PRELIMINARY REPORT ON THE GOLD BULLION MINING PROPERTY IN YAVAPAI COUNTY, ARIZ.

GEOGRAPHICAL LOCATION.

The property of the Gold Bullion Mining Company, Inc. (an Arizona corporation), is located in the Cherry Creek mining district, Yavapai County, Arizona, one mile west of the post-office at Cherry, 16 miles from a station on a branch of the Sante Fe railroad at Dewey, 32 miles northeast of Prescott, the county seat of Yavapai county, and 29 miles from the United Verde Copper Company's smelter at Clarksdale, Arizona. ELEVATION. The elevation of the mining property, above sea level, is from 5240 feet at the mill to about 5500 feet on a part of the property.

ROADS

The one mile road from the camp and mine to the post-office at Cherry is of moderate grade and in fair condition for travel by auto trucks. From Cherry the main roads and highways leading to the railroad station and to Prescott, Phoenix and the smelters at Clarksdale and Jerome are kept in excellent condition the year around.

SUPPLY DEPOTS. LABOR.

Mine and mill equipment, mining and camp supplies are obtainable at reasonable prices at the above named places. Many experienced miners reside in the district and are available at reasonable wages.

BUILDINGS.

A well-built mill building, commodious enough for a 25-30 ton plant, is well located on the bank of Cherry Creek, close to the mine workings. A blacksmith and machine shop, 18 x 40 feet, one three room dwelling house and three two room cabins, all in good condition, are also well and conveniently located on the property. The well sheltered and pleasantly situated camp site is ample for many other houses and buildings.

ORE VEINS.

There are several veins of ore on the Gold Bullion property. The principal vein, which trends in a north-south direction, follows a granite porphyry dike, which is reported traceable for several miles and is found to attain a width of 100 feet or more in places. The other veins have not, however, been opened up on the property. The quartz contained in the principal vein is massive, occurring in lenses and in bunches, so far as seen, with oxidized sulphides interwoven. The quartz is gold bearing, particles of gold being visible to the naked eye. The oxidized sulphides also carry values in finely disseminated gold.

The development work so far done on the Gold Bullion has been done in the oxidized zone. It is therefore impossible to determine, at the present stage of development, what values the vein and/or veins may carry at a greater depth in the sulphide zone. However, the possible length of the principal vein, its average width where exposed and so far ascertained and the depth to which oxidization reaches in this Cherry Creek district, indicate a large possible tonnage of ore. In the absence of adits or tunnels of sufficient length, levels, upraises and accessible shafts, it is
impossible, of course, to estimate the tonnage of ore, even in the oxidized zone. Neither is it possible to determine the regularity of occurrence of the higher grade ore which the veincarrys. However as a result of the careful sampling done on the principal vein and the assays made thereof, the average gold values are highly satisfactory. The ore also contains some silver and a small percentage of copper.

**MILLING ORE.**

The very small percentage of copper found in the oxidized zone, due to the almost complete leaching of that mineral, is highly favorable for certain milling methods and processes.

**STRIKE, DIP & WIDTH OF VEINS.**

The principal vein on the Gold Bullion property has a northerly strike and a steep dip, averaging about 45° West. The width of the vein between walls has been found to be from four to twelve feet.

**DEVELOPMENT WORK HERETOFORE PERFORMED.**

The development work done so far on the property consists chiefly of several open cuts, one shaft reputed to be 96 feet deep, one shaft about 30 feet below surface, and two small adits or tunnels. (See accompanying map.) All of the work has been done in a very unsystematic manner, and more or less in a crude way.

**SAMPLING.**

The heavy snow fall this winter (1932-1933) made it impossible to cover all of the surface of the group of claims, and the subsequent freezing and thawing has caused cave-ins of the sides of the open cuts and of some places inside the mine. These conditions prevented a more complete sampling, so the taking of samples was limited to only the accessible parts of the property. However, as the ore in the accessible places fairly well represents the character of the body of ore to be found in the vein, the samples taken by me and assayed by the chief chemist and assayer of the United Verde Copper Company at Clarkdale, Arizona, should represent the values to be found in the principal vein in the zone of oxidation. The sulphide zone of course is much below the surface and no development has reached the sulphide zone on this property.

The samples were taken across the vein where exposed, taking the gangue and vein matter between the walls as well as the pay streak, the idea and purpose being to ascertain the low average value of the ore in the vein, having the milling of the low grade ore in view.

A composite sample, made up of parts of each of nine samples taken, gives a fair idea of the average values of the ore to be found in the vein. This composite sample showed an average of $16.40 per ton in gold. Some of the samples assayed as high as $35. to $39. per ton in gold. The average value of other samples taken was $8.83 per ton, principally gold. (Computed gold at $20. per ounce. Silver at .30¢ per ounce.)

**TIMBER.**

Timber suitable for mining purposes is available in the forest reserve adjoining the property and is purchaseable at a low cost. Also suitable timber closely capacity of the mill which will eventually be equipped on the property.
ber grows on the mining property, the trees being principally oak, pine, juniper and cedar.

WATER.

An ample supply of good water for all purposes is found on the property furnished by ever-flowing springs.

PLAN OF DEVELOPMENT.

Accompanying this report is a preliminary survey and map of the Gold Bullion mine, as so far developed, showing also the recommended further development.

It will be observed that the portal of the Adit, or tunnel No. 1, is approximately only 25 feet above the bed of Cherry Creek, although at a distance of 240 feet from the creek bed. Its elevation, therefore, is the lowest that can be recommended. This adit or tunnel gains satisfactory stoping ground for a distance of about 700 feet, at that point about 200 feet of stopes and beyond that distance (not shown on the map) somewhat level for a distance of about 200 feet. Then gradually, and in some places rapidly, gaining elevation to the north limit of our property.

The map will show a level 75 feet vertically above the adit or lower tunnel No. 1. This level can be opened up as an adit, shown on the map as Tunnel No. 2, and the ore therefrom taken down to the ore bin at the mill on a 3/8 railway track. The length of this track will be 525 feet.

It is recommended to drive both tunnels at the same time, to reduce the costs and shorten the period of development.

Further development will be in the nature of putting in upraises, stoping, extending the tunnels, and eventually sinking shafts to lower levels below the oxidized zone, to explore the sulphides. Such development would be rather remote, however, as there is considerable territory to explore above Tunnel No. 1 by drifting and crosscutting.

ORE SUPPLY FOR PILOT MILL.

Taking into consideration the character of the vein, the brittleness of the ore and vein matter, the closeness of the mine workings to the mill, the facilities of conveyance of ore from mine to mill and other favorable conditions, I believe that under the plan of development and operations herein suggested, a small crew of men will break enough ore to keep a pilot mill operating most of the time. However, it is to be recommended that at least three months' supply of mined ore be available at and for the pilot mill before it starts operating.

APPROXIMATE COST OF MINING & MILLING.

The cost of mining and milling, under the plan of development and operations herein suggested, should not exceed $5 per ton. The cost of milling will be reduced after further development, when the stopes are being mined, providing tonnage for a mill of larger daily capacity. The greater tonnage of ore milled, ordinarily, the lower cost per ton. For instance, if the operating cost of a 25 ton mill is $2. per ton, the operating cost of a 50 ton mill will be less per ton, and of a 100 ton mill still less.

The profitable results of operations of the pilot mill will determine the daily capacity of the mill which will eventually be equipped on the property.
after the mine has been further developed.

CONCLUSION.

In conclusion, I have no hesitation in stating that, in my opinion, the Gold Bullion mining property is attractive, meriting the investment of capital to prospect and develop it in a systematic manner.

Respectfully submitted,

H. HUGHES-ROBERTS.

Phoenix, Arizona.
20th February, 1933.

NOTE. The foregoing is an extract from the report of Mr. H. Hughes-Roberts, made for the group of army officers who bought the property in 1933. Certain parts have been omitted, such as a discussion of the Cherry Creek region, and an explanation of different processes of treating ores. All pertinent parts of the reports are contained above, the conclusions and sense of the report being in no way changed or altered.

San Antonio, Texas.
April 28, 1934.
LONGITUDINAL SECTION
THROUGH A PORTION OF THE PROPERTY
OF
THE GOLD BULLION MINING CO.

MAP NO. 1

[Diagram of a longitudinal section through a property of the Gold Bullion Mining Co.]