; gold predominating.

OPERATING CO.: Little Butte Syndicate, Bouse, Ariz., F. T. Merrill, Gen. Mgr., R. H. Young, Sec. & Treas.

AREA & LOC.: Property consisting of 21 claims, is located 3 miles southwesterly from Bouse, Arizona.

DEV. WORK: Main two-compartment timbered shaft has been sunk on slope of vein to depth of 600 feet; but shaft is under water below the 200-ft. level. Property was operated by a company headed by Charles Denton around 1909, and possibly later.

PRESENT OPERATIONS: The Little Butte Syndicate, referred to above, shipped 31 cars of ore to the Magma Copper Company Smelter, since Nov., 1940. with average value of $14.00 per ton in gold and copper.

EXAMINATION: Property was recently examined and sampled by Richard de Smet and W. M. Weichman, representing the Gold Standard Mines Corporation, of Mohave County, Arizona, with a view to consummating a deal with syndicate now working the mine.

ORE RESERVES: Property has large reserves of milling ore now developed.

EQUIPMENT: Consists of hoist, compressor, air drills, 7 houses, etc.

WATER: Ample water developed in mine to supply possibly a milling plant with capacity of 100 tons daily.

ROAD: Good road to property from Bouse, a station on the Santa Fe R. R.

Seven men are now employed at property.

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 4/28/40

Mine LITTLE BUTTE MINE.

Location 4 MI. W OF BOISE.

Owner

Address

Operating Co.

Address

Pres. HAVE SHIPPED 50 CARS

Genl. Mgr. OF AVERAGE OF $15.00 ORE

Mine Supt. SINCE LAST FALL.

Mill Supt.

Principal Metals Cu-Ag.

Men Employed 5

Production Rate

Mill, Type & Capacity CONSIDERING PLANS FOR 50 TON MILL

Power, Amt. & Type

Signed JSC.

(Over)

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 12/30/39

Mine LITTLE BUTTE MINE

Location NEAR BOUSE

Owner —

Address —

Operating Co. ASSOCIATED MINES CO.

Address Ed. CREGAR

D. J. MACGREGOR

Pres. BOUSE - ARIZ.

Genl. Mgr.

Mine Supt.

Mill Supt.

Principal Metals COPPER - GOLD -

Men Employed 3

Production Rate UNWATERING MINE &

Mill, Type & Capacity PLAN TO DEVELOP.

Power, Amt. & Type

Signed J.R.

(Over)

DEPARTMENT OF MINERAL RESOURCES

News Items

Date 11/14/39

Mine LITTLE BUTTE Yuma

Location 5 MI. WEST OF BOUSE.

Owner FORMER OWNER MRS. EVA ADAMS

Address BOUSE

Operating Co. LITTLE BUTTE SYNDICATE

Address BOUSE - ARIZ.

~~Pres.~~ FLETCHER T MERRELL

Genl. Mgr. CHAS. KRANTZ

Mine Supt. CLARK RHODEHAMEL

Mill Supt.

Principal Metals Au & Cu.

Men Employed 11

Production Rate JUST STARTED - SHIPPED

Mill, Type & Capacity 3 CARS IN 10 DAYS

1ST CAR - WENT 11½% Cu - 0.86 Cu.

Power, Amt. & Type

Signed J.S.C.

(Over)

Present Operations OLD SHAFT - 700 ft. deep 47° dip
WORKING ON 100 & 200 ft
LEVEL - PLAN TO UNWATER
TO 300 ft.

New Work Planned GOOD ORE FOUND
IN FOOTWALL OF VEIN
IN RHYOLITE BRECCIA.

Miscl. Notes

July 29, 1942

Elgin B. Holt
P.O. Box 188
Kingman, Ariz.

Mr. Gustave W. Voelzel,
Technical Adviros, Mining Division,
War Production Board,
411 Caples Bldg., El Paso, Texas.

Dear Mr. Voelzel:

I note by your letter to me of July 27th, that Mr. Paul Dueker, lessee of the Little Butte Mine, Bouse, Arizona, has made application to the War Production Board for a serial number covering the operation of this lease.

That since there is not enough information available in Washington to grant a serial number, the matter has been referred to your office for investigation. Also you state, as far as you can find out, Mr. Dueker made one shipment in March and one in June to the smelter at Hayden; but you cannot find a record of any other shipments to date.

Also, I note you desire a brief description of the development on this mine and a list of the shipments of ore for the last three months, showing date of shipments, tonnage, grade of ore and to whom shipped.

In reply, I last visited this mine on June 9, 1942, at which time Mr. Dueker was in active operation and working around seven men, mainly su -lessees. The property is an old producer and has been worked in a small way for years.

There are two main workings: (a) The Little Butte shaft, sunk on a gold-copper vein to a depth of 700 feet. Teh 1941 production of this shaft, above the 200-foot level where water stands, was two cars of ore, per Dueker, averaging around $25.00 per ton in gold and copper. The 1942 production from said shaft was also two cars averaging around 6 percent copper and 0.25 ozs. gold. (b) The other workins is the Eva May shaft, which produces silicious gold ore only needed by smelter for fluxing. This shaft, per Dueker, produced in 1941 800 tons of ore, averaging $30.00 gold per ton, net smelter returns. This shaft produced up to June 9, 1942, 400 tons of ore, assaying about the same as above. I have no other records of this matter here in Kingman, but am writing Mr. Dueker today asking him to furnish you with the information requested in your letter.

Very sincerely yours,
Elgin B. Holt, Field Engineer

CC: Charles F. Willis

Little Butte

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

Date Oct 13 - 1944

Name of Mine New World Mining Co

Owner or Operator Mrs A. Delisle Phx

Address 1517 E Washington St

Mine Location Bonse - Arizona

Filing Information

File System

File No. 70

This chart to be used for gallons of gasoline required per month.

PRESENT OPERATIONS: (check X)

Production X; Development ; Financing ; Sale of mine ;

Experimental (sampling) X; Owner's occasional trip ;

Other (specify) Trips to order cars for shipping ore to Superior

PRODUCTION: Past and Future.

	Tons
Approx. tons last 3 months	450
Approx. present rate per 3 months	
Anticipated rate next 3 months	600
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	Plymouth-37	1000	70
Light or Service Trucks			
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

Copper ore

REMARKS:

This property has been a shipper for the past 2 yrs and still producing = Mr Martin A. Julian is managing the property for owners

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By A. L. Nebeker

Field Engineer

DEPARTMENT OF MINERAL RESOURCES

REPORT TO OPA ON ACTIVE MINING PROJECT

WAR PRICE & RATION BOARD 81.14.2
PARKER, ARIZONA

Filing Information

File System............

File No............

This chart to be used for gallons of gasoline required per month.

Date: 10/3/44

Name of Mine: Little Butte Copper Mine

Owner or Operator: New World Mining Co

Address: J B French Mgr

Mine Location: Bouse, Arizona

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			
Ore Hauling Trucks			
Compressors			
Other Mine or Mill Eqpt.			150

PRODUCT PRODUCED OR CONTEMPLATED: Name metals or minerals.

....

REMARKS:

....

ARIZONA DEPARTMENT OF MINERAL RESOURCES

By.........

March 16, 1944

MEMORANDUM

TO: W. C. Broadgate

FROM: George A. Ballam

On September 24, 1943 lease on Little Butte Mine in Plomosa district of Yuma County was transferred by P. J. Dueker of Bouse to the New World Mining Co., 1517 East Washington Street, Phoenix. Dueker had received a zero quota.

The new operators, A. de Lisle and George A. Flading of the above address, shipped one car of copper fluxing ore a couple of months ago and are now loading out another. They notified the quota committee of the change of status requesting transfer of quota. Have not received premium on the first shipment and operation is contingent on receipt of premiu.

While there has been no great delay so far, this operation is contingent on the premium and these people are getting nervous.

They report no irregularities in the transfer.

GAB:LP

Little Butte

Bouse, Ariz.
Sept. 5, 1942.

Mr. Earl F. Hastings,
Phoenix, Ariz.

Subject R.F.C.Loan

Dear Mr. Hastings:

Replying to yours of the Ist. inst.,I wish to submit the additional information to my loan application:

Exhibit A Item 3: It will require a 2 stage centrifugal pump with an electric motor attached, capacity 250 gals. p m, to unwater the shaft to the 400 ft. level, where the pupm can be permantly installed as there is a station at that level thereby holding the water below that level, from best information I learn that the water flow at that point is about I25 gals p m, after the shaft is unwatered, the cost of pump and motor approximately $350.00, to operate the pump would require a 60 h p gasoline engine connected to a 4C K.W. electric generator, cost about $I,650.00.

Exhibit A Item 4: I have a lease with option to buy on the property from the Owner, Eva D. Adams for a period of 5 years, I am to pay the owner a royalty of I0 percent of smelter returns on all ore shipped.

Exhibit B Item C: First level I00 ft. below surface, is 30C feet in length, all shipping ore was mined through stopes to the surface,a very large tonnage of low grade ore remaining. Second level 200 feet below surface, its length is also 300 feet, all shipping ore from this to the upper level was mined and a large body of low grade ore was also exposed.

Appearence of stopes mined would indicate a continuous mineralized vein the length of the levels, the width of the ore mined was 1 t0 I0 feeth, There is a winze on the second level I50 feet south of the shaft on an ore shoot a bout 50 feet in depth, size 4 x 6 feet, that exposes ore on both sides and ends as far down as can be seen in the clear water and from appearence will be shipping ore.

From a reliable source I am informed, that a cross cut was driver from a point in the shaft 58 feet below the second level to the ore body, I have no map that shows this work, the hoist engineer informs me that a mark on the hoist cable indicates that was a stopping place for the skip.

Indications are good that the ore shoots in the vein extend downward, this is proven by the winze on the second level, also by a sample taken by me from the floor of the second level about midway between the shaft and the winze, this sample assayed 8 percent cppper and .4I oz. gold; there is no record that shows that any ore was mined below thw water level, excepting the winze.

The 2 cars of ore shipped by me through the Wickenburg Ore Market were mined just above the water level and above the winze, the ore was mine run and not cobbed. Thanking you for this favor, I beg to remain

Yours very truly,

Paul J Drucker

September 1, 1942

Mr. Paul J. Dueker
Bouse, Arizona

Dear Mr. Dueker:

Subject: Little Buttes Mine
R.F.C. Loan

Your application for a $5,000 preliminary development loan has been forwarded to this office for review. We find a number of discrepancies or omissions in the application and feel that you cannot obtain favorable consideration by the R.F.C. engineer without some of these matters detailed.

1. Exhibit A Item 3. List the equipment you believe you will require to unwater the mine; for instance, the size of the pump that will be needed and an estimate of the water to be pumped and the daily pumping requirements after the mine is unwatered and you are attempting to hold the level to a given point.

2. Exhibit A Item 4. The nature of your interest in or ownership of the property should be given. If you hold the property under lease with option to purchase, the details of the agreement should be outlined.

3. Exhibit B Item C. Underground map enclosed gives the section across the shaft and relation of the workings to the vein. There is, however, no plan of the workings nor is there any reference as to the extent of development. You should describe the condition and the lateral extent of the two levels above the water, stating whether or not there is more than one shoot of ore which has been stoped, giving the length and width of the stoped area, and you should likewise give any information relative to the extent of workings now under water. While you may not have definite information as to these under water workings, you should have some rough idea as to the amount of drifting and stoping which has been done. This information would not only have a bearing on the exposed ores which you anticipate uncovering, but also on the amount of water which you are going to have to pump to make those workings accessible.

While the various smelter settlement sheets are indicative of a good grade of ore, particularly the last two which were made by you through the Wickenburg Ore Market, they do not indicate whether or not this was sorted

Kingman, Arizona, Aug. 3, 1942

OFFICE ROUTINE:
Gustave W. Voelzel,
Advisor Mining Div.,
WPB.

To: J. S. Coupal

From: Elgin B. Holt

As per your memorandum to FIELD ENGINEERS of August 1st, I am herewith enclosing correspondence I have had with Mr. Gustave W. Voelzel re- an application that was made for a serial number covering the operations of P. J. Dueker, lessee of the LITTLE BUTTE mine, Bouse, Arizona.

You will note that in my letter to Voelzel the only information I did not have was a list of the shipments of ore for the last 3 months showing date of shipment, tonnage, grade of ore and to whom shipped. I wrote to Mr. Dueker, per cc enclosed, asking him to write direct to Mr. Voelzel furnishing the desired information. Per his reply, attached hereto, he did as requested, so Mr. Voelzel now should have all the data he wants in this matter.

You will, of course, pass this correspondence on to Mr. Willis for his consideration. In future, when I answer such letters I will mail the correspondence direct to you, as you have stated in your memorandum, with such information as I know about any property concerned. In this case, no harm has been done, as the correspondence is fairly complete, so that Mr. Willis may act in the matter as he may see fit.

Should any other information be desired by yourselves, kindly let me know about it and I will pick the same up in Bouse when I visit that place on August 11th.

Elgin B. Holt

Elgin B. Holt.

cc - Paul J. Dueker

Bouse, Ariz.
Aug. I, 1942.

Mr. Elgin B. Holt,
Kingman, Ariz.

Dear Mr. Holt:

Acting under suggestion contained in yours of the 29th. ult., I have by even ma il sent to Mr. Gustave W. Voelzel, Advisor for Mining Division War Production Board at El Paso Texas, a list of ore mined and shipped by me from the Little Butte Mine during the past 3 months.

It is very much appreciated and I desire to thank you for the valuable informatinn you furnish to the afore mentioned Advisor in my behalf, I feel sure that it will be of great assistance to me in securing a serial number. Thanking you again, I remain

Yours sincerely,

Paul J. Dueker

Paul J. Dueker

July 29, 1942

Elgin B. Holt,
P. O. Box 188,
Kingman, Ariz.

Mr. F. J. Dueker,
Bouse, Arizona.

Dear Mr. Dueker:

I am herewith enclosing a letter I have just received from Mr. Gustave M. Voelzel, Technical Advisor, Mining Division War Production Board, 411 Caples Bldg., El Paso, Texas, together with cc of my reply to him.

You will note he states you have made application to the War Production Board for a serial number covering your operations, etc.

In short, I suggest that you write Mr. Voelzel direct giving him the information asked for in the last paragraph of his letter, as well as any other information you may have that might help in securing the said serial number.

Very sincerely yours,

Elgin B. Holt,
Field Engineer.

cc - Chas. F. Willis.

July 29, 1942

Elgin B. Holt
P.O. Box 188
Kingman, Ariz.

Mr. Gustave W. Voelzel,
Technical Adviros, Mining Division,
War Production Board,
411 Caples Bldg., El Paso, Texas.

Dear Mr. Voelzel:

I note by your letter to me of July 27th, that Mr. Paul Dueker, lessee of the Little Butte Mine, Bouse, Arizona, has made application to the War Production Board for a serial number covering the operation of this lease.

That since there is not enough information available in Washington to grant a serial number, the matter has been referred to your office for investigation. Also you state, as far as you can find out, Mr. Dueker made one shipment in March and one in June to the smelter at Hayden; but you cannot find a record of any other shipments to date.

Also, I note you desire a brief description of the development on this mine and a list of the shipments of ore for the last three months, showing date of shipments, tonnage, grade of ore and to whom shipped.

In reply, I last visited this mine on June 9, 1942, at which time Mr. Dueker was in active operation and working around seven men, mainly sub-lessees. The property is an old producer and has been worked in a small way for years.

There are two main workings: (a) The Little Butte shaft, sunk on a gold-copper vein to a depth of 700 feet. Teh 1941 production of this shaft, above the 200-foot level where water stands, was two cars of ore, per Dueker, averaging around $25.00 per ton in gold and copper. The 1942 production from said shaft was also two cars averaging around 6 percent copper and 0.25 ozs. gold. (b) The other workins is the Eva May shaft, which produces silicious gold ore only needed by smelter for fluxing. This shaft, per Dueker, produced in 1941 800 tons of ore, averaging $30.00 gold per ton, net smelter returns. This shaft produced up to June 9, 1942, 400 tons of ore, assaying about the same as above. I have no other records of this matter here in Kingman, but am writing Mr. Dueker today asking him to furnish you with the information requested in your letter.

Very sincerely yours,
Elgin B. Holt, Field Engineer

CC: Charles F. Willis

July 29, 1942

Elgin B. Holt,
P. O. Box 168,
Kingman, Ariz.

Mr. Gustave W. Voelzel,
Technical Advisor, Mining Division
War Production Board,
411 Caples Bldg., El Paso, Texas.

Dear Mr. Voelzel:

I note by your letter to me of July 27th, that Mr. Paul Dueker, lessee of the Little Butte Mine, Bouse, Arizona, has made application to the War Production Board for a serial number covering the operation of this lease.

That since there is not enough information available in Washington to grant a serial number, the matter has been referred to your office for investigation. Also you sate, as far as you can find out Mr. Dueker made one shipment in March and one in June to the Smelter at Hayden; but you cannot find a record of any other shipments to date.

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Very sincerely yours,

Elgin B. Holt,
Field Engineer.

cc - Chas. F. Willis

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Little Butte

District Bouse, ~~Mohave~~ Yuma County

Date March 5, 1959

Engineer Travis P. Lane

Subject: Several Visits - last Feb. 26th

Iron Tree Mining Co. has operated its cyanide plant at intermittent intervals since October. Activities were suspended at the time of this visit (Mar.5). As on previous visits none of the principals in the venture was present and no reliable information was available locally regarding tonnage and grade of ore treated, etc. Judging from the size of the tailings pile only several hundred tons has been treated. It is said that percolating in the leach vats was unsatisfactory because of a high proportion of slime in the material treated, and also that gold precipitation in the zinc boxes (on zinc shavings) was imperfect. No gold has been produced to date.

The treatment plant consists of 2 percolation leach vats, one of 175 ton capacity and the other 250 ton, together with accessory barren and pregnant tanks, zinc boxes, etc. The plant feed is derived from a nearby deposit of surface detrital material. The material is tractor ripped and then picked up and transported by an end loader to the Cedar Rapids crushing plant. The crushed product, nominally 1/8", is trucked to a hopper from which it is loaded by belt conveyor into the leach vats.

The two partners (Smith & Boyd) live in Bakersfield. Mr. Smith directs the operation, making occasional visits to the property. The normal crew is composed of 4 men, none of whom is a technical man with knowledge of cyanidation. At the time of visit a Mr. J. McLaren Forbes, Consulting Geologist, was making an economic evaluation of the project -- attempting to determine the tonnage and value of the ore reserve and to discover the reason for the poor metallurgical results. Until recently Mr. Forbes was (for a number of years) a consulting geologist with Consolidated Copper Mines. Later this month he will go to South America to join the staff of Cerro de Pasco as a consulting geologist. At the time of the writer's visit he was completing a thorough sampling of the Little Butte property. He had received assay returns from only a few of his earlier samples and these showed a significant amount of gold, but less than original estimates.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Little Butte

District Bouse, Yuma Co.

Date September 17, 1958

Engineer Travis P. Lane

Subject: Visit

The property comprising 8 unpatented claims is located some 4 miles westerly from Bouse.

Owner: Elmer Glenn et al
Parker, Arizona

Operator: Iron Tree Mining Co.
1718 Chester Ave.
Bakersfield, Calif.

Albert Smith, Mgr., Mr. Boyd, partner, both of Bakerfield, Calif.

Neither of the principals was present at the time of visit. Mr. Elmer Glenn, the superintendent (and part owner of the property) was supervising the final construction stages of the project. In addition to the installations described by the writer in a report dated July 18, 1958, a Cedar Rapids portable crushing and screening plant has been moved onto the property. At the time of this visit an end loader was feeding the crushing plant and a 1/8" product was being stockpiled pending completion of the cyanide treatment plant -- expected to be accomplished within a week. The work crew consisted of 3 men, including Mr. Glenn.

The deposit occurs in an area of low knolls along the trend of the granite-lime contact which was developed in the Little Butte shaft about 1 mile to the north. Mr. Glenn states that the proven area is about 2000 feet wide by 5000 feet long with a known depth of 45 feet (and probably much deeper). The deposit is unconsolidated detrital material. No blasting is necessary and no stripping is required. The gold is said to be free with value of around $7.00 per ton. Capacity of the crushing and screening plant is estimated at about 15 tons per hour. The capacity of the single leach tank is 175 tons and it is anticipated that the leach cycle will be from 24 to 48 hours. It is proposed to add other tanks as the operation progresses.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Mine Little Butte

Date July 13, 1958

District Bouse, ~~Mohave~~ Yuma Co.

Engineer Travis Lane

Subject: Visit to property

Owner: Don Wills

Operator Iron Tree Mining Co.
1718 Chester Ave.
Bakersfield, Calif.

The Company is a partnership composed of Albert Smith (as manager) and a Mr. Boyd. Both partners are residents of Bakersfield, California.

The property comprises 8 unpatented lode claims covering the croppings of the gold-copper vein developed in the Little Butte incline shaft. The present interest is centered in a gold placer area on a series of low knolls about 1/2 mile south of the Little Butte shaft. Some limited dry placering was done here in the past but apparently no important production has been made.

The operators plan to treat the surface material by cyanide percolation leach. At the time of visit a leach tank,27' diameter by 8' high, was in progress of erection; also being erected were a solution make-up tank, a gold tank and a barren tank. These last three tanks are 21' diameter by 8' high. Precipitation will be on zinc shavings for which a 10 compartment zinc box is on the property but not placed. An ample water supply is available in the Little Butte incline shaft which is reported to be 700 ft. deep more or less. Water stands at about the 200 ft. level. An unwatering job performed about 2 years ago indicated the shaft was clear to about the 650 ft. level and that the inflow is about 100 gpm (?). The operators have set a pump in the shaft and a small winch at the collar, and have laid about 2000 ft. of 4" aluminum pipe to the mill site.

Neither of the principals was present at the time of this visit and no details regarding reserves, grade of material, etc. were available. Two men were working on the installation, one of them being Elmer Glenn as foreman.

LaPaz

LITTLE BUTTE MINE YUMA COUNTY

Mr. Petrus (Pete) W. Fleming, Consulting Engineer, 18588 Linnet Street, Tarzana, California 91356, came into office in reference to Barite Mines that he said he had an interest in. They are located in the Bouse District, particularly in Sections 7 and 34, T7N, R17W. Said he has an option on the Scotchman, Little Butte, Teddy "r" and others in that area. GBG WR 11-8-68

It appears Mr. Schaeffer is now trying to sell his lease on John Townsend's Copper Hill properties near Bouse and his leaching process. The figure mentioned to Mr. Chambers was $40,000. Went to Bouse and found John Townsend. Although Jack Schaeffer was not available John said he was continuing to mine and leach some ore from the Copper Hill mine southwest of Bouse. GW WR 2-12-71

Jack Schaeffer continues to operate his copper leaching "process" from ore taken out of the Copper Hill property of John Townsend, four miles southwest of Bouse. GW QR 4-8-71

The Copper Hill Mine near Bouse was operated for a portion of the period by Jack Schaffer what stated he had devised a process for increasing the amount of copper leachable from an ore. GW QR 9/71

USGS Bull. 451, p. 40, 41
IC 8236, p. 124

RRB WR 3/4/83: Shayam Nadkarni, 144 Woodmere Blvd., Woodmere, N.Y. 11598, reports that he has a lease with option to buy on the Little Butte Mine, NW¼, Section 8, T7N R17W. near Bouse, La Paz County. He says that based on the results from 16 drill holes, 90 feet deep, they have 5,000,000 tons of material ranging in grade from .05 to .30 oz/ton gold. The deposit is reportedly a series of small veins and stringers through the nonmineralized country rock which they intend to mine by open pit methods and heap leach. (Our files indicates that it is an oxide copper deposit which would appear to rule out cyanide heap leaching.) Mr. Nadkarni asked about regulations on cyaniding and wanted the names of mineral surveyors so he can take the property to patent.

NJN WR 10/3/86: Perry durning (c) reports that Fischer-Watt Mining Company has dropped the Little Butte Mine (f) La Paz County.

LITTLE BUTTE MINE YUMA COUNTY

Interviewed Jim Townsend. He reported that the Little Butte operation suspended several weeks ago and that Mr. Boyd (of Bakersfield), the principal in the venture, had recently closed the company account at his store. TPL WR 5-23-59

Visited the Little Butte cyanide plant and surface workings (Iron Tree Mining Co.) 5 miles northwest of Bouse. Idle. According to Pat de Williams, Forbes' sampling showed surface values of $2 to $3 over a large area. TPL WR 6-13-59

Visited the Iron Tree Mining Co. workings and plant near the Little Butte Mine. The property was idle and operations apparently suspended indefinitely although most of the equipment is still on the site. The surface over a large area has been cut by interlacing bulldozer swaths attempting to expose surface spots with higher than average gold values. TPL WR 10-17-59

Visited the Little Butte Mine (Iron Tree Mining Co.)

A new company, Loma Grande Mining Co., Inc., Box 2247, Parker, Arizona, has taken over this surface deposit from the former operators. This is a subsidiary of the Freemont Uranium Co., 684 Main St., Lander, Wyoming. Orville Murray, Parker, Arizona, is the supt. in charge, Wesley Van Gordon is mill supt. 6 men are employed remodeling the plant. It will use the gravel screening and crushing plant placed on the property by the former operators but the treatment process will be jig and table concentration of the gold values instead of cyanidation. They speak of a two or three shift operation with capacity of 15 TPH. These people have purchased a number of equipment items from the Wickenburg Mill of Mohave Mining and Milling Co. and at the time of visit were installing this equipment - a jig, classifier, etc., and some tables, and other items are still to be brought in from the Mohave plant. TPL WR 2-13-60

Visited the Loma Grande Mining Co. operation near Bouse. This is the site of the former Iron Tree Mining Co. project near the Little Butte mine. The plant was idle and one man was doing mechanical maintenance work. He said that the principals had gone to Wyoming with a recent plant clean-up (the first). No authentic information was available regarding the outcome. The amount of stacked tailings indicated that some 300 to 400 tons of surface material had been put through the plant. There was considerable evidence of free gold in the lower end of the classifier box and in several middlings buckets. The normal crew is 5 men including the superintendent. TPL WR 4-22-60

The Loma Grande Mining Co., has suspended work at the Little Butte property and adjoining claims. TPL Conf. Bouse 6-16-60

Visited the Smoke Hole - Little Butte property near Bouse, formerly operated by Loma Grande Mining Co., operation now being handled under option agreement by Western Nuclear Co. Three geologists with William A. Street as Chief, are sampling the surface. TPL WR 1-14-61

Visited the Smoke Hole-Little Butte property. The geologist crew had recently completed their surface sampling job for Western Nuclear and no one was present on the ground at the time of visit, and no account was available re the results of the sampling. TPL WR 2-18-61

LITTLE BUTTE MINE

YUMA COUNTY

Visited the Little Butte mine. Schaffer is operating a 50 ton "Schaffer Process" plant here under lease agreement from the Loma Grande Mining Co. (of Wyoming). He has been re-running material which the Loma Grande and its predecessor company, the Iron Tree Mining Co., had run by cyanide and gravity concentration method (with very poor recovery). Mr. Schaffer was not present and the plant was not running. It seems to have produced several pounds of gold in a recent run. The "mill" is actually a 5' x 10' amalgamation in the mill, and on dressed plates and in an amalgam trap. The special "process" feature was not apparent.
TPL WR 6-15-61

Visited the Little Butte mine looking for Schaffer but missed him. Also visited the site of another "Schaffer Process" plant, in Bouse Wash. Several men were installing a mill identical with the one at the Little Butte mine. Mr. Schaffer was not present but a member of the crew told me that the plant was being built to run ore from the Old Dutchman mine. The enterprise is separate from the Little Butte project. It is expected that others will be installed for other investors at other places in the region. I was told that the "process" was a chemical formula known only to Mr. Schaffer. It is claimed that the gold in the region occurs locked up in such a fashion that it cannot be reported by a fire assay. In fact it is claimed that the Loma Grande tailings material which assayed only $7 to $9 as mill feed is actually returning $40 to $50 in the Schaffer Process. If true, this would seem to junk the old adage, "You can't get blood from a turnip." TPL WR 6-17-61

The property is now operated by Bongo Mining & Milling Co. under agreement with Western Nuclear Co. of Lander, Wyoming which in turn holds the property under operating agreement with Loma Grande Mining Co.

No company official was present and the two men on the job had no comment.

The "Schaffer process" mill which was recently installed at the old Little Butte shaft has been moved up to the Smoke Hole site (¼ mile) and a duplicate unit installed. The mill appeared to be complete and ready for start-up. The feed will be the same surface material which was formerly treated unsuccessfully by cyanide persolation leach (the first plant), then by sluice and jig concentration. Denis Doheney is President of thenew company, 684 Main St., Sander, Wyoming. Orville Murray is manager for Loma Grande Mining Co. J. R. "Jack" Shaffer is consulti on the job for Bongo Mining Co. Memo TPL 10-11-61

Active Feb. 1962 - O. L. Murray, Mgr., Loma Grande Mining Co., 684 Main Street, Lander, Wyoming - 3 men working

Visited the Little Butte mine and mill of the Loma Grande Mining Co. The Yuma Mining Co. of Colorado is operating a Schaffer "secret process" mill. 3 men working. TPL WR 2-17-62

Visited the Little Butte Smoke Hole property (Loma Grande Mining Co.) The last lessees (Bob Winkley, Hugh Fisher et al) have quit and the property is idle. TPL WR 6-16-62

Interview with J. C. Townsend

Mr. Townsend stated that Simplot Corp. drilled several holes at the Little Butte during September and then moved off, ude to excessive water. He reported that some pockets of rich gold ore were mined by Wm. McLain and Sigmund Hall 18 years ago. They are said to have mined about $75,000 in gold, before the ore played out. They are said to have had a "merry time" during this period and ended up broke. LAS Memo 10-16-64

PRODUCTION POSSIBILITY

DEPARTMENT OF MINERAL RESOURCES SURVEY

STATE OF ARIZONA

TYPE NO. 1 FIELD ENGINEERS REPORT

Mine LITTLE BUTTE Date September 28, 1942

District Plomosa, Yuma Co. Engineer Elgin B. Holt

Subject: PRODUCTION POSSIBILITY

OWNER: Mrs. Eva D. Adams, 528 W. 104th St., Los Angeles, California; Lessee, P. J. Dueker, Bouse, Arizona.

METALS: Copper and gold.

LOCATION

The Little Butte mine is located 5 miles west of Bouse, a station on the Santa Fe Railroad, with which the mine is connected by a level desert road, in good condition. This property has been worked from time to time for the last 40 years or more, and has produced a considerable amount of shipping ore, of which there is no record available, excepting for the years 1940-41-42, as set forth below. Area: 21 claims.

DEVELOPMENT WORK

The main two-compartment shaft has been sunk on slope of vein to a depth of 700 feet; but shaft is under water below the 200-foot level. Property was originally worked by a company headed by Charles Denton, around 1909. Nearly all of the ore has been worked out in the Little Butte shaft to the 200-foot level, where water stands, as stated. Lesse, P. J. Dueker, has applied to RFC for a loan of $5,000 with which to unwater part of the shaft in order to open up another level or two in which are unmined blocks of ore.

1940-41-42 PRODUCTION

During 1940, 31 cars of ore were shipped to the Magma Copper Company smelter; said ore averaging around $14.00 per ton in copper and gold. During 1941, two cars of ore were shipped, averaging $25.00 per ton in copper and gold. Also, two cars of ore were shipped in 1942, averaging

6 per cent copper and 0.25 ounce gold per ton. All of the above shipments were made from the Little Butte shaft, which produces copper and gold ore.

EVA MAY SHAFT

During 1941 a gold vein was discovered 700 feet west of the Little Butte shaft. The Eva May shaft was sunk on this new vein to a depth of 65 feet, with drifts on the 30-foot and 65-foot levels; the said vein being 15 feet wide in granite. During 1941, 800 tons of ore were shipped from the Eva May workings, averaging $30.00 per ton in gold and 80 per cent silica; this class of ore being needed by smelters as fluxing material due to its high silica content. The 1942 production from the Eva May workings amounted to 400 tons, prior to June 9th, assaying about the same as above noted - $30.00 gold per ton, net smelter returns.

MEN EMPLOYED

Around 7 men are employed at this property; these being mainly sub-lessees.

PROBLEMS

The main problem at this property is to secure new working capital with which to unwater the Littel Butte shaft, extend the various levels and block out new ore reserves. As stated, Lessee, P. J. Dueker has applied for a Preliminary Development Loan to RFC to be used in partly unwatering the mine. After this work has been carried out, he will automatically apply for a $20,000 Development Mining Loan from RFC for the purpose of opening new ore reserves. After all this is done, the mine can again be put into steady production of copper and gold ore.

This mine will never make a large property; but if reopened in a proper manner, it can be depended upon to produce around 8 car loads of ore per month, assaying around 6 per cent copper and 0.25 ounce gold per ton.

Elgin B. Holt.

DEVELOPMENT
EXAMINATIONS
VALUATION
REPORTS

TELEPHONE
MUTUAL 8258

ALVIN B. CARPENTER
CONSULTING MINING ENGINEER
1211 PACIFIC MUTUAL BUILDING
LOS ANGELES
MUTUAL 8258

Brief Report on a Barite Deposit near Bouse, Yuma County, Ariz.

History

Although there had been a noticeable amount of barite (barium sulphate) scattered as float about the hills west and northwesterly from Bouse, there had been no inquiry for this mineral until in the latter part of 1929. In several oilfields in Southern California, well drilling was at its crest and the heavy gas pressure in these fields required special devices to prevent the wells blowing tools out while drilling was in progress. For these special conditions, the use of barite ground very fine and with a specific gravity of at least 4.3 was mixed with a bouyant clay, "Bentonite", and poured into the drill hole in great quantities.

This method was so successful that large quantities of barite of required specific gravity were in demand and a quest for this mineral started. The Bouse District at once became a prospective producer

and work was started in several localities to open up deposits where it occurred. New roads were constructed and unloading arrangements were constructed at the railway station at Bouse.

The most interest in this material came in January of 1930 before the results of the stock slump of the November preceding had been felt much in the oil business, but which began to be evident by the end of February, and specifications as to the quality of barite and the drop in demand due to the curtailment in oil well drilling practically put an end to the possibility of shipments from this territory about the time such shipments were ready to start. There has been no development to speak of on any of these deposits and as a consequence practically nothing is known of the quantity and grade that is to be found with further exploration. So far as the outcrops in general have been observed, the ore shown superficially will run slightly under market specifications, (from 3.80 to 4.10 specific gravity compared with market demand of 4.26 minimum specific gravity), and it will be necessary to raise the grade of ore exposed at present, either by finding a better grade below the present superficial workings or by an economical method of concentration.

During 1930 the deposits in the Bouse District have produced no commercial barite, nor has there been any local work done with the exception of that required by assessment work on the located claims.

A very extensive amount of experimentation, however, has been carried on at the request of Mr. Homer C. Chapin in an effort to bring up the grade (specific gravity) and quality of the present available material with what may be considered to date as a partial success and there are hopes that with a return to normal business conditions, there will be a return of demand for barite and a commercial operation may be worked out.

Little Butte Deposits

The most extensive barite deposits in the district lie within the boundaries of the southerly claims of the Little Butte Amalgamated Mines Company, and one mile south of the company's plant (a copper exploration).

The deposits lie about two miles from the town of Bouse, a station on the Parker division of the Santa Fe Railway, approximately 300 miles east of Los Angeles.

The occurrence is in veins that, on the crests of low hills, appear as filling large vents from which the veins are enclined to radiate and the

barite mineral is found in extensive outcrops throughout a longitudinal distance of three thousand feet and a width of from 300 to 400 feet.

This area shows a wide variety of rock formations in a territory consisting of gravel washes and low rounded hills, forming a low ridge throughout the length of the claims. At the north end of the claim Stillman No. 7, the veins cut up through the shales. South of No. 1 Hill, (see map accompanying this report,) they occur in arkosic sandstone and in shales. No. 3 Hill shows a contact between sandstone and a quartz porphyry. A transverse fault near the south end of the claim appears to have thrown the barite veins a short distance to the west, and the formation south of the fault is largely a conglomerate as the veins ascend to the top of Nill No. 3 in the Stillman No. 9 claim.

In the gulch south of this hill, there is a junction of two narrow barite veins that are, however, persistent to a point in the gulch where they are lost beneath an extensive covering of wash, on the south side of which is a gulch showing several veins with widths of from one foot to three feet. The widest one and the most westerly one, ascends the south bank of the gulch for a distance of about 100 feet, where it

horsetails out into stringers in an andesite breccia. Towards the east side line of this claim is a barite vein that, starting with a width of one foot, crosses the side line of the Stillman No. 9 claim into the claim located a year ago as "Chapin Barite" Claim, where it shows a width of 10 feet, 4 feet of which is a very clean barite that gave a specific gravity of 4.10 on the surface.

The surface samplings of many of the barite veins above recounted are as follows. Reference to map; at points marked in red;

It will be noted from the map that the principal work done so far on these claims was on the crests of the low hills where the barite showed the greatest widths.

The barite veins at the north end of Stillman No. 7 claim were not sampled as no holes or trenches were made across them. These veins vary in width from 2 to 4 feet, and show an average grade barite.

West of Hill No. 1 a narrow wein of barite showed a specific gravity of 4.10.

Two trenches were made near the crest of Hill No. 1 The trench on the east side, 4 feet deep and about 30 feet long, showed barite with specific gravity of from 3.90 to 3.99. A few feet at south end was ferruginous and ran 3.22.

On Hill No. 2 a deep trench was made near the crest about 25 feet in length and 7 feet in depth at deepest point. The barite showed the entire length with specific gravity of from 3.69 to 3.99. Owing to the width of barite at surface, further work at this point should be the sinking of a shaft to determine if an improved grade of barite can be evidenced with depth.

Hill No. 3 is in a conglomerate containing a great deal of iron oxide and the barite found here is very ferruginous, -a cobbed sample ran a specific gravity of 3.96.

In the gulch south of No. 3 Hill where the vein about 2.5 feet wide follows the gulch, an outcrop sample showed but 2.99 specific gravity, and later when opened up showed a specific gravity of 3.87.

In the south gulch on the Stillman No. 9 claim, a prominent vein of barite crosses the gulch, and shows an outcrop width of 6 feet that gave specific gravity of 2.99. Some development here did not show an improved grade but a branch vein running west along the gulch looked more favorable, but was not sampled due to its irregular outcrop.

The best outcrop discovered lies in a gulch and occurs in a shale similar to the occurrence of barite at Hill No. 1. This showed a surface width of

10 feet and is on the new claim, located as the "Chapin Barite" Claim. This outcrop showed 2.5 feet near the foot wall with a specific gravity of 4.10 and 1.7 feet near the hanging wall with specific gravity of 4.28. A trench that was made showed a very white colored barite but a bit more width of mixed ore in bottom of trench. However a further depth may show considerable improvement.

The above descriptions of the extensive occurrences on these claims will give an idea of the possibilities for tonnage if further exploration can determine the depth to which it will go. As you know, it is Mr. Webber's opinion that similar veins can be expected to run to a depth of 100 feet or more, and in such case I think his estimate of 70,000 tons would be very conservative.

The specific gravity of this barite is not up to a commercial grade so far as the little development on it has shown. The want of weight is due to the lime and flourine content that is shown in the analyses so far made from the surface ores. This lime may show much less as depth is attained and may give us a product much more amenable to a successful concentration.

As you have full reports on the concentration test that you have had made, I shall not attempt to include them in this very hurried report, for you have the conclusions of both the Southwestern Engineering Co. and the Engineer's, Inc. as to what can be done.

INVOICE

PACIFIC PETROLEUM COMPANY

536-538 MERCHANTS NATIONAL BANK BLDG.
LOS ANGELES, CALIF.

September 28th,1928.

SOLD TO LITTLE BUTTE AMALGAMATED MINES CO.,
BOUSE, ARIZONA.

DATE SHIPPED 9/13/28.
OUR ORDER 1824
YOUR ORDER Teleg.9/13/28.
SHIPPED TO Bouse, Arizona.

F. O. B. Vernon, Calif. TERMS: 10/10/28.

CAR NO.	DESCRIPTION	GROSS GALLONS	LOADING TEMP. O. F.	COMMODITY AT 60° FAHR. GALLONS	NET GALLONAGE	PRICE	AMOUNT	TOTAL
GPCX-105	SPECIAL GAS OIL	6678	74		6631	4-1/2¢	$298.40	
	PREPAID FREIGHT Vernon to Bouse, Arizona.....						165.62	
							$464.02	
	September 24th, 1928, By Check.....						458.84	
					BALANCE----------			$5.

(CORRECTED INVOICE)

Note:- Please disregard the corrected invoice we sent you with our letter of even date, on which invoice we failed to show the amount paid by you on Sept. 24th.

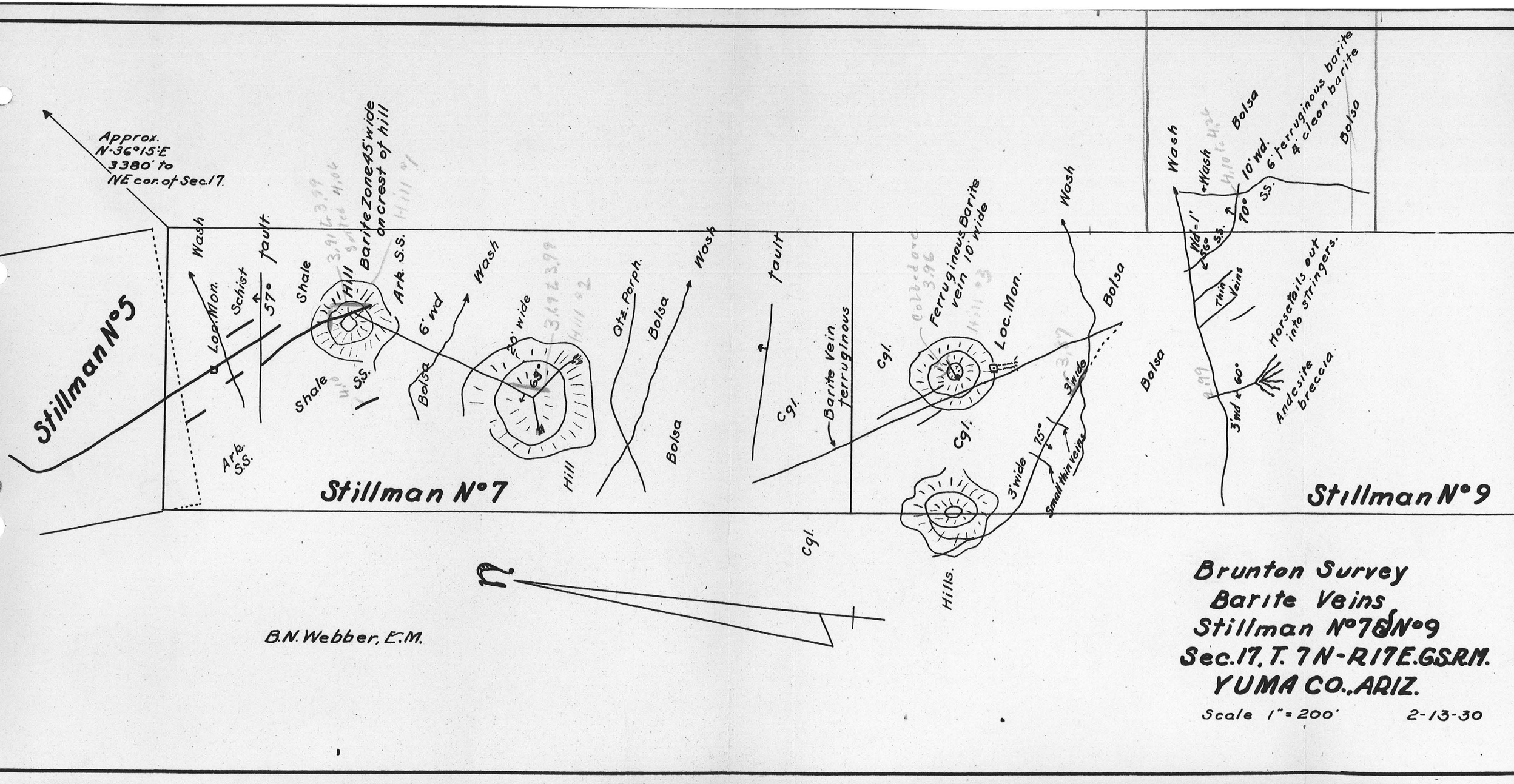
PACIFIC PETROLEUM COMPANY

By C. Binnard.

P.P. 5.18 9/29/28.

SUMMARY OF ACTIVE PROJECTS AS OF 1985

Project	Land holdings (acres) Located	Leased	Current FWM Interest	J.V. Partner	Commitment required by J.V. to earn interest	Diluted FWM interest after commitment	Ore Reserves Type of Deposit	Tonnage	oz/T Au	oz/T Ag	Project Status
Hayden Hill Lassen Co. California	950	2800	50% working	Pecos Resources Vancouver B.C. Canada	Already earned $1.6x 10^6$ expended in 1984	50% working subject to 3% Net Profits Finders Fee	Open pit- Heap leach Drill Indic Add pot.	7,[illegible] +12,[illegible]	[illegible] [illegible]	0.40	Active J.V., ore reserves defined, ready for production 825 oz Au produced in 1984
Dexter Elko Co Nevada	1,100	300	25% Net Profits Carried	Pecos Resources Goldbelt Res Vancouver B. C. Canada	Already earned $1.2x 10^6$ expended in 1984	25% Net Profits Carried	Open pit- Heap leach Drill prov. Add pot.	2,[illegible] +2,[illegible]	[illegible]	1.90	Active J.V., ore reserves defined, ready for production. Minor production in 1984
Democrat Lemhi Co Idaho	-0-	550	50% Net Profits Carried	Democrat Resources Vancouver B.C. Canada	$1.4x 10^6$ already expend $2.3x 10^6$ must be expend to earn 50% interest	50% working or be diluted to 6% Net Profits Carried	Underground Milling drill & spl Potential	50,000T Could be large	[illegible] 15% Pb	9.00 5%Zn	Active J.V., further exploration required prior to production
Buffalo Valley Lander Co Nevada	-0-	2800+	5% Net Profits	Consolidated Mining Denver Colorado	None	5% Net Profits Carried	Open Pit- Heap leach drill ind. Add pot	75,[illegible]T unknown	[illegible]		Inactive J.V., ore reserves defined, ready for production
Roadside Mohave Co Arizona	-0-	5820	50% Net Profits Carried	Pecos Resources Anaconda Mineral Denver Colorado	±$200,000 expended must expend $1.5x 10^6$ by 6/87 to earn interest	20% working 7.5% Net Profits carried Subject to 3% Net Profits finders fee	Open pit- Heap leach Drill ind. Add pot	300,000T Could be large	0.[illegible]		Active J.V., further exploration in progress
Golden Syncline San Bern California	**1,760**	**1,800**	**100%**				Open pit- heap leach potential	Could be very large	speculate ±0.05		**Geology, geochem completed drill targets defined**
Pancake Nye Co Nevada	1,540	-0-	100%				Open pit- Heap leach Potential	Could be very large	Speculate [illegible]-0.10		Limited geology and geochem completed. Further work required to define drill targets
Little Butte La Paz Co Arizona	-0-	800	100%				Open pit Heap leach Potential	2,000,000T	0.0[illegible]-0.07		Geology and geochem completed, drill targets defined
Van Deeman Mohave Co Arizona	-0-	500	100%				Open pit- Heap Leach Potential	1,000,000- 2,000,000 T	0.04-0.07		Geology and geochem completed, drill targets defined
Comstock Storey Co Nevada	55	175	100%	Westley Mines Vancouver B.C. Canada	Expend $500,000 to earn 80% interest	20% working interest Subject to dilution	Underground Milling Potential	+1,000,000T	+0.50 +20.0		Geology and geochem completed, drill targets defined
Bovard- Rand Mineral Co Nevada	40	550	100%				Open pit- Heap leach Potential Underground Milling Potential	+500,000T +500,000T	0.05-0.10 0.20-0.40 ±10.00		Preliminary geology and geochem completed drill targets defined for open pit reserve. Further work required for underground drill target
Kemble Camp Mohave Co Arizona	700	-0-	100%				Open pit- Heap leach Potential	+2,000,000T	0.03-0.07		Geology and geochem completed, drill targets defined
Border Mine Pima Co Arizona	400	-0-	100%				Open pit- Heap leach Potential	+1,000,000T	0.03-0.06		Initial geology and geochem completed. Further work required to define drill target
Mineral Springs San Bern California	320	-0-	100%				Open pit- Heap leach Potential	+2,000,000T	0.04-0.07		Initial geology and geochem completed. Further work required prior to drilling
Gemfield Esmeralda Co Nevada	-0-	140	1% Net Smelter Royalty	Santa Fe Minerals Reno Nevada	Take over terms of FWM lease	1% Net Smelter Royalty	Open pit- Heap leach Potential	+1,000,000T	[illegible]n		Actively being explored by partner



B.N. Webber, E.M.

Brunton Survey
Barite Veins
Stillman N°7 & N°9
Sec. 17, T. 7N - R17E. G.S.R.M.
YUMA CO., ARIZ.

Scale 1" = 200' 2-13-30

90'
119.5'
60'
81'
150'
64'
85'
214'
82'
110'
296'
79'
103'
375
RESERVOIR
CONCRETE WALL
2'-6" THICK
78'
100'
453'
600'
37'
50'
490'
650'
100' CROSS CUT IN FOOT WALL
700'

CROSS CUT JUST TOUCHES VEIN
ABOUT 9/10 OF WATER IN MINE COMES FROM HERE

OLD SHAFT CAVED FOR 20' FEET

BLUE CLAY SEAM SHOWING SULPHIDES

HERE IS SEAM MIGHT BE FAULT SEAM SHOWING CRUSHED ROCK

PROFILE VIEW OF SHAFT

LITTLE BUTTE AMALGAMATED MINES CO

BOUSE, ARIZONA

SCALE 1"=50'