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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 county is not surveyed or subdivided,therefore no legal description 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 milling purposes. 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.

This 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 Company. This company sank the No.2 shaft to a depth of 735 feet,and drove the present drifts on the 500 foot 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 principally a large inclined stope, or drift, with its best values from the 200 foot level down to the present 385 foot level. These workings were damaged and allowed to cave by the pulling of some very rich pillars, after which the lower levels were opened 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 engines, 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.

Mill Building
- - - - - - -

1 - 12" Sturdevant Jaw Crusher
1 - 12 X 40 Conveyor
3 - 100 ton ore bins
13 - 16" Hopper gates
12 - 1750 lb. Nisson heavy duty stamps
24 - 3 X 6 amalgamation plates
6 - Wilfly type concentrating tables
2 - Vanners
3 - small Isabelle Classifiers
1 - Botulla cleanup pan
1 - small lathe
7 - new shoes and dies for stamps

Mine shafting
- - - - - - -

10' of 3" line shaft
54' of 4" " "
85' of 1½" " "

Couplings, Journal Boxes, etc.
- - - - - - - - - - - - - - -

3 - 3 X 16 " "
9 - 4 X 10 " "
11 - 1½ X 8 " "
3 - 4" line shaft couplings
4 - 1½" " " "

Pulleys
- - - -

2 - 12 X 28 cast iron pulleys
1 - 22 X 46 " " "
1 - 14 X 60 " " clutch drive pulley
3 - 14 X 20 " " " " "
3 - 14 X 60 wood pulleys

Pipe
- - -

Pipe
- - - - -

8000' - 4" pipe
600' - 3" "
300' - 2½" "
400' - 1½" "

Pumps
- - - - -

1 - 7" Luitweiller Lift Pump
1 - #5 - 2" Cameron Sinking Pump
2 - 3" Smith Triplex geared power pumps
1 - #5 - 2" Cameron Station Pump
1 - 4" Gould Triplex geared power pump
1 - 1½"Centrifugal circulating pump

Oil Engines
- - - - - - -

1 - 22 HP Fairbanks-Morse engine
1 - 50 HP Western Hoisting Engine
1 - 25 HP " " "
1 - 50 HP Fairbanks-Morse Engine
1 - 12 HP " " Hoisting Engine
1 - 6 HP " " " "
1 - 12 HP " " Vertical Engine
1 - 32 HP " " Engine
1 - 60 HP " " Mill
1 - 12 HP " " engine direct connected to
1 - 75 KW- 63 Amperes,115 volt Direct Current 325
R.P.M.generator switch board,etc.
1 - 1½ HP Weber Hoist Engine
1000' - 3/4" Hoisting Cable
500' - 3/4" " "

Compressor Plant
- - - - - - - - - -

1 - 7½ X 12 X 14 - 2 stage Sullivan belt driven Comp.
1 - 7 X 10 Leyner vertical
1 - 3 X 10 Air Receiver
1 - 3 X 6 " "

Pipe Fittings,etc.
- - - - - - - - - - -

Tanks:

6 - 5 X 28' Steel Cyanide Tanks
4 -10 X 10 " Slime "
2 - 6 X 10 Galvanized Tanks for Fuel

Mine Equipment
- - - - - - - - -

3 - Denver jackhammer drills
400 lbs. of drill steel
1 - 16" Blower Fan
2 - 110 gallon valve bucket
3 - 1000 lb. ore buckets
6 - 1000 lb. Tram cars
2 - 1000 lb. Hoist skips
2 - 500 lb. " "
Lot mine pipe,rails,picks,cars,etc.

Miscellaneous Equipment
- - - - - - - - - - - - -

1 - 10 HP Boiler
1 - 12 HP "
2 - 35' Head Frames
1 - 5 ton chain block
1 - Brown Type #37 Furnace (assay office)
6 - Balances (assay office)

Blacksmith Shop, tools, press, drill, forge, etc.

Buildings
- - - - - - -

Hoist and Compressor at No.2 shaft
Timber Shed " " "
Engine House for pump " " "
Blacksmith Shop " " "
Hoister House " " "
Assay Office
Garage

1 - 1 story stone bunk house, 1 room
1 - 2 story adobe " " 4 rooms
1 - 2 " eating house and kitchen, 5 rooms, frame
1 - 2 " living quarters, frame, 8 rooms
1 - 1 " " " " 2 "
1 - 1 " 1 room office, frame

PRODUCTION:

The records of the operation of the mill are entirely lost, having been 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 for concentrates and bullion shipped to them, which are evidently overlooked when the other records were destroyed or removed. (EXHIBIT 1 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. This 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 a 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 considerable 4 inch pipe, the pump was bushed down to fit the 4 inch column, and has been 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 remain the same and operations are carried on above the 500 foot level, it will furnish a very ecinomical supply for 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 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 trend of the dikes and fault system, and dips about 30° NW. No foot or hanging walls are discernable 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 on the SE side of the mine. This evidently cuts off the ore body, as no values 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 "ORE BODY" is $11.75 gold and silver per ton.

There was taken from the mine two large samples of 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, which 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 the underground workings is outlined an area that encloses the major portion of the observed mineralization, which shows an average width of about 40 feet, a lenght 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 larger 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 as 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 $54.86 per ton. This is a good, strong showing of copper ores, and is worthy of further development, as the vein probably larallels 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 reasonably 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,
Mining Engineer,
Tulsa, Oklahoma.

Phoenix, Arizona.
April 23, 1927.

No 917 Sh

Phoenix, Arizona.
Apr. 19, 1927.

#3

Chas. A. Diehl

ARIZONA ASSAY OFFICE
315 North First St.

Phone 4447

P.O. Box

This certifies that the samples submitted for assay by Mr. W. R. Shanklin, contain as follows per ton of 2000

MARKS	SILVER OUNCES	SILVER TENTHS	VALUE 60¢ Oz	GOLD OUNCES	GOLD HUNDTHS	VALUE AT $20 per OZ	TOTAL VL OF GOLD & SILVER	COPPER	13¢ POUNDS	VALUE	TOTAL
1		.1	$.06		.17	$3.40	$3.46				
2	Trace				.06	$1.20	$1.20				
3	2	.3	$1.38		.32	$6.40	$7.78	2.33	46.6	$6.05	$13,83
4	Trace			Trace							
5		.1	$.06		.05	$1.00	$1.06				
6		.1	$.06		.02	$0.40	$0.46				

Charges $8.25

Assayer Chas. A. Diehl

EXHIBIT # 3

No. 726 Mu

Phoenix, Arizona.
Feb.17,1927.

CHAS.A DIEHL
ARIZONA ASSAY OFFICE
Phone 4447 315 North First Street P.O.Box 1148

THIS CERTIFIES that the samples submitted for assay by Mr.F.A.Mueller, contain as follows per ton of 2000 lbs.Advoir.

SAMPLE MARKED	SILVER OUNCES PER TON	VALUE AT per oz	GOLD OUNCES PER TON	VALUE AT $20 per oz.	COPPER Per Ct.	Lbs.
X 1			.05	$1.00		
X 2			.05	1.00		
X 3			.10	2.00		
X 4			.04	.80		
X 5			.02	.40		
X 6			.01	.20		
X 7			.03	.60		
X 8			.03	.60		
X 9			.04	.80		
X 10			.01	.20		
X 11			.02	.40		
X 12			.22	4.40		
X 13			.71	14.20		
X 14			.17	3.40		
X 15			.71	14.20		
X 17 small envelope			.06	1.20		
X 17 large "			.01	.20		
X 18			.10	2.00		
X 19			.17	3.40		
X 20			.22	4.40		
X 21			.01	.20		
X 22			.02	.40		
X 23			.02	.40		
X 24			.01	.20		
X 25			.02	.40		
X 26			.05	1.00		
X 27			Trace			
X 28			.02	.40		
# 29			.01	.20		
# 30			.01	.20		
# 31			.07	1.40		
# 32			.01	.20		
# 33			.01	.20		
# 34			.02	.40		
# 35			.02	.40		
# 36			Trace			
# 37			.16	3.20		
# 38			.02	.40		
# 39			Trace			
# 40			.07	1.40		
# 41	.6	$0.36	.10	2.00	$2.36	
# 42	.2	.12	.05	1.00	1.12	
# 43	.2	.12	.08	1.60	1.72	
# 44	16.0	9.60	1.88	37.60	47.20	
45	Trace		.04	.80		
46	7.0	4.20	1.50	30.00		
47	11.8	7.08	1.01	20.20		
48	.6	.36	.18	3.60		
49	.1	.06	.07	1.40		
50	.1	.06	.06	1.20		

SAMPLE MARKED	SILVER OUNCES per ton	VALUE AT per oz	GOLD OUNCES per ton	VALUE AT $20 per oz	COPPER Per Ct.	Lbs.
51	.2	$0.12	.08	$1.60		
52	3.6	2.16	.11	2.20		
53	.2	.12	.92	18.40		
54	.2	.12	.21	4.20		
55	.2	.12	.17	3.40		
56	.9	.54	.92	18.40		
57	23.1	13.86	3.18	63.60		
58	3.2	1.92	.95	19.00		
59	5.9	3.54	1.85	37.00		
60	.4	.24	.23	4.60		
61	.2	.12	.15	3.00		
62	Trace		Trace			
63	.1	.06	.22	4.40		
64	.6	.36	.48	9.60		
65	.2	.12	.14	2.80		
66	5.4	3.24	1.30	26.00		
67	.6	.36	.24	4.80		
68	.8	.48	.23	4.60		
69	.2	.12	.23	4.60		
70	1.3	.78	.67	13.40		
71	.2	.12	.16	3.20		
72	.4	.24	.15	3.00		
73	3.7	2.22	2.20	44.00		
74	Trace		.03	.60		
75	Trace		.02	.40		
76	Trace		.02	.40		
77	Trace		.03	.60		
78	3.8	2.28	1.09	21.80		
79	.4	.24	.08	1.60		
80	.2	.12	.11	2.20		
81	Trace		.02	.40		
82	.3	.18	.23	4.60		
83	7.5	4.50	1.54	30.80		
84	Trace		.06	1.20		
85			.05	1.00	Trace	
86			2.65	53.00	1.36 o/o	
87			.01	.20	Trace	
88			.15	3.00	Trace	
89			.06	1.20	Trace	
90			.03	.60	Trace	
91			.03	.60	Trace	
92	Trace		.02	.40		
93	Trace		.10	2.00		
94	Trace		.01	.20		
95	Trace		.01	.20		
96	Trace.		.01	.20		
97	Trace		1.70	34.00		
98	Trace		.04	.80		
99	Trace		.03	.60		
100	.4	.24	.11	2.20		
101	.1	.06	.08	1.60		
102	.4	.24	.26	5.20		
103 Mud	.1	.06	.07	1.40		
104 "	1.5	.90	.68	13.60		
105 "	.2	.12	.08	1.60		
106 "	Trace		.02	.40		
107	Trace		.01	.20		
108	Trace		Trace			
109	Trace		.02	.40		
110	Trace		Trace			
111	Trace		.01	.20		
112	.2	.12	.28	5.60		
113	.2	.12	.07	1.40		

SAMPLE MARKED	SILVER OUNCES per ton	VALUE AT per oz	GOLD OUNCES per ton	VALUE AT $20.per oz	COPPER Per ct. Lbs.
114	4.5	$2.70	.60	$12.00	
115	.3	.18	.08	1.60	
116	Trace		Trace		
117	Trace		.03	.60	
118	.2	.12	.04	.80	
119	.2	.12	.01	.20	
120	.3	.18	.04	.80	
121	.1	.06	.06	1.20	
122	.2	.12	.05	1.00	
123	Trace		.03	.60	
124	.1	.06	.02	.40	
125	Trace		.01	.20	
126	Trace		.02	.40	
127	Trace		.04	.80	
128	Trace		Trace		
129	Trace		.01	.20	
130	Trace		Trace		
131	Trace		Trace		
132	Trace		.02	.40	

Charges $ 111.75 Assayer Chas.A.Diehl

EXHIBIT #4

AMERICAN SMELTING & REFINING CO.
HAYDEN PLANT
Hayden, Arizona.

April 26, 1927.

Mr. W. R. Shanklin,
Jefferson Hotel,
Phoenix, Arizona.

Dear Sir:

We are enclosing assay certificate on sample left with us. This is a very good grade of ore and the gross value would be over $100.00 per ton. If you are contemplating shipment of either this grade of ore or a lower grade, we would suggest that you write to Mr. Howard H. Fields, El Paso Smelting Works, El Paso, Texas, advising him what point shipments would be made, the approximate tonnage you would ship, and any other information you may have. Mr. Fields will give you treatment rates and shipment instructions.

Yours very truly,

AMERICAN SMELTING & REFINING COMPANY

(Signed) By C. C. KISER
Business Manager

Encl-1

CCK:T

cc: Mr. Howard H. Fields

(Copy) EXHIBIT #4

MAGMA COPPER COMPANY
Superior, Arizona.

April 22, 1927.

Mr. W. R. Shanklin,
Jefferson Hotel,
Phoenix, Arizona.

Dear Sir:

Referring to my letter of April 19th, I wish to state that we will be pleased to quote you on ore similar to the sample submitted to us the following terms and rates:

The base treatment rate will be $2.50 a ton when the sum of the metals paid for is $15.00 a ton or less. On any increase over $15.00 in the sum of the metals paid for, the treatment rate will be increased by 10 per cent of such increase over $15.00 until a total treatment rate of $5.00 is obtained which will be the maximum treatment rate up to a total of $100.00 in value.

We will pay for 90 per cent of the copper at market quotation less 2.5¢ a pound, with a minimum deduction of 8 lbs. and a maximum deduction of 20 lbs. per ton. Quotations used in settlement for copper will be the average of the daily refinery quotations for electrolytic copper as shown by the Engineering & Mining Journal of New York in its issue for the calendar week next preceding the date of arrival of shipment at smelter.

We will pay for 95 per cent of the silver if over one ounce at the market quotation on the date of sampling shipment. We will pay for all the gold if over 0.03 oz. at $19.50 per ounce.

The sample submitted to us by you is a heavy sulphide ore and it went 40.6 iron and 42.1 sulphur, and it does not seem as ifa man would be able to do any concentrating on an ore of this character and grade. Even should you decide to mill this ore it might be a good plan for you to mine a car of it and ship it to a smelter sampling works where a good sample could be obtained.

Freight rates from Wickenburg to Superior are as follows:

Value of ore -	$20.	$30.	$40.	$50.	$60.	$70.	$80.	$90.	$100.
Rate -	2.50	2.85	3.25	3.60	4.00	4.20	4.80	5.10	5.10

Very truly, yours,

Wm. KOERNER

General Manager

Hand Sample

AMERICAN SMELTING & REFINING COMPANY
HAYDEN PLANT

ASSAY CERTIFICATE

Date Assayed 4/23 1927

MARKED W.R.Shamklin,c/o Jefferson Hotel,Phoenix,Arizona.

LOT NO.	GOLD OUNCES Per ton	SILVER OUNCES Per ton	LEAD Fire o/o	LEAD Wet o/o	Cu o/o	Ins. o/o	SiO^2 o/o	Fe o/o	Mn	CaO Total %	CaO Avail %	Zn %	Sul. %	AL^2O^3 %	Sb Bi
	%.))														
	5.00	13.36			0.10	11.0		42.4							

Values per ton	Ag.	13.36 oz.	@	60¢ per oz.	$8.01
" " "	Au.	5.00 oz.	@	$20. " "	100.00
" " "	Fe	42.4%	@	.01 per cent	4.24
				Total	112.25

AMERICAN SMELTING & REFINING COMPANY

By P.T.Wail Assayer Chemist

MAGMA COPPER COMPANY

Assat Certificate

Date 4/19/27/

W.R.Shanklin, Jefferson Hotel, Phoenix, Arizona.

NO.	LOCATION	CU. %	Ag. Oz.	Au. Oz.	Fe %	Si 02 %	% Moisture	Remarks
	Gold Bar Mine	0.15	6.30	2.72	40.6	12.2		

Values per ton	Ag. 6.30 oz.	@ 60¢ per oz.		$ 3.78
	Au. 2.72 oz.	@ $19.50 " "		53.04
	Fe/ 40.6%	@ .01 per unit		4.06
			Total	$60.88

W.W.SIMON AHR
Assayer

EXHIBIT #5

(Copy)

Constellation, Ariz.
April fifteenth, 1927.

Mr. W. R. Shanklin,
Tulsa, Oklahoma.

Dear Sir:

This is to state that during my many years upon the property now known as the Gold Bar Mine, I, on many occasions, had entered into that portion of the mine lying between the "Glory Hole" and the 385 foot level and have observed much mineralization in this area together with a great deal of a nice grade of gold ore.

The ores are of a sulphide, a semi-sulphide, and an oxidized character. Such samples and assays as I had taken indicated a good commercial value to the ore, ranging from $8.00 to $30.00 per ton.

This portion of the mine is partially stoped and was partly let down owing to the drawing of two pillars containing high grade ore, and has remaining therein a goodly tonnage of millable ore which should show a profit if mined.

Respectfully,

F. A. MUELLER

LEASE AGREEMENT

THIS AGREEMENT made and entered into this _____ day of _____, 1933, by and between CLARA E. TWICHELL of Constellation, Arizona, a widow, individually and as Executrix of the Estate of James A. Twichell, deceased; COMMONWEALTH TRUST COMPANY OF PITTSBURGH, a corporation, as Executor and Trustee under the Last Will and Testament of James A. Twichell, deceased; JAMES WARD TWICHELL, and his wife ROSINA TWICHELL of Constellation, Arizona, and ALICE MAY TWICHELL EVERSON, and her husband, MALCOLM W. EVERSON of Pittsburgh, Pennsylvania, parties of the first part hereinafter called the "LESSORS,"

AND

WOLCOTT BLAIR, of Chicago, Illinois, party of the second part hereinafter called the "LESSEE,"

WITNESSETH:

That the Lessors for and in consideration of the sum of One ($1.00) Dollar and other good and valuable considerations to them in hand paid by the Lessee, the receipt whereof is hereby acknowledged, and in further consideration of the covenants hereinafter contained and by the Lessee to be kept and performed, and the royalties and the rentals hereinafter reserved and by the Lessee to be paid, do hereby demise, lease and let unto the Lessee the following described premises, to-wit:

ALL those certain patented lode mining claims situated and located in the Black Rock Mining District, Yavapai County, Arizona, known as and called, LITTLE JOHNIE; LITTLE JIM; ROBERT; CABLE; BLACK BEAR; HOMESTAKE; RED WONDER; CROWN; BUTTON; HOME; FOB; CHARM; WHITE BLAZE; BENNETT; GALBRAITH; and the BRUNTON MILL

SITE, a full and detailed description of said claims and mill site being contained in United States Patent dated September 28, 1928, of record in the office of the County Recorder of Yavapai County, Arizona, in Book 145 of Deeds, at pages 443 to 446 thereof; also those two unpatented lode claims, situated in the same mining district, the names of which and the Book of Mines and pages thereof where the location notices are recorded in the office of the said County Recorder are: DAVID, Book 136, page 284, and THREE LIARS, Book 136, page 156, together with all improvements, machinery, houses, and equipment now on the above property; said group of patented and unpatented lode mining claims and the developments and mining excavations thereon and therein shall hereinafter be termed and designated when spoken of collectively, as the "GOLD BAR MINE", upon the terms and conditions hereafter following:

1. This lease shall be for the term of ten (10) years from and after the date hereof, and it is agreed and understood that the Lessee may and shall have the right at the end of the said ten year period to extend this lease for another and further period of ten (10) years, if the said Lessee shall so elect, but in the event the Lessee shall so desire and elect to extend the period of the said lease in accordance with the terms hereof, he shall be required to give in writing, notice to the last known addresses of Lessors of his desire and election to so renew and extend the term of the said lease at least ninety (90) days before the expiration of the ten (10) year term of the said lease as herein fixed.

2. From and after the date of this agreement, and thereafter during the life hereof, the Lessee and his agent, servants and employees, shall be entitled to the sole and exclusive

possession of said mining claims, with the right to explore, develop, mine and work the same, and to extract, ship, smelt and otherwise dispose of the metals, ores and minerals taken therefrom except as such right may be modified hereinafter in paragraph ninth hereof, and to construct, make and use thereon such shafts, stopes, drifts, tunnels and other workings and dumps and excavations as may be useful to or convenient for the working and development of said mining claims or any one or more of them, and the Lessee agrees that all work done on said claims shall be done in a good and workmanlike fashion and after the manner of good mining and that he will at all times keep all drifts, shafts, tunnels and other workings done or made by him thereon, thoroughly drained and clear from loose rock and rubbish, unless prevented from so doing by strikes, floods, or other extraordinary mining casualties or acts of God, and that the Lessors, their agents and attorneys shall have the right at all reasonable times to enter into and upon said premises and the workings thereon for the purpose of inspecting the same.

3. It is understood and agreed by and between the parties hereto that the effective date of this agreement shall be and so considered in all references to time in this agreement as that of the date that this agreement is fully executed and acknowledged by the last parties signing this agreement.

4. The Lessee shall begin the process of unwatering of said GOLD BAR MINE within thirty (30) days after the date of this agreement, and shall have completed the unwatering and the examination of said mine thereof, together with the sampling and related labors incident to said examination of said mine, within ninety (90) days from the date of this agreement. On or before

the last day of said ninety (90) day period, the Lessee shall notify the Lessor or any of them in writing, of the Lessee's decision to proceed under the terms of this agreement or to abandon said enterprise and thereby terminate this lease. Failure of the Lessee to notify the Lessors or any of them will be construed and will operate as an election by the Lessee to abandon said enterprise, and will operate as a cancellation of this agreement.

5. In lieu of such unwatering, examining and sampling, the Lessee may at his election, begin within thirty (30) days after the date of this agreement and complete within one hundred (100) days from said date, re-timbering and repairing of No. 1 and No. 2 shafts now in said mine, together with the installation of any machinery needed for such and other development work, such installation being completed within four (4) months of said date. However, if the Lessee elects to proceed under this agreement without first unwatering said mine and in lieu thereof proposes to proceed with said re-timbering of shafts No. 1 and 2, he shall, within thirty (30) days of the date of this agreement, so notify the Lessors of his election.

It is understood and agreed, however, by the parties hereto that No. 2 shaft is to be repaired for use as a working shaft, to give access to the five hundred (500) foot level of said mine, and the No. 1 shaft is to be repaired only insofar as is required by the Arizona Mining Laws for its use as an emergency exit from the mines.

6. The Lessee shall work an average of not less than three hundred (300) shifts per month in underground development work, such work to begin sixty (60) days after the Lessee has signified his election to proceed under this agreement, and said

work shall continue throughout the life of this agreement.

7. The Lessee shall repair the mill at his own expense, and make any additions thereto that he may deem advisable.

8. The Lessee agrees to remit to the Commonwealth Trust Company of Pittsburgh, Pennsylvania, for deposit to the order and credit of the Lessors, as their interests may appear, the following royalties on all metals and ores extracted from Gold Bar Mine, and milled or smelted on the premises:

Ten (10) per cent. of the net mint or net smelter returns on ores having a total value of metal content not in excess of Fifteen ($15.00) Dollars per ton;

Twelve and one-half (12 1/2) per cent. of the net mint or net smelter returns on ores having a total value of metal content in excess of fifteen ($15.00) Dollars per ton and not exceeding twenty-five ($25.00) dollars per ton;

Fifteen (15) per cent. of the net mint or net smelter returns on ores having a total value of metal content in excess of twenty-five ($25.00) Dollars per ton and not exceeding forty ($40.00) dollars per ton;

Twenty (20) per cent. of the net mint or net smelter returns on ores having total value or metal content in excess of forty ($40.00) dollars per ton.

9. The Lessee agrees to pay the following royalties on all ores shipped direct to the smelter without milling:

Twelve and one-half (12 1/2) per cent. of net smelter returns on ores having a total value of metal content not in excess of twelve dollars and fifty cents ($12.50) per ton; and

Fifteen (15) per cent. of net smelter returns on ores having a total value of metal content in excess of twelve dollars and fifty cents ($12.50) per ton and not exceeding twenty-five ($25.00) dollars per ton; and

Twenty (20) per cent. of net smelter returns on ores having a total value of metal content in excess of twenty-five ($25.00) dollars per ton.

That the term "Net smelter returns" as used in this agreement shall mean the gross returns from ore shipments direct to smelter, deducting smelter and railroad charges only.

It is understood and agreed between the parties that no ores are to be shipped by the Lessee to the smelter without milling, without the consent of the Lessors.

10. The Lessee shall remit to the said Commonwealth Trust Company of Pittsburgh for deposit to the order and credit of the Lessors, as their interests may appear, as rental ten (10) cents per ton of all ore milled through the Gold Bar Mill from mines not owned or controlled by the Lessors. Such ores shall be known as custom ores. It is agreed and understood, however, by and between the parties hereto that the tonnage of custom ores allowed to be handled in addition to the ores from the Gold Bar Mine shall be the daily capacity of the mill over and above one hundred (100) tons, provided further, that if it is impossible or impractical to mine one hundred (100) tons per day for each and every day from the Gold Bar Mine, the Lessee shall be allowed to mill Custom ores to the amount per day of the total capacity of the Gold Bar mill in excess of the tonnage of ore mined from the Gold Bar Mine.

11. The Lessee shall remit to the said Commonwealth Trust Company of Pittsburgh, for deposit to the order and credit of the Lessors, as their interests may appear, all royalties and rents due on the tenth day of each month on all metals, ore and concentrates shipped, the net returns of which have been received by the Lessee during the immediate preceeding month. All remittances to be accompanied by duplicate mint or smelter receipts.

12. It is understood and agreed by and between the parties hereto that the Lessee has exclusive right to and use of all machinery, buildings and equipment now on the Gold Bar Mine, and that the Lessee will maintain and keep in as good repair as they now are, all such buildings, machinery and equipment, ordinary wear and tear excepted. On cancellation of this agreement for any cause whatsoever, the Lessee will at his own expense, replace the hoist at No. 2 shaft on its present location on said Gold Bar Mine, as a workable unit, if such hoist should be moved during the life of this agreement.

13. All work done upon said premises, and all buildings, machinery and equipment placed thereon by the Lessee shall be at his own cost and expense, and he shall at all times keep paid all bills and accounts for labor, supplies and materials furnished to him or any one in privity with him and used in connections with his operations upon said mining claims and he shall not suffer mechanics or material men's liens to be filed upon or against same or any part thereof and the Lessors shall have the right at all times to keep said premises posted in accordance with the laws of the State of Arizona against such claims. The Lessee shall also at all times while carrying on operations upon said premises under the provisions of this agreement carry workmen's compensation insurance in accordance with the requirements of the

laws of the State of Arizona, it being expressly understood and agreed that the Lessors and said mining claims shall not be liable for or subject to any of the claims above mentioned and that the Lessee will save and keep harmless the Lessors for or on account of any claims for damages for injury or death sustained by any employee of the Lessee engaged in any work upon said premises or for the benefit thereof under this agreement and to that end the Lessee shall always be considered as an independent contractor of the Lessors.

14. The Lessee shall have the right to remove all tools, supplies, machinery, equipment and buildings placed by him upon said mining claims while in possession thereof under the terms of this agreement except ties, rails, ladders and mining timbers in place, and all the electrical equipment, including transformers, but not including electrical hoists and motors, at any time during the life of this agreement or at any time within ninety (90) days after the termination of this agreement for any cause whatsoever.

15. It is agreed and understood by and between the parties hereto that during the term of this lease the Lessee shall at his own cost and expense pay the prorata part of all 1933 taxes and assessments of any and all kinds lawfully levied and assessed against the said property from the date of this agreement to December 31st, 1933, that the Lessee shall also at his own cost and expense do any and all necessary and required annual labor and assessment work upon the said claims required hereafter to hold the same under the mining laws of the United States and the State of Arizona, and furnish proof thereof to the Lessors each year on or before the first day of June, beginning with July 1933.

16. The Lessee during the continuance of this lease shall at all times keep correct, full, complete and accurate accounts and records of his operations upon the said mining claims, including assay records, surface and underground maps, and Engineer's and Geologist's reports covering said property, which shall be at all reasonable times subject to the inspection by the Lessors and their agents or representatives.

17. If at any time during the life of this agreement there shall be any open ground contiguous to or adjoining any of the mining claims hereinbefore described that the Lessee desires to have located, he shall notify the Lessors or some one of them in writing to that effect, whereupon the Lessors shall locate such ground and any and all claims so located by them shall be covered by this agreement, and if any claims are now held by the Lessors or either of them adjacent to or in the immediate vicinity of any of the claims hereinbefore described, they shall also be deemed to be included in and covered by this agreement.

18. The Lessee shall do or cause to be done at his own expense all location work required to locate any such additional claims that he may require the Lessors to locate under the provisions of the last preceeding section.

19. The Lessors do hereby covenant and warrant with and to the Lessee that they are owners thereof of said mining claims together with all buildings, machinery and appurtenances now thereon by title free and clear from any and all liens, mortgages, taxes and encumbrances whatsoever and that they have good right and full power and lawful authority to enter into this agreement.

20. It is agreed and understood that in the event the

Lessee shall fail to pay the rents and royalties herein reserved as and when due and payable, or shall fail in any particular to keep and perform each, all and every of the covenants and agreements herein contained and bynhim hereunder to be kept and performed, then this lease may, and upon the option of the Lessors, shall be terminated and ended, and all rights of the Lessee herein given and granted terminated and forfeited, and upon any such forfeiture of the said lease, or upon the termination and ending of the said lease, the Lessee shall immediately yield up and deliver to the Lessors possession of the said premises, and the Lessors may and shall have and are hereby given the right then to enter in and upon the said premises and every part thereof, and take immediate and full possession thereof.

21. The Lessee may and shall, by and with the written consent of the Lessors, have the right to assign this lease and all the rights and privileges herein granted, and it is agreed and understood that each, all and every of the terms hereof and that all of the rights and privileges herein granted shall extend to, be binding upon, and enforceable by the heirs, executors, administrators, assigns, and successors of each of the respective parties hereto.

22. It is further understood and agreed by and between the parties hereto that this agreement shall be executed in quadruplicate.

IN WITNESS WHEREOF this agreement is executed in quadruplicate by the individual parties hereto and Clara E. Twichell as Executrix and Commonwealth Trust Company of Pittsburgh, Pennsylvania, a corporation, as Executor and Trustee, under the Last Will

and Testament of James A. Twichell, deceased, through its duly authorized officers on the day and year first herein before written.

Witness:

_____ _____

As Executrix of the estate of James A. Twichell, Deceased.

Attest:

COMMONWEALTH TRUST COMPANY OF PITTSBURGH

_____ By _____

_____ _____

As Executor and Trustee under the Last Will and Testament of James A. Twichell, Deceased.

Witness:

_____ _____

_____ _____

_____ _____

_____

Lessors.

Witness:

_____ _____

Lessee.

Please return to
J. A. Wheeler
Committee room
arg.

Copy from original

GOLD BAR MINE.
Wickenburg, Arizona.

REPORT ON EXAMINATION.

T A B L E O F C O N T E N T S.

Introductory Letter

Location of Property

Claims,of which there are sixteen,contiguos claims.

Topography

History

Geology

Origin of Ores

Ore Bodies and Values

Equipment

Water

Power

Metalurgy and Reduction

Conclusions.

PHOTOSTATS:-

not attached

Long Section of Mine Workings (attached) Section A-A

Cross Sections (attached) Section B-B,C-C.

Location of Underground Workings attached

Plat of Claims,showing locations of Development Work. attached

F O O T E A N D C O M P A N Y
Industrial Engineers, Auditors and Appraisers
136 Liberty Street
NEW YORK.

Telephone Rector 9186
****

May
Tenth
1929.

James A. Twichell, Esq.,
Gold Bar Mines,
Wickenburg, Arizona.

Dear Sir:-

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

G O L D B A R M I N E .

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 consist of:-

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

Our Mining Engineer and Geologist, Mr. Geo. 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 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 resultsobtainable without jeopardizing the underground working, which would result in a large capital outlay for its rehabilitation and safety of operations.

Respectfully submitted
FOOTE AND COMPANY.
(Signed) E.R. FOOTE.
F.A.A., F.C.I., C.P.A.

G O L D B A R M I N E .
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,which is reached by a road in good condition,tho 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:-

15 LODE CLAIMS
1 MILLSITE

1	~~West End~~	9	Red Wonder
2	Bennett	10	Cable
3	Galbraith	11	Robert
4	Homestake	12	Little Jim
5	White Blaze	13	Little Johnny
6	Charm	14	Crown
7	Fob	15	Buttons
8	Black Bear	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 favourable 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 three thousand five hundred (3,500) feet above sea level.

The climate conditions are favourable for continuous operations the entire Year. A decided advantage.

HISTORY:-

The property was discovered about 18~~77~~ 88 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 year's lease was given John Brown,Trustee of the Saginaw Lumber Company. During the life of this lease a ten stamp mill was erected. The ore treated came from an open cut in the outcrop of the ore chute and from measurements of this cut in the out-crop,I estimate about 4000 tons of ore were treated with a recovery,according to Mr.O'Brien,of $60000. On the basis of an 80% recovery,the ore treated contained a value of approximately $18.75 per ton.

The Interior Mining and Trust Comapny was then formed. This company sank the No.1 shaft to a depth of 325 feet,erected a

hundred tons capacity and worked the ore body by means of an incline from the 385 foot level to the surface,a distance of approximately 500 feet. These workings are inaccessable owing to caving,the rich supporting pillars having been pulled. Thro the courtesy of Mr.F.A.Mueller who was in touch with the operations during this period,and from a few records which escaped destruction,I find the mill ran ten months,treating some twenty thousand tons of ore with a recovered value of $200000.00,this from ore containing $275000.00 value or $13.75 per ton treated. A poor recovery.

Then came a reorganization and the property became known as the Gold Bar Mining Company. $80000.00 was raised with which the No.2 shaft was sunk to the 700 foot level and connections made between the 500 foot level of No.2 shaft and the old workings at the 385foot level by means of drifts an 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 two major periods of movements. One resulting in a system of North 70 degrees East fissures,and the other in South 30 degrees East fissures. Both systems show evidence of intensive mineralization.

Developement has been almost entirely confined to one of the fissures of the North 70 degrees East system,with a dip of 30 degrees Northwest. Evidence of faulting in this fissure is encountered on the 445 foot 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 South 30 degree East system. There being a strong cross feature 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 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 distant to the Southeast,is another fissure having the same dip 30 degrees N.W. There are three very strong out-crops or blow-outs 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 outcrop on the fissure in which the mining has been done.

I was particularily impressed by the one furtherest to the South West, which is located on the Cable Claim, and is where the Red Wonder Vein or Fissure, the strongest fissure of the South 30 degree East 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 orebodies will exist. I cannot understand why this feature of the property has received so little attention in the past. The invitation is unmistakable.

ORIGIN OF 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 further argument. In as much as 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 observe 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 copper content. The copper will eventually form a considerable proportion of the values is sustained by its occurence 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 carbonates and oxides and as assays gave copper 6.15%, Gold $6.80.

ORE BODIES AND VALUES:-

The orebody 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 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 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 dip of 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 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 20000 tons as mined, we have an available ore supply of 69600 tons,not to mention a large expectancy of probable ore.

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

Ten stamp mill,results per ton ----	$18.75
Large mill, " " "	13.75
Mill-run of 70.166 tons,taken without sorting across a 4'x6'x40' cross-cut on the 407 foot level- Copy of this 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 a 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 $835200.00. This estimate takes no account of the low profitable grades of ore of which there is an abundance,nor 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 lowere 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,a double compartment shaft,and is well equipped for hoisting. It has in connection compressor and pumping facilities.

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

Mill buildings are 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 machinery obsolete,still a very considerable portion can be utilized.

WATER:-

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

POWER:-

A power line has been brought to the Monte Cristo 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 tablesgoingto 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 excellant 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 connections between the two shafts on the 500 foot level of the No.2 shaft.

2- At the 385 foot incline level of No.1 shaft a working station should be made and so constructed as to easily handle large timbers and long lengths of pipe.

8

Twenty feet below this level 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. Drifts should be run on this 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 S10 degrees W for six or seven hundred feet to prospect for the downward extension of th the ore under the No.3 blow-out.

6 - This campaign of developement should cost not to exceed $30000.00 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 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) F.R.FOOTE.
F.A.A,F.C.I.,C.P.A.

G O L D B A R M I N E
Wickenburg, Arizona.

MILL TEST RUN MADE BY V.G.HILLS, E.M.

LOT NO.4.

This ore was taken from the 41' winze level and consisted of all the material taken from a 4x6x40' cross-cut thro the ore-body.

The mine weight was 72.336 tons. Moisture was 3%, making the dry weight 70.166 tons.

Owing to several stops of the mill during the run the time was lost. But during the first day the stamps crushed about 1¼ tons per hour or 7.44 tons dry per stamp for 24 hours.

Owing to the failure of the power the mill stopt and the clean-up was made with 6.41 tons dry left in the bin. Thus there was 63.756 tons in the test.

The concentrates saved were:-

Wilfley table	1" lot	12.530 tons,	moisture 13.75%,	dry	10.807 tons.
" "	2" "	2.790 "	" 14.8 %,	"	3.377 "
					13.374 "
Vanner "		1.111 "	" 16.8 %,	"	.929 "

Making one tons of concentrates to 4.52 tons ore.

The coarse rock sample 9427 returns:
Gold 1.04 oz. Silver 5.2 oz.

The sands head sample #9428 returns:
Gold 1.30 oz. Silver 3.2 oz.

Considering the complete and careful manner in which the sands sample was taken it must be regarded as representing the correct value of the ore.

The mint value of the ore is:-

Gold 1.30 oz.	at $20.67	$26.87
Silver 3.2 "	" .53	1.71
		$28.58

The savings on the plates was 2# 8oz. avoirdupois of amalgum, which at the uniform mine estimate before noted gives value of $193.33.

			per ton
From amalgam (approx.only)		$193.33	3.03
Wilfley Con. Gold 2.33 oz.	$48.16		
" " Sil. 9.2 "	4.88		
13.184 tons	53.14	699.28	10.97
Vanner con. Gold 3.83 oz.	79.17		
Sil.12.1 "	6.41		
o.929 tons at	85.58	79.51	1.25
Wilfley tails. Gold .22 oz	4.55		
" " Sil. .6 "	.32		
40.459 tons at	4.87	197.04	3.09
Vanner tails. Gold .70 oz	14.47		
" " Sil. 1.8 "	95		
9.184 tons at	15.42	141.62	2.22
Discrepancy		510.73	8.02
		$1821.51	$28.58

63.756 tons at $28.58.

G O L D B A R MINE
Wickenburg, Arizona.

Sample marked	SILVER Oz.pr,ton	Value at 60¢per oz.	GOLD Oz.pr ton	VALUE $20.pr ton
Composite sample	1.6	$ .96	.56	11.20
1	.2	.12	.02	.40 from out crop
41	1.0	.60	.12	2.40
41A	8.6	5.16	1.34	26.80
46	.6	.36	.17	3.40
48	.6	.36	.11	2.20
53	1.1	.66	.28	5.60
55	.9	.54	.30	6.00
59	2.2	1.32	.58	11.60
64	.4	.24	.16	3.20
67	4.0	2.40	1.48	25.60
70	1.0	.60	.53	10.60
72	.1	.06	.20	4.00
78	2/3	1.38	.42	8.40
82	.7	.42	.08	1.60
87	.9	.54	1.45	29.00
102	.3	.18	.03	.60

Signed by Chas.A.Diehl
Assayer.

G O L D B A R M I N E.
Wickenburg, Arizona.

M A P S .

Long Section of Mine Workings — Section AA

Cross Sections — BB and CC

Location of Underground Workings

Plat of Claims, showing Location of Development Work.

not collected

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