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GOLD BAR MINE

12/28/34

Ore:-- Positive, Probable - Costs. Royalty. Net Operating Yield.

(See Tentative appraisal for derivation of tonnage and manner of classification into Positive & Probable ore).

It is important to differentiate between net operating yield as given below and a net profit. Depreciation, amortization, special ore development and reserve funds should be deducted before determining the net profit which is variable in proportion to the accuracy of the "Probable Ore" estimate.

TONS		89,800
ORE VALUE		$20.76
GROSS VALUE:		$1,864,248.00
LOSS in milling, (tailings 10%). . . .		186.424.80
VALUE AFTER 10% TAILING LOSS		$1,677,823.20
COSTS		
MINING, (see foot note A.)	$3.50	
Milling "	1.50	
Development, per ton of ore extracted.	1.00	
Exploration " " " " "	1.00	
Marketing, bullion, concentrates and shipping ore--smelter, mint, frt. chges.--reduced to per ton of ore mined.	1.15	
Overhead.	.35	
	$8.50	
Tons: 89,800 @ $8.50		763,300.00
NET OPERATING PROFIT		$914,523.20
15% Royalty		236,132.98

Minimum Annual Payments provided for in Mine Purchase Contract as follows:

1st year ----	$40,000.00
2nd year ----	65,000.00
3rd year ----	77,000.00
4th year ----	79,250.00
	$261,250.00

Remainder $300,000.00
Payable at 8% royalty until paid.

NoteA. John F. Duling has made a valuable graph giving the average, based upon the actual experience over a long period of years of many Western mines, of cost of mining of a 4 ft. width of vein, as $3.45 per ton, and of milling, exclusive of cyaniding, as $1.45 per ton.

GOLD BAR MINE

From report by W. R. Shanklin of Tolusa, Oklahoma. Dated April 23, 1927. Addressed to W. Ol Dickensen, of the same address.

Ore available from present development, and above the No. 2 shaft 500 Level, a total of about 110,000 tons of ore, and the average value per ton rock of mine run of $11.75, as indicated by the sampling, giving a total value of $1,292,500.00.

(Tabulated returns on 132 samples given.)

From report by George P. Hyde of Eureka, Nevada. Dated May, 1929. For Foote and Company, New York.

The ore body developed consists of quartz intermixed with massive sulphides, carrying gold and silver values in the proportion of four ounces of silver to one ounce gold. From the surface to the 385 foot level the ore is oxidized to a more or less extent, at the surface completely, then indiminishing proportion until at the 385 foot level the ore occurs almost completely as original sulphides. In only two places, at the surface and on the 47 foot incline level has the ore been cross-cut. In the former place for a width of 60 feet and in the latter place 4 feet. The distance between these two points being approximately 500 feet. The depth of the ore body on the vein has in no place been demonstrated. At the surface the ore in the bottom of the Gloryhole is still "going" and is exposed at this point 40 feet in depth. On the 407 foot incline level, the same depth has been exposed by stoping, with ore still exposed in the roof and floor. Assuming, as one is justified, from the reports of conditions as they existed in the stoped area, that the same dimensions of width and depth hold for the distance of 560 feet or from the 445 incline level to the surface, and using 12 cubic feet for a ton of ore in place, and deducting 20,000 tons as mined, we have an available ore supply of 69,600 tons, not to mention a large expectancy of probable ore.

(Average value based on about 50 check samples, date from mill reports etc., given as $12.00 per ton gold and silver. Ratio 1 - 4. Gold at $20.00 per ounce. Silver at 0.60 per oz.)

The geology of the district offers nothing complex. The country rock is granite, and is known as the Bradshaw Mountain Granite. There has been extensive fissuring, showing two major periods of movements. One resulting in a N. 70° E. system of fissures, and the other in a S. 30° E, system. Both systems show evidence of intensive mineralization. Development has been almost entirely confined to one of the fissures of the N. 70° E. system, with a dip of 30 degrees northwest. Evidence of faulting of this fissure is encountered on the 445 incline level, where a thrust movement interrupted the ore body. The downward extension of the ore body will be found in the northwest or hanging wall side of the vein. This displacement was doubtless caused by one of the fissures of the S. 30° E. system. There being a strong cross festure (fracture?) evidenced at this point in the workings and it corresponds in position to what is known on the surface as the Black Bear Vein. This displacement accounts for the fact that while No. 2 shaft was sunk on the supposed rake of the ore body, it failed to encounter the ore. On the 500 foot level of the No. 2 shaft, and about 100 feet from the shaft, there is encountered a condition of extreme crushing, accompanied by extensive mineralization of Marcasite. The same condition with Marcasite exists in the footwall and adjacent to the ore body from the surface to the 445 foot level. The downward extension of the ore body at the 500 foot level will undoubtedly be picked up by driving a short cross-cut to the northwest.

Paralleling this fissure on which the work has been done and about 600 feet to the southwest, is another fissure having the same dip. There are three very strong outcrops or blow-outs on this fissure, the two extremes being about 1000 feet distant from each other. All three are large and show very much more extensive mineralization than the outcrop on the fissure in which the mining has been done. I was particularly impressed by the one farthest to the southwest, which is

located on the Cable Claim, and is where the Red Wonder vein or fissure, the strongest fissure of the S. 30° E. system, joins the S. 70° W. system.

I believe when this property is developed, it will be found that under or in connection with this outcrop, the largest and richest ore bodies will exist. I cannot understand why this feature of the property has received so little attention in the past. The invitation is unmistakable.

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& Letter

NOTES ON FLAGG REPORTS

7/15/34

Mr. Flagg gave me a copy of his sampling, assays, maps and reports.

He said he examined only the sulfide area because Smith and Holderness claimed that the ore in this block had been mis-represented to them by Twithells'.

He found as per his report 11,000 tons of $8.80 (.44 oz.) Au.) as compared with Smith & Horderness of 1.04. Arithmetical average of all = .92 oz.

Omitting the high sample of Smith & Holderness, average would be .3982 oz. which is not far from Flagg.

Flagg said he was unable to get into the 385' level going t o No. 1 shaft or rather was afraid of loose rock cutting him off from escape.

From there he might have gotten into the old stopes or might not.

He was clear on the 11,000 tons of 8.88. He said he could not see how he could prove 80,000 tons of ore, say 60,000 tons from 385 level up.

Said he would not raise his hand and swear there was 20,000 tons, just would not know.

Said the clean up of drifts, etc., to permit proper sampling would be a big job in some places.

Said he tried to interest George Easley in it on the following basis:

1. Not consider any ore as proven or developed, i e. for-get it.

2. Get a good geologist on the ground for 60 days.

3. Do some development work - on the Cable and Black Bear as indicated the geologic work.

He did not work at the Glory. Hale was very pessimistic about the Gold Bar Mine paying out on the main shaft alone, He said the pump was ruined when column was broken and rock got in. He said

Bailing alone would not unwater it as a great deal of water would come in from coniguous country. More water by 2 to 1 the first year than thereafter. Flagg is a good man. Flagg found no evidence of Secondary Enrichment - looked for it. Flagg found no Chalcopyrite.

J. H. Steinmesch.

GOLD BAR MINE

Report of

Smith & Holderness Assays 4/1/31

On the Sulfide Between 385 & 445' Levels.

Sample No.	Oz. Au.
1	.04
2	.04
3	.03
4	1.14
5	.26
6	12.40
7	.66
8	.02
9	1.31
10	.29
11	.03
12	.19
13	1.68
14	.60
15	.48
16	.32
17	.30
18	.24
19	.41
20	.24
21	.06
22	.08
23	.34
Composite	1.04
Omitting No. 6	.3982
Arithmetical Average	.92

GOLD BAR MINE

(Copy of letter from A. L. Flagg - April, 1931.)

Dear Sir:

I submit herewith the results of my recent investigation at the property formerly owned by the Gold Bar Mining Company, in the Black Rock mining district, Yavapai County, Arizona.

DATA FURNISHED: (1) Mine maps and assay results from a formal report by W. R. Shanklin, 1927; (2) Assay results and copy of a mill-test-run from a report by George P. Hyde, 1929; (3) Assay results of the sampling by Smith & Holderness, 1930. No detailed records of previous operations are available, except the report of the milling test, made by V. G. Hills, in 1908.

SCOPE OF INVESTIGATION: Except for a brief reconnaisance of an area approximately three thousand feet square, in the center of which the principal developed ground is situated, the investigation was confined to 385, 407, 445, 478 and 503 levels, entered through the No. 2 shaft. The surface investigations were carried out more for the purpose of general information.

GEOLOGICAL STUDIES: Except for a few hand specimens for consideration no geological material was gathered. Questions affecting the genesis of the ores were not a part of the problem as submitted, neither were any special problems in structural geology.

SAMPLING: Sampling was limited to check samples below the 407 level, and were taken for the purpose of determining whether or not any part of this block might be estimated as ore in sight. The samples were assayed at the Arizona Assay Office in Phoenix, Arizona, and the original certificate is attached hereto.

For the purpose of evaluating the property as a development project the agreement between the Shanklin general sampling and the Hyde check sampling is sufficiently close. In arriving at an average value of the block between the 385 and the 445 levels as determined

by the Smith and Holderness sampling an average of a little more than $18.00 is obtained if the one high sample No. 6 is included. If this sample is not included the average is $8.50. The average of the seven check samples taken by the writer from the Block between the 407 and 445 levels is $8.88. Since previous sampling of the whole section, as well as the mill run, have indicated a higher value, the "sweetening" effect of an occasional higher value may be allowed for to the extent of assuming that in all probability the ore in the shoot explored so far will break to an average of around eleven dollars per ton in gold alone.

ASSAY RESULTS:

Sample	Number	1	0.04 oz. gold	$0.80
"	"	2	.46 " "	9.20
"	"	3	.72 " "	14.40
"	"	4	.82 " "	16.40
"	"	5	.30 " "	6.00
"	"	6	.10 " "	2.00
"	"	7	.66 " "	13.20
"	"			

The attached blue-print shows the approximate location of the above samples.

TONNAGE ESTIMATES: The nature of the development in the region at and below the 385 level is such that it is impossible to say, in the strict sense of the term, that there is any ore blocked out. In the reports by Messrs. Shanklin and Hyde certain positive tonnages are mentioned. While the method of computing this tonnage is stated in general terms the area is not so sub-divided that it is possible to compare the amounts estimated in either of these reports with that set out as being indicated ore in the present report. Furthermore, the workings above the 385 level were inaccessible at the time of the present investigation. Therefore, no opinion can be expressed as to the positive or indicated ore above the 385 level.

From the data gathered during the time of investigation on which this report is based, and, after making due allowance for the dimensions as reported for the ore removed from the stoped out areas above the 385 level, now inaccessible, there is believed to be between

the 385 level and a point just below the 445 level a block approximately forty (40) feet square in cross-secton by one hundred fourteen (114) feet long, measured on the longer axis of the winze, and volume of 182,400 cubic feet or 15,200 tons gross. From this 25% might be deducted as representing the ore removed from the winze and the other working at these levels, leaving a net of 11,400 tons of indicated ore.

CONCLUSION: The present investigations indicate a minimum of 11,400 tons of ore of an average value of not less than $8,888 per ton in gold between the 385 and 445 levels. In view of the milling test record, which is a sample on a larger scale, and after making due allowance for the higher averages obtained by a closer sampling on the same section, it is reasonable to assume that an average value of from $11.00 to perhaps over $12.00 per ton will be realized as this area is stoped out.

Respectfully submitted,

(Signed) A. L. Flagg
Consulting Engineer.

Phoenix, Arizona.
April 20th, 1931.

GOLD BAR MINE - Near Wickenburg

(Note by G. M. Colvocoresses - November 1937)

The underground workings of this mine have been inaccessible for many years and none of our engineers who visited this district obtained any favorable impression from what little they could see on the surface.

In 1933 it was examined by Earl R. Pembroke, of Salt Lake City, who was said to have made a rather favorable report and to have recommended unwatering the shaft and examining the old workings, but so far as I can learn this was never done.

In 1934 some parties from St. Louis took an option and tried to raise money for a similar purpose but they evidently failed for nothing had been done there when I was in that vicinity in 1936.

The large expense involved on making any thorough investigation of this old mine does not seem to be warranted by the vague rumors of high grade ore left by the old operators, which rumors are entirely unsupported by any engineering data that I have been able to secure.

GOLD BAR MINE - Near Wickenburg

(Extract from letter of G. M. Colvocoresses dated February 20, 1933.)

Consulting my files I find that the Gold Bar was presented to me by an attorney who had an option on the property in 1924 when I was manager of the Southwest Metal Company operating copper mines and a smelter at Humboldt. The information which he could furnish concerning this property was of a very general character and I subsequently investigated by discussing the mine with two parties in Wickenburg who were somewhat familiar with the property and appeared to be more reliable than the caretaker, a man named Muller, who seemed to have given most of his information to my friend the attorney. Subsequently one of our engineers who were examining other properties in that district made a brief investigation of the Gold Bar and mentioned it in his report.

The gist of all the data which I obtained was about as follows. The Gold Bar was operated by a glory hole from the surface and an old shaft and considerable oxidized gold ore was taken from near the surface, some of which assayed $25.00 per ton. The ore shoot chute pitched rather steeply in the vein and in order to follow this down an inclined winze was sunk from the bottom of the old shaft for a considerable distance. Somewhat later a new shaft was sunk to a depth of over 500 feet and it was intended to extend the 500 foot level in order to connect with the bottom of the winze, but actually there remained about 75 feet of drifting in order to make this connection. The property was closed down in 1917 and I do not know whether any work has subsequently been done.

If the 500 foot level had connected with the winze it was expected that a continuous ore shoot chute would have been partly developed with a vertical dimension of 400 feet, a lateral dimension of about 80 feet, a width of about 40 feet, and containing ore which would average $18.00 to a ton. This would have proved up some 100,000 tons of very excellent ore which obviously would have constituted a very valuable deposit, and I might say, a very unusual one, particularly in respect to width to be found in the Wickenburg district.

It was stated that assay maps and reports substantiating these statements might be obtained from Pittsburg and I asked the attorney to procure these, but he never did so and since our company was not particularly interested in gold mining at that time, I did not follow the matter any further.

Of course I do not know what report you may have seen or what other data has been presented to you convincing you that it is advisable to re-open and unwater the mine in order to permit a thorough examination. This proceedure however, will cost probably $5,000.00 (after the level is extended to meet the winze) and unless you already have in your possession very complete and trustworthy engineering reports, I would strongly suggest that before embarking on such an expenditure it would be very prudent to arrange for a complete preliminary investigation by some competent engineer in your employ.

Yours very truly,

(signed) G. M. Colvocoresses

F O O T E and C O M P A N Y

Industrial Engineers, Auditors and Appraisers

136 Liberty Street

NEW YORK

Telephone 9186

May
Tenth
1 9 2 9.

James A. Twichell, Esq:
Gold Bar Mine,
Wickenburg, Arizona

Dear Sir:-

In accordance with your instructions, we have made an examination of your mining properties located at Wickenburg, Arizona, in the County of Yavapai, and known as the:

GOLD BAR MINE.

At the time of our examination between the dates of April the Eleventh and Twenty Third, Nineteen Hundred and Twenty Nine, considerable time was saved, as we were furnished accurate maps of the surface and underground workings, which maps and other valuable data was offered to us by Mr. W. R. Shanklin, Mining Engineer and Geologist. These maps by the courtesy of Mr. Shanklin, have been made a part of this report, who was present during our examination of the Mine, and rendered valuable assistance to our Engineer.

The specific data contained on the aforesaid maps, were carefully checked, and found to be correct.

The maps submitted consisted of:-

Long Section of Mine Workings and Marked Section A-A
Cross Sections and Marked Section B-B and C-C
Location of Underground Workings
Plat of the Claims, showing locations of Development Work.

Our Mining Engineer and Geologist Mr. George P. Hyde, was instructed to pursue a policy of brevity during the period of his examination of your property, where the data had been so ably treated in other reports, but to give due consideration and careful study to the treatment of the ores, and a decided opinion of the best ways and means for the proper development of the Mine, to ultimately extract

therefrom the best results obtainable without jeopardizing the underground workings, which would result in a larger capital outlay for its rehabilitation and safety of operations.

Respectfully submitted,

FOOT AND COMPANY

By E.P.Foote, F.A.A.,F.C.I.,C.P.A.

GOLD BAR MINE
Wickenburg, Arizona

LOCATION:*

This property is located in Yavapai County, in the State of Arizona, about fifteen miles North Easterly from Wickenburg, which is on the Santa Fe Railroad, and is reached by a road in good condition, though having in places steep grades, which could be bettered by the expenditure of a few thousand dollars.

CLAIMS:-

The property consists of sixteen full, contiguous patented claims as follows:-

1, West End, 2. Bennett, 3. Galbraith, 4. Homesteak, 5. White Blaze, 6. Charm, 7. Fob, 8. Black Bear, 9. Red Wonder, 10. Cable, 11, Robert, 12. Little Jim, 13. Little Johnny, 14. Crown, 15. Burton, 16. Home, and a fractional claim, the Brunton, situated on the Hassayampa River, and on which is a pumping station.

A suit to quiet title has been instituted, and a favorable decision rendered by the Court.

TOPOGRAPHY:-

The country in which the claims are located is rough, with deep canyons and precipitous sides. The elevation of the camp being about theee thousand five hundred (3,500) feet above sea level.

The climate conditons are favorable for continuous operations during the entire year. A decided advantage.

HISTORY:-

The property was discovered about the year 1888 by James Mahoney, who interested Mr. F. X. O'Brien, who was then mining in Colorado. Later O'Brien purchased Mahoney's interest. In 1901 a years lease was given John Brown, Trustee of the Saginaw Lumber Co. During the life of this lease a ten stamp mill was erected. The ore treated came from an open cut in the out crop of the ore chute and from measurements of this cut, I estimate about 4000 tons of ore were treated with a recovery, according to Mr. O'Brien, of $60,000,00. On the basis of an 80% recovery, the ore treated contained a value of approximately $18.75 per ton.

The Interior Mining & Trust Company was then formed. This company sank the No. 1 shaft to a depth of 325 feet, erected a mill of a hundred tons capacity and worked the ore body by means of an incline from the 385 foot incline level to the surface, a distance of approximately 500 feet. These workings are inaccessible owing to caving, the rich supporting pillars having been pulled. Through the courtesy of Mr. F. A. Mueller who was in touch with the operations during this period, and from a few records which have escaped destruction, I find the mill ran ten months, treating some 20,000 tons of ore with a recovered value of $200,000.00, this from ore containing $275,000.00 value of $13.75 per ton ore treated. A poor recovery.

Then came a reorganization and the property became known as the Gold Bar Mining Company. $80,000.00 was raised with which the No. 2 shaft was sunk to the 700 foot level and connection made between the 500 foot level No. 2 shaft, and the old workings at the 385 foot level by means of drift and upraise. A small amount of ore was mined at this period and mill runs made.

GEOLOGY:-

The geology of this district offers nothing complex. The country rock is granite, and is known as the Bradshaw Mountain Granite. There has been extensive fissuring, showing the two major periods of movement. One resulting in a system of North 70° East fissures, and the

other in South 30° East fissures. Both systems show evidence of intensive mineralization.

Development has been almost entirely confined to one of the fissures of the North 70° East system, with a dip of 30° Northwest. Evidence of faulting in this fissure is encountered on the 445 foot invline level, where a thrust movement interrupted the ore body. The downward extension of the ore body will be found in the Northwest or hanging wall side of the vein. This displacement was undoubtedly caused by one of the fissures of the South 30° East system. There being a strong cross fissure in evidence at this point in the workings and it corresponds in position, to what is known on the surface as the Black Bear Vein. This displacement accounts for the fact that while No. 2 shaft was sunk on the supposed rake of the ore body, it failed to encounter the ore. On the 500 foot level of the No. 2 shaft, and about 100 feet from the shaft, there is encountered a condition of extreme crushing, accompanied by extensive mineralization of Marcasite.

This same condition with Marcasite exists in the foot-wall and adjacent to the ore body from the surface to the 445 foot level. The downward extension of the ore body at the 500 foot level will undoubtedly be picked up by driving a short cross-cut to the Northwest.

Paralleling this fissure on which the work has been done, and about 600 feet distant to the Southeast, is another fissure having a same dip 30° N.W. There are three very strong out-crops or blowouts on this fissure. The two extremes being about 1000 feet distant from each other. All three are larger and show very much more extensive mineralization than the out-crop on the fissure, in which the mining has been done.

I was particularly impressed by the one furtherest to the Southwest, which is located on the Cable claim, and is where the Red Wonder vein or fissure, the strongest fissure of the South 30° East system joins the S. 70° W. system. I believe when this property is developdd, it will be found that under or in connection with this out-

crop, the largest and richest ore bodies will exist. I cannot under - stand why this feature of the property has received so little attention in the past. The invitation is unmistakable.

ORIGIN OR ORES:

That the ores have been deposited as sulphides, filling, pre-existing deep fissures in the granite and by hot ascending solutions is so evident in view of present knowledge that it requires little furthere argument. In as much as the ores of deep seated ascending origin are always genetically associated with igneous rocks and this condition pre-eminately exists in the case under observation, there is every reason to expect permanency and continuation of the ore bodies to depth.

From conditions I observed at the property I should expect stronger and richer ore bodies to occur as greater depth is attained and be accompanied in the values by a copper content. That copper will eventually form a considerable proportion of the values is sustained by its occurrence in a drift on the 445 foot level, in the Bennett Drift on the 475 foot level at 610 feet in the No. 2 shaft and 165 feet from the No. 2 shaft on the 700 foot level. This copper occurs as carbonate and oxides and as assay gave copper 6.15%, Gold $6.80.

ORE BODIES AND VALUES:-

The ore body developed consists of quartz intermixed with massive iron sulphides, carrying gold and silver values in the proportion of four ounces of silver to one ounce gold.

From the surface to the 385 foot incline level, the ore is oxidized to a more or less extent, at the surface completely then in diminishing proportion until at the 385 foot level the ores occur almost completely as original sulphides.

In only two places, the surface and on the 407 foot incline level has the ore body been cross cut. In the former place for a width of 60 feet and in the latter place for 45 feet. The distance between these two points being approximately 500 feet. The depth of the ore body on the dip of the vein has in no place been demonstrated. At the

surface the ore in the bottom of the ghory hole is still "going" and is exposed at this point 40 feet in depth. On the 407 foot incline level, the same depth has been exposed by stoping with ore still in the roof and floor.

Assuming, as one is justified, from reports of conditions as they existed in the stoped area that the same dimensions of width and depth hold for the distance of 560 feet or from the 445 foot incline level to the surface, and using twelve cubic feet for a ton of ore in place and deducting 20,000 tons as mined, we have an available ore supply of 69,600 tons, not to mention a larger expectancy of probable ore.

Various results of values in this ore body are as follows:-

Ton stamp mill, results per ton	$18.75
Large Mill, " " "	$13.75
Mill Run of 70.166 tons, taken without sorting across a 4'x 6'x 40' cross-cut on the 407 foot level - Copy of the report of this run attached as exhibit A	$28.56
Average of 43 samples of the ore body taken in the winze area	$12.80
Composite of 15 samples, taken at random by me as check on above (See Exhibit B)	$11.20

From the foregoing results a valuation of $12.00 is conservative. On this basis the 69,600 tons represent a value of $835,200.00. This estimate takes no account of the low profitable grades of ore of which there is an abundance, nor of the large expectancy of probable ore.

In justice to the property, it should be noted that the conditions existing when the samples were taken, the mine having been under water for many years, with resulting muddy accretions on walls and roof, would tend to give lower results than would be attained in the extraction and milling of the ore. With modern mining, and milling methods, this ore carrying $12.00 in value per ton, should give a handsome profit.

EQUIPMENT:

Excellent living quarters for both staff and a large crew are now on the property.

No. 2 shaft is well constructed, double compartment shaft, and is well equipped for hoisting. It has in connection compressor and pumping facilities.

No. 1 shaft while not as well equipped or in as good a condition as No. 2, can with but little expense be made into a good workable shaft.

Mill building is well constructed, in good condition and with a little expense will lend itself to the installation of modern machinery. The advance of late years in ore reduction methods since the installation of this plant has rendered much of the machinert obsolete, still a very considerable portion can be utilized.

WATER:

The mine as at present developdd produces about 60 gallons of water per minute. This will undoubtedly be increased with further development. This gives an assurance of sufficient water for all mill purposes.

POWER:

A power line has been brought to the Monte Christo Mine, one and one-Half miles distant. The rate for power is two cents per KWH.

METALLURGY AND REDUCTION:

While decision as to reduction and concentration of the ore should be left for more detailed investigation than I was able to give it, the process that will undoubtedly be adopted will follow more or less on this line:

Crushing and sizing to a four mesh product,
tabling same.

The reject from the tables going to a ball mill circuit to be finished by flotation cells. The product of tabling and flotation sent for reduction to a smelter.

Should tonnage of concentrates warrant, it might be well to

investigate the feasibility of a Dwight-Lloyd cintering plant.

CONCLUSIONS:

In order to complete this report the following summary of conclusions may be briefly stated:

The large body of excellent grade of ore so far exposed warrants an extensive campaign of development. This should be done as follows:

1 - Sink No. 1 shaft 125 feet deeper and drive a connection between the two shafts on the 500 foot level of the No. 2 shaft.

2 - At the 385 foot incline level of the No. 1 shaft a working station should be made and so constructed as to easily handle large timbers and long lengths of pipe. Twenty feet below this station a sub-level of short length should be run to act as a discharge for a reserve or pocket bin, extending from the station above. Such a bin is necessary to prevent delays. Drafts should be run on t is level to delimit the ore body.

3 - From the station at the 500 foot level of the No. 1 shaft drifts should be run to pick up and delimit the ore body on that horizon.

4 - The cross cut on the 500 foot level and 100 feet from the No. 2 shaft should be driven ahead with every expectation of picking up the ore body within a short distance.

5 - From this same station a drift should be run about S 10° W for six or seven hundred feet to prospect for the downward extension of the ore under the No. 3 blow-out.

6 - This campaign of development should cost not to exceed $30,000.00 and should be done before any decision is reached as to the character and size of the permanent reduction plant. It would be advisable to install a small pilot plant of about 25 ton capacity for reducing the ore extracted from the development campaign. This could be done at a reasonable cost as the machinery necessary is largely on the ground. What would have to be purchased could be done with the idea of its being a unit of the permanent plant. The profit from the pilot plant should largely pay for the development cost and being an excellent guide as to the character of the permanent plant.

The property at present is not sufficiently developed for the extraction of large tonnage. The commodity in this instance being gold is not subject to market fluctuations. The cost of opening up and proving this exceptional ore showing will be nominal and the outcome will undoubtedly result in a large and successful mining venture.

(Signed) FOOTE AND COMPANY

ATTEST:

Signed by George P. Hyde
Mining Engineer and Geologist

(Signed) E. P. FOOTE

F.A.A., F.C.I., C.P.A.

NOTES RE GOLD BAR MINE

by G. M. Colvocoresses

March 1938

I have never visited this mine and my engineers who did so on several occasions could do no more than look over the surface.

The attached reports contain much repetition and speculation but it may be gathered from these and maps which I have seen,- but of which I did not secure copies,- that there is very little pay ore developed and accessible but a good chance to develop a worthwhile mine which might operate profitably thru the installation of modern equipment and a 100 ton cyanide mill.

The terms asked by the owners have been and apparently still are much too high and according to my latest information the property is just now under uption to Jack Beach, a Los Angeles Engineer, who is supposed to represent St. Louis capital.

Cecil G. Fennell of Phoenix, who furnished the reports, etc., claims to have some kind of an interest in the property but apparently this could not be perfected without litigation.

According to the concensus of Engineering opinion the mine itself has merit and if Beach should drop out of the picture or if Fennell should be in a position to make a clean cut deal on reasonable terms, I think that further investigation would be warranted.

G. M. C.

NOTE RE GOLD BAR

June 9, 1938

Fennell says that L. E. Foster examined this mine some years ago in compan with Franklin Smith, an Engineer representing English capital and that they estimated the proven ore remaining in the chimney or plastered on its sides to represent 40,000 tons with average value of $18.00 per ton at present price of gold. It was too small for the English Company.

ADDITIONAL NOTES RE GOLD BAR

10/8/38

Fennell says that property could now be taken over from owners without any legal complications on a 10 year lease with sliding scale royalty starting at 10%.

Royalty to apply on purchase price which is now set at $175,000 if option is exercised within 3 years, or $225,000 if option exercised in 4 years, or $250,000 if option exercised in 5 years (Purchase price is still much too high but of not great importance if terms of lease are fair and reasonable.

Fennell claims that all the engineers who have examined and sampled the mine agree that there is more than enough high grade ore developed and accessible,- after the workings are cleaned out to repay the initial investment with profit (This is not borne out by Flaggs' report)

He also maintains that there is every reason to believe that much additional high grade and a large tonnage of lower grade ore will be developed by future. work.

GOLD BAR NOTE

11/23/40

Twitchell says that he now has lessees working the mine and especially trying to find the surface showing which represents a high grade vein that was developed on the 440' level in the old mine.

Twitchell is living in the old Wickenburg house in the town pf Wickenburg.

THE GOLD BAR GROUP

That which follows is compiled from extracts of an exhaustive Hill's Report upon an ex-extensive examination of the Property and Mine; together with data from actual records made during operating periods of the property, and from the personal knowledge of the writer, who was for many years in close touch with the progress of the operations thereon.

The property is located in the Black Rock Mining District, in Southern Yavapai County, Arizona; upon a well built mountain road, with the nearest post-office three miles to the south at Constellation, Arizona; and fifteen miles in NE direction from Wickenburg, Arizona, the nearest Railway.

The Estate consists of seventeen full Lode Claims with ample acreage to fully protect all the principal Mineralized features of the Property.

"The Country is in Granite which is extensively Fissured and some of the Fissures show faulting, though, so far as observed, the faults are not of large displacements. The Mineral deposits of the Veins seem to have been subsequent to the faulting. A number of Quartz Veins are observed upon the Property and several of them have received some development work; but the following will be confined to the Ore-body where mining and milling were carried on."

"This ore has a strike of S 53 W, with a dip of 30 degrees from the horizontal. The Original Ore Deposite consists of Iron Pyrite carrying gold, with about four ounces of silver to the oz. of gold. From the surface down to a vertical depth of about 300' the ore has been quite thoroughly oxidized; below this level the appearance of the original sulphide form is rapid. At the first or 41' winze level there is some iron oxide but the quantity is so small as to be scarcely noticable in the mass of sulphide."

"The orebody has been opened and partially stoped for a little more than 500' on its dip, which is about 300' in vertical depth, on the oxidized ores."

From the 300 foot vertical level a winze was sunk to a depth of 252' upon the sulphide ores. Lateral work from this winze exposed a greater width to the ore-body, and mill run tests upon these sulphides gave a much greater value than those of the oxidized ores above. No stoping was done below the 300' vertical level, with the exception of a couple hundred tons or thereabouts which were used for mill tests.

"Gold is practically the only valuable product of the mine; tho there is a trifle of silver and a high percentage of Iron, which has an indirect asset by the lessening of the costs in the case of the smelting of the ores." The lower winze works show some copper indications which have not been given much consideration, tho with a greater depth the copper values may have a considerable bearing upon the ore values.

Extensive assay lists will not be given consideration at this time; suffice it to mention that a cost record upon 16,000 tons of the oxidized ores milled from above the 300' vertical level gave a value of about $8.00 per ton,- no sorting. The higher grade of oxidized ore remaining in the mine and just above the 300' ~~lev~~ vertical level.

During Mr. Hill's examination of the property four Nissen Stamps, taking ore from a seperate bin, with two Wilfley Concentrating tables and one Vanner were set aside for test runs upon various character of ore. Four runs were made, giving favorable results and returns. Since the deeper exploration and development is vital to establish the future of the Mine, the test runs upon the oxidized ores will not be mentioned at this time, tho a considerable tonnage of this ore still exists in the Mine, we will herein refer to Mill-test No. 4. "This Mill test No. 4 consists of all the material taken from a 4 x 6 x 40 ft. crosscut through the orebody, and amounting to 72.33 tons with moisture of 3%, or 70.16 tons dry. This ore concentrated 4.52 tons into one, with a return of

better than $25.00 per crude ton of ore. This 70 tons of sulphide ore came from an east and west crosscut through the ore body, and was about as perfect a sample as anyone could desire to have taken."

Assays on the work as it progressed at the second or 110 winze level gave more elaborate returns than those on the 41 foot winze level. No mill tests were made from this or lower points. It would be difficult to find more encouraging features than are to be found throughout the winze.

The results of the winze work and its exploration warranted the owners to sink a new working shaft at an expenditure of about $80,000; which shaft has a vertical depth of 730 feet and in advance of the dip of the ore.

Lateral work in the New or No. 2 shaft was not carried to a point of attacking the ore-body; tho, during the sinking of this shaft which was to go down in the granite, a very large mineralized zone was passed through at the 500 foot depth, which mineralization will in all probability prove to be the Matrix to the ore.

The cost of mining 16,000 tons of the oxidized ore was $2.10 per ton, and the milling thereof at $1.19 per ton. This might be improved upon tho later and more improved methods, as the ore is not refractory but lends itself to economical treatment. Test sheets of this ore are at hand.

No mention of ore in sight will be made, as no attempt at blocking out the ore in the winze was made; yet a worthy consideration must be given the ore's continuity from the surface for a distance of about 800 feet upon its dip and with a width of not less than 40 feet at the first winze level.

Working Maps, Assay Sheets, and other vital matter may be examined upon the Property.

"Briefly summarized, the present and the future of the Mine may be stated thus:"

"Milling has established approximate cost and values."

"The orebody is wider and also richer where exposed in the lower workings than at other points."

"The width of the ore at the first winze level is about 40 feet, is sampled by Mill-lot No. 4 and there can be no question as to its value."

"The area or full extent of the ore in the winze is still unknown. The known laws in regard to Mineral deposition with depth are most important to consider in this case. Like all rules it may have its exceptions, but every condition so far shown in this mine is an emphatic illustration of the law above stated. We are rapidly getting into permanent water the the ore becoming of the sulphide form and at the same time increasing in the quantity of the Precious Metals. Nothing more could be asked for in the life of excellent prospects. The ore should continue to increase in value, but just how far the value will increase would be quite idle to attempt to preduct. To say that the prospects are extremely encouraging, even flattering, is a common and often idle expression in mining; but the words truly fit the present case."

"The Geology and Minerology are simple and present nothing unusual."

The property is in a fair state of repair and would require but a nominal expenditure to go into operation again.

All data and information will be placed before the interested, upon the property, in a manner unelaborated and with conservatism.

Very respectfully submitted,

(Signed) F. A. Mueller.

Constellation, Arizona

copied 4

THE GOLD BAR GROUP

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Working Maps, Assay Sheets, and other vital matter may be examined upon the Property.

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"The area or full extent of the ore in the winze is still unknown. The known laws in regard to Mineral deposition with depth are most important to consider in this case. Like all rules it may have its exceptions, but every condition so far shown in this mine is an emphatic illustration of the law above stated. We are rapidly getting into permanent water and the ore becoming of the sulphide form and at the same time increasing in the quantity of the Precious Metals. Nothing more could be asked for in the line of excellent prospects. The ore should continue to increase in value, but just how far the value will increase would be quite idle to attempt to predict. To say that the prospects are extremely encouraging, even flattering, is a common and often idle expression in mining; but the words truly fit the present case."

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The property is in a fair state of repair and would require but a nominal expenditure to go into operation again.

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Very respectfully submitted,

(Signed) F. A. Mueller.

Constellation, Arizona.

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GOLD BAR MINE

Wickenburg, Arizona

Report of Examination by Hills and Willis,
Mining Engineers

To the Board of Directors,
Interior Mining and Trust Company.
Hartje Building, Pittsburg, Pa.

Gentlemen:

In accordance with your request, I have made an examination of your mining property located 16 miles N.E. of Wickenburg in the Black Rock Mining District, Yavapai County, Arizona.

The period of my examination on the ground, was from December 8th, 1907 to January 1st, 1908.

There are certain items such as the extent of the estate the character and condition of the title, the mines history, the location with reference to railroads and other transportation facilities, the question of water supply, drainage, inventories of machinery and other equipment, and other particulars which commonly form important and extensive parts of mine reports; which are not considered in this case. You are alrady fully posted in regard to these features.

However, the subject of the extent of the ore shoots within your vertical plane and boundaries and the question of extralateral rights and possible future litigation in regard thereto was discussed but after certain surveys and maps were made and considered, the matter was left with the members of the board, who were on the ground. The property or surface maps were left at the mine and I did not take any copy of same.

GEOLOGY AND MINEROLOGY:

The country is granite, which is extensively fissured and some of the fissures show faulting, though so far as observed, the faults were not of large displacement. The mineral deposits of the veins seem to have been subsequent to the faulting. A number of quartz veins were observed on the property and several of them have received some development work; but my examination was practically confined to the ore body where mining and milling operations were being conducted.

This ore deposit is in the form of a pipe or chimney. It has a strike S 53 degrees W. with a dip of 30 degrees from the horizontal. Within or near the ore body signs of vein structure are obscure and the valuable ore is seldom bounded in any direction by walls. The originaal ore deposit consists of iron purite carrying gold, with a little silver and traces of copper, antimony and lead. I did not observe and zinc.

From the surface down to a vertical depth of about three hundred feet, the ore has been oxidized quite thoroughly; below this level the appearance of the original sulphide form is rapid. At the winze level there is still some iron oxide but the quantity is so small as to be scareely noticeable in the mass of sulphides. Quartz, the most common material of vein filling, is found in comparatively small quantities aside from the quartz which is a constituent part of the granite.

SURVEY AND MAP:

During the period of my examination it was found necessary to make a survey of the underground workings of the mine. The survey and map were made under my supervision, and sections were left at the mine as a working map. This report shows only such portions as have some important connection with the subject considered. The ore shoot has been opened for a little more than 500 feet on its dip, which is but a little over three hundred feet in vertical depth. The mine workings consist of a vertically below the collar of the shaft as follows:

Adit level	1112 feet.
No. 1 "	114 "
No. 1½ "	171 "
200' "	209 "
300' "	307 "
Winze	333 "

Only the 200 and 300 foot levels are connected with the shaft, but all of the workings are connected through stopes in the ore shoot. A plat attached hereto and forming a part of this report shows separately the plan of the winze and the plan of the 300 foot level at and near the ore shoot. On another sheet there is a vertical section showing the dip of the ore shoot. On both plan and section the extent of the pay ore, as far as developed, is shown by red coloring, and the ground

which was sampled and proven barren is colored green.

THE ORE:

Gold is practically the only valuable product of the mine; though there is a trifle of silver and the high per cent of iron figures as an indirect asset by lessening the reduction charge in the case of smelting ore. Iron, Sulphur and Silica (insoluble) are factors in determining the cost of treatment, hence some of the important mill runs and concentrate samples were assayed for these minerals.

GOLD BAR GOLD MINE

TENTATIVE APPRAISAL VALUE OF ASSETS

(To accompany summary and survey)

Manner derived:

The ore tonnages as given in the accompanying reports, from which this is summarized and to which reference for additional details is made, are as follows:

	Tons	Value per ton
One report states:		
"Available ore supply"	69,000	"Of a gross value of $12.00
Another reports states:		
"Ore available from present development and above #2 shaft, 500 ft. level"	110,000	"An average value per ton of mine run" $11.75
Average	89,800	$11.87
Average value of mine run ore-- with price of gold at $35.00 oz.	89,800	. . . . . $20.76
Gross value of above 89,800 tons of ore		$1,864,248.00

Due to oxidiation, leaching and mechanical concentration, the ore in places, especially within 200 feet of the surface, will no doubt prove to be a little higher or lower in value than given in the accompanying reports as above--though the tendency under such conditions is towards that of enrichment--but the final net returns would aggregate in accord with the above totals.

It cannot be claimed that this ore is blocked out in the sense that it is exposed on two, three, or four sides, and thus in sight. On the other hand, portions of same are well opened up and exposed on one or two sides, and those portions of ore referred to in the reports as stope filling, are already actually mined, or, if not already mined in the stope, are exposed in the stopes. It is, therefore, certainly conservative to treat 40% of the tonnage as positive ore, and safe to treat the balance as probable ore.

V A L U A T I O N S

POSITIVE ORE: 35,920 tons at $20.76		
Gross value		$745,699.20
Loss in extraction of values, (tailing loss)	$74,569.92	
Mining, milling, ore development, exploration, marketing and overhead	305,320.00	379,889.92
NET OPERATING PROFIT.		$365,809,28
		$365,809.28
PHYSICAL & PERSONAL PROPERTY: hoisting equipment, compressors, machines, tools, power units, buildings, and camp equipment --(replacement valuation		$ 47,250.00

(2)

4/23/27

REPORT ON GOLD BAR MINE

Wickenburg, Arizona.

By W. R. Shanklin, Mining Engineer, Tulsa, Oklahoma.

Mr. W. O. Dickenson,
Tulsa, Oklahoma.

Dear Sir:

Complying with your request that I make a survey and examination of the Gold Bar Mine at Wickenburg, Arizona, I am herewith presenting my Report; with detail maps of underground work, and such other items of information as I have been able to find from my examination of the property.

LOCATION:

The Gold Bar Mine is located in what is known as the Black Rock Mining District in Yavapai County, Arizona, about fifteen miles Northeast of the town of Wickenburg, on the Santa Fe Railroad, which is about 51 miles North and West of Phoenix. This part of the country is not surveyed or subdivided, therefore no legal descriptions of the land can be given.

CLAIMS:

There are sixteen full claims in a body, and a fractional claim on the Hassayampa River for a mill site, on which is located a pumping station for millingpurposes. This group of claims is shown on the attached map. Title is held on these shown by solid lines, and patent can be obtained on them by going through the usual procedure of patenting such claims. Those shown by dotted lines were taken up some years ago, but have since been allowed to lapse, and are now forfeited.

TOPOGRAPHY:

The Topography is very rough and mountainous with narrow, sharp canyons and precipitous slopes. The general altitude of the area ranges from about 3200 to over 4100 feet, with an elevation at the No. 2 shaft of about 3450 feet.

The surface drainage is to the North and Northwest, into the Hassayampa River, which, in turn, flows to the Southwest and enters the Gila River.

HISTORY:

This property was first mined by O'Brien and Mahoney, and became known as the O'Brien Mine. They started mining operations at the Old Glory Hole, which they mined for several years, treating the oxidized ores by stamp mill and amalgamation. No record of this operation or production is now available.

The property was then organized as the Interior Mining and Trust Company, who operated on a much larger scale than the former operators, sinking the No. 1 shaft and opening up the old stope down to the present 385 foot level. All of the milling equipment now on the property was put there by this company and operated for a number of years. The records of this operation and production are entirely lost, but it is evident that a lot of valuable ores were mined and treated.

A re-organization of the Interior Mining and Trust Company was effected and the property became known as the Gold Bar Mining Co. This company sank the No. 2 shaft to a depth of 735 feet, and drove the present drifts on the 500 feet and 700 foot levels, but did not operate the mill, or produce any marketable ores. The property was shut down a number of years ago and remained idle until quite recently, when the ground was unwatered and the two shafts connected by a drift on the 500 foot level. The old milling machinery now on the property was shut down about twenty years ago and has not since been operated.

DEVELOPMENT:

The development of the mine was first started at the Old Glory Hole and carried downward in various stages. The shafts were sunk during the latter years of its operation, together with the drifts and crosscuts from the 385 foot level down to the 700 foot level, comprising a total of about 1800 feet of drift, as shown in detail on the attached maps of the underground workings.

The old workings above the 385 foot level comprise prin-

cipally a larger inclined stope, or drift, with its best values from the old 200 foot level down to the present 385 foot level. These workings were demaged and allowed to cave, by the pulling of some very rich pilars, after which the lower levels werenopened in an effort to develop a lower extension to the upper ore body. The last work done in the mine was quite recent, when the mine was unwatered and the present connection made with the incline at the 500 foot level.

EQUIPMENT:

The property is now equipped with the following itemized list of mining machinery, oil eninges, compressors, buildings, tanks pipe lines, and other miscellaneous equipment. A lot of this equipment is in fair condition and can be used in the further development and operation of this property, for which purpose it is estimated as being worth approximately $40,000.to the property, but to tear down and remove it for sale as second hand machinery, it is worth only a small part of its value if used on the property.

PRODUCTION:

The records of the operation of the mill are entirely lost, having veen destroyed or removed by officials of the Interior Mining and Trust Company, and no evidence of any ore sales or other data pertaining thereto is now available to show that the mine actually produced and sold valuable concentrates and bullion, except the attached photographic copies of Mint Memorandum and the return of settlement sheets from the Smelter fro concentrates and bullion shipped to them, which were evidently overlooked when the other records were removed or destroyed. (EXHIBIT1 and EXHIBIT 2)

The ore from the mine was treated in the present stamp mill, over amalgamation plates, concentrating tables, and vanners, and by cyanide treatment of the mill tailings. It is reported that the entire production of gold and silver values covering the entire period of the property's operation was approximately a quarter of a million dollars.

MILL TEST:

During the latter period of the operation of the present mill, a mill test was made on 70.17 tons of dry ore taken from the present 407 foot level on the south side of the winze or incline. Thie ore was milled very carefully and showed a concentrate recovery of about 22 per cent, or 15.44 tons of concentrates with a value of $133.20 per ton. The ore as taken from the mine, or mill feed showed a value of $29.30 per ton. This mill test gives an idea of the value and richness of the ores taken from the mine at this level during the period of sinking the incline or winze, and driving the crosscut drifts, as shown on the map of the underground workings, and is comparable to the ore that is now seen in these old drifts.

WATER:

The water for milling purposes was formerly a problem, and necessitated the installation of a pumping plant on the Hassayampa River about a mile from the present plant. Water for domestic purposes is obtained from a good well and spring, located at the camp site.

The mine water was never very heavy, as little water was encountered in the old workings and around the No. 1 shaft at the 385 foot level. Such as accumulated was hoisted and bailed out. When the No. 2 shaft was sunk and the present drifts cut, a flow of water was encountered which at present amounts to about sixty gallons per minute, with indications that this will probably increase as the work is carried deeper.

A 7-inch Luitweiller lift pump was installed to take care of this water, but as there was no 7-inch column pipe on the property at the time, and there was considerably 4-inch pipe, the pump was bushed down to fit the 4-inch column, and has operated that way ever since, but it pumps very little water and will not keep down the present flow in the mine.

There is probably sufficient water in the mine for milling purposes, so long as the present underground conditions re-

main the same and operations are carried on above the 500 foot level; it will furnish a very economical supply of milling, as the water has to be pumped down to the 500 foot level.

GEOLOGY:

The surface rocks are granite, with many local variations, and should probably be correlated with the Bradshaw mountain granite. It is quite uniform over the area, and is found in all the levels of the mine to a depth of over 700 feet in the No. 2 shaft.

There is a number of dioritic dikes of varying character, cutting into this granite, which have a general strike of NE and SW, and with varying dips to the NW. Occurring with these dikes is a system of fault and fracture planes having approximately the same dip and strike.

The mineralized zone, or vein, follows the general trned of the dikes and fault system, and dips about 30° NW. No foot or hanging walls are descernible in the mine, except for the presence of heavy quartz vein matter, which occurs between the ore body and the large faulted crushed or brecciated section of the S.E. side of the Mine. This evidently cuts off the ore gody, as no value of any consequence are found beyond this contact.

On the West side of the incline, or winze, at the 445 foot level, there is found an intrusive dike along which occurs heavy quartz vein matter in contact with a strong copper vein, showing good values in gold and silver. This vein, or lead, probably dips to the NW and may develop into a body of copper ore, but at present it is found at no other point in the mine.

SAMPLING AND ASSAYS:

Sampling of the mine was done very carefully, samples being taken approximately every five feet throughout the drifts that could be entered and examined. The assays of these samples are attached hereto on the original sheets from the Assay Office, and speak for themselves (Exhibit 3). The location in the mine from which each sample was taken is shown on the attached map of the underground

workings with a line and number of the assay. The average value of these samples taken out of the area hereafter described as "OREBODY" is $11.75 gold and silver per ton.

There was taken from the mine two large samples or ore as near shipping concentrates as could be obtained for smelter tests. These samples were taken, one to the Magma Smelter at Superior, and the other to the Hayden smelter at Hayden. The results of these tests are also attached hereto as "EXHIBIT 4," and furnish a good idea of the value of the concentrates that can be shipped from the mine.

ORE BODY:

The ore body, as developed by the underground workings, is apparently a vein or veins, of disseminated ores in a comparatively narrow strip paralleling and intermixed with a mass of quartz vein matter which lies between the ore and the faulted or severely brecciated area, wich is evidently a fault and in turn parallels the general strike of the fault or fracture planes as observed on the surface and in the mine.

The ores are iron sulphides in association with this veins of quartz carrying gold and silver values. There is also some oxidation throughout the sulphide zone extending from the old 200 foot level to the present 445 foot level. Above the old 200 foot level all the ores are pretty well oxidized to the surface at the Old Glory Hole.

The underground workings have in no way blocked out or developed what might be termed an ore reserve, but the showing of sulphide ores carrying values as shown by the sampling, shows beyond doubt that there is a body of ore which can be mined at a profit. To estimate an available tonnage of mineable ore is largely a matter of opinion as to the extent of the ores carrying average values large enough to make mining profitable. Naturally, such an estimate should be conservative, using only such measurements as come well within the limits of the exposed ores that show good values.

On the attached map of theunderground workings is outlines an area that encloses the major portion of the observed mineralization, which shows an average width of about 40 ft., a length of about 330 feet, and an average height of probably 100 feet, extending from the 445 foot level up to the old 200 foot level, which is correctly a distance of about 175 feet. This area seems to cover the large part of what is apparently the extent of the present known ore body, and contains a total of about 110,000 tons of ore, using 12 cubic feet of rock in place of one ton, and the average value per ton rock or mine run of $11.75 as indicated by the sampling, giving a total value of $1,292,500.00. This sum must be considered as an estimate only, and that the actual value may vary widely from these figures. However, as considerable value is indicated by the above estimate, further development of the property should develop extensions to the present ore body, both laterally and with depth.

The point on the map indicating the presence of copper sulphides carrying values in gold, silver, and copper, the assays of which are shown (but the area not included in the above estimate) gives values of $13.83 to $54.85 per ton. This is a good, strong showing of copper ores, and is worthy of further devlopment, as the vein probably parallels to some extent the other ore body, but deeper.

CONCLUSION: The matter of ingress and egress to this property is one of great importance and involves the preparation of suitable roads for hauling heavy material to the mine, and concentrates from the mine for shipment at Wickenburg, a distance of 15 miles. There is a reasonable good mountain road from Wickenburg to the Monte Cristo mine. From there to the Gold Bar Mine, a distance of two and one half miles, the road will require some improvement and reconstruction.

The attached letter of Mr. F. A. Mueller, who has been connected with and in charge of the property for a great many years, is the only authentic information obtained upon the character of the ores that were developed in the old stope below the old 200 foot level. This letter is marked "EXHIBIT 5".

From the foregoing data it is quite evident that there is considerable profit to be derived from this mine, if operated in the proper manner; and if so, a certain portion of the profits should be set aside and spent in further prospecting at deeper levels, in which case it is very probable that valuable bodies of copper ores may be discovered, as well as extensions to the present known ore body.

Respectfully submitted,

(Signed) W. R. Shanklin

W. R. Shanklin
Mining Engineer
Tulsa, Oklahoma

Phoenix, Arizona

April 23, 1927.

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LETTER FROM MORTON E. PRATT * OCTOBER 28TH, 1933.

copied

Mr. Cecil G. Fennell
1835 So. Van Ness Ave.,
Los Angeles, Calif.

Dear Mr. Fennell:

I have previously mentioned to you a property in this vicinity in which I have been sufficiently interested, for more than three years now, to closely inquire into all of the information I could get. Particularly to question the old miners that had worked in the mine. Had not seen much of a possibility of doing anything with it because the price was high and the owners representative here very hard to deal with. He had been asking $400,000, and a substantial cash payment. I could not see that at all.

Shortly after my return in September I decided to get into it, and have been hammering away ever since. Have not been able to get anywhere on a deal on the whole property. Found that those principally interested are very desirous of holding an interest in the property, and for that reason have held the price out of reach, for the whole.

Catering to this and inciting a desire to get something moving, I have finally got agreement to a deal on an undivided three-quarter interest, that I think would be attractive at any time and certainly attractive at this time. Say here though, that I am figuring on gold at 20.67 and not 30 or more.

Conditions are as follows:

Price. $150,000.00 for an undivided three-quarter (75%) interest.

Terms.		
	12 mo. (14 mo. from the start)	$25,000.00
	18 mo.	25,000.00
	24 mo.	25,000.00
	30 mo.	25,000.00
	36 mo.	50,000.00

Time. To unwater the mains and complete examination 2 months. Work toward this end to be started within 10 days of the signing of the agreement. Payments as above to start on a lease and bond embodying the following principal agreements as follows:

Time: To start operation, 1 month. Provided any new equipment is considered advisable, time to be extended to cover such installation.
Work: To be conducted at the rate of at least 300 shifts per month, for the first year. Average over a 3 mo. period.
Production: Can be started as soon as mine and mill can be made available, and provided only that during the first year mine development work must be conducted to in no way deplete ore reserves as at present. A tonnage equal to that mined must be developed, provided development work can be conducted in ore in or on any part of the property.
Royalty: of 15% of the gross recovery, as distinct from thegross value of the ore, to be paid on all production made, and applied to the purchase price.
Capital Expenditure: Repayment of the capital expenditure made to be accomplished from production before the vendors share in any profit other than purchase. Upon final payment by the purchasers, any and all profit from production to be applied to the extinguishment of capital account, to a maximum of not over $125,000.00. Following the extinguishment of the Capital Account (not to exceed $125,000.00) and not until paid will the vendors share in the 25% interest reserved.
Title: Good and sufficient title to the property to be placed in escrow, on acceptance of the first payment, with instructions to deliver on final payment. Title is at this time a complete abstract, up to the date of the death of the late owner. Probate documents are all that is required to furnish an abstract of title to date.

The foregoing was agreed to only yesterday. Not as yet drafted in a semblance of legal form, and no signatures to date. That will be my next work following this word to you, but you may be sure it is good as it stands.

My insistence to be allowed 30 days on this basis, even 10 days, I could not accomplish. Had to accept it on the basis of first come first served. Others are working on it now on the same basis. That is the first man to tie them up on the 60 day examination agreement and start work in 10 days, gets the deal.

The advantage this deal offers, over others now under consideration, is the capital repayment clause which had not been previously worked up, and which I think you will agree is of considerable importance.

Following is an outline on the property, intended to be as brief as seems consistent, and convey to you the essential details.

GOLD BAR MINE

Location:

Fifteen miles N.E. of Wickenburg, which is the closest R.R. shipping point and highway junction. Post Office, Constellation. Two miles distant. Six mails a week. Daily except Sunday.

PROPERTY:

Sixteen patented lode claims. Over 300 acres. Also a mill-site water-right claim on the Hassayampa River about a mile distant from the camp and mine.

HISTORY AND PRODUCTION:

Discovered by one Mahoney. First worked by O'Brien and Mahoney. Ten Stamp mill erected in 1901. Amalgamation only. Production as given by OBrien, 4000 tons and recovery $60,000.00 plus. Interior Mining & Trust Co. then formed to work on a larger scale. Put down the No. 1 Vertical Shaft 325' and connected from the 300 level. Erected 12 Nisson Stamps of about 1200# weight. Said to be 1700# stamps, but they are not. Amalgamation and tabling (Wilfleys and Vanners) was followed. Production estimated at 20,000 tons, recovery $200,000.00. Extraction poor. Probable value of ore nearer $300,000.00 or an average value of close to $15.00 per ton. Reorganized and named the Gold Bar Mining Co. Put down the No. 2 vertical Shaft to a depth of 735'. Connected with the ore body from the 500 level, and about 200 feet of lateral work on the 700 level. No ore found below the 500' level. Made but a small production. Financial troubles and litigation followed and there has been no production since. Small leases not considered.

There are not records remaining and no authentic figures on production. Those given are estimates or guess as you may care to consider, but from the miscellaneous information that I have gathered am inclined to consider them conservative. The Gold Bar Co. have two reports on the property. One by W. R. Shanklin of Tolusa, Okla. Dated April 23, 1927 and addressed to W. O. Dickenson, of the same address. The other made Foote & Co., of New York. George P. Hyde of Eureka, Nevada, the examining engineer.

I have but met Mr. Shanklin. He is now endeavoring to interest capital in the property. George P. Hyde I know very well. Has long held down the old Croesus silver mine at Eureka, Nev. Is unquestionably a good man. Has a high reputation as an engineer and for personal integrity.

Ore Reserves. Mr. Shanklin estimates as ore available from present development, and above the No. 2 shaft, 500 Level, "A total of about 110,000 tons of ore, and the average value per ton rock of mine run of $11.75, as indicated by the sampling, giving a total value of $1,292.500.00."

Shanklin furnishes assay returns on 132 samples. Mr. Hyde's estimate, same block of ore, is as quoted. "Theore body developed consists of quartz intermixed with massive sulphides, carrying gold and silver values in the proportion of four ounces silver to one ounce gold. From the surface to the 385 foot level the ore is oxidized to a more or less extent, at the surface completely, then in diminishing proportion until at the 385 foot level the ore occurs almost completely as original sulphides. In only two places, at the surface and on the 407 foot incline level has the ore been cross-cut. In the former place for a width of 60 feet and in the latter place 45 feet. The distance between these two points being approximately 500 feet. The depth of the ore body on the vein has in no place been demonstrated. At the surface the ore in the bottom of the Gloryhole is still "going" and is exposed by stoping, with ore still in the roof and floor.

Assuming, as one is justified, from the reports of conditions as they existed in the stoped area, that the same dimensions of width and depth hold for the distance of 560 feet or from the 445 incline level to the surface, and using 12 cubic feet for a ton of ore in place, and deducting 20,000 tons as mined, we have an available ore supply of 69,600 tons not to mention a large expectancy of probable ore."

At another place he estimates an average value of $12.00 per ton gold and silver. Ratio as above given or 1 - 4. Gold figured at $20 per oz. Silver at $.60 per oz.

On Geology which also runs into prospective possibilities, I am quoting Mr. Hyde.

Geology. "The geology of the district offers nothing complex. The country rock is granite, and is known as the Bradshaw Mountain granite. There has been extensive fissuring, showing two major periods of movements. One resulting in a N. 70° E. system of fissures, and the other in S. 30° E. system. Both systems show evidence of intensive mineralization.

Development has been almost entirely confined to one of the fissures of the N. 70 E. system, with a dip of 30 degrees N.W. Evidence of faulting of this fissure (postmineral?) is encountered on the 445 incline level, where a thrust movement interrupted the ore body.

The downward extension of the ore body will be found in the Northwest or hanging wall side of the vein. This displacement was undoubtedly caused by one of the fissures of the S.30 E. system. There being a strong cross festure (fracture?) evidenced at this point in the workings and it corresponds in position to what is known on the surface as the Black Bear Vein. This displacement accounts for the fact that while No. 2 shaft was sunk on the supposed rake of the ore body, it failed to encounter the ore. On the 500' level of the No. 2 shaft, and about 100 feet from the shaft, there is encountered a condition of

extreme crushing, accompanied by extensive mineralization of Marcasite. This same condition with Marcasite exists in the footwall and adjacent to the ore body from the surface to the 445 foot level. The downward extension of the ore body at the 500 foot level will undoubtedly be picked up by driving a short cross-cut to the North west.

Paralleling this fissure on which the work has been done and about 600 feet to the Southeast, is another fissure having the same dip. There are three very strong outcrops or blow-outs on this fissure, - the two extremes being about 1000 feet distant from each other. All three are large and show very much more extensive mineralization than the outcrop on the fissure in which the mining has been done. I was particularly impressed by the one farthest to the Southwest, which is located on the Cable Claim, and is where the Red Wonder vein or fissure, the strongest fissure of the S. 30 E. system, joins the S. 70 W. system.

I believe when this property is developed, it will be found that under or in connection with this outcrop, the largest and richest ore bodies will exist. I cannot understand why this feature of the property has received so little attention in the past. The invitation is unmistakable."

I can agree with Mr. Hyde in the much more than common indication of large ore bodies, from the outcrops mentioned. Aside from the granite, which I am quite sure further study would reveal as much more than one period of intrusion, there is considerable of schist inclusions that could have had marked effect on the localization of the ore bodies or outcrops of promise. Nothing of this ore as estimated can be seen until the mine is unwatered, with the exception of the ore at the Gloryhole, and as I have quoted from Mr. Hyde's report. Lately some lessers have been mining and hand sorting a shipping grade of ore, principally sulphide, and have followed five or six feet farther into the foot-wall, with good ore still in sight. The

limits not yet revealed.

Also confirms my information, gathered principally from the old time miners that worked in this ore body and stope. That nowhere was sulphide ore removed where it could be avoided. Mining was confined to the more oxidized ore, principally following the hanging-wall, and that large bodies of good sulphide ore remain in the old stoped area.

Also I am told, with considerable evidence in confirmation, that there was something abviously wrong during the last periods of operation. Miners were held on the removal of ore that they were sure was much below average grade, and with better ore left behind in the stope. A part of the squeeze that I have mentioned and of which I have become quite convinced.

The A. S. & R. Co. examined the mine in 1930. Mr. Hatcher was on the job. When he was here a few days since I got him to talk a little about it. He says there is a good tonnage of ore practically developed for extraction. You know how little one can get from them, and I could get nothing definite as to volume or values, but the A. S. & R. were really interested and that spells considerable. He said "We could not arrive at terms with the owners." The owners say "They wanted it all and would not consider their holding a small interest." About gets the story.

Equipment. There is considerable of the equipment that could be used. Buildings and camp which is a considerable item. The framing of the Mill Building and Binns would be all right, particularly if put to use where they stand. With the stamps, which are good and on good conrete blocks, it seems more than probably a very satisfactory mill could be worked out at comparatively small capital outlay. The mine equipment is old but in fair condition. A sullivan 300 plus feet capacity, compound, belt driven Air Compressor that should serve for a time at least. Hoists and power equipment all of the old distillate burning type; Expensive to operate in point of fuel costs, to say

nothigg of lost time. Obsolete. Serve very wel l for unwatering and examination, and I should say that should be all. No. 2 shaft in good condition to the water level. They have just finished retimbering at the water level, about 330 feet. I was down to that point. Looks exceptionally straight and in good condition. The miners say that they build down and removed all bad timber down to sound timber under water. I did not go into the No. 1 shaft, but it is reported as needing some renewals at the water level only, to be in good serviceable condition. Exceptionally good ground on the whole, I should say.

Unwatering. The equipment for unwatering is all available and ready to go. Fuel and labor is all that is needed. Cost of unwatering to the No. 2 shaft, 500' level, would amount to about $1000.00. Can anticipate no appreciable additional cost in preparing the underground workings for examination of the unstoped area. The stoped area will more than probably entail some considerable expense in repair before much could be determined as regards remaining ore. This last it seems would probably not be necessary in order to arrive at a decision, under the conditionsas given.

It seems to me that the Gold Bar is a better proposition than the one I got you interested in here. due consideration to the fact that I know this mine thoroughly and must take the judgment of someone else on the Gold Bar.

You will bear in mind that the two reports on the property were not made for the owners, but prospective purchasers, and the chance that both of them are badly off is quite remote. That coupled with my small information from Mr. Hatcher causes me to feel every assurance that there is a much larger body of avilable ore in this mine than I had thought, of a grade permitting large profit at this time, and under the terms given a most exceptional proposition. I certainly do not know of any place where one can get a look at a possible potential tonnage of 100,000 of $10.00, at the cost of a thousand or two of dollars, and possible to buy the property out of

production. You do some figuring. I figure that the estimated tonnage can be discounted 60% and the mine made to pay for itself. Possibilities of new ore developments as favorable as they appear, should make it an attractive proposition even on that basis.

I am looking to you for some very early action. In fact I am going to anticipate a wire from you early next week, advising that you will be here to look the proposition over at once, and prepared to cinch the deal for sixty days at least. If I do not hear from you by Nov. 2nd, at latest I will take this up with others, because I am satisfied that some pretty fast work will have to be done to get it, and I intend to make every possible effort to be the man that ties it up and has a look at that volume of near high grade ore.

See that I have passed up an important note that should have appeared under Unwatering. The No. 2 shaft is reported as making 80 gallons per minute when pumped down below the 700' level. There is nothing as to the water that may make at the 500' level. At present the water is up to the lower part of the stoped area. Volume confined to the lower incline workings and connection. Not at all large. I am guessing that the flow to be encountered at the 500' level will be about 20 gallons per minute, and more than probable under rather than over this amount.

I have turned this data out hastily, but think it covers the field though in rather ragged shape, but it is going forward without delay, as is.

Sincerely hope that you find yourself in a position to get here without delay, look it over and hold it down for ten days, if you cannot do better.

Very truly yours,

Morton E. Pratt.

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GOLD BAR MINE

Conclusions and Recommendations.

The following conclusions are based on the report by Shanklin, 1927, and Hyde, 1929, and their supplemental data, the investigations of Pratt, 1934, and recent conferences with Warde Twichell and Stone, foreman, and a personal surface examination made in March, 1934. The above report and maps are attached for reference.

The property is located at an elevation of about 3400 feet in the Black Rock Mining District, Yavapai County, Arizona. It is in the Bradshaw Mountains 1½ miles south of the Hassayampa River, 2 miles north of Constellation, and 18 miles northeast from where it is reached by a good dirt road.

The property comprises 16 patented lode claims and a fraction millsite claim on the river, a total of 301 acres covered by U. S. Mineral Patent No. 4060 A & B. The locations date back to 1888 and the title appears clear in the estate and heirs of James W. Twichell. The property appears to cover the entire area of the district that shows any important mineralization.

There is a telephone line to camp and a power line to Constellation, the post office, and climate, living, labor, transportation and operating conditions are favorable. There is no timber in the country but the mine would make water for a twenty five ton mill, and water for a one thousand ton mill could be brought from the river with a lift of perhaps 400 feet. There is a good camp site with good accommodations for about 30 men.

The country rock is Bradshaw Mountain granite and the veins are in fault fissures striking about north 70° east, the main veins being parallel and about 600 feet apart and dip to the northwest. The ore shoots are at intersections with minor fissures striking about north 30° west or they are pipes raking about 30° to the southwest in the veins. The gangue is a brecciated granite cemented with a quartz filling. The

gold is associated with pyrite with some chalcopyrite at depth. At the outcrops the pyrite is well oxidized and there are some copper carbonates and silicates and the gold is rather coarse, free and about 800 fine.

The geology and the type and character of the mineralization suggest persistence of ore bodies and values to a considerable depth.

The main development work is in the north vein and consists of an incline in the rake of the shoot to an inclined depth of 503 ft., connected on the 385 foot level with shaft No.1, 325 feet deep vertically, and on the 503 foot level with shaft No. 2, 735 feet deep vertically. The latter shaft was located to cut the ore shoot on its southwest rake but the shoot was faulted at the 445 foot incline level, presumably only a short distance to the north west (Hyde).

Presumably due to post mineral movement a channel was opened along the rake of the shoot resulting in an oxidized zone to the water level. Extraction was largely confined to the oxidized ores by selection and amounted to about 20,000 tons or from 20% to 25% of the total content above the fault, leaving from 69,000 tons (Hyde) to 110,000 tons (Shanklin) of available ore in the shoots. These estimates are based on a width and thickness of ore shoot of about 40 feet, and from the appearance and size of the outcrop and glory hole they appear to be conservative estimates of reasonably assured reserves.

Records of past production, mill runs and sampling by Hyde and Shanklin indicate average values of about $19.00 with gold at $35.00. Deducting 20% to allow for leaching in the oxidized sections and for selection in past extraction would give an average of about $15.00 in the remaining ores. The results of recent leasing operations in and near the glory hole check fairly close with this figure, and on the above basis there would be over $1,000,000.00 of gross value in the remaining ores.

The appearance at the glory hole and outcrop suggest that there are several thousand tons of near surface ores available for immediate mining of which the heads can be kept at the above figure with a reason-

able amount of sorting and with mining costs of not ~~to~~ exceed $3.00 per ton delivered to the mill on a basis of 25 tons per day, with milling costs, royalty, and loss at around $6.00 per ton, leaving $6.00 per ton for rehabilitation, development, and expansion purposes.

Shaft No. 1 is caved a little at the collar and at water level but could be rehabilitated at probably small cost. Shaft No. 2 has been recently retimbered and the timbers below are reported in good condition and the ground stands well. The hoist, pump, compressor, and engine are in fair condition and with small repairs would meet the present needs.

The 12 stamp Nisson mill and accessory equipment can largely be rehabilitated at small cost but should have added a flotation unit. The river pipe line and pumping plant will need some repairs and replacement for larger mill operation. The mine, mill and camp buildings are mostly in good condition.

The south vein, west ore shoot closely resembles the north shoot in appearance and type and character of mineralization but is larger and more highly silicifed and the outcrop is perhaps 300 feet higher in elevation. It justifies immediate exploration as it should contain above the fault level several times the tonnage of the north shoot, of which a large tonnage is suitable for open cut mining. Two smaller outcrops to the northeast suggest that this south ore shoot may prove to be several hundred feet in length.

Mr. Hyde after a study of the conditions of the fault reached the conclusion that the downward extension of the shoot would be found only a short distance to the north west, and the geology, type and character of the mineralization support the above conclusion, and the deeper development at the Monte Cristo at Constellation indicate persistance of mineralization deeper than the level of this fault. A comparatively small amount of additional development work properly located may reasonably be expected to show several hundred thousand tons of probable ore of milling grade.

In every respect the Gold Bar Mine gives promise of many years of very profitable operation. This seems to be the conviction of all the engineers who have seen it. It can be placed into profitable operation quickly at small cost and the scale of operations can be expanded from earnings to any basis that may be justified by the proposed exploration and development program, although it may prove to be advisable and profitable to expidite the expansion program by securing the additional capital when and as same can be used to advantage.

Recommendations:

1. Rehabilitate mill for 25 ton per day capacity with flotation added.

2. Run air line from compressor to glory hole to commence mining here and in the eastern portion of the outcrop, transporting to mill bins by surface tram.

3. Repair No. 2 shaft water column and commence unwatering discharging into pipe line to tank at mill.

4. Rehabilitate No. 1 shaft and open up the 385 foot incline level for extraction of remaining ores.

5. Unwater to the 503 foot level, cross cut to pick up ore shoot below the fault and open up for extraction.

6. Cross cut to ore shoot on the 700 foot level at the point indicated by above work.

7. Explore and test south ore shoot by surface cuts and a cross cut tunnel 100 feet below apex and by cross cuts from the old O'Brien tunnel.

8. Run such cross cuts to south ore shoot from levels 300 ft., 500 ft., and 700 ft. shaft No. 2 as may become justified.

9. Rehabilitate river pipe line and pumping plant to meet mill expansion requirements.

10. Rehabilitate, adapt, modernize, and expand mill progressively as justified.

11. Replace present power with Diesel plant with capacity as may be justified by mine developments.

Signed.

J. M. Beach,
May 1934.

LETTER FROM MORTON E. PRATT -- OCTOBER 27th, 1933.

Mr. Cecil G. Fennell
1835 So. Van Ness Ave.,
Los Angeles, Calif.

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vertical shaft to a depth of 735'. Connected with the ore body from the 500 level, and about 200 feet of lateral work on the 700 level. No ore found below the 500' level. Made but a small production. Financial troubles and litigation followed and there has been no production since. Small leases not considered.

There are no records remaining and no authentic figures on production. Those given are estimates or guesses as you may care to consider, but from the miscellaneous information that I have gathered am inclined to consider them conservative. The Gold Bar Co. have two reports on the property. One by W. R. Shanklin of Tulsa, Okla. Dated April 23, 1927 and addressed to W. O. Dickenson, of the same address. The other made by Foote & Co. of N.Y. George P. Hyde of Eureka, Nevada, the examining engineer.

I have but met Mr. Shanklin. He is not endeavoring to interest capital in the property. George P. Hyde I know very well. Has long held donw the old Croesus silver mine at Eureka, Nev. Is unquestionably a good man. Has a high reputation as an engineer and for personal integrity.

Ore Reserves. Mr. Shankling estimates as ore available from present defelopment, and above the No. 2 shaft, 500 Level, "A total of about 110,000 tons of ore, and the average value per ton rock of mine run of $11.75, as indicated by the sampling, giving a total value of $1,292,500.00.

Shanklin furnishes assay returns on 132 samples. Mr. Hyde's estimate, same block of ore, is as quoted. "The ore body developed consists of quartz intermixed with massive sulphides, carrying gold and silver values in the proportion of four ounces silver to one ounce gold. From the surface to the 385 foot level the ore is oxidized to a more or less extent, at the surface completely, then in diminishing proportion until at the 385 foot level the ore occurs almost completely as original sulphides. In only two places, at the surface and on the 407 foot incline level has the ore been cross-cut. In the former place for a width of

60 feet and in the latter place 45 feet. The distance between these two points being approximately 500 feet. The depth of the ore body on the vein has in no place been demonstrated. At the surface the ore in the bottom of the Gloryhole is still "going" and is exposed by stoping, with ore still in the roof and floor.

Assuming, as one is justified, from the reports of conditions as they existed in the stoped area, that the same dimensions of width and depth hold for the distance of 560 feet or from the 445 incline level to the surface, and using 12 cubic feet for a ton of ore in place, and deducting 20,000 tons as mined, we have an available ore supply of 69,600 tons not to mention a large expectancy of probable ore."

At another place he estimates an average value of $12.00 per ton gold and silver. Ratio as above given or 1 - 4. Gold figured at $20 per oz. Silver at $.60 per oz.

On Geology which also runs into prospective possibilities, I am quoting Mr. Hyde.

Geology: "The geology of the district offers nothing complex. The country rock is granite, and is known as the Bradshaw Mountain granite. There has been extensive fissuring, showing two major periods of movements. One resulting in a N. 70° E. system of fissures, and the other in S. 30° E. system. Both systems show evidence of intensive mineralization.

Development has been almost entirely confined to one of the fissures on the N. 70 E. system, with a dip of 30 degrees N/W. Evidence of faulting of this fissure (post mineral) is encountered on the 445 incline level, where a thrust movement interrupted the ore body.

The downward extension of the ore body will be found in the Northwest or hanging wall side of the vein. This displacement was undoubtedly caused by one of the fissures of the S 30 E. system. There being a strong cross festure (fracture?) evidenced

at this point in the workings and it corresponds in position to what is known on the surface as the Black Bear Vein. This displacement accounts for the fact that while No. 2 shaft was sunk on the supposed rake of the ore body, it failed to encounter the ore. On the 500' level of the No. 2 shaft, and about 100 ft. from the shaft, there is encountered a condition of extreme crushing, accompanied by extensive mineralization of Marcasite. This same condition with Marcasite exists in the footwall and adjacent to the ore body from the surface to the 445 foot level. The downward extension of the ore body at the 500 foot level, will undoubtedly be picked up by driving a short cross-cut to the Northwest.

Paralleling this fissure on which the work has been done and about 600 feet to the Southeast, is another fissure having the same dip. There are three very strong outcrops or blow-outs on this fissure,- the two extremes being about 1000 feet distant from each other. All three are large and show very much more estensive mineralization than the outcrop on the fissure in which the mining has been done. I was particularly impressed by the one farthest to the Southwest, which is located on the Cable Claim, and is where the Red Wonder vein or fissure, the strongest fissure of the S 30 E system, joins the S 70 W system.

I believe when this property is developed, it will be found that under or in connection with this outcrop, the largest and richest ore bodies will exist. I cannot understand why this feature of the property has received so little attention in the past. The invitation is unmistakable."

I can agree with Mr. Hyde in the much more than common indication of large ore bodies, from the outcrops mentioned. Aside from the granite, which I am quite sure further study would reveal as much more than one period of intrusion, there is considerable of schist inclusions that could have had marked effect

on the localization of the ore bodies or outcrops of promise. Nothing of this ore as estimated can be seen until the mine is unwatered, with the exception of the ore at the Gloryhole, and as I have quoted from Mr. Hyde's rpport. Lately some lessers have been mining and hand sorting a shipping grade of ore, principally sulphide, and have followed five or six feet farther into the foot-wall, with good ore still in sight. The limits not yet revealed.

Also confirms my information, gathered principally from the old time miners that worked in this ore body and stope. That nowhere was sulphide ore removed where it could be avoided. Mining was confined to the more oxidized ore, principally following the hanging wall, and that large bodies of good sulphide ore remain in the old stoped area.

Also I am told, with considerable evidence in confirmation that there was something obviously wrong during the last periods of operation. Miners were held on the removal of ore that they were sure was much below average grade, and with better ore left behind in the stope. A part of the aqueeze that I have mentioned and of which I have become quite convinced.

The A. S. & R. Co. examined the mine in 1930. Mr. Hatcher was on the job. When he was here a few days since I got him to talk a little about it. He says there is a good tonnage of ore practically developed for extraction. You know how little one can get from them, and I could get nothing definite as to volume or values, but the A. S. & R. were really interested and that spells considerable. He said "We could not arrive at terms with the owners." The owners say "They wanted it all and would not consider their holding a small interest." About gets the story.

Equipment. There is considerable of the equipment that could be used. Buildings and camp which is a considerable item.

The framing of the Mill Building and Bins would be all right, particularly if put to use where they stand. With the stamps, which are good and on good concrete blocks, it seems more than probable a very satisfactory mill could be worked out at comparatively small capital outlay. The mine equipment is old but in fair condition. A sullivan 300 plus feet capacity, compound, belt driven Air Compressor that should serve for a time at least. Hoists and power equipment all of the old distillate burning type; Expensive to operate in point of fuel costs, to say nothing of lost time. Obsolete. Serve very well for unwatering and examination, and I should say that should be all. No. 2 shaft in good condition to the water level. They have just finished retimbering at the water level, about 330 feet. I was down to that point. Looks exceptionally straight and in good condition. The miners say that they build down and removed all bad timber down to sound timber under water. I did not go into the No. 1 shaft, but it is reported as needing some renewals at the water level only, to be in good serviceable condition. Exceptionally good ground on the whole, I should say.

Unwatering. The equipment for unwatering is all available and ready to go. Fuel and labor is all that is needed. Cost of unwatering to the No. 2 shaft, 500' level, would amount to about $1000. Can anticipate no appreciable additional cost in preparing the underground workings for examination of the unstoped area. The stoped area will more than probably entail some considerable expense in repair before much could be determined as regards remaining ore. This last it seems would probably not be necessary in order to arrive at a decision, under the conditions as given.

It seems to me that the Gold Bar is a better proposition than the one I got you interested in here, due consideration to the fact that I know this mine thoroughly and must take the judgment of someone else on the Gold Bar.

You will bear in mind that the two reports on the property were not made for the owners, but prospective purchasers, and the chance that both of them are badly off is quite remote. That coupled with my small information from Mr. Hatcher causes me to feel every assurance that there is a much larger body of available ore in this mine than I had thought, of a grade permitting large profit at this time, and under the terms given a most exceptional proposition. I certainly do not know of any place where one can get a look at a possible potential tonnage of 100,000 of $10.00, at the cost of a thousand or two of dollars, and possible to buy the property out of production. You do some figuring. I figure that the estimated tonnage can be discounted 60% and the mine made to pay for itself. Possibilities of new ore developments as favorable as they appear, should make it an attractive proposition even on that basis.

I am looking to you for some very early action. In fact I am going to anticipate a wire from you early next week, advising that you will be here to look the proposition over at once, and prepared to cinch the deal for sixty days at least. If I do not hear from you by Nov. 2nd, at latest, I will take this up with others, because I am satisfied that some pretty fast work will have to be done to get it, and I intend to make every possible effort to be the man that ties it up and has a look at that volume of near high grade ore.

See that I have passed up an important note that should have appeared under Unwatering. The No. 2 shaft is reported as making 80 gallons per minute when pumped down below the 700' level. There is nothing as to the water that may make at the 500' level. At present the water is up to the lower part of the stoped area. Volume confined to the lower incline workings and connection. Not at all large. I am guessing that the flow to be encountered at the 500' level will be about 20 gallons per minute, and more than probable under rather than over this amount.

I have turned this data out hastily, but think it covers the field though in rather ragged shape, but it is going forward without delay, as is.

Sincerely hope that you find yourself in a position to get here without delay, look it over and hold it down for ten days, if you cannot do better.

Very truly yours,

Morton E. Pratt.

X

Note re Gold Bar 12/16 38

The line of fault marked on map as cutting off the mineralized section is misleading as ore should be found again below this fault if search is made in the proper direction & ore was actually found below it in large a lower levels, altho 700' level is blank.

Fennell in 34 unwatered the mine to depth of 490' so that they could just get into the 503 level but they did not examine a sample here. ~~Fennell wanted~~ Fennell wanted their #2 (vertical) shaft but would advise opening up the old inclined shaft for any new investigation.

next evening.

So the Etta crew went back to work and by four o'clock the following afternoon there arrived two deputies with Lawyer Thompson of Boston, very tired and very nervous and greatly relieved to find all peaceful at the mine.

Bill Jones met him first and told him they were glad that he had come and that they only wanted their pay and Lawyer Thompson agreed that he would come back with the money which was due them as soon as he had cashed in on the bullion in Prescott, and the deputies were witnesses to his promise.

So they took him to the clean up room in the mill from which the retort had mysteriously disappeared and showed him some heavy bags of rather dirty looking amalgam which Thompson promptly took into his possession and put under charge of the deputies one of whom was supposed to watch them continuously.

Thompson was ~~greatly relieved to find everything so quiet and~~ glad indeed to have the supposed gold in his possession & the wild western mines so [illegible] orderly and Ah Fong, the camp cook, fixed him up a special dinner and made him comfortable in the bed room once occupied at intervals by T. H. Jenkins. Thompson was really a good fellow and after supper he asked all the boys who were off shift to come down to Ryan's and have a drink with him, and for a couple of hours he sat there and listened to ~~wild~~ tales of the West and was again greatly pleased with the unexpected sobriety and moderation of the miners and the fact that none of them seemed to feel any resentment over their past treatment By the Etta Co.

Thompson said that he had never heard of Clay Peters, but he had met Jenkins when the latter came to Boston, ~~highly recommended~~ and signed the bond and lease on the mine, and he seemed much disturbed to learn that a man who made such a good appearance had turned out to be a crook and promised help in locating and bringing him to justice.

Of course he said that the Estate which he represented could not

Gold Bar Mine near Wickenburg

February 20, 1933

Extract from letter
J. S. M.C. dated

Mr. James H. Prentiss
The Prentiss Agency, Inc.
1813 - 120 South La Salle Street
Chicago, Illinois

Dear Mr. Prentiss:

Subject: Gold Bar Mine

This will acknowledge yours of February 16th, and it is always a pleasure to correspond with any friend of Mr. Harriman's, however I fear that in this case I cannot give you very much useful information since I have never visited or examined the Gold Bar mine although I am very familiar with many properties and ore deposits in its immediate vicinity.

Consulting my files I find that the Gold Bar was presented to me by an attorney who had an option on the property in 1924 when I was manager of the Southwest Metal Company operating copper mines and a smelter at Humbolt. The information which he could furnish concerning this property was of a very general character and I subsequently investigated by discussing the mine with two parties in Wickenburg who were somewhat familiar with the property and ~~it~~ appeared to be more reliable than ~~that~~ the caretaker, a man named Muller, who seemed to have given most of his information to my friend the attorney. Subsequently one of our engineers who were examining other properties in that district made a brief investigation of the Gold Bar and mentioned it in his report.

The gist of all the data which I obtained was about as follows. The Gold Bar was operated by a glory hole from the surface and an old shaft and considerable oxidized gold ore was taken from near the surface, some of which assayed $25.00 per ton. The ore chute pitched rather steeply in the vein and in order to follow this down an inclined winze was sunk from the bottom of the old shaft for a considerable distance. Somewhat later a new shaft was sunk to a depth of over 500 feet and it was intended to extend the 500 foot level in order to connect with the bottom of the winze, but actually there remained about 75 feet of drifting in order to make this connection. The property was closed down in 1917 and I do not know whether any work has subsequently been done.

If the 500 foot level had connected with the winze it was expected that a continuous ore chute would have been partly developed with a vertical dimension of 400 feet, a lateral dimension of about 80 feet, a width of about 40 feet, and contain ore which would average $18.00 to a ton. This would have proved up some 100,000 tons of very excellent ore which obviously would have constituted a very valuable deposit, and I might say, a very unusual one, particularly in respect to width to be found in the Wickenburg district.

It was stated that assay maps and reports substantiating these statements might be obtained from Pittsburg and I asked the attorney to procure these, but he never did so and since our company was not particularly interested in gold mining at that time, I did not follow the matter any further.

Of course I do not know what report you may have seen or what other data has been presented to you convincing you that it is advisable to re-open and unwater the mine in order to permit a thorough examination. This proceedure however, will cost probably $5,000.00 (after the level is extended to meet the winze) and unless you already have in your possession very complete and trustworthy engineering reports, I would strongly suggest that before embarking on such an expenditure it would be very prudent to arrange for a complete preliminary investigation by some competent engineer in your employ.

Such an investigation should comprise an examination and sampling of the surface and accessible workings in the glory hole and elsewhere; also a careful study of any old assay maps and reports by others and confirmation from parties in Wickenburg, Prescott and Phoenix who actually saw the mine in operation.

The cost of such an investigation would probably be about $300.00 and it would either serve to strengthen your present favorable opinion of the property or to bring to light new facts which might make a much larger expenditure seem very unwise.

I shall be very glad to be of any further service to you in this matter if you so desire and I shall probably be in this vicinity during the next three or four weeks, after which some professional work will take me to northern California for a more or less extended period of time.

Yours very truly,

G. M. Colvocoresses

GMC:ss-w

GOLD BAR MINE - Near Wickenburg

(Note by G. M. Colvocoresses - November 1937)

The underground workings of this mine have been inaccessible for many years and none of our engineers who visited this district obtained any favorable impression from what little they could see on the surface.

In 1933 it was examined by Earl R. Pembroke, of Salt Lake City, who was said to have made a rather favorable report and to have recommended unwatering the shaft and examining the old workings, but so far as I can learn this was never done.

In 1934 some parties from St. Louis took an option and tried to raise money for a similar purpose but they evidently failed for nothing had been done there when I was in that vicinity in 1936.

The large expense involved on making any thorough investigation of this old mine does not seem to be warranted by the vague rumors of high grade ore left by the old operators, which rumors are entirely unsupported by any engineering data that I have been able to secure.

GOLD BAR MINE

Mine now under option to Jack Beach of Los Angeles, Engineer for Sid Francis and Tally, (a St. Louis multi-millionaire who was to have backed Fennell and Francis) but Beach is not living up to his obligations, so that the property could probably be acquired by others.

(7)

STATEMENT BY CECIL S. FENNELL 1936

GOLD BAR MINING COMPANY

Black Rock District, Yavapai County

ARIZONA

S U M M A R Y

of

accompanying reports, maps, memoranda and of data secured from a reconaissance field survey & examination of the property incidental to the unwatering of the mine to the 490' level & preparation for the operation of the property as a whole and based thereon an Inventory & Tentative Appraisal.

- -

PURPOSE OF SUMMARY & SURVEY

To epitomize the above mentioned voluminous data after making such confirmatory investigations as were possible, by which to enable the layman to get a bird's eye view of and obtain a correct understanding of the property and its salient features as related to an interest in the property from any one of several angles.

Basal geologic conditions in their relationship to the formative stage of, and mineralization of veins, and other ore bearing media, and thus to the genesis of the ore itself, and to the values inherent to such ores, become of outstanding importance, when it is recognized that the practical and commercial outcome of the operations are dependent thereon.

Particular study has therefor been paid to these factors as effecting the evaluation, under appraisal and otherwise, of this property, and though it is not within the scope of a summarized survey to give the findings as here stated, it appears desirable to enlarge upon same to the extent given under the captions, Geology, Ore Genesis, and Mineralization.

LOCATION:

The Gold Bar Mine is situated fifteen miles Northeast of Wickenburg, nearest point of local supply, and three miles East of Constellation, which is the postoffice for the mine. The well known

Monte Cristo Mine is located at Constellation.

The mine is connected with Wickenburg by a fair mountain road, which is in sufficiently good condition to permit of the operation of motor trucks. Graded hard surface highways radiate North, South, and West from Wickenburg.

The nearest railroad station is at Wickenburg on the A.T. & S F. R. R., with connecti on at Phoenix, fifty miles South, with the S. P. R. R. Prescott, the County seat, is located about sixty miles to the north.

TITLE:

Sixteen, U. S. granted, patented claims. The mill site, upon which the pumping plant is located, is also patented.

HISTORY:

The Gold Bar Mine was discovered by James Mahoney in 1888, who sold it some years later to F. X. O'Brien. A lease on the properly was given to John Brown, one of the officials of the Saginaw Lumber Company in 1901. He erected a ten stamp mill on the property and operated same for a year or two.

The Interior Mining & Trust Company acquired the property thereafter and erected a 100 ton capacity mill; subsequently the Gold Bar Mine Company acquired same under a reorganization, but did not operate the property very actively. The property has not been operated of recent years; but was unwatered about four years ago down to the 520 level to permit of examination -- the water has since risen to the 300 level.

PRODUCTION:

Under these successive ownerships, according to the best available records, there appears to have been a gross production-- practically all the values are in gold of about . . . . . $380,000.00.

This was at the price for gold of $20.67 oz. Based upon the present price of gold -- $35.00 oz. -- this would make a gross production of . . . . . $645,000.00.

MINES OF SAME DISTRICT:

The largest and most profitable mines of this district are located upon and within the Bradshaw Mountain granites, as is the Gold Bar Mine, and at the same geological horizon. Amongst these are numbered the Congress, Monte Cristo, Octave, Yarnell, and Vulture.

In the adjoining Yavapai schist formation, which interlocks with these granites with a considerable degree of non-conformity, are located the historic Peck, Wildflower, Blue Bell, McCabe-Gladstone, and the Famous United Verde mines. These mines have yielded from $2,000,000.00 to over $20,000,000.oo respectively, (the United Verde something in excess of $75,000,000.00) and attained depths on the dip of their veins from 1,000 feet to 3,500 feet.

GEOLOGY:

The mine is situated in the Bradshaw Mountain Granite formation. This formation is probably one of the pre-Cambrain period as distinguished from the post-Cambrain period; an important distinction as related to the genesis of gold bearing ores in granite.

Environing rhyolite and dioritic flows and intrusions, are associated with gneissic and other metamophosed formations; basalt and malpais of volcanic origin appear; pegmatitic rocks, products of segregation, from the gneissic rocks, also appear. No sandstone or limes, or other sedimentary formation is in evidence.

The strata and manner of their stratification, as hereafter indicated evidence the dynamic igneous and seismic forces that contributed towards and brought about the extensive rupturing movements which permeated this area. Resultant therefrom extensive fissuring occurred which formed the "true fissure" veins.

As the dynamic forces of seismic, igneous, and rupturing movements, arising from the adjustment of the strata composing the earth's crust, concentrate in certain areas, such as here found, deep seated veins, well mineralized, are to be expected.

MINERALIZATION:

In the immediate neighborhood of the mine there appears to have been two major periods of movements, though probably not within the same geologic epoch, which brought about extensive fissuring. One movement formed a 70° North East system of fissures, and the other South 30° East fissures. These formed the two fissure veins which heretofore received the closest attention. They take a generally uniform dip of 30° to the Northwest. These veins intersect upon the property. It is probably in the neighborhood of this intersection that the most pronounced mineralization and enrichment of the gangue-vein filling -- has taken place.

The present development and opening up of the mine has been confined to the North 70° East fissure vein system, and most of the ore extracted has been taken from the ore shoot which it carries.

These fissures created zones of lowered resistance to permit of the rising solutions penetrating towards the surface to deposit their metalliferous content.

Within the zones of greatest dynamic activity, as evidenced in places in the underground workings and by certain of the surface out-crops, deep seated chimneys and pipes may occur, which, in flattening upon an incline lateral plane, probably increased the width of the veins, thus giving opportunity for wide ore shoots to make.

Should further study and working out of the geologic conditions sustain this theory, it is to be expected that in relationship to thse chimneys or pipes, the ore shoots may be short, but of extreme depth and width, forming in places, lenses, or lenticular bodies of rich shipping ore. This has already occurred to a limited extent in the "Glory Hole", old workings of the mine.

In the neighborhood of the convergence of the two fissures mentioned, some faulting has occurred, with a corresponding displacement of the vein, with its ore content. In this particular part of the mine the ore shoot has yet to be picked up.

This faulting has given rise, in some instances, to the assumption that the mine, in this part of the workings at least, was "bottomed" -- an almost ridiculous deduction in view of the geologic influences, as previously explained, clearly indicating deep-seated ore bodies; and in view of the experience of the out-standing properties of the same district occurring in the same geologic period and formation.

The extensive movements and fracturing which have taken place could scarcely exist without causing at least a moderate faulting. This runs true to form in this mine, as in others, in bringing about a displacement of the vein and its contained ore bodies.

In the majority of such displacements, similar to that occurring here, the ore is picked up without excessive loss of time or heavy expenditure.

ORE GENESIS:

Similarly to the ores in the other mines in this district, the Gold Bar carries, with depth, the usual primary sulphides. These have ascended under high pressure from great depth in the form of super heated semi-molten solutions, fed through the fissures to which reference has been made.

These solutions, derived from deep seated ore magmas, were deposited by precipitation upon nearing the surface as heat was dissipated and pressure released, thus segregating and solidifying into ore as we know it.

The extensive mineralization and high values found are the sequelae of the conditions above depicted. The areas, already worked in this mine, are so closely confirmatory of the above, as to leave but little doubt as to the permanancy, and continuity of value, of the ore bodies.

The manner of the laying down of the ore; the existence of primary sulphide bodies; the appearance of copper in the gangue in the lower levels; and the depth and production obtained in and from

neighboring mines, in the same formation of the same geologic period, warrants the assumption not only that the values will continue to great depth, but that such values may increase with depth.

The above is aside from, and not taking into consideration, the rich oxidized secondary ores near the surface, which have been mined, and are yet to be mined; and some of which is already broken ready for extraction in the stopes.

DEVELOPMENT:

Shaft No. 1 is sunk to a depth of 325 feet; shaft No. 2 to a depth of 735 feet; and the "Old Shaft" -- now out of service -- to a depth of about 200 feet. Levels have been extended from these shafts and incline at 200 ft., 385 ft., 407 ft., 445 ft., 478 ft., 503 ft., and 700 ft. and an incline from the "Old Shaft" to a depth of 520 ft. Several short crosscuts have been driven, but possibly not in the most desirable direction. Reference is made to the accompanying maps for further details of the development.

The mine has been developed and the ore bodies opened up, by these shafts, inclines--levels--drifts, crosscuts, and raises to the extent of over 2,400 lineal feet.

EQUIPMENT:

This consists of a one hundred ton capacity mill, complete hoisting plant at No. 2 shaft, auxilliary hoisting equipment, pumps, compressors, with adequate power--gas engines--connected to each operating unit; also machine and blacksmith shop; also a fairly complete supply of tools, drills, and minor appliances.

A pumping plant, equipped with high pressure triplex pumps--gas driven-- is located at the Hassayampa River, one and one half miles from the mill, connected to the mill by a four inch water main--in this arid country an extremely valuable asset. About 900 feet of this pipe is missing. The pipe and pumping plant will require considerable overhauling.

Camp buildings: bunk and boarding houses, and manager's residence, and store building with the usual domestic out-buildings, are located below the mine, in a canyon leading to the Hassayampa River. Like the mill building, these buildings need overhauling. See Inventory for additional details and condition of the foregoing.

Much of this machinery, including the mill, requires reconditioning and much of it is more or less obsolete--at the same time this obsolescence does not debar its use, with a comparatively small expenditure for reconditioning, for the further development of the property, extraction of ore, and bringing it to the stage of permanently profitable operation.

Thereafter a new mill, or an adaptation of the present mill by additions of flotation and cyanidation units, so as to permit of the utilization of the latest metallurgical practice and appliances, will be desirable.

With these a better extraction of values can be made, and costs considerably reduced.

See section: "Recommendations" relative to the installation of electrical power, which is now available, and additions to, or the erection of a new mill.

See "Iventory" for details of machinery, physical property, and their conditions.

ORE VALUES:

The ore in sight and partially blocked out--see maps and reports--is composed of approximately 40% oxidized and 60% sulphide ore, and yields an average value, under careful sampling, of from $11.00 to $15.00 per ton at $20.67 oz.

The value of the silver content of these ores, at present price for silver, ranges from 65¢ to $1.25 per ton of ore.

The average of $11.00--$15.00 is $13.00

With gold at $35.00 oz., the added value to this ore, as against a price for gold of $20.67 is 9.35

Making present value of ore, per ton $22.35

ORE RESERVES:

Due to the former operators of the property failing to, or being unable to utilize the sulphide ores, most of the sulphide ore reserves still exist in the backs, above and below the levels, with a lesser tonnage existing as stope filling.

The oxidized ore is mainly limited to the upper workings, and exists mostly as stope filling. The former operators made but little attempt to work what they regarded as the lower grade ores. This resulted in their leaving, broken in the stopes, a considerable tonnage of now good milling ore, based upon the price for gold of $35.00 oz.

ORE--TONNAGES:

The average of the tonnages in the reports etc., from which this is summarized, is 89,800 tons. In behalf of conservatism, as applied to the appraisal and profits, in the financial set-up, this tonnage is divided into immediately available (positive) ore of 35,920 tons, and Probable ore, of 53,880 tons.

ORE--POTENTIAL:

Partially based upon the experience of mines in the same Bradshaw Mountain granites and the Yavapai schists--in this and adjoining districts--and upon the deductions, as made in the text, (see Geology and Mineralization), there is no good reason for not anticipating--though this is not taken into consideration in the valuation for appraisal purposes--that greater tonnages than those above given, similar to those heretofor extracted, and still in sight in place in the mine, will be developed. See Appraisal--Potential Assets.

RECOMMENDATIONS:

1. That the present plant and mill be used:

   (a) as a pilot to render working information as to the best method by which to gain the highest extraction of values from the ore:

   (b) with which to produce a moderate income as set forth

on page 8, in the financial set-up, which accompanies this summary:

(c) while developing the mine and putting in sight additional ore bodies.

2. To connect into the present ore bodies for more economical extraction from the #2 shaft--probably from the 500 foot level, by drifting to the North East, thus to permit of more economical operations, and ore development than formerly.

3. To sink at least 60 feet or 70 feet on the outcrop on the Great Bear Claim, and drift at that depth 30' to 50' North East and South West or to drive a short tunnel to cut same at this depth. This may determine something as to occurrence of ore in this area, which is noted in the text. This should be done inexpensively, using a prospecting shaft and 4'x6' drifts.

4. To do such work as will define the "chimneys" or "pipes" of ore referred to in the text.

5. That sufficient preliminary capital be provided to permit of the execution of the above. This should not exceed $15,000.00 to $20,000.00. See financial set-up.

6. That thereafter, and not until then, sufficient capital be provided for:

(a) the installation of a new mill; or the material enlargement of the present mill, with flotation and possibly cyanidation adjuncts.

(b) to change over from the present gas engine power to either electric or Diesel engine power, for all purposes.

(c) for extensive exploitation and development of ore.

(d) for the prospecting and opening up of contiguous claims belonging to the property.

The provision of from $50,000.00 to $75,000.00 additional capital should suffice for this, especially if a small portion of the then income, were utilized with same.

CONCLUSIONS:

There are four factors, which under capable management, appear to make the operation of this property safe and profitable.

1. According to the best information available at the price for gold of $20.67, former operators either made a small loss, a small profit, or broke even.

Taking the same ore, under the same conditions of mining, milling, overhead and marketing, with the price for gold 75% higher , they would have made, even in the face of adverse operating conditions, a profit of $5.00 to $8.00 per ton, upon the ore then treated.

2. This was in the face of high costs, and constant bickerings and pulling apart of the foremen, miners and management, mediocre management, lack of expert advice, and unwarranted high marketing expense, and with at least a portion of the development work wrongly placed.

Costs of mining, milling, marketing and overhead, are now, somewhat less than during those years of the operation of the property as shown in the text under History, and in addition the price of gold is approximately 75% higher.

Added to these cost reductions are the economics resulting from the installation of electric or Diesel engine power when installed; and the economy--probably arising--of not having to pump from the Hassayampa River as water at greater depth is encountered.

3. Advances in metallurgy were lacking in the previous operation of the property, particularly in the extraction of the values from sulphide ores by flotation. A materially lower tailing loss is now feasible.

4. The former operators were more or less afraid to tackle the primary sulphide ores, relying in the main, on getting the values and profits out of the oxidized ores. For this reason they left the larger portion of the sulphide ores exposed in place in the mine. These ores, under modern metallurgical practice, are now available as are and were the oxidized ores.

5. Regarded purely from the engineering angle, with the uncertain factor arising from the "Probable" ore estimate, so definite a statement as that prefacing this heading might appear scarcely warranted, but when, upon careful further calculation, it is found that both estimates of Positive and Probable ore tonnages could be cut in half, the average value of the mill heads be reduced by 30% to 40% and the loss in milling increased to 20%, and yet show an excellent profit, it is deemed fair to both property and investor to let it stand.

NOTES ON FLAGG AND OTHER REPORTS

7/15/34

Mr. Flagg gave me a copy of his sampling, assays, maps and reports.

He said he examined only the sulfide area because Smith and Holderness claimed that the ore in this block had been mis-represented to them by Twithells'.

He found as per his report 11,000 tons of $8.80 (.44 oz.) Au.) as compared with Smith & Holderness of 1.04. Arithmetical average of all = .92 oz.

Omitting the high sample of Smith & Holderness, average would be .3982 oz. which is not far from Flagg.

Flagg said he was unable to get into the 385' level going to No. 1 shaft or rather was afraid of loose rock cutting him off from escape.

From there he might have gotten into the old stopes or might not.

He was clear on the 11,000 tons of 8.88. He said he could not see how he could prove 80,000 tons of ore, say 60,000 tons from 385 level up.

Said he would not raise his hand and swear there was 20,000 tons, just would not know.

Said the clean up of drifts, etc., to permit proper sampling would be a big job in some places.

Said he tried to interest George Easley in it on the following basis:

1. Not consider any ore as proven or developed, i.e. forget it.

2. Get a good geologist on the ground for 60 days.

3. Do some development work - on the Cable and Black Bear as indicated the geologic work.

He did not work at the Glory. Hale was very pessimistic about the Gold Bar Mine paying out on the main shaft alone. He said the pump was ruined when column was broken and rock got in. He said

Bailing alone would not unwater it as a great deal of water would come in from ciniguous country. More water by 2 to 1 the first year than thereafter. Flagg is a good man. Flagg found no evidence of Secondary Enrichment - looked for it. Flagg found no Chalcopyrite.

J. H. Steinmesch.

GOLD BAR MINE

Report of

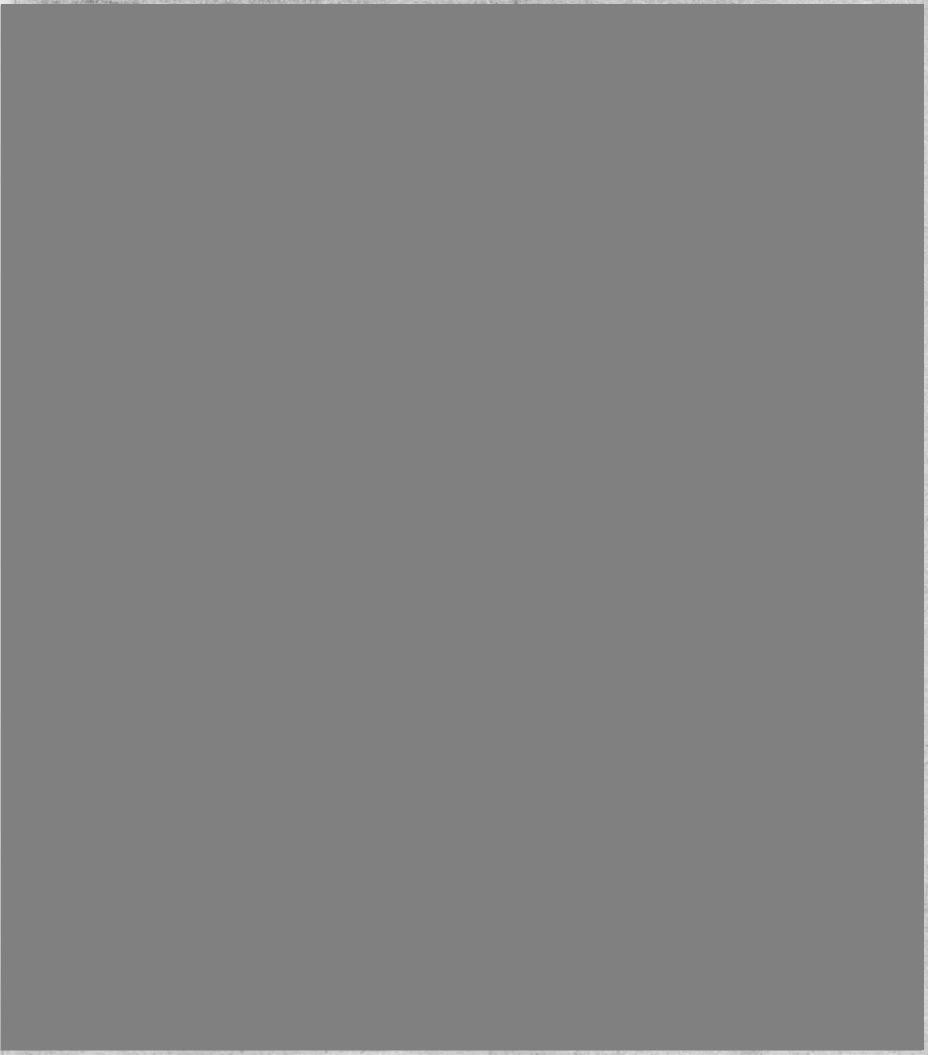
Smith & Holderness Assays 4/1/31

On the Sulfide between 385 and 445' levels.

Sample No.	Oz. Au.
1	.04
2	.04
3	.03
4	1.14
5	.26
6	12.40
7	.66
8	.02
9	1.31
10	.29
11	.03
12	.19
13	1.68
14	.60
15	.48
16	.32
17	.30
18	.24
19	.41
20	.24
21	.06
22	.08
23	.34
Composite	1.04
Omitting No. 6	.3982
Arithmetical Average	.92

Goldex Gold Prospects

The Mining Record 6/25/75



Mining Record 11/10/76

Goldex Assigns Gold Bar