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Index. Powers, Mammoth Mts., Ariz.  
Ind., Class D.

v. England

POWERS MINE

Invoice P. - General 12/20/38

Harold Elliot called and may want me to examine the Powers Mine for owners in Chicago.

Located in Galluiro Mts. east of Mammoth in Rattlesnake Canyon (Graham County) some 30 miles (?) east of Mammoth.

Old Mine, - can find no record.

Engineer for owners is Frances G. Fabian A.I.M.E. of Chicago.

COPY OF  
REPORT OF DR. HENRY MACE PAYNE GEOLOGIST  
for  
Consolidated Galiuro Gold Mines, Inc.  
March Twenty-sixth, 1934.

Los Angeles, California  
545 Northwestern Avenue  
March Twenty-sixth, 1934.

The Consolidated Galiuro Gold Mines, Inc.,  
Safford, Arizona.

Report made at the request  
of L. Page, President.

The Consolidated Galiuro Gold Mines, Inc., is an Arizona Corporation, of One and one-half Million Dollars capital stock, with none as yet issued, operating on a ten year bond and lease.

#### PROPERTY

The property consists of seven claims, viz:

Abandon No. 1;  
Abandon No. 2;  
Abandon No. 3;  
Abandon No. 4,  
Burro,  
Sunshine,  
Moonshine.

The President, Mr. Page, owns five claims adjoining making twelve claims in all, comprising approximately 240 acres.

#### LOCATION

It is located in Rattlesnake District, Graham County, Arizona, 65 miles South-west of Safford and directly North of Kilberg Peak. No Government topographical work has been done in this area. The Forestry maps are the only ones available. The Federal and State geological Surveys have no detailed reports covering the area.

#### TRANSPORTATION

The property is reached by 15 miles of paved road from Safford, 30 miles of gravel road from the State Road, and 20 miles of barely passable trail which latter must be relocated and reconstructed before mining on a commercial scale can be efficiently conducted. The nearest Railroad shipping point is Glenbar, Arizona, about 50 miles distant.

#### HISTORY

Its history over a period of years from about 1850 is one of strife, inaccessibility and seasonal dependance on water. Known as the "Power Mine," values of moment are known to have been extracted. Until about 1890 this part of Arizona was harassed by roving bands of Apache Indians.

In 1914, R. L. Young shipped 5½ tons of ore from the 30 ft. level of winze and received \$11,800. He was subsequently ejected from the property by an injunction filed at Safford on the ground that during the proceeding 6 months he had taken out \$65,000 on which he had failed to pay royalty.

## GEOLOGY

The Galiuro Mountains which center in Kilberg Peak, consist of a double range of mountains intersected by deep canyons whose slopes average 85 degrees. The mine is located on the Kilberg Canyon side of the divide separating Kilberg from Rattlesnake Canyon.

The immediate area is a dome, or anticline, sloping in all directions. The vein under development extends in a North and South direction for 12 or more miles, and has been specifically traced along the outcrop for more than 13,000 ft.

On the surface it is approximately 112 ft. wide, with walls of rhyolite and andesite. The region is partially metamorphosed, but not sufficiently to materially disturb the obvious intrusions from below.

Examination of the underground workings, noted below, proves beyond any doubt the hot-magma-solution origin of the deposit. Dog tooth spar, vugs and druses are abundant. While values are found throughout the extent of the vein, the highest values are found in a clearly defined portion adjoining the hanging wall. This gangue is in turn enriched at frequent intervals by lenticular formation running up to \$2,000 per ton in gold.

The ore is all free milling and many samples taken were freely crushed by hand and panned with excellent showing of gold.

## TIMBER

The Company has obtained a 30 ft. right-of-way for its road, from the United States Government, including the timber found thereon. This timber is mostly Western Pine and some White and Douglass Fir, and is ample in quantity for all the necessary construction and for mining purposes.

## WATER SUPPLY

There is an old deep well on the Rattlesnake watershed about 2 miles from the property from which ample water may be secured and pumped over the saddleback approximately 400 ft. above; or an impounding dam may be constructed in Kilberg Canyon and the water pumped from there.

## DEVELOPMENT

About 240 ft. below the outcrop of the vein, a Cross-Cut Tunnel has been driven approximately 325 ft. to the foot wall on the East.

North and South drifts have been extended from this Tunnel, in the vein, 25 ft. and 75 ft. respectively, and about 15 ft. South of the Tunnel in the Southerly Drift, a Winze has been sunk 100 ft. with 15-25 ft. cross cuts at 25 and 80 ft. depths.

At the outcrop on the mountainside, the high-values portion of the vein adhering to the hanging wall is 3 ft. wide. At the tunnel level 240 ft. below, it is 4 ft. wide. At the bottom of the winze it is 15 ft. wide.

The foot wall on the East is nearly vertical, not exceeding 12 degrees. The hanging wall on the West lies about 55 degrees, and at the foot of the winze appears to be widening out very rapidly, as the pay streak increases.

There thus appears an increase of 3 to 15 ft. in this pay streak, and values (as will be noted below) have increased 21½% with depth.

#### VALUES

In order to obtain a specific knowledge of actual recoveries in recent years, I requested that all mint receipts available. Mr. Page furnished the following data:

El Paso Smelter Returns. Fineness of gold 742.2; 30 ton shipment from bottom of winze cross-cut, \$6.97 per ton.

Denver Mint Report. #331, July 14, 1932. Fineness 738.25; 5 tons assorted ore from all portions of the mine. \$160.90 or \$32.18 per ton.

Denver Mint Report. #589, July 30, 1932. Fineness 684.0 (?) 5 tons from 35 ft. level in winze \$38.64 per ton.

Denver Mint Report. #831, August 11, 1932. Fineness 739; 5 tons from cross-cut in winze at 80 ft. level. \$82.03.

Denver Mint Report. #2428, Oct. 26, 1932. Fineness 754.5; 5 tons from South drift beyond winze on main level, \$66.97.

Denver Mint Report. #4046, Feb. 9, 1933. Fineness 5 tons of general sample out of 200 tons complete mine run on dump \$31.78.

Assays made for Mr. Page on cross section samples of the pay streak taken at tunnel level in 5 ton lots, showed \$5.74 per ton; and at the bottom of the winze \$6.97 per ton. Four tons taken from one of the lenses in the winze, mixed quartered and sampled, assayed 44.62 oz. gold per ton, or \$922.29 per ton.

The owner of the adjoining property to the South, Mr. Knothe, has shipped ore to the smelter returning him \$200-\$800 per ton.

The Gold Mountain Group to the North likewise shipped ore from this same vein returning approximately \$800 per ton.

All values quoted above are at \$20.67 per oz.

Samples taken by myself for assay were as follows:

No. 1-¼" screenings from dump, average mine run from bottom of winze.

No. 2 - Oversize rejects from Denver pan.

No. 3 - Mill tailings from pilot mill after grinding and amalgamating.

These were submitted to the Mine Equipment & Engineering Co. of Los Angeles, for concentrating in the Spiro Concentrator, because it is my belief that the entire production of this property should be ground and concentrated at the mine, and the concentrate only, shipped to mint or smelter.

Even with a satisfactory road built over the 20 miles out of the Canyon, the distance and cost of transportation will consume an undue portion of the values. The cost of transportation of one ton of concentrate is no greater than of one ton of gangue matter.

For concentration of this sort, the ore should be ground to 20 mesh at least; probably 40 mesh would be best. Mr. Page states that 40 mesh has been found to release all of the gold.

Obviously therefore, the concentration effected by the Spiro Concentrator would have been still more complete on the first two samples, had they been properly ground before concentration.

Sample No. 1 consisted of 25 lbs. equivalent to 11,340 grams, was concentrated to 1.609 grams, or a concentration of 7087; this yielded 129.20 milligrams of gold equivalent to \$10.34 per ton at \$35.00 per oz.

Sample No. 2 consisted likewise of 25 lbs. and was concentrated to 1.0675 grams, or a concentration of 10.6000; this yielded 88.37 milligrams of gold equivalent to 7.90 per ton at \$35.00 per oz.

Sample No. 3 consisted of 23 lbs. equivalent to 10.433 grams, was concentrated to 1.7857 grams or a concentration of 5841; this yielded 1.77 milligrams of gold equivalent to 17¢ per ton (at \$35.00 per oz) and represents the loss on rejects over the Denver Pan.

Assay sheet by Harley A. Sill of Los Angeles is attached hereto and made a part of this report.

(The additional assay No. 4 on rock from another location, for suspected Tellurium proved negative, although it contains non-commercial occurrences of Fluorine and Apitite.)

Sample No. I was also suspected of containing scheelite or ore of tungston, but was found negative.

#### RECOMMENDATIONS

It is recommended that with the securing of funds, the last 20 miles of road to the mine be improved; that adequate water supply be provided from one of the two sources indicated; that the mill be moved to the mouth of the mine; and that the ore after grinding, be concentrated in a Spiro Concentrator; that a bunkhouse and messhouse be built at the

mine; and that as a part of the permanent development, a shaft be sunk from the level of the main tunnel along the outside of the mountain in line with the winze, intersecting the vein at a point estimated between 600-700 ft. in depth with cross cuts through the pay streak, this affording cheaper removal of the ore from mine to mill, and automatically providing adequate ventilation.

#### CONCLUSION

With this development there will be several million tons blocked out for immediate concentration and shipment of gold. The values already noted and the development already done have proved sufficient tonnage for recovery of the necessary funds if efficiently applied, to place this mine on a permanent paying basis over a long term of years.

Very truly yours,

(Signed) Henry Mace Payne.

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