

GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1102 LUHRS TOWER
PHOENIX, ARIZONA

Copy of

REPORT ON HARQUA HALA BONANZA MINE

August 9th, 1945

Mr. J. H. Byrd
Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

The following report on the Harqua Hala Bonanza Mine has been prepared from personal examinations of this property, the first of which was made in February, 1917 and several others from 1931 to 1940, also from a careful study of reports by many other engineers dating back to 1892 and from some of which citations will be found in the text.

PROPERTY, LOCATION AND GENERAL CONDITIONS:

The Harqua Hala Mine on which you now hold a lease and option by virtue of a contract with the owners consists of the following patented mining claims,- (See Map, Exhibit A)

Consolidated Bonanza comprising the Gold Mountain,
Gold Hill and Gold Star Lode Claims -
Patent Survey # 1081

Narrow Gauge Placer - Patent Survey # 1097

Grand View Lode - Mineral Entry # 567 and

Summitt Lode, which lies some distance northwest of the
other claims of this group- Patent Survey # 1079

Also the following unpatented claims: -

North Pole Lode

Wedge Lode

Several of these claims are in partial conflict with one another and the Narrow Gauge is only a fraction so that the total acreage is about 100.

You have also leased the well and water rights on the Consolidated Bonanza Millsite in Centennial Wash, and pipe line from the well to the mine.

All the above are located in the Ellsworth Mining District, Yuma County, Arizona, some 8 miles south of the town of Salome which is situated 108 miles from Phoenix on paved U. S. Highway No. 70, and on the Parker Cut-Off branch of the Santa Fe Railway. The mine lies along the north east base of Martin Peak at the southwest end of the Harqua Hala range of mountains in Township 4 north, Range 13 west, Gila and Salt River Base and Meridian.

GEOLOGY AND ORE OCCURRENCE:

The basal rock in this vicinity appears to be a coarse-grained pre-Cambrian granite impregnated with iron pyrites over which lies a series of sedimentary rocks including quartzite, limestone, shale and conglomerate with intrusive dikes of porphyry. All of these rocks have been subjected to faulting and folding and shear zones have been formed in which there has been a deposition from ascending solutions of vein material including a little copper in places and gold associated with the iron and with gangue minerals which are mainly quartz, calcite and brecciated wall rock. The ore in the upper levels has been largely oxidized and in places there were zones of secondary enrichment. At a vertical depth of less than 300', the condition appears to change as the wall rock becomes granitic and although some of the sulphide veins found at greater depth have yielded limited quantities of fairly high grade ore, such occurrences, - so far as they have been developed, - appear to be comparatively small and scattered.

It has been suggested by certain geologists that a continuous ore zone might exist between the Bonanza and the Golden Eagle Claims lying one mile to the north-east but on the Golden Eagle Claims the quartzite in which the principal bodies of the Bonanza ore occur has been largely eroded away, except for the outcrop on the Harqua Hala Northern Claims. I therefore consider this as a possibility which should be left for future consideration and I feel that first investigations should be confined to the Bonanza Claims on which you hold the lease and option.

The value of the primary ore which should exist below the present workings has never been determined but there seems to be no reasonable ground to assume that it will be rich enough to work except in areas where there has been some local enrichment. Therefore, I also believe that for the time being one should only consider the possibilities of mining the upper areas in the vicinity of the Bonanza workings where the shattered quartzite predominates and the values from the veins have impregnated the wall rock.

In this mineralized area, which is characterized by shear zones and more or less parallel fissures with varying dips and strikes and many cross fractures, the country rock is mainly quartzite overlain with limestone while the footwall of the ore zone is an intrusive rock of coarse grained porphyritic texture which various engineers have called "andesite", or "rhyolite", but which locally is simply termed "porphyry".

There are two veins known as the "Iron" and the "Bonanza" and the ore shoots in some places appear to be confined by well defined and almost barren wall rock but the larger and richer deposits seem to be of a replacement type where the mineralized solutions have also impregnated the walls and often followed along fracture planes and slips from one fissure to another at the same time dissolving out the more soluble constituents of the rock and replacing these with metallic minerals. The value of this low grade material was obviously insufficient to permit mining under old conditions or to attract any particular attention from previous operators and both its tonnage and average value are still problematical and must be determined by further exploration and development.

HISTORY:

The Bonanza Mine, operating at intervals since 1889, is credited with a total production of over two hundred thousand ounces (200,000) of gold worth some seven million dollars (\$7,000,000) at present prices. The average content of silver was about one ounce to each ounce of gold on which basis the value in silver was about 2% of the gold value, although the percentage of silver in the sulphide ores is considerably higher and may increase with depth.

The tonnage of ore mined has not been recorded for some of the very rich ore running better than 5 oz. gold per ton was shipped crude to smelters and a small tonnage was milled at Harrisburg in the early days but the great bulk of the production from the Bonanza Mine and some ore from the Golden Eagle was treated in the Bonanza Mills where the quantity of both amalgamation and cyanide tailings was carefully estimated prior to 1933 at slightly over 127,000 tons from which it may be inferred that the total production

of the Bonanza Mine did not exceed 120,000 tons of ore. Most of this ore mined during the 1890's seems to have carried one oz. of gold per ton and very little of it carried less than 0.75 oz..

Recent attempts to operate this mine on a small scale have not proved profitable and while some lenses and shoots of \$8.00 and even \$10.00 ore (at present price of gold) were found in the lower workings, yet such occurrences proved to be small and their location was such as to make mining and haulage expensive.

The bulk of the high grade ore in the upper portions of the mine has long since been worked out and, except for the chance of finding new ore shoots, the future value of the property appears to me to rest upon the possibility that between and around these high grade stopes there still remains a much greater tonnage of comparatively low grade material which might be found to have a sufficient average value to permit cheap mining from an open pit and cheap treatment in a large cyanide mill to be erected at the mine.

ORE OCCURRENCE AND GENERAL MINERALIZATION:

The attached assay map, Exhibit C, while not entirely up to date, shows the general outlines of the underground work in the Bonanza and gives information concerning the width and value of ore in the vein, some of which has been mined since this map was made.

My examinations of the accessible underground workings and of the maps show that most of the old production came from a number of stopes scattered irregularly through the upper 200' of the mineralized zone in which there was probably only one original vein later faulted into the "iron" and "bonanza" veins and broken up by other faults and folding into several off-shoots and lenses.

The width of the stopes varied from a maximum of 60' to 3' or less and between the various ore shoots the shattered rock is seamed with bands of clay and iron oxide in which according to my samples gold values nearly always seem to occur.

Some engineers have believed that the values in the Bonanza were cut off by one of the larger faults which was noted on the 6th level but I am doubtful on this point.

A short distance to the east of the Bonanza lies the so called "iron vein" which was probably once a part of the Bonanza (see Exhibit B). Here the gold is associated with hematite and a considerable quantity of \$25.00 ore (at old price) is said to have been mined but much of those workings were caved prior to 1906 and but little can be seen of them today. There is a record of good values found in this vein from the Quinn Shaft which was sunk vertically for 306' at a point close to the line of the Bonanza Claims and in a winze below the bottom level of this shaft the vein is said to have averaged about \$11.00 (at present gold price) and over a considerable length, also a number of samples taken in the lower levels of the Iron vein workings average around \$10.00. The strike of this vein is generally north-south with dip, - sometimes very flat, to the west and it may converge with the Bonanza vein at depth. The apex of the vein seems to be almost entirely on the Gold Star Claim.

While none of the reports give any complete description of the old workings on the Iron vein or the tonnage and value of the ore which was left in them yet I was reliably informed that there was a large tonnage which would run \$7.00. I was able to observe some good looking vein matter near to the surface and my sample

from the dump ran \$4.20 per ton.

The water in the Bonanza Mine normally stands at a vertical depth of 200' and the flow down to the lowest (9th) level at a vertical depth of 550' is very small, - about 8 gallons per minute. Apparently some of the Bonanza ore shoots were cut off at their bottom by a fault which dips to the north-east at an angle of almost 45 degrees. If this is a normal fault the lower segments should lie in the foot wall and might be found by drilling or drifting to the south-west from the long drift which runs to the Iron vein following the fault plane in the 6th level.

In all the workings the sulphide ores came in with lower gold values but carrying a higher relative percentage of silver and with a substantial amount of copper. Because of general inaccessibility of the shoots and metallurgical difficulties in treating this class of ore very little of it was extracted and I particularly checked the existence of several thousand tons between the 6th and 9th levels, some of it in the porphyry. This is said to average \$12.00 or better per ton although such limited sampling as I have done would indicate a lesser value.

The chances of developing reserves of similar material seem very fair and in connection with any new operations it would undoubtedly pay to continue further exploration to greater depth, and laterally in both directions along the mineralized zone. The report of Tovote should particularly be noted in this respect and I was informed that just prior to the closing down of the last operations in 1937 an entirely new shoot of good ore had been found on the 6th level and was suspected to continue upwards to

the 5th level and beyond but this statement I had no opportunity to verify.

Although the search for high-grade ore conducted from 1913 to 1918 by the Yuma-Warrior Co. proved unsuccessful, yet I think that it would be a mistake to conclude that the possibilities of the mine in depth have been exhausted. I believe that the tonnage of good grade sulfide ore which may be found below the water level will prove small in comparison to the remaining oxidized material.

LOW GRADE ORE RESERVES:

The geological conditions surrounding the wider replacement deposits in the upper workings of the mine and the physical aspects of the Bonanza workings naturally suggest the existence of a large mass of low grade ore that might be attractive under present working conditions and at the present price of gold, but a careful study of all available data throws very little light upon the tonnage and average grade.

Since the old production nearly all came from the high grade shoots the reported value of the mill heads has no significance while the one fairly complete assay map which I have found (Exhibit C) - made by C. C. Thompson in about 1914, - records mainly the value of samples taken over narrow widths in or near the pay ore. But I have noted that there were a large number of samples carrying from \$2.00 to \$5.00 per ton (at present price) which came from exploration drifts and crosscuts and are suggestive as to the value of the wall rock between the veins and the old stopes.

Generally speaking, the reports of several engineers, who previously examined this mine, also give little pertinent information, high grade ore was all that interested them or the parties whom

they represented, the exploration and development work was all planned to find such material and samples were usually taken in the drifts and crosscuts only when the visual appearance indicated a point of enrichment. I have, however, culled out some interesting statements among which I mention the following:-

C. E. Mills (later General Manager of the Inspiration Copper Co.) in 1892 reported that much low grade material had been broken above the 4th level and sent to the waste dumps with average value around \$5.00 per ton (old price) and that many of his samples in wall rock gave similar values.

F. W. Norton says that the Bonanza cave-in, which put a stop to the work of the English Co. in 1895, involved an area 400' in length, and 60' in width and 150' in depth and the caved material represented 300,000 tons from which 50% could be screened out and would carry around \$6.00 per ton at old price. W. Tovote later refers to 200,000 tons of caved material and stope fills which he figured would average \$4.00 per ton at old price.

C. C. Thompson told me that he had assayed many hundred samples for the Yuma-Warrior Mines Co. from 1913 to 1918 and recalled that most of those taken off the veins ran from \$2.00 to \$6.00 at old price while I was told, but could not verify the statement, that a California engineer after much sampling had estimated that as much as 5,000,000 tons of \$5.00 ore could still be mined.

In 1935 a company headed by Elliott and Stratton took over the Bonanza Mine, their object being for the first time to develop low grade ore and mine this on a large scale. In order to determine the tonnage and value of such ore, the surface in the vicinity

of the outcrop and including the present glory hole was divided into 20' squares and a sample, -supposed to be representative, -was cut from each square. I was shown by C. C. Thompson some 600 assays from the samples thus obtained and told by him that the total area of 240,000 square feet represented a rectangle with length (east-west) of 600' and width (north-south) of 400'. I am satisfied that the assaying of these samples was done by Thompson honestly and with reasonable accuracy but the methods of sampling seem to have been open to criticism and therefore the results may be unreliable. Of the 600 assays mentioned some 40 were in the vein and gave results of \$15.00 or better, but casting these out, I averaged the remainder at about \$2.33 and the lowest assays were \$0.70 per ton.

This same company and others who were associated with them also took a great many samples of wall rock in the underground workings of the mine and claimed that the average of these was in excess of \$5.00 per ton but I feel that this statement is of little value as their sampling was not done in a systematic manner. Subsequently a considerable quantity of material was broken down in the vicinity of the glory-hole and together with some of the old caved rock and rock from the waste dump was sent to a test mill in 1937 and the record shows that the average grade of the 6277 tons treated was \$2.88 per ton although much of it was obviously barren wall rock.

Miles Carpenter who acted for a time as engineer for this company and had charge of much of the sampling has given it as his opinion that there is a large tonnage of ore that will average better than \$2.00 per ton while C. C. Thompson who saw much of the

sampling and did the assaying estimates that many hundreds of thousands of tons should carry better than \$3.00 per ton. I should also mention a report that the surface gravel and placer ground lying east of the old mill had been partially sampled and that at least 10,000 tons would average between \$4.00 and \$5.00 at the old price of gold.

In 1917 when I first visited the Bonanza Mine, it occurred to me that some of the low grade ore around the glory hole might pay to work and I took a few samples of which I now have no exact record but recall that they averaged less than \$2.00 per ton (old price) so that I gave the matter no further thought until 1934 when for a time I was interested in the re-treatment of the richer portion of the mill tailings and the price of gold had advanced. At that time the mine was under option to parties who later turned it over to Elliott and Stratton and they were taking a number of samples in various portions of the workings. I had a few samples taken for my own information and these indicated that there were sections away from the ore shoots which would run from \$3.00 to \$6.00 per ton at present price but no attempt was made to do this work in a systematic fashion or to calculate the tonnage which my samples represented.

It was also noted that there were still some ends of the old ore shoots and seams of higher grade material scattered at intervals throughout the mineralized zone and that these as well as any new ore discoveries would tend to sweeten up the average grade obtained in breaking down the entire mass.

I further studied this matter at intervals and on the occasion of two investigations in 1939, I took several large samples from various sections of the wall rock between the old stopes in the upper workings and from the broken ore left in the mine or put on the dumps. The arithmetical average of these samples was \$3.28 per ton and they should have been roughly representative of a very substantial tonnage of the mineralized area away from the vein from which some higher grade material should still be taken and might well serve to sweeten the average to \$4.00 or better.

Fortunately, much of the desired information can be secured by sampling and measuring the ground which is already prospected by the old workings of the mine which are now open or could be reopened at comparatively small expense and from which I would recommend core drilling or short cross-cuts in order to sample the intervening blocks of ore.

In an effort to arrive at some very approximate figures as to the possible tonnage, I have scaled off several maps and sketches which the owners have furnished me but find that some of these are obviously inaccurate while others are so incomplete as to have little value.

From such measurements as I could make on these maps and in the mine itself it would appear that the minimum tonnage which may average better than \$3.00 in the upper levels of the mine (down to a depth of 300') will be in the order of 400,000 but if, as seems likely, there is a continuation of values in the rock between the Bonanza vein and the Iron vein extending to the boundary of the Gold Star Claim then the surface dimensions of

the mineralized rectangle would exceed 600' x 400' and assuming a depth of 300', the possible tonnage approaches a figure of 6,000,000.

Since the conditions indicate that the superficial area of the ore body will tend to decrease with depth and that it will prove to be more or less funner-shaped, I would reduce the above maximum to say 4,000,000 tons plus whatever ore may be found in other parts of the property.

I do not intend to imply that I have as yet obtained sufficient data to in any way justify the assumption that even the minimum tonnage mentioned will actually assay \$4.00 or \$3.00 per ton, but I feel that there are good indications that such will prove to be the case.

GENERAL CONDITIONS:

The physical conditions of the Bonanza deposit are such as to lend themselves to cheap open-pit or glory hole mining for the recovery of all or a large part of the possible pay ore to a depth of some 300' below the outcrops,- no large amount of stripping would be required and the walls of the pit should stand extremely well.

In the pit the broken ore could be loaded on trucks or belts for conveyance to a pocket from which it could be hoisted through a new shaft to the crushing plant and mill which would probably be located near the site of the old stamp mill.

There is still some room for tailings disposal on the flat although additional space would eventually have to be acquired.

MILLING:

Through the use of modern cyanide practice it should be possible to recover at least 90% of the gold and over 80% of the silver in the oxidized ore which would represent nearly all of the material mined from the pit.

To treat the copper bearing sulfide ore from below the water level it might be necessary to provide a special plant using flotation as well as cyanide but the extra milling cost should be more than covered by the value of the copper recovered. While only exploration and development work was in progress the present buildings, with some repairs, could be made to house a crew of 15 - 20 men and assay office equipment can be installed in the building last used for that purpose. For metallurgical testing work the mill erected by Elliott and Stratton could be reconditioned and adapted for cyanide treatment with the installation of additional equipment or a crushing plant might be added to the plant recently used by Eagle Picher Co. for treatment of tailings by the Chapman process.

WATER SUPPLY:

On the 5 acre millsite at Harrisburg, owned by the Bonanza and Golden Eagle Mining Company, a well is sunk in Centennial Wash from which ample water was obtained for the old and recent operations and I am told that the pipe line is in good condition.

August Nord, a reliable rancher, informed me that from his well nearby he had continuously pumped for irrigation as much as 400 gallons per minute with only a very slight lowering of the water table and he expressed a positive conviction that the Bonanza well, if properly enlarged, could yield over 1000 gallons

per minute at all seasons of the year. Since the Centennial Wash drains an area of some 600 square miles, including McMullen Valley, the south slopes of the Harcuvar Mountains and the north slopes of the Harquahala Mountains, I believe that his estimate is reasonable and that the existence of an adequate water supply for a mill of 2500 tons capacity may be accepted as a fact subject to a further investigation of other water rights which might be infringed by draining off so large a supply.

POWER:

Previous work was conducted with steam power and subsequently by Diesel engines but recently the U. S. Government has built an electric power line from Parker Dam to Phoenix and I am reliably informed that after the war a contract would be made with the U. S. Reclamation Service to secure future power at Harqua Hala at a price in the order of 0.6¢ per kw. hour.

WORKING COSTS & FINANCIAL RETURNS:

While it would be premature to make anything more than a very rough and preliminary estimate of costs, the general conditions affecting this project seem to be favorable and to justify an expectation that Harqua Hala low grade ore, if found to occur as a fairly contiguous body from the surface to a depth of 300' could be worked at a cost comparable to that which has been attained at some similar operations such as the Yellow Aster in California, the Beatty Mine in Canada and various open pit porphyry copper mines where mining and milling is done for less than \$1.50 per ton. Unless unforeseen metallurgical difficulties should reduce the percentage of extraction, the recovery may be safely figured at a minimum of close to 90% of the gold values and I think that the

ore could be mined in such a way that this would average close to \$3.00 per ton including the silver.

The total capital investment including preliminary sampling, purchase price of property, installation of mining equipment and erection of a mill, water supply, power lines, etc., will run to a large figure and can probably only be justified if it can be written off by a charge not exceeding 50¢ per ton of ore. Thus with mining, milling and repayment of capital tentatively estimated at \$2.00 per ton it appears that one should be assured of at least two million tons of ore with an average recoverable value of \$3.00 in order to put this venture in the class of an attractive investment; or a corresponding lesser tonnage of higher grade or larger tonnage of lower grade material.

I believe that there is a reasonable probability that the Harqua Hala Mine will be found to measure up to such standards and the verification of this opinion can be made far more cheaply than in the case of an unworked prospect or many other old mines in which the workings are caved or largely inaccessible.

RECOMMENDATION:

To carry out the program suggested above I would propose that many of the old workings in the upper levels including those on the Iron vein should first be partially cleaned out in order that the gob recovered from the stopes and much of the wall rock can be sampled and then at suitable locations short cross-cuts or diamond drill holes should serve to block out and delimit the low grade ore body and permit a sufficiently thorough sampling to enable the average grade to be estimated.

The cost of this work,- the first scientific attempt ever made to develop low grade ore at Harqua Hala,- may be estimated at about \$25,000 and I think that it should serve to answer the question as to whether or not, given reasonably favorable economic conditions, quantity and quality of ore left in this mine will permit it to be profitably worked on a large scale. Personally I believe that such will prove to be the case.

Yours very truly,

(signed) G. M. Colvocoresses

George M. Colvocoresses
Mining and Metallurgical Engineer
Registered in Arizona # 761

EXHIBITS

- A--White print of survey map of claim. *(not available)*
- B--Small print of map of Iron Vein ✓
- C--White print (reduced size) of assay map of mine. ✓

January 18, 1946

Mr. J. H. Byrd
C/o Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

Returning to my office this morning after a short absence, I find your two letters of January 15 mainly in reference to the lifting of the government restrictions on gold mining.

On January 14 when I received your letter on the above subject, I talked to Mr. Willis of the Mining Journal and to the local officials of the R. F. C., but not one of them was able to give me any definite information, and the information contained in the second paragraph of my letter of the 14th was obtained by the Arizona Bureau of Mines.

The entire question of permitting the resumption of gold mining operations has been so badly messed up that one could probably interpret the matter in several different ways, but I believe that from a legal standpoint the restrictions were lifted on July, 1945; although from a practical standpoint many of these carried over until October or November of that year.

At the present time there are only a few government projects which are granted any special priorities, and gold mines are in a similar position to copper, lead, and zinc operations and all of these are very short of labor and also find it difficult to procure delivery on timber and other supplies and items of mining equipment.

The local representatives of the Allis-Chalmers Company told me a few days ago that they would agree to promise delivery on most items within a period of sixty to ninety days, but added that such a promise would have to be made conditional upon the strikes situation since they might make it hard to secure raw materials.

I do not believe that one can depend on any promises made by the manufacturers of automobiles or trucks as the strikes in Detroit have had such a serious effect on those industries.

Referring back to the dates on which your payments are to be made to the Bonanza and Golden Eagle Mining Company under the terms of the contract of June 28, 1945, I am sorry that I did not explain this situation a little more fully when writing you on the

14th at which time I was very busy with some other work. I quote below the entire text of Article 7 of the contract from which it should be noted that the question of declaring or failing to declare a default is left with the option of the lessor, and there can be no forfeiture until after the lessor has given you a written notice of its intention to declare such forfeiture and to terminate the lease on account, thereof. After the receipt of such a notice, you would have sixty days in which to make good such a default after your failure to pay the \$3,000 stipulated in Article 4, paragraph (a).

"ARTICLE VII. Forfeiture Clause.

The failure of the second party to keep or perform any agreement on its part to be kept and performed, according to the terms and provisions hereof, and especially the failure of the second party to make the payments of the minimum royalty or rental stipulated in Article IV. hereof, shall at the election of the lessor, work a forfeiture hereof. Provided, however, that in the event of a default on the part of the lessee and the election of the lessor to terminate this lease on account thereof, the lessor shall give to the lessee a written notice of its intention to declare a forfeiture of this lease and to terminate the same on account thereof, specifying the particular default or defaults relied upon by it, and if such default arises from non-payment of rental or royalty the second party shall have thirty (30) days after receipt of said notice in which to make good such default, but in the case of all other types of default, a period of 60 days shall be granted to remedy said default and reinstate this agreement.

In the event of a valid forfeiture, surrender or other termination of this lease and option the second party will surrender to first party peaceable possession of said property and the whole and every part thereof immediately, and all payments theretofore made shall become the property of first party as a rental for the use of the property and as consideration for the privileges hereby granted."

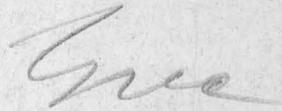
I do not know what correspondences in regard to the above may have passed between Mr. Morton and your company, but unless he has actually served you with a notice of default and specified the cause for same and the date when the payment was due according to his interpretation of the contract, it does not appear to me that you are in any danger of losing the rights under your agreement as long as you keep up the minimum rentals or royalties..

I have not talked to Mr. Morton in regard to the above, but will if you so desire, but I am sure that you will find him extremely reasonable and willing to discuss any modifications of the original agreement which may seem to be in order on account of past or existing conditions in the industry.

Mr. J. H. Byrd--page 3

I was pleased to learn that the results of your sampling the loose material continued to be satisfactory, and I have already written you in respect to the Government loan.

Yours very truly,

A handwritten signature in cursive script, appearing to read "G. M. C.", is written in dark ink.

GMC: IW

December 16, 1945

Mr. Harlan H. Bradt
C/o J. Frederic Taylor
Suite 1500
72 Wall Street
New York, New York

RE: Harqua Hala
Bonanza Mine

Dear Bradt:

Referring to our conference here in Phoenix and subsequent conversation by long distance telephone, I have subsequently discussed the matter in detail with Messrs. Donald and Walter Martin who are the officials and principal owners of the Bonanza and Golden Eagle Mining Company owner of the Harqua Hala Mine, and with their approval I have prepared an agreement of lease and option to purchase of which three copies are herewith enclosed for consideration by you and your associates.

We shall, of course, be very glad to discuss any alterations which you may wish to make in the terms of this agreement, but I believe that it covers the ground fairly thoroughly and carries out the intention of our verbal and telephone discussions.

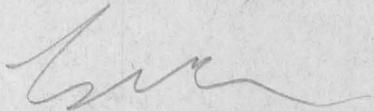
Before the agreement is finally put in form for execution, I will await your comment, and after we are all in agreement concerning the text of the document, I will send you copies for execution and after you have returned two of these executed copies together with the advance royalty payment of \$100.00 which will apply on the purchase price in case you exercise your option, the contract will be executed by the officials of the Bonanza and Golden Eagle Mining Company, and one executed copy will be returned to you.

As soon as these formalities are completed, I will sort out a number of maps and essential data which will give you a much more complete picture of the situation than I have done to date, and needless to say, we will cooperate to the fullest extent with any engineer whom you may send out to make an examination of the mine.

I trust that you have had a pleasant trip to the East and please accept my wishes for a merry Christmas and a happy and prosperous New Year.

Sincerely,

GMC: IM
Enclosures



February 15, 1946

Mr. Donald M. Martin
44 North First Avenue
Phoenix, Arizona

Dear Mr. Martin:

Your favor of February 14. I will make it a point to see you on February 21. A few weeks ago Dr. Harrison Schmitt, who has charge of the New Jersey Zinc Company's exploration work in the western states, told me that he was ready at any time to start examination of the Harqua Hala but that he would not make any commitment other than to carry on the exploration work continuously until he could determine whether it was a mine his company would want to buy. That is about the best prospect that I have developed. Dr. Schmitt is a close personal friend, and at the time I had him on the property he told me that he would start with the Harqua Hala as the first property to examine although he had a large number of properties under consideration. Just before the first of the year Schmitt made a contract with the New Jersey Zinc Company under the terms of which he was to give them half of his time and was to take charge of an organization which he would perfect for the purpose of exploration work to find new mines. He liked the Harqua Hala and told me that if he undertook the job he would expect to spend at least \$25,000 on it although he thought that after spending \$15,000 he would have a fair idea of the possibilities of the property.

I am writing you this in advance of our conference on the theory that your company might be interested in such a program. As far as we ourselves are concerned, what we would impose as a proof of our interest would be so modest that it could not conceivably affect any deal.

I am, with regards,

Yours very truly,

J. H. Byrd

JHB:el

cc G. M. Colvocoresses

DONALD M. MARTIN
44 North First Avenue
Phoenix, Arizona

February 14, 1946

Mr. J. H. Byrd,
P. O. Box 5226,
Tucson, Arizona.

Dear Mr. Byrd:

It was with regret that I learned
of your decision to abandon your contract
on the property at Harqua Hala.

I expect to be in my office all
of next week with the exception of Friday,
February 22nd, and shall be pleased to see
you at your convenience.

I shall be glad to deliver Mr.
Mill's report to Mr. Colvocoresses.

Yours very truly,

Donald M. Martin

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

February 11, 1946

Mr. George M. Colvocoresses
Mining and Metallurgical Engineer
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

I wrote Mr. Martin that I was sending you a copy of Mr. Mills' report, but by mistake my secretary has already enclosed it in Mr. Martin's letter. I am sending you a copy of the letter I wrote Mr. Martin tomorrow, and I am writing today to Mr. Martin asking him to forward the report to you because I am sure you will have a better understanding of it.

Regards.

Yours very truly,

J. H. Byrd



JHB:el

February 11, 1946

Mr. Donald Martin
44 North First Street
Phoenix, Arizona

Dear Mr. Martin:

My secretary, by error, enclosed the Mills report in the letter to you. I had intended it to go instead to Mr. Colvocoresses. Will you not kindly forward it to him. I enclose a three-cent stamp.

I have just now learned that I can't get a room in Phoenix until Wednesday, February 20, so I plan to be there and see you either on the twentieth or the twenty-first. I also want to advise with Mr. Colvocoresses and make certain that both of you will be in the city before I make an engagement to come.

Yours very truly,

J. H. Byrd

JHB:el

Encl. 1

Martin - February 11, 1946

-2

be willing to limit or define the amount of money that they would spend on the property for exploration work. They would only agree to spend as little or as much as the progress of the exploration work indicated to be justified.

We are, therefore, compelled to reach this conclusion; to wit, that we cannot afford to proceed further under the provisions of the contract, notwithstanding the fact that you were nice enough to give us precisely the contract that we asked for. Our Mr. Dillard was convinced, before we made the contract, that the pit material would run above four dollars per ton and it was on this theory that we felt justified in proposing the contract that was made.

We employed a very capable engineer, Mr. M. B. Mills, who has done much work for us in years past, to sample the pit and to sample the area between the pit and the canyon floor in the hope that values in the latter area would make a power shovel operation possible. I am sending Mr. Colvocoresses a copy of Mr. Mills' comment on what he found in the two areas mentioned.

If you wish me to surrender the contract, I will do so at once. If you wish to discuss the matter with the idea of having us endeavor to interest the friends that we have mentioned, in the property, on the basis of eliminating the exactions that they regard as objectionable, we shall be pleased to see what we can work out.

You have been very considerate in the matter of all negotiations, and I regret to delay in writing you as to our decision. We have only just received the final results of about 100 assays. I am coming to Phoenix the latter part of the week and will try to make an engagement with you before I come.

I am, with regards,

Yours very truly,

J. H. Byrd

JHB:el

Encl. 1

February 11, 1946

Mr. Donald Martin
44 North First Avenue
Phoenix, Arizona

Dear Mr. Martin:

We have the money ourselves to carry out the contract obligations on the Harqua Hala property, but we question whether with \$25,000 expended it would not require still more money, an indeterminate amount, and possibly twice that much.

We have done an extensive job of sampling, which indicates that the mill head value of the caved in pit material may not run above two dollars per ton. If an additional two million tons could be developed, I would think a two-dollar grade might be commercial. The question here in this contingency would be the cost of a large plant that would amortize itself out of what could be saved on low grade ore.

I do not say that the two hundred thousand or three hundred thousand tons of caved material may not run above two dollars or that the average might not be enriched by finding high grade spots in this mass.

Assuming that we could develop with our limited resources two million tons of ore with a mill saving value of even \$2.50 per ton, there might still be a question about our being able to secure the financing of such an operation.

Therefore, the picture that presents itself to us is that even though we strain our resources to carry out the contract provisions and even though we were able to develop the tonnage and grade mentioned, we might still find ourselves unable to go further and have to take a financial loss too great for us to contemplate.

We have had on the property engineers of two excellent companies, Humphrey's Gold Corporation of Denver and New Jersey Zinc Company. Both companies thought the property had real possibilities and at that time each of the companies was willing to undertake extensive exploration. Both companies, however, after going over our contract, made the statement that, without any developed commercial ore, they would not pay for the privilege of developing the property and that they would not

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

Hargus Hala

October 1, 1945

J.H.
(Byrd)

h a

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

Enclosed herewith is check in the amount of \$150.00 which
is paid on the balance of your account.

Very truly yours,

J. H. Byrd



JHB/mc

c

HARQUA HALL MINE.

<u>District</u>	<u>Property</u>	<u>Location</u>	<u>Owners & Operators</u>	<u>Date visited</u>
Salome & Wenden, Arizona.	Bonanza	Harqua Hall. 9 miles south of Salome	Under bond to H. W. Stevens. John B. Martin, one of the owners in charge of operations.	1917 Feb. 2nd.

NOTES:

250' incline, from bottom level of which is a 160' winze, then a 26' winze to be sunk deeper. Several thousand feet of old development work. Stoping has been principally from 3, 4, & 5 levels. Levels 6, 7, & 8 largely crosscuts. Basal rock is silicified, much altered granite, some of which has appearance of sandstone, impregnated with pyrite. Quartzite and other sedimentaries in contact with the basal granite. Limestone, shale and schist overlying quartzite. Great variations in dip. Oxidized red hematite ore above. Fifth level occupied shear zones and was worked for gold. 40 stamp mill and cyanide plant now idle. In lower workings coarse-grained granitic rock much fractured, with pyrite and sericite in brecciated zones. Copper has been showing up in appreciable quantities in lower levels. According to Martin a short shoot on the 8th level, having an average width of 12' and never less than 10', averages \$20.00 in gold and copper. Going North the ore-body turned over, got narrower, and showed some chalcocite. Very little mineral visible but Martin says it runs 6% Cu. with some gold. Proposal to put in concentrator and flotation plant, losing carbonates. Now three lifts for hoisting and three pumps. It is expected that the winze now being sunk will indicate most suitable location for new shaft. Mine was lately sampled by Nicholson for Seeley Mudd and associates. Deal does not appear to be going through. Unless additional oxidized gold ore-bodies can be found above water level, the future of the mine would appear to depend upon copper and gold in the sulphides below water level.

G. M. Colvresses.

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not done by Zannaras whose Attorneys evidently expected to be able to collect from the impledged~~xxxxxx~~ assets of the Corporation.

MEMO RE: HARQUA HALA

February 20, 1946

Recent investigations made by Mr. Byrd and his engineers have given unfavorable results and do not appear to make the venture attractive on the basis of any data that can be secured at a moderate expense.

However I have always maintained that it would not be possible to estimate the tonnage and average grade of ore left in the upper workings and near to the surface without carrying out a certain amount of diamond drilling and also making a number of drifts and cross-cuts all of which would have to be sampled. I figure that the cost of securing this information would be in the order of \$25,000 and similar estimates were made by Mr. Morton manager of the Eagle Picher Company and recently I understand by Mr. Wood of Denver and Harrison Schmitt. In other words any thorough investigation of the Harqua Hala as a producer of low grade ore is bound to involve a substantial preliminary expenditure and more over should the result prove satisfactory, a very large investment would have to be made for a proper plant and equipment in order to operate on a large scale and with low unit costs.

If Mr. Byrd is confident that the New Jersey Zinc Company will carry out such an investigation at their expense, I believe that some arrangement with the owners might provide for a revision of the present contract of lease and option which would perhaps relieve Byrd from the payment of the \$2,000 advance royalty provided he would agree to pay some stipulated minimum rental or royalty while the exploration work was in progress.

Referring to the last paragraph of the report by M. D. Mills, it is quite possible that an expenditure for \$5,000, or more likely up to \$10,000, would permit the mine to be unwatered and the clearing out and sampling of some of the lower workings in which a certain amount of high grade ore probably remains and could be mined and treated on a small scale and with some profit to the operator.

Perhaps Mr. Byrd could arrange to carry on this work for his account and from the proceeds to pay a royalty to the owners of the mine while the exploration and development in the upper levels was being carried on by the New Jersey Zinc Company.

By such a method of procedure the owners would continue to receive some rental income from the property but no large cash payment or very substantial royalty would be involved until the work of the New Jersey Zinc Company had reached a definite conclusion.

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February 20, 1946

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BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

February 19, 1946

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

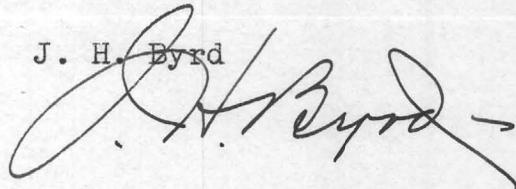
Dear Mr. Colvocoresses:

Thanks for your letter of February 18.

I will call Mr. Martin and you sometime on the morning of Thursday, February 21, and request a conference that will be convenient to you both. I am sure Mr. Martin will not object, and I would like to have your present at the conference because of your familiarity with the picture.

Yours very truly,

J. H. Byrd

A handwritten signature in dark ink, appearing to read 'J. H. Byrd', with a long horizontal stroke extending to the right.

JHB:el

February 18, 1946

Mr. J. H. Byrd
Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

I was away from my office nearly all of last week and have not previously had time to acknowledge your several communications in regard to the Harqua Hala.

This morning I had a discussion on the subject with Mr. Donald Martin who brought around the copy of M. D. Mills' report which I shall want to study over more carefully before making any comment.

I feel very certain that I shall be in Phoenix on the 21st of this month when I will be glad to discuss the situation with both you and Mr. Martin, and I sincerely hope that a mutually satisfactory arrangement can be worked out involving a modification of your present contract which will permit you to retain your interest in the property and to arrange for some further exploration work.

Personal regards.

Yours very truly,

GMC: IW

3 M. C. G.

Copy of *file*

REPORT ON HARQUA HALA BONANZA MINE

August 9th, 1945

Mr. J. H. Byrd
Byrd Mining Operations
P. O. Box 5226
Tucson, Arizona

The following report on the Harqua Hala Bonanza Mine has been prepared from personal examinations of this property, the first of which was made in February, 1917 and several others from 1931 to 1940, also from a careful study of reports by many other engineers dating back to 1892 and from some of which citations will be found in the text.

PROPERTY, LOCATION AND GENERAL CONDITIONS:

The Harqua Mine ^{Hala} on which you now hold a lease and option by virtue of a contract with the owners consists of the following patented mining claims,- (See Map, Exhibit A)

Consolidated Bonanza comprising the Gold Mountain,
Gold Hill and Gold Star Lode Claims -
Patent Survey # 1081

Narrow Gauge Pleacer - Patent Survey # 1097

Grand View Lode - Mineral Entry # 567 and

Summitt Lode, which lies some distance northwest of the other claims of this group- Patent Survey # 1079

Also the following unpatented claims: -

North Pole Lode

Wedge Lode

Several of these claims are in partial conflict with one another and the Narrow Gauge is only a fraction so that the total acreage is about 100.

You have also leased the well and water rights on the Consolidated Bonanza Millsite in Centennial Wash, and pipe line from the well to the mine.

All the above are located in the Ellsworth Mining District, Yuma County, Arizona, some 8 miles south of the town of Salome which is situated 108 miles from Phoenix on paved U. S. Highway No.70, and on the Parker Cut-Off branch of the Santa Fe Railway. The mine lies along the north east base of Martin Peak at the southwest end of the Harqua Hala range of mountains in Township 4 north, Range 13 west, Gila and Salt River Base and Meridian.

GEOLOGY AND ORE OCCURRENCE:

The basal rock in this vicinity appears to be a coarse-grained pre-Cambrian granite impregnated with iron pyrites over which lies a series of sedimentary rocks including quartzite, limestone, shale and conglomerate with intrusive dikes of porphyry. All of these rocks have been subjected to faulting and folding and shear zones have been formed in which there has been a deposition from ascending solutions of vein material including a little copper in places and gold associated with the iron and with gangue minerals which are mainly quartz, calcite and brecciated wall rock. The ore in the upper levels has been largely oxidized and in places there were zones of secondary enrichment. At a vertical depth of less than 300', the condition appears to change as the wall rock becomes granitic and although some of the sulphide veins found at greater depth have yielded limited quantities of fairly high grade ore, such occurrences, - so far as they have been developed, - appear to be comparatively small and scattered.

It has been suggested by certain geologists that a continuous ore zone might exist between the Bonanza and the Golden Eagle Claims lying one mile to the north-east but on the Golden Eagle Claims the quartzite in which the principal bodies of the Bonanza ore occur has been largely eroded away, except for the outcrop on the Harqua Hala Northern Claims. I therefore consider this as a possibility which should be left for future consideration and I feel that first investigations should be confined to the Bonanza Claims on which you hold the lease and option.

The value of the primary ore which should exist below the present workings has never been determined but there seems to be no reasonable ground to assume that it will be rich enough to work except in areas where there has been some local enrichment. Therefore, I also believe that for the time being one should only consider the possibilities of mining the upper areas in the vicinity of the Bonanza workings where the shattered quartzite predominates and the values from the veins have impregnated the wall rock.

X
X
X
In this mineralized area, which is characterized by shear zones and more or less parallel fissures with varying dips and strikes and many cross fractures ^{the} and country rock is mainly quartzite overlain with limestone while the footwall of the ore zone is an intrusive ~~granitic~~ rock of coarse grained porphyritic texture which various engineers have called "andesite", or "rhyelite", but which locally is simply termed "porphyry".

There are two veins known as the "Iron" and the "Bonanza" and the ore shoots in some places appear to be confined by well defined and almost barren wall rock but the larger and richer

deposits seem to be of a replacement type where the mineralized solutions have also impregnated the walls and often followed along fracture planes and slips from one fissure to another at the same time dissolving ^tout the more soluble constituents of the rock and replacing these with metallic minerals. The value of this low grade material was obviously insufficient to permit mining under old conditions or to attract any particular attention from previous operators and both its tonnage and average value are still problematical and must be determined by further exploration and development.

HISTORY:

The Bonanza and ~~Golden Eagle~~ Mines, operating at intervals since 1889, are credited with a total production of over two hundred thousand ounces (200,000) of gold worth some seven million dollars (\$7,000,000) at present prices. The average content of silver was about one ounce to each ounce of gold on which basis the value in silver was about 2% of the gold value, although the percentage of silver in the sulphide ores is considerably higher and may increase with depth.

The tonnage of ore mined has not been recorded for some of the very rich ore running better than 5 oz. gold per ton was shipped crude to smelters and a small tonnage was milled at Harrisburg in the early days but the great bulk of the production from the Bonanza Mine and some ore from the Golden Eagle was treated in the Bonanza Mills where the quantity of both amalgamation and cyanide tailings was carefully estimated prior to 1933 at slightly over 127,000 tons from which it may be inferred that the total production of the Bonanza Mine did not exceed 120,000 tons of

ore. Most of this ore mined during the 1890's seems to have carried one oz. of gold per ton and very little of it carried less than 0.75 oz..

Recent attempts to operate this mine on a small scale have not proved profitable and while some lenses and shoots of \$8.00 and even \$10.00 ore (at present price of gold) [✓] here found in the lower workings, yet such occurrences proved to be small and their location was such as to make mining and haulage expensive.

The bulk of the high grade ore in the upper portions of the mine has long since been worked out and, except for the chance of finding new ore shoots, the future value of the property appears to me to rest upon the possibility that between and around these high grade stopes there still remains a much greater tonnage of comparatively low grade material which might be found to have a sufficient average value to permit cheap mining from an open pit and cheap treatment in a large cyanide mill to be erected at the mine.

ORE OCCURRENCE AND GENERAL MINERALIZATION:

The attached assay map, Exhibit C, while not entirely up to date, shows the general outlines of the underground work in the Bonanza and gives information concerning the width and value of ore in the vein, some of which has been mined since this map was made.

My examinations of the accessible underground workings and of the maps show that most of the old production came from a number of stopes scattered irregularly through the upper 200' of the mineralized zone in which there was probably only one original vein later faulted into the "iron" and "bonanza" veins and broken

up by other faults and folding into several off-shoots and lenses.

The width of the stopes varied from a maximum of 60' to 3' or less and between the various ore shoots the shattered rock is seamed with bands of clay and iron oxide in which according to my samples gold values nearly always seem to occur.

Some engineers have believed that the values in the Bonanza were cut off by one of the larger faults which was noted on the 6th level but I am doubtful on this point.

A short distance to the east of the Bonanza lies the so called "iron vein" which was probably once a part the Bonanza (see Exhibit B). Here the gold is associated with hematite and a considerable quantity of \$25.00 ore (at old price) is said to have been mined but much of those workings were caved prior to 1906 and but little can be seen of them today. There is a record of good values found in this vein from the Quinn Shaft which was sunk vertically ~~from~~^{for} 306' at a point close to the line of the Bonanza Claims and in a winze below the bottom level of this shaft the vein is said to have averaged about \$11.00 (at present gold price) and over a considerable length, also a number of samples taken in the lower levels of the Iron vein workings average around \$10.00. The strike of this vein is generally north-south with dip, - sometimes very flat, to the west and it may converge with the Bonanza vein at depth. The apex of the vein seems to be almost entirely on the Gold Star Claim.

While none of the reports give any complete description of the old workings ^{on the Star vein} or the tonnage and value of the ore which was left in them yet I was reliably informed that there was a ^{large} tonnage which would run \$7.00. I was able to observe some good looking vein matter near to the surface and my sample from the dump ran \$4.20.

per ton.

The water in the Bonanza Mine normally stands at a vertical depth of 200' and the flow down to the lowest (9th) level at a vertical depth of 350' is very small, - ^{about} almost 8 gallons per minute. X Apparently some of the Bonanza ore shoots were cut off at their bottom by a fault which dips to the north-east at an angle of almost 45 degrees. If this is a normal fault the lower segments should lie in the foot wall and might be found by drilling or drifting to the south-west from the long drift which runs to the Iron vein following the fault plane in the 6th level.

In all the workings the sulphide ores came in with lower gold values but carrying a higher relative percentage of silver and with a substantial amount of copper. Because of general inaccessibility of the shoots and metallurgical difficulties in treating this class of ore very little of it was extracted and I particularly checked the existence of several thousand tons between the 6th and 9th levels, some of it in the porphyry. This is said to average \$12.00 or better per ton although such limited sampling as I have done would indicate a lesser value.

The chances of developing reserves of similar material seem very fair and in connection with any new operations it would undoubtedly pay to continue further exploration to greater depth, and laterally in both directions along the mineralized zone. The report of Tovote should particularly be noted in this respect and I was informed that just prior to the closing down of the last operations in 1937 an entirely new shoot of good ore had been found on the 6th level and was suspected to continue upwards to the 5th level and beyond but this statement I had no opportunity to verify. ✓

X Although the search for high-grade ore conducted from 1913 to 1918 by the Yuma-Warrior Co. proved unsuccessful, yet I think that it would be a mistake to conclude that the possibilities of the mine in depth have been exhausted. I believe that the tonnage of good grade sulfide ore ^{which} as may be found below the water level will prove small in comparison to the remaining oxidized material.

LOW GRADE ORE RESERVES:

X The geological conditions surrounding the wider replacement deposits in the upper workings of the mine and the physical aspects of the Bonanza workings naturally suggest the existence of a large mass of low grade ore that might be attractive under present working conditions and at the present price of gold, but a careful study of all available data throws very little light upon the tonnage and average grade.

Since the old production nearly all came from the high grade shoots the reported value of the mill heads has no significance while the one fairly complete assay map which I have found (Exhibit C) - made by C. C. Thompson in about 1914, - records mainly the value of samples taken over narrow widths in or near the pay ore. But I have noted that there were a large number of samples carrying from \$2.00 to \$5.00 per ton (at present price) which came from exploration drifts and crosscuts and are suggestive as to the value of the wall rock between the veins and the old stopes.

Generally speaking, the reports of several engineers, who previously examined ^{this mine} these ~~mines~~, also give little pertinent information, High grade ore was all that interested them or

the parties whom they represented, the exploration and development work was all planned to find such material and samples were usually taken in the drifts and crosscuts only when the visual appearance indicated a point of enrichment. I have, however, culled out some interesting statements among which I mention the following:-

C. E. Mills (later General Manager of the Inspiration Copper Co.,) in 1892 reported that much low grade material had been broken above the 4th level and sent to the waste dumps with average value around \$5.00 per ton (old price) and that many of his samples in wall rock gave similar values.

F. W. Norton says that the Bonanza cave-in, which put a stop to the work of the English Co. in 1895, involved an area 400' in length, and 60' in width and 150' in depth and the caved material represented 300,000 tons from which 50% could be screened out and would carry around \$6.00 per ton at old price. W. Tovote later refers to 200,000 tons of caved material and stope fills which he figured would average \$4.00 per ton at old price.

C. C. Thompson told me that he had assayed many hundred samples for the Yuma-Warrior Mines Co. from 1913 to 1918 and recalled that most of those taken off the veins ran from \$2.00 to \$6.00 at old price while I was told, but could not verify, the statement, that a California engineer after much sampling had estimated that as much as 5,000,000 tons of \$5.00 ore could still be mined.

In 1935 a company headed by Elliott and Stratton took over the Bonanza Mine, their object being for the first time to develop low grade ore and mine this on a large scale. In order

to determine the tonnage and value of such ore, the surface in the vicinity of the outcrop and including the present glory hole was divided into 20' squares and a sample, - supposed to be representative, - was cut from each square. I was shown by C. C. Thompson some 600 assays from the samples thus obtained and told by him that the total area of 240,000 square feet represented a rectangle with length (east-west) of 600' and width (north-south) of 400'. I am satisfied that the assaying of these samples was done by Thompson honestly and with reasonable accuracy but the methods of sampling seem to have been open to criticism and therefore the results may be unrelia^bble. Of the 600 assays mentioned some 40 were in the vein and gave results of \$15.00 or better, but casting these out, I averaged the remainder at about \$2.33 and the lowest assays were \$0.70 per ton.

This same company and others who were associated with them also took a great many samples of wall rock in the underground workings of the mine and claimed that the average of these was in excess of \$5.00 per ton but I feel that this statement is of little value as their samplings was not done in a systematic manner. Subsequently a considerable quantity of material was broken down in the vicinity of the glory-hole and together with some of the old caved rock and rock from the waste dump was sent to a test mill in 1937 and the record shows that the average grade of the 6277 tons treated was \$2.88 per ton although much of it was obviously barren wall rock.

Miles Carpenter who acted for a time as engineer for this company and had charge of much of the sampling has given it as his opinion that there is a large tonnage of ore that will average better than \$2.00 per ton while C. C. Thompson who saw

much of the sampling and did the assaying estimates that many hundreds of thousands of tons should carry better than \$3.00 per ton. I should also mention a report that the surface gravel and placer ground lying east of the old mill had been partially sampled and that at least 10,000 tons would average between \$4.00 and \$5.00 at the old price of gold.

In 1917 when I first visited the Bonanza Mine, it occurred to me that some of the low grade ore around the glory hole might pay to work and I took a few samples of which I now have no exact record but recall that they averaged less than \$2.00 per ton (old price) so that I gave the matter no further thought until 1934 when for a time I was interested in the re-treatment of the richer portion of the mill tailings and the price of gold had advanced. At that time the mine was under option to parties who later turned it over to Elliott and Stratton and they were taking a number of samples in various portions of the workings, ~~At that time~~ I had a few samples taken from my own information and these indicated that there were sections away from the ore shoots which would run from \$3.00 to \$6.00 per ton at present price but no attempt was made to do this work in a systematic fashion or to calculate the tonnage which my samples represented.

It was also noted that there were still some ends of the old ore shoots and seams of higher grade material scattered at intervals throughout the mineralized zone and that these as well as any new ore discoveries would tend to sweeten up the average grade obtained in breaking down the entire mass.

I further studied this matter at intervals and on the occasion of two investigations in 1939, I took several large samples from various sections of the wall rock between the old stopes in the upper workings and from the broken ore left in the mine or put on the dumps. The arithmetical average of these samples was \$3.28 per ton and they should have been roughly representative of a very substantial tonnage of the mineralized area away from the vein from which some higher grade material should still be taken and might well ^{be able} run to sweeten the average to \$4.00 or better.

Fortunately, much of the desired information can be secured by sampling and measuring the ground which is already prospected by the old workings of the mine which are now open or could be reopened at comparatively small expense and from which I would recommend core drilling or short cross-cuts in order to sample the intervening blocks of ore.

In an effort to arrive at some very approximate figures as to the possible tonnage, I have scaled off several maps and sketches which the owners have furnished me but find that some of these are obviously inaccurate while others are so incomplete as to have little value.

From such measurements as I could make on these maps and in the mine itself it would appear that the minimum tonnage which may average better than \$3.00 in the upper levels of the mine (down to a depth of 300') will be in the order of 400 000 but if, as seems likely, there is a continuation of values in the rock between the Bonanza vein and the Iron vein extending to the boundary of the Gold Star Claim then the surface dimensions of the mineralized rectangle would exceed 600' x 400' and assuming

a depth of 300', the possible tonnage approaches a figure of 6,000,000.

X Since the conditions indicate that the superficial area of the ore body will tend to decrease with depth and that it will prove to be more or less funnel-shaped, I would reduce the above maximum to say 4,000,000 tons plus whatever ore may be found in other parts of the property.

I do not intend to imply that I have as yet obtained sufficient data to in any way justify the assumption that even the minimum tonnage mentioned will actually assay \$4.00 or \$3.00 per ton, but I feel that there are good indications that such will prove to be the case.

GENERAL CONDITIONS:

X The physical conditions of the Bonanza deposit are such as to lend themselves to cheap open-pit or glory hole mining for the recovery of all or a large part of the possible pay ore to a depth of some 300' below the ^{outcrop} open-crops, - no large amount^t of stripping would be required and the walls of the pit should stand extremely well.

X In the pit the broken ore could be loaded on trucks or belts for conveyance to a pocket from which it could be hoisted through a new shaft to the crushing plant and mill which would probably be located near the ^t site of the old stamp mill.

There is still some room for tailings disposal on the flat although additional space would eventually have to be acquired.

MILLING:

Through the use of modern cyanide practice it should be possible to recover at least 90% of the gold and over 80% of the

silver in the oxidized ore which would represent nearly all of the material mined from the pit.

To treat the copper bearing sulfide ore from below the water level it might be necessary to provide a special plant using flotation as well as cyanide but the extra milling cost should be more than covered by the value of the copper recovered.

X
X
While only exploration and development work was in progress the present buildings, with ^{some} repairs, could be made to house a crew of 15 - 20 men and ^d assay office equipment can be installed in the building last used for that purpose. For metallurgical testing work the mill erected by Elliott and Stratton could be reconditioned and adapted for cyanide treatment with the installation of additional equipment. or a crushing plant might be added to the plant recently used by Eagle Picher Co. for treatment of tailings by the Chapman process.

WATER SUPPLY:

On the 5 acre millsite at Harrisburg, owned by the Bonanza and Golden Eagle Mining Company, a well is sunk in Centennial Wash from which ample water was obtained for the old and recent operations and I am told that the pipe line is in good condition.

August Nord, a reliable rancher, informed me that from his well nearby he had continuously pumped for irrigation as much as 400 gallons per minute with only a very slight lowering of the water table and he expressed a positive conviction that the Bonanza well, if properly enlarged, could yield over 1000 gallons per minute at all seasons of the year. Since the Centennial Wash drains an area of some 600 square miles, including McMullen Valley,

the south slopes of the Harcuvar Mountains and the north slopes of the Harquahala Mountains, I believe that his estimate is reasonable and that the existence of an adequate water supply for a mill of 2500 tons capacity may be accepted as a fact subject to a further investigation of other water rights which might be infringed by draining off so large a supply.

POWER:

Previous work was conducted with steam power and subsequently by Diesel engines but recently the U. S. Government has built an electric power line from Parker Dam to Phoenix and I am reliably informed that after the war a contract would be made with the U. S. Reclamation Service to secure future power at Harqua Hala at a price in the order of 0.6¢ per kw. hour.

WORKING COSTS & FINANCIAL RETURNS:

While it would be premature to make anything more than a very rough and preliminary estimate of costs, the general conditions affecting this project seem to be favorable and to justify an expectation that Harqua Hala low grade ore, if found to occur as a fairly contiguous body from the surface to a depth of 300' could be worked at a cost comparable to that which has been attained at some similar operations such as the Yellow Aster in California, the Beatty Mine in Canada and various open pit porphyry copper mines where mining and milling is done for less than \$1.50 per ton. Unless unforeseen metallurgical difficulties should reduce the percentage of extraction, the recovery may be safely figured at a minimum of close to 90% of the gold values and I think that the ore could be mined in such a way that this would average close to \$3.00 per ton including the silver.

The total capital investment including preliminary sampling, purchase price of property, installation of mining equipment and erection of a mill, water supply, power lines, etc., will run to a large figure and can probably only be justified if it can be written off by a charge not exceeding 50% per ton of ore. This with mining, milling and repayment of capital tentatively estimated at \$2.00 per ton it appears that one should be assured of at least two million tons of ore with an average ^{cover} reasonable value of \$3.00 in order to put this venture in the class of an attractive investment; or a corresponding lesser tonnage of higher grade or larger tonnage of lower grade material.

I believe that there is a reasonable probability that the Harqua Hala Mine will be found to measure up to such standards and the verification of this opinion can be made far more cheaply than in the case of an unworked prospect or many other old mines in which the workings are caved or largely inaccessible.

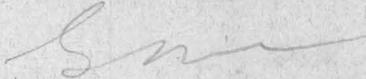
RECOMMENDATION:

To carry out the program suggested above I would propose that many of the old workings in the upper levels including those on the Iron vein should first be partially cleaned out in order that the gob recovered from the stopes and much of the wall rock can be sampled and then at suitable locations short cross-cuts or diamond drill holes should serve to block out and delimit the low grade ore body and permit a sufficiently thorough sampling to enable the average grade to be estimated.

The cost of this work, - the first scientific attempt ever made to develop low grade ore at Harqua Hala, - may be esti-

mated at about \$25,000 and I think that it should serve to answer the question as to whether or not, given reasonably favorable economic conditions, quantity and quality of ore left in this mine will permit it to be profitably worked on a large scale. personally I believe that such will prove to be the case.

Yours very truly,



George M. Colvocoresses
Mining and Metallurgical Engineer
Registered in Arizona # 761

Exhibit 1
A. White print of Survey map of claim
B. Small print of map of same
C. White print (reduced size) of
assay map of mine
(All ready bound + copy of
report of Aug 9th 45)

EXTRACT FROM LETTER TO CAPT. R. W. HUNT FROM R. N. DICKMAN

Harqua Hala, Ariz.
July 17, 1915.

Captain R. W. Hunt,

My dear Sir:

.....
The work has reached the stage where it is going to be necessary to sink on Level VI. and that means that we will have to run the Air Compressor daily in order to pump the water from below level VI. Also, when the time comes, it can be used to hoist from below Level VI.

Number one vein North on Level VI. has become very flat, so that to keep in it the drift had to turn east. Here I have recommended that they keep the ore in the drift and now make an upraise at the north end, which will give us an idea as to its position between Level VI. and IV. This will determine work also perhaps on Level IV. north.

Vein No. 2 on Level VI. is both a disappointment and a surprise, for in the old workings on Level IV. it was productive all along for 200 feet. Ultimately we must make a few blind upraises from VI. before finally giving up that block of ground.

I think that it is safe now to assume that we will have somewhere in the neighborhood of 2500 tons of ore available when the mill is started of grade in the neighborhood of \$8.00 from assay results.

.....
Sincerely yours,

R. N. Dickman.

EXTRACT FROM LETTER TO MR. STEVENS FROM R. N. DICKMAN

Harqua Hala, Ariz.
July 17, 1915.

My dear Stevens:

.....
On Level VI. to make a long story very short, the vein is very flat and is dipping northwest in a bow-shaped body, so that the drift north has turned east and the ore is in the lower half of the drift and flat. We will now make another raise and see where it does lead to. The crosscut, which the map will show, is really on the flat vein; that is, it is gently inclined northwest and we must now sink on it.

.....
As ever,

Dickman.

EXTRACT FROM LETTER TO CAPT. R. W. HUNT FROM R. N. DICKMAN

Harqua Hala, Ariz.
April 13, 1915.

My dear Sir:-

.....
Examination now shows plainly that the discovery in Level IV was almost at an "apex" of TWO fractures, or veins, both of which were ore bearing in the old workings above. These are now termed "Vein No. 1", which lies and pitches to the west, and lies conformable to the fractures of the quartzites above and the granitic country rock below, and "Vein No. 2", which cuts across these bedding planes and also cuts "Vein No. 1", as shown in the vertical section.

In the old workings above, "Vein No. 1" either itself or else similar breaks, have furnished the big stopes, Bonanza, Castle Garden, etc. pitching on their floors always to the west with the bedding planes of the enclosing rocks.

Vein or fracture No. 2 has been the site of the so-called iron veins with lower grade material and more or less porphyritic nature at times.

The ore milled was all taken from the work on Level IV and solely from the drifts, raise and winze, a total of about 190 feet on ore of various classes and amounting to 212 tons. Its average hence taking 15 cubic feet in place as one ton, is about 1.11 tons per lineal foot, which would account for an average of approximately 2.4 feet average feet in width saved as ore. As will be noted on the tracing, the ore widths varied from a mere seam to the full width of the drift.

Taking bullion yield, plus tailing losses, the ore showed about \$9.50 gross value of which \$7.50 was recovered on the plates. The milling cost shows almost exactly \$1.00 per ton for labor and fuel to which must be added supplies and

and wear and tear. This included the operation of the pipe line and pumps.

It will be noted that on Level IV north veins 1 and 2 ran along together for a short distance and then crossed. Along this junction good value was encountered. Beyond this lower grade was encountered.

The raise on Vein No. 2, east Level IV., showed good values and broke into the extreme north workings of the mine above this level. On the level itself the values were in the main low, as well as in the winze, which reaches to Level VI.

On Level VI. Vein No. 1 shows from a seam to 3 feet in width with varying assays, as shown from \$1.15 to \$16.00 with an average to date of \$4.85 per ton.

Vein No. 2 has thus far shown no high or even medium grade ore though frequently very favorable in appearance. On the south it has now penetrated into the quartzite, but without any increase in value. On the north it is likewise low grade.

Ore in sight. It will be plain from the map that any estimate of ore is not warranted by conditions of development. The development is practically confined to the levels with exception of one raise on No. 2 and one winze on No. 1. At the same time there is no doubt that several times the amount taken from the levels would be gained by stoping, and in so doing the ore would be cleaner and the grade somewhat higher.

Development Advisable. In the order of importance the following development is to be recommended, proceeding with substantially the present force and monthly expense.

1. Raise on Vein No. 1, Level VI. This is essential for actual ore development and since it will be largely on ore, will open the ground for stoping.

2. Drive north on Vein No. 1, Level VI. While there is now but a seam, this work is essential if the property is

to at all enlarge. It is in line with dip, strike and rake of the ore chutes above. Ultimately this drift should encounter another junction with Vein No. 2 as on Level IV., if directions continue as on that level.

3. Drive north on Vein No. 1, Level IV for same development reasons.

4. Sink a winze on Vein No. 1, Level VI preferable after driving north on same and at a northerly point if vein recovers width and value.

At a later time it will be advisable to drive north on Vein No. 2, but this may well await results on Vein No. 1, since all work on Vein No. 2, Level VI, is in low grade material. Likewise a winze will be advisable at some point such as set down as "proposed winze 2." east on Level VI.

IN GENERAL there is no appearance as yet of sulphide ores and it is certain that the present free and oxidized ores will continue to the level of ground waters. There is no available data for saying how much deeper this level may be.

As to the results on Level VI compared with our hopes, it must be frankly stated that on Vein No. 2 they are very disappointing, but the work thus far prosecuted has been warranted in light of what had to be done to reach it at all.

On Vein No. 1 our hopes have not been realized, though we have encountered ore which will yield a profit on stoping when opened by the raise, and there is a possibility at least of opening an ore body in the 100 feet incline between the two levels, in which we have every reason to expect high grade ore, at least occasionally, under the conditions of Level IV.

.....

Very truly yours,

R. N. Dickman.

COPY OF REPORT BY R. N. DICKMAN

Harqua Hala, Arizona

May 4, 1914.

The President and Directors of the Yuma-Warrior Mining Co.

GENTLEMEN:

.....
Present Conditions

The Shaft has been sunk 100 feet, a good station installed and the formation crosscut for 37 feet east and 61 feet west, without result as to the finding of the ore. Practically all this work is in the diabase of the country rock, and no continuance of the quartzite or the sulphide ore body has been encountered.

Raise from IV to III was not completed but a drift run to the west as shown and considerable exploration work done on crevices and in the lime. No ore has been shown by this work. It now appears that it will require about 100 feet of incline raise from a point marked "X" to connect with the ore in the winze above.

Drift and Raise Level III to I iron. as will be noted was not run direct, owing to lack of survey in the first instance and departure from the survey furnished later. Recent work however in proper direction has not encountered more than an indication of the iron vein 100 feet above, nor at this writing do indications seem promising.

The net result of all the work is that NO ADDITIONAL ORE has been added by all the work, and while there is as formerly stated a small amount of ore accessible in old stopes and along drift bottoms, it is not at all sufficient to warrant mill operations.

I have expressed the opinion that the future of this mine depended on future discoveries at deeper levels. The limited work on Level V has not disclosed anything encouraging, nor has the partially finished work recommended on the levels above.

Under the present financial condition of the company I have recommended closing down of the work.

The Sulphide Ore Body. It was originally advised (and funds allowed out of \$8000 surplus) that a milling test be made on this ore body. Having failed in this however a thorough sampling has been made, and the results are shown on the accompanying map of the IV Level.

25 samples show a general average of \$3.57 per ton. A concentration test shows a ratio of 9.61 into one with concentrates containing 1.50 oz. gold per ton or \$3.22 per original ton with tailings of \$.38 per ton gold value. The concentrates of \$31.00 per ton value will undergo a charge of about \$14.00 per ton for wagon haul, rail and treatment leaving \$17.00 per original ton net return on concentrates.

Applying this to 9.61 tons of ore leaves \$1.77 per ton for mining and milling, a sum which would hardly be sufficient for operation on material of this class alone.

Conclusion on Golden Eagle.

While I do not think that the work performed has exhausted the possibility of discovering additional ore bodies, and would under some circumstances advise at least the completion of the work as originally outlined, especially under the present economical and effective method of contract and low overhead cost, the recent discovery in the Bonanza offers a far better opportunity for development and a strong probability of opening of milling ore at minimum cost.

The Bonanza Mine.

Incident to what the writer had presumed to be the opening of ore on the Golden Eagle and to reduce overhead cost per foot, it was decided to run the drift around in solid diabase footwall ground and get beneath the old Bonanza stopes so

as to draw the fines from the crushed and caved ground, recognizing that while of low grade the cost of mining would be only that of loading, tramping and hoisting and milling.

In doing this from Level IV of the Bonanza, shown in BLUE on the map an ore body was encountered and the drift continued along the same for a distance of 32 feet or more. The work does not determine the extent nor direction of the ore body, but is none the less of such extent that it may apparently be taken to indicate an ore body of considerable extent judged by similar occurrences elsewhere in the mine. It is significant in being the first and only ore discovered in the diabase footwall of the bonanza and is in direct line of the south to north trend of all former ore bodies.

The shaft is completed to Level VI a depth of 55 feet vertically below this level IV and the maximum distance is 95 feet to a point below the center of this discovery. It is apparent that the amount of work will not be great in opening up the ore body if it proves of the extent to be hoped for.

After consultation with Mr. J. B. Martin and Mr. A. C. Massey we have decided that a maximum sum of \$5000 should suffice to explore this ore body and place same in shape with drifts and raises and the crosscut from Level VI to deliver ore to the mill.

Dismissing the expenditures at Golden Eagle as unfortunate, it is apparent that if this discovery had followed some success at that point add a considerable amount of exploration on Bonanza, it would have been considered satisfactory and in line with former plans. Such money as is raised for future work should certainly be devoted to this ore and the Golden Eagle work postponed until this has been proven of lasting value and revenue.

The samples taken are shown on the map and are here repeated:

<u>Feet</u>	<u>South Side</u>	<u>Feet</u>	<u>North Side</u>
0 to 5	\$1.65		
5 to 10	42.55	5 to 10	\$ 12.81
10 to 15	1.65	10 to 15	2.06
15 to 20	1.24	15 to 20	1.24
20 to 25	1.24	20 to 25	1.65
25 to 31	6.61	25 to 31	1.65
31 to 37	6.61	31 to 37	7.02
			Average \$6.76

Other mineralized material beyond to the east was sampled and results are recorded on the map.

On Level VI colored Purple a raise has been made on a newly discovered ore streak on which two feet of ore shows \$10.33 value and about 30 tons have been extracted in development work.

On the same Level VI at point marked Crosscut 6 is exposed an iron ore body about 4 feet wide standing vertically on which general sample for 25 feet shows \$4.13 which is worthy of development in a southerly direction in unworked ground.

Between Level IV and VI at a point about 40 feet below VI on the incline, a small streak perhaps connected with the new ore body shows \$43.40 gold value corresponding with the wall streak from 0 to 5 in the drift and in the diabase foot-wall.

The future of the Bonanza Mine lies in the development of deeper ore bodies in the diabase as will be seen from the cross-section B-B- and it is to be hoped that this new discovery will prove significant of continuance in that direction.

Very truly yours,
(Signed) R. N. Dickman.

C

HARQUA HALA MINE

May 1939.

Hodgson wrote Martin that he could say nothing good of the mine for either open pit or surface operations but he thought that the tailings might be worked over with some profit.

Look up U.S.G.S. Bulletins referring to this mine.

Some engineers think that the ore zone extends under the wash between the Bonanza and the Golden Eagle workings and that it might thus have a length of over one mile and a width of perhaps 300'.

Miles Carpenter told Martin that Hodgson had asked him to sign a report stating that a large tonnage of low grade ore would average #3.50 per ton which he refused to do. Hodgson said that they could mine such ore for 12¢ per ton but Carpenter thought the cost would be nearer 25¢.

Carpenter had previously made a partial examination of the low grade ore for Elliott and had estimated that this would run \$2.00 per ton but did not mention the tonnage to which this estimate referred.

9 Elliott did some steam shovel mining around the old glory hole and his average grade was only 72¢ per ton but if he had kept out of the waste the average of the mineralized material should have been about \$2.50.

The mine is located in Township 4 North, Range 13 west and mostly in Sections 22-23 and 26-27.

Between the Bonanza and the Golden Eagle groups of claims lie the property of the Harqua Hala Northern Company which does not belong to the Martins and is now being worked by some parties under lease. The Johnson Claims known as the Harqua Hala Extension lie to the south-east of the Bonanza Group.

G.M.C.

April 25, 1946

Mr. J. H. Byrd
Post Office Box 5226
Tucson, Arizona

Harqua Hala - J

Dear Mr. Byrd:

I have heard nothing recently concerning your activities or that of the New Jersey Zinc Company at this property and no one representing the New Jersey Zinc Company has visited my office; however I sincerely hope that Mr. Schmitt's plans for undertaking the exploration work have not been altered or delayed and that I should hear from you or from someone on this subject in the near future.

I have a recollection that you spoke to me sometime ago concerning the Rio Del Monte Mine which is located not far from the Harqua Hala and in going over an old file, I came across a letter written in 1935 which gives some information on this property and from which I quote as follows:

"I am the owner of the Rio Del Monte property of 20 patented claims some 4 or 5 miles from the Harqua Hala formerly owned by the Ridgeway Estate of Phila on which work was stopped in 1907 on the death of Senator Ridgeway, on which he had spent \$50,000 to \$100,000 on development work, the deepest shafts between 200 and 300 feet on a 10 foot vein.

There are many other good assaying veins 7, 6 and 5 feet wide which assay about the same, viz between \$4.00 to \$14.00 average.

On the 10 foot vein alone there are 3 shafts 150 feet apart averaging more than 150 feet deep and in ore.

I will be glad to give you further details at my disposal if you wish, and will thank you, anyway, for a reply.

R. P. Camden
1433 East 1st Street
Long Beach, California

Page #2

I have no personal knowledge concerning the accuracy of these statements which may be considerably exaggerated, and I do not know whether Mr. Camden is still the owner of the claims, but I thought that you might like to get in touch with him and learn more concerning the present situation.

Personal regards.

Yours very truly,

GMC: IW

*C. H. Marshall / Partner for
Royal*

A. 4/5. 35-

Long Beach, Cal.
March 3, 1935.

Mr G.M. Calvocoresses.
W.S. Wasserman Co
Harqua-Hala & Congress Mines
Phoenix. Ariz.

Dear Sir;

I see by the Los Angeles Times that your people are about to build a 300 ton mill at the Harqua Hala mine.

I am the owner of the Rio Del Monte property of 20 patented claims some 4 or 5 miles from the Harqua H formerly owned by the Ridgeway Estate of Phila on which work was stopped in 1907 on the death of Senator Ridgeway, on which he had spent \$50,000 to \$100,000 on development work, the deepest shafts between 200 and 300 ft on a 10 ft vein.

There are many other good assaying veins 7, 6 and 5 ft wide which assay about the same, viz between \$4.00 to \$14.00 ave.

I am writing to know if you would be able to mill my ore upon completion of works and if not, whether it would interest your company to in some way become associated or interested in the Rio Del Monte with me for the development of the property.

On the 10 ft vein alone there are 3 shafts 150 ft apart averaging more than 150 ft deep and in ore.

The story behind this property is worth while and you would be given every opportunity to examine it to any extent you cared to go.

I personally had sufficient means to proceed with the work and a mill for the Del Monte when I took it over but I suffered like the majority in the financial crash.

I will be glad to give you further details at my disposal if you wish, and will thank you, anyway, for a reply.

Truly yours,

R.P. Camden

R.P. Camden.
1433 E. 1st St.
Long Beach, Cal.

Notes

GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1102 LUHRS TOWER
PHOENIX, ARIZONA

Martin
May 2nd, 1940

PRELIMINARY REPORT ON HARQUA HALA MINE
(Bonanza and Golden Eagle) *file*

LOCATION:

The Bonanza and Golden Eagle Groups comprise 9 patented and 3 unpatented claims or fractions, having an area of about 170 acres, also a 5 acres millsite at Harrisburg with water rights on Centennial Wash. These are owned by the Bonanza and Golden Eagle Mining Company, controlled by Walter and Donald Martin of Phoenix. The workings of the two mines are one mile apart but the two groups are almost connected by the North Pole and Tramway Claims. Some intervening and adjacent claims (unpatented) are known as the Harqua Hala Northern property and are owned by a Mrs. Donaldson of Long Beach, California. All the above are located in the Ellsworth Mining District, Yuma County, Arizona, eight miles south of Salome with which they are connected by a good desert road. The Santa Fe Railway (Parker Cut-Off Branch) and the paved U. S. Highway #70 pass through Salome which is 108 miles from Phoenix.

The accompanying claim map was prepared in part from the separate patent surveys of some of the claims but other claims were drawn in from a sketch made by a local engineer and their location may be only approximately correct.

The elevation at the mines is 1800 feet above sea

level and the climate is typical of the desert, very hot in summer and very dry, the average rainfall being recorded at about 8" per annum.

GEOLOGY AND ORE OCCURRENCE:

The basal rock in this vicinity appears to be a coarse-grained pre-Cambrian granite which has been impregnated with gold bearing iron pyrites and over this lies a series of sedimentary rocks including quartzite, limestone, shale and conglomerate. All of these rocks have been subjected to faulting and folding and shear zones have been formed in which there has been a deposition from solution and secondary concentration of the oxidized iron minerals, a little copper in places and gold associated with the iron and with gangue minerals which are mainly quartz, calcite and brecciated wall rock. At a vertical depth of less than 300', the conditions appear to change and although some of the sulphide veins found at greater depth have yielded limited quantities of fairly high grade ore, such occurrences,- so far as they have been developed,- appear to be comparatively small and scattered.

It has been suggested by certain geologists that a continuous ore zone might exist between the Bonanza and the Golden Eagle but here the quartzite in which the principal bodies of ore occur has been largely eroded away, except for the outcrop on the Harqua Hala Northern Claims. I therefore consider this as a possibility which may be left for future

consideration but I feel that present investigations should be confined to the chances of working the two showings as separate units.

The value of the primary ore in which there has been merely an impregnation of gold bearing pyrites has never been determined but there seems to be no reasonable ground to assume that it will be rich enough to work excepting in areas where there has been some local enrichment. Therefore, I believe that for the time being one should only consider the possibilities of mining the upper areas in the vicinity of the Bonanza and Golden Eagle workings where the shattered quartzite predominates.

In the mineralized area which is characterized by shear zones and more or less parallel fissures with varying dips and strikes, the country rock and the hanging wall is mainly quartzite overlain with limestone while the footwall is a granitic rock of coarse grained porphyritic texture which various engineers have called a "granite", "andesite", or "rhyolite", but which locally is simply termed "porphyry" which caption I shall follow.

The ore shoots in some cases appear to be confined to well defined and narrow veins between almost barren wall rock but the larger and richer deposits seem to be of a replacement type where the mineralized solutions have also impregnated the walls and often followed along fracture planes and slips from

one fissure to another at the same time dissolving out the more soluble constituents of the rock and replacing these with metallic minerals. The value of this low grade material was obviously insufficient to permit mining under old conditions or to attract any particular attention from previous operators and both its tonnage and value are still problematical and can only be inferred in a very tentative manner.

HISTORY:

The Bonanza and Golden Eagle Mines, operating at intervals since 1889, are credited with a total production of about \$4,000,000 at old price of gold, the average content of silver having been about one ounce to each ounce of gold on which basis the present value in silver is about 2% of the gold value and can be neglected although the percentage of silver in the sulphide ores is considerably higher.

The tonnage of ore produced has not been recorded and some of the very rich ore running better than 5 oz. gold per ton was shipped crude to a smelter and a small tonnage was milled at Harrisburg in the early days.

The great bulk of the production from the Bonanza and the Golden Eagle Mines was treated in the Bonanza Mills where the quantity of both amalgamation and cyanide tailings was carefully estimated prior to 1933 at slightly over 100,000 tons from which it may be inferred that the total production of the two mines did not exceed 120,000 tons of ore.

The more recent attempts to operate this mine on a small scale have not proved profitable and while some lenses and shoots of \$8.00 and even \$10.00 ore (at present price of gold) are now found in the lower workings, yet such occurrences have proved to be small and their location is such as to make mining and haulage to surface expensive.

The high grade ore in the upper portions of the mine has long since been worked out and the future value of the property appears to me to rest entirely upon the possibility that between and around these high grade stopes there existed and still remains a much greater tonnage of comparatively low grade material which might be found to have a sufficient average value to permit cheap mining from an open pit and cheap treatment in a large cyanide mill to be erected at the mine.

ORE OCCURRENCE AND GENERAL MINERALIZATION:

The attached maps, Exhibits B & C, while not entirely up to date, show the general outlines of the underground work and the assay map (Exhibit D) gives information concerning the value of ore in the veins some of which has been mined since this map was made.

An examination of the accessible underground workings and the maps of the mines show that most of the old production came from a number of stopes scattered irregularly through the upper 200' of the mineralized zone in which there was probably

only one original vein in each of the mines broken up by faults and folding into several off-shoots and lenses.

The width of the stopes varied from a maximum of 60' to 3' or less and between the various ore shoots the shattered rock is seamed with bands of clay and iron oxide in which gold values nearly always seem to occur.

Some engineers have believed that the values in the Bonanza were cut off by one of the larger faults which was noted on the 6th level but I am doubtful on this point.

In the Golden Eagle ore zone there are two and sometimes three nearly parallel shoots of ore separated by from 60' to 100' of quartzite in the upper levels and porphyry in the lower levels while in the Bonanza workings four roughly parallel veins were found near the surface dipping into one another until only two of them have been recognized on the 4th level and only one on the 6th level.

Some distance to the east lies the so called iron vein where the gold is associated with hematite and a considerable quantity of \$25.00 ore (at old price) is said to have been mined but much of those workings were caved in prior to 1906 and but little is known of them today. In passing it may, however, be mentioned that there is a record of good values found in this vein from the Quinn Shaft which was sunk vertically for 306' at a point close to the line of the Bonanza Claims and in a winze below the bottom level the vein is said

to average about \$11.00 (at present price) over a width of 5' and a considerable length.

In all of the deeper workings of both the Bonanza and Golden Eagle mines sulphide ores came in with lower gold values but carrying a higher relative percentage of silver and with a substantial amount of copper. Because of general inaccessibility and metallurgical difficulties in treating this class of ore very little of it was extracted in either mine and I am reliably informed that several thousand tons remain particularly between the 7th and 9th levels in the Bonanza. This is said to average \$12.00 or better per ton.

The chances of developing additional reserves of similar material seem very fair and in connection with any new operations it would undoubtedly pay to continue further exploration to greater depth, and laterally in both directions along the mineralized zone. The report of Tovote should particularly be noted in this respect and I am informed that just prior to the closing down of the last operations in 1937 an entirely new shoot of good ore had been found on the 6th level and was suspected to continue upwards to the 5th level and beyond.

Although the search for high-grade ore conducted from 1913 to 1918 by the Yuma-Warrior Co. proved unsuccessful, yet I think that it would be a mistake to conclude that the possibilities of either the Bonanza or the Golden Eagle have been exhausted but I believe that such higher grade ore as may be

developed should only be considered as a sweetener for the bulk of the future production which may thus be brought up to an average of \$3.00 or more per ton.

LOW GRADE ORE RESERVES:

The geological conditions surrounding the replacement deposits in the upper workings of the mines and the physical aspects of the Bonanza workings naturally suggest the existence of a large mass of low grade ore that might be attractive under present working conditions and at the present price of gold, but a careful study of all available data throws very little light upon the problem.

Since the old production all came from the high grade shoots the grade of the mill heads has no significance while the one fairly complete assay map which I have found, - made by C. C. Thompson in about 1914, - records mainly the value of samples taken over narrow widths in or near the pay ore. However, there were a large number of samples carrying from \$2.00 to \$5.00 per ton (at present price) which came from exploration drifts and crosscuts and are suggestive as to the value of the wall rock.

Generally speaking, the reports of several engineers, who previously examined these mines, also give little pertinent information. High grade ore was all that interested them or the parties whom they represented, the exploration and development work was all planned to find such material and samples were

usually taken in the drifts and crosscuts only when the visual appearance indicated a point of enrichment. I have, however, culled out some interesting statements among which I mention the following:-

C. E. Mills in 1892 reports that much low grade material had been broken above the 4th level and sent to the waste dumps with average value around \$5.00 per ton (old price) and that many of his samples in wall rock gave similar values.

F. W. Norton says that the Bonanza cave-in which put a stop to the work of the English Co. in 1895 involved an area 400' in length, 60' in width and 150' in depth and the caved material represented 300,000 tons from which 50% could be screened out and would carry around \$6.00 per ton at old price. W. Tovote later refers to 200,000 tons of caved material and waste fills which he figures would average \$4.00 per ton at old price.

C. C. Thompson told me that he had assayed many hundred samples for the Yuma-Warrior Mines Co. from 1913 to 1918 and recalled that most of those taken off the ore ran from \$2.00 to \$6.00 at old price.

Mention is made of some similar values between the ore shoots in the Golden Eagle where the width of mineralized ground seemed to vary from 60 to 120'.

In 1935 a company headed by Elliott and Stratton took over the Bonanza Mine with the object of operating on a

large scale and in order to determine the value of the remaining ore, the surface in the vicinity of the outcrop and including the glory hole was divided into 20' squares and a sample, - supposed to be representative, - was cut from each square. I was shown by C. C. Thompson some 600 assays from the samples thus obtained and told by him that the total area of 240,000 square feet represented a rectangle with length (east-west) of 600' and width (north-south) of 400'. I am satisfied that the assaying of these samples was done by Thompson honestly and with reasonable accuracy but the methods of sampling seem to have been open to criticism and therefore the results may be unreliable. Of the 600 assays mentioned some 40 gave results of \$15.00 or better but casting these out entirely I averaged the remainder at about \$2.33 and the lowest assays were \$0.70 per ton.

The same company and others who were associated with them also took a great many samples in the underground workings of the mine and claimed that the average of these was in excess of \$5.00 per ton but I feel that this statement is of no value. Subsequently a considerable quantity of material was broken down in the vicinity of the glory-hole and together with some of the old caved rock and rock from the waste dump was sent to a test mill in 1937 and the record shows that the average grade of the 6277 tons treated was \$2.88 per ton.

Miles Carpenter who acted for a time as engineer for this company and had charge of much of the sampling has given

it as his opinion that there is a large tonnage of ore that will average better than \$2.00 per ton while C. C. Thompson who saw much of the sampling and did the assaying estimates that many hundreds of thousands of tons in the two mines should carry better than \$3.00 per ton.

In the spring of 1939 Captain J. P. Hodgson took a lease and option on the property and made a brief investigation accompanied by a geologist and an assistant and some samples were taken. Apparently, Captain Hodgson was also seeking a large low grade mine and convinced himself that he would not find it at Harqua Hala since he dropped his option and wrote to the owners that he did not consider the property attractive either for open pit or underground operations. Captain Hodgson's opinion should be given due consideration but it does not appear to have been based on any extensive sampling and I am informed that Hodgson never examined any of the old maps, reports or records which are in the possession of the owners.

In 1917 when I first visited the Bonanza Mine, it occurred to me that some of the low grade ore around the glory hole might pay to work and I took a few samples of which I now have no record but recall that they averaged less than \$2.00 per ton (old price) so that I gave the matter no further thought until 1934 when for a time I was interested in the re-treatment of the richer portion of the mill tailings. At that

time the mine was under option to parties who later turned it over to Elliott and Stratton and they were taking a number of samples in various portions of the workings but with the evident intention of reporting a ficticiously high grade through including a number of samples taken in the ends of the old stopes or in small pockets of higher grade material. Greatly doubting the statements which were made by these people, I had a few check samples taken for my own information and these indicated that there were sections away from the ore shoots which would run from \$3.00 to \$6.00 per ton at present price but no attempt was made to do this work in a systematic fashion or to calculate the tonnages which the various samples represented.

It should however be considered that there are still some ends of the old ore shoots and seams of higher grade material scattered at intervals throughout the mineralized zone and that these as well as any new ore discoveries would tend to sweeten up the average grade obtained in breaking down the entire mass.

On the occasion of two recent investigations in 1939, I took several large samples in various sections of the wall rock between the old stopes in the upper workings and from the broken ore left in the mine or put on the dumps. The arithmetical average of these samples was \$3.28 per ton and they should have been roughly representative of a very substantial tonnage of the mineralized area.

From all the above I am lead to conclude that a large body of \$3.00 to \$4.00 ore may remain at the Bonanza and Golden Eagle Mines and that this chance justifies a further and much more thorough investigation the scope of which can better be determined after it has progressed to a certain point.

The tonnage of such ore which may be found to exist is far too uncertain to permit even an approximate estimate for if values are confined to the immediate vicinity of the old stopes in the upper workings it will be so limited as to make the mine entirely unattractive whereas if the values will hold laterally between the Bonanza and the Iron Vein and carry down into the porphyry at both the Bonanza and Golden Eagle, the total may well run well into the millions but only further investigation can tell the story.

Fortunately, much of this information can be secured by sampling and measuring the ground which is already prospected by the open workings of the two mines or those which could be reopened at comparatively small expense and only providing the results of such a procedure were entirely favorable would I recommend the use of core drills or other means of sampling the intervening blocks of ore.

In an effort to arrive at some very approximate figures as to the possible tonnage, I have scaled off the several maps and sketches which the owners have furnished me but find that some of these are obviously inaccurate while others are so old as to have little value.

However, from such measurements as I can make plus my examination of the mine itself and assuming that an average value of \$3.00 per ton should be found only in the wall rock adjacent to and between the principal stopes in the Bonanza we have a rough rectangle 300' x 100' and assuming a depth of 200' to the 6th level this would approximate 400,000 tons after deducting 100,000 tons already mined.

If the values should be continuous between the Bonanza vein and the iron vein and extend to the boundary of the Gold Star Claim, the dimensions of the rectangle would exceed 600' x 400' and assuming a depth of 300', the possible tonnage reaches a figure of 5,000,000. Since it is my opinion that the superficial area of the ore body will tend to decrease with depth and it may prove to be funnel-shaped, I should reduce the above mentioned minimum to 300,000 tons and the maximum to say 4,000,000.

Applying a similar procedure to the Golden Eagle, I find a minimum of about 150,000 tons; a maximum of 1,500,000.

It is not intended to imply that I have as yet obtained sufficient data to in any way justify the assumption that even the minimum tonnage mentioned will actually assay \$3.00 or even \$2.00 per ton but I believe that there is a very definite suggestion that such is actually the case with possibilities ranging all the way up to the maximum figures, plus any new discoveries that may be made.

GENERAL CONDITIONS:

Mining Methods:

The physical conditions of both the Bonanza and Golden Eagle deposits are such as to lend themselves to cheap open-pit or glory hole mining for the recovery of all or a large part of the possible pay ore to a depth of some 300' below the outcrops on the hills,- no stripping would be required and the walls of the pits should stand extremely well.

An inclined haulage way or main hoisting shaft could carry all of the Bonanza ore directly to a mill just west of the pit while from a similar shaft or tunnel an aerial ropeway one mile in length could convey the Golden Eagle ore to the same mill.

Milling:

Modern cyanide practice should make an excellent recovery of gold and silver from all of the oxidized ore and all material mined in the upper 250' to 300' of the pits. If sufficient copper came in with depth it would probably be necessary to resort to a combination of flotation and cyanide but some revenue should then be derived from the copper in the concentrates.

An excellent site for a mill of 1000 tons or greater capacity is found on the hillside directly to the west of the proposed Bonanza pit but some additional ground must be acquired for proper storage of tailings.

The present camp buildings, with a few minor repairs, would comfortably house a crew of 15-20 men and assay office equipment can be installed in the excellent building recently erected for that purpose. For large scale testing work the mill erected by Elliott and Stratton could be reconditioned for amalgamation or altered and used for cyanide treatment with the installation of additional equipment.

Water Supply:

A 5 acre millsite claim at Harrisburg, is owned by the Bonanza and Golden Eagle Mining Company and here a well is sunk in Centennial Wash from which ample water was obtained for the old and recent operations.

August Nord, a reliable rancher, informed me that from his well nearby he had continuously pumped for irrigation as much as 400 gals. per minute with only a very slight lowering of the water table and he expressed a positive conviction that the Bonanza well, if properly enlarged, could yield over 1000 gals. per minute at all seasons of the year. Since the Centennial Wash drains an area of some 600 square miles, including McMullen Valley, the south slopes of the Harcuvar Mountains and the north slopes of the Harquahala Mountains, I believe that his estimate is reasonable and that the existence of an adequate water supply may be accepted as a fact subject to a further investigation of other water rights which might be infringed.

The pumps and engines have been removed from the well and the present pipe line is of 2-3/4" welded boiler tubing and would have to be replaced with a larger line for any substantial operations. The elevation of the well is about 1750'. The line has a length of about 6 miles rising some 300' in the first 4 miles to a saddle on which a reservoir (which I did not visit) is located on the Summit Claim and from which the water would run by gravity to the proposed site of a new mill at an elevation of 1800'. These relative elevations have been checked from contour maps and with my aneroid.

Power:

Previous work was conducted with steam power and more recently by Diesel engines and even under the latter conditions the cost of electric power (with oil hauled from Salome) was at least 1.5¢ per kw. hour but the U. S. Government electric power line from Parker Dam to Phoenix will pass within about 20 miles of the mine and I am reliably informed that a contract could be made to secure future power for substantially less than 1¢ per kw. hour.

Working Costs & Financial Returns:

While it would be premature to make anything more than a very rough and preliminary estimate of costs, the general conditions affecting this project seem to be favorable and to justify an expectation that Harqua Hala low grade ore could be

worked at a cost comparable to that which has been attained at some similar operations such as the Yellow Aster in California, the Beatty Mine in Canada and at other mines where mining and milling is done for less than \$1.50 per ton. Unless unforeseen metallurgical difficulties should reduce the percentage of extraction, the recovery may be safely figured at a minimum of 85% of the values or more probably close to 90%.

The total capital investment including preliminary sampling, purchase price of property, installation of mining equipment and erection of a mill, water supply, power lines, etc., will run to a large figure and can probably only be justified if it can be written off by a charge not exceeding 50¢ per ton of ore. If mining, milling and repayment of capital are tentatively estimated at \$1.50 per ton it appears that one should be assured of at least two million tons of \$3.00 ore to put this venture in the class of an attractive investment; or a correspondingly lesser tonnage of higher grade or larger tonnage of lower grade material.

I personally believe that there is a reasonable prospect that the Harqua Hala Mine will be found to measure up to such standards and the verification of this opinion can be made far more cheaply than in the case of an unworked prospect or many other old mines in which the workings are caved or largely inaccessible.

RECOMMENDATION:

If the data given in this report appears to make the proposition attractive, I first suggest that further inspection and investigation are in order and might reasonably be followed by the acquisition of an option to purchase the property which I am assured by the owners will be given on very reasonable terms and with no down payment whatever.

A small force of engineers with assistants might then be employed to carry on a limited amount of surveying and sampling which could be discontinued at any time or speeded up as their findings might dictate.

Future policy should obviously be guided by the results of their investigation which would be the first scientific work of this nature that has ever been done at the Harqua Hala Mine. I need hardly add that I have no financial interest whatever in this property and merely a pleasant personal acquaintance with the owners at whose request I have undertaken to present this property to any responsible company who may indicate their desire to engage in the development and operation of a large low grade gold mine.

Respectfully submitted,

S. M. Colvocoresses

Hargrave Hales 6/13 46.

Call from R. C. Richmond &
F. F. C. Keill, Eng. & Tech. who
are assistants of Harrison Schmidt

Silver City has been employed by
New Jersey Zinc Co & they will be
quartered at Salome during next few

days Johnson will show them over the
mine for preliminary exam. & decision as

to method of ~~development~~ exploration

Show them Contour map tracing &
large scale assay map blueprint of which
they will return.

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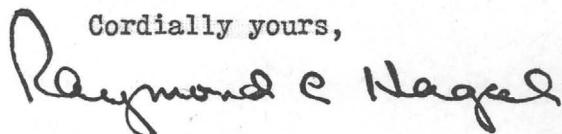
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W 3/27, '47
Mch 23-'47

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* LOS ANGELES

HILTON HOTEL
* LONG BEACH

HILTON HOTEL
ALBUQUERQUE *

HILTON HOTEL
* EL PASO

PALACIO HILTON
CHIHUAHUA *

Dear Colvo -

Your reports are being forwarded under separate cover, I am sorry for the delay. My schedule has been thrown out of gear by inability of my Canadian friends to get funds into the States and I have had to carry our American commitments personally, as a result.

Nevertheless, I am still interested in Hargua Hala and will try to get over to see you before my iron work in Texas is completed.

Best wishes,

Sincerely,

Harlan Bradt

March 27, 1947

Mr. Harlan Bradt
C/o Hilton Hotel
Longview, Texas

RE: Harqua Hala

Dear Bradt:

Thank you for yours of March 23 and for returning the reports, maps and other documents relative to the Harqua Hala Mine.

I can readily understand that it is slow process to interest any capital in the development of a gold mine under present conditions and particularly where Canadian capital is involved.

However I hope that you may be able to work out something in due course of time, and I shall be glad to see you here when you next come through Phoenix.

You doubtless have in mind the fact that the Tumco property is also open for negotiations.

Yours very truly,

GMC: IM

January 30, 1946

Mr. J. H. Byrd
C/o Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

I acknowledge your letters of January 26 and 28th, and from the latter I am extremely sorry to learn that the results of samples taken from loose material on the surface have not proved as satisfactory as you expected they would a short time ago. Personally I have always been rather skeptic concerning the values which were reported from the surface of the flat below the Harqua Hala mine and also from the surface of the hillside and the loose material which might be classed as float. I have always thought that the low grade ore remaining in the mine would be found around the open pit on the surface or in the vicinity of the old stopes underground, and until that area is thoroughly sampled, I do not believe that one can properly estimate the tonnage and grade of ore or the probability of resuming mining operations on a large scale and with any degree of profit.

To make such an investigation as I advocate would probably cost close to \$25,000 and my estimate was checked by engineers of the Eagle Picher Company and as far as I can gather from your letters, a similar opinion was formed by Mr. Wood of Denver and Dr. Schmitt. I have always reported the matter in such a manner when reporting to Mr. Martin and to any other interested party and you will note that such was my recommendation in the report which I gave you dated August 9, 1945.

Now it would distress me very much if you should find yourself unable to continue your operations after having spent a considerable amount of money in investigating the property and in presenting it to other parties, and if you think that arrangements could be made for a thorough sampling of the mine by the New Jersey Zinc Company or by some other equally responsible concern, I will certainly do all that I can to help you obtain concessions from Martin which will make it possible to proceed along those lines.

WLC

Mr. J. H. Byrd--page 2

I believe you will recall that the arrangement which you made with Martin concerning the payment of the \$3,000 as per Article 4, paragraph (a) of your contract was arranged directly between you and Martin and in my opinion this could be modified in the interest of both parties since I do not think that he will find any mining company willing to make a large investment in the Harqua Hala until after they have spent some money for exploration and development, and I do not think that they should be asked to make this initial payment until after they have learned the results of such an investigation.

I have not heard anything from my friend, Mr. Pfeffer, since I last wrote you and presume that he is in San Francisco, but I note that you expect to be in Phoenix the latter part of this week or early next week and we can then discuss the situation quite fully, and if you desire, I will be glad to arrange for a conference with Martin.

Regarding the Burro Mine located south and west of Bagdad, I had this property examined by one of the field engineers from Humboldt back in 1917. At that time no operations were in progress and the engineer could find very little of interest on the surface but he took some samples from the narrow stringer of quartz in an adit tunnel and the values of these in gold and silver were far too low to be commercial.

I was informed in 1934 that the property had been quite thoroughly sampled by a reliable engineer named Beckwith who had estimated that there was a probability of two million tons of gold ore averaging 15 ounces per ton, say a little over \$5.00 per ton at the present price of gold, but I was never able to obtain Beckwith's report or any reliable confirmation of this report *read* which I greatly doubt.

In 1935 or 36 it was again sampled by a man named Robertson who was not an engineer but had considerable mining experience, and he told me that the average of his samples was less than \$1.00 per ton and that he considered the property worthless.

Regarding the Socorro Mine nor far from the Harqua Hala, I can not make any statements from personal information. I have heard it spoken of both favorably and unfavorably and I suggest that you could probably obtain considerable information from C. C. Thompson, the assayer at Bouse, and who should be personally familiar with the property.

I shall look forward to seeing you in Phoenix during the course of the next few days and meanwhile I sincerely trust that the final assays on the Harqua Hala material will prove better than you anticipate.

Yours very truly,

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032
January 26, 1946

W 1 / 30
'46

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

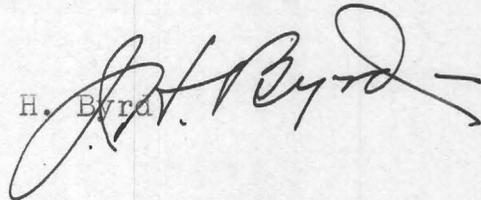
Dear Mr. Colvocoresses:

For the past week or ten days we have had five men intensively sampling the pit material as well as the loose material and rubble on the mountainside above the canyon floor at the Harqua Hala. The work has been done under the direction of Mr. M. J. Mills, a young engineer who worked for us about ten years ago and later went to the Philippines in charge of important gold mining operations for the largest company operating there. He is a graduate of the Colorado School of Mines and a highly capable metallurgist and mill operator as well as a mining engineer.

Hundreds of pannings and more than eighty samples were taken, and as soon as we get the results, we will supply you with the plat and assay map of the areas sampled. Numerous screen tests are now being made as well as table and jig tests. It will probably be the latter part of next week before we get the complete picture.

Very truly yours,

J. H. Byrd



JHB:lc

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

January 28, 1946

A 1/30
46

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

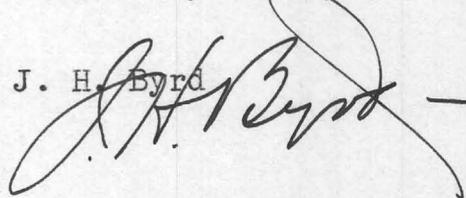
We still have thirty-seven assays unfinished on Harqua Hala ore rubble and pit material. These assays are disappointing so far and I may have to release my option on the property. I now expect to be in Phoenix the latter part of this week or the first part of next week and will probably want to talk to you and Mr. Martin. I am afraid now the job is too big for us to undertake alone, and it doesn't look as if we are going to be able to enlist the assistance of others after we show them these assays. The results are not yet altogether conclusive, however, and I have two groups of people that I could probably interest in the property. I think New Jersey Zinc would make a complete sampling job starting the middle of February if given time to do it. We do not feel sufficiently sanguine now to undertake the payments to Mr. Martin that would be necessary under our contract in order to give the New Jersey Zinc the time they will require. They would expend on the property, according to Dr. Harrison Schmitt, a minimum of \$15,000 and possibly as much as \$25,000.

I am wondering if you have any information about the Burro Mine on Burro Creek some fifteen miles south or west of Bagdad. I am informed that it has been sampled twice by responsible people; also whether you have any information on the Socorro Mine ten miles south of Salome.

Regards,

Yours very truly,

J. H. Byrd



JHB:lc

January 14, 1946

Mr. J. H. Byrd
Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

Replying to yours of January 11, I have carefully looked over your contract of lease and option to purchase with the Bonanza and Golden Eagle Mining Company, and it is my very definite opinion that since the payment of \$3,000, stipulated in Article 4, is not either a royalty or rental, but as you say is a payment on account of the purchase price, you would be entitled to 60 days of grace after default in such payment during which time you could reinstate the contract by remedying the default. This, I believe, is clearly the meaning and intention of Article 7 and I feel confident that Mr. Martin would agree.

The question arises as to just when the said payment of \$3,000 was actually due since it was stipulated in Article 4, paragraph (a), that this payment was to be made 90 days after the Federal Government had removed the restrictions on equipment and operation of gold mines. The said restrictions were contained in the limitation order of the War Production Board L-208 which, I am informed, was finally rescinded, after some previous modifications, by an order issued on June 16, 1945 to become effective July 1, 1945. Unless you and Mr. Martin had already agreed upon some different arrangement, it would appear that the \$3,000 should have been paid about October 1, 1945 and that the 60 day period of grace would ordinarily have expired on December 1, 1945, but I have assumed that you and Mr. Martin had reached some specific agreement in this respect for I felt confident that Mr. Martin would be likely to make some concessions in that regard.

I have already written you in respect to the status of the R. F. C. loan application, and of course if you so desire, I would be very glad to resume negotiations with the R. F. C.; although I should not be very confident of persuading them to change their decision.

Personal regards.

Yours very truly,

W.L.H. *Wm. H. ...*

Along 47034

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

January 11, 1946

*A 1/14
46*

Harqua Hala

Mr. George M. Calvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Calvocoresses:

If you have a copy of my contract on the Harqua Hala, please look at page 8, article 7, with respect to default payments. What I wish to have is your construction of what the last sentence in the first paragraph means. Obviously I have thirty days to make good any default arising from non-payment of rental or of royalty, but I have sixty days to remedy any other default. So far, that is clear. The \$3,000 cash payment is a payment against the purchase price of the property and is not either rental or royalty because these rental and royalty payments continue regardless; then in that case does the \$3,000 carry a sixty day period of grace?

You wrote the contract and know what you intended, but since this isn't clearly stated, I would like your construction of it before I take the matter up with Mr. Martin.

The inquiry I make does not mean that I am going to wait until the end of any default period before making any payments. Also when you write me, please advise what you regard the status of the R.F.C. loan application to be at this time.

Regards.

Yours truly,

J. H. Byrd
J. H. Byrd

JHB:lc

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

January 15, 1946

A 1/18 46

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

Supplementing my enclosed letter, Dr. Chapman of the Bureau of Mines has just telephoned me that the date when priorities which would effect gold mining and restrictions which would effect labor were lifted was September 30, 1945 and has confirmed the feeling that I have had all along that the effective date was on or before October 1, 1945.

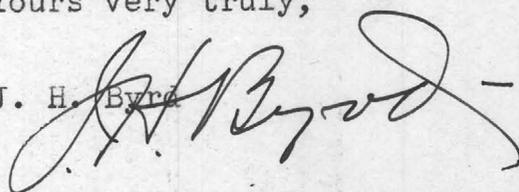
We are taking a lot of samples of the loose material I talked to you about this week, and in a few days we hope that we will have a picture that would justify us in starting a sizeable operation immediately without having to await the results of exploration work. I expect to be up next week at the latest and will probably have at that time information to go over with you and Mr. Martin.

We about decided last week to suggest the advisability of wiring R.F.C. to suspend action on our loan application since we might wish to revise it. We delayed a few days, and during the interim we had notice that they had declined the loan and doubt whether we will need R.F.C. money for what we are planning to do; but if further sampling and testing confirms information we now have, I don't think there would be any trouble to get the money we would need from R.F.C.

With further reference to the \$3,000 payment, it is my opinion now that it was due to be made December 30, 1945. Regardless of delays on account of strikes and difficulty of securing deliveries, I, on my part, am willing to regard that date fixed as being ninety days from the day that gold mining restrictions were actually lifted.

Yours very truly,

J. H. Byrd



JHB:lc

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032
January 15, 1946

A 1/18.46

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

I thank you for your letter of January 14. Regarding the second clause in your letter and the lifting of restrictions on gold mining, I know perfectly well that order L-208 purported to lift restrictions as of July 1. They did not, however, lift restrictions because neither labor or priority requirements were relinquished. We were very much exercised when we discovered this and so advised Mr. Martin.

For fear he wouldn't understand our situation in this respect, we took the matter up here with the War Production Board and with various suppliers of equipment with whom we were dealing and especially lumber. The War Production Board very definitely told us that restrictions covering materials and labor had not been lifted by the order, and that no priorities were available for gold mining.

These restrictions, however, were lifted either in October or November of 1945, that is to say, as to labor and as to machinery and timbers which required priorities. Mr. Willis of the Mining Journal and Dr. Chapman of the Bureau of Mines are looking up the exact date, and will advise as soon as they report the same to me. As we recall here in the office, the newspaper announcement was October 15. I talked today with Mr. Loerpabel of the American Smelting and Refining Co., and he told me, or rather, made the statement that restrictions are not even lifted now particularly on mining timber which he says is practically unavailable because of the requirements of F.H.A. as to veterans' housing. He also confirms something that we have found to be true and that is while there is no restriction against ordering machinery and equipment, it is practically impossible to get deliveries. As an illustration of how this works, I need a truck badly at the Harqua Hala before I can send some men and do some preliminary work that has to be done.

X
Inca -
R.F

A.C. from desk
in 66 d

2 - Colvocoresses - Jan. 15, 1946

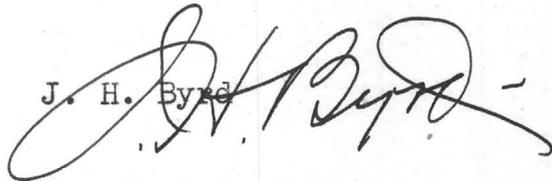
I ordered two new Dodge trucks (Dodge promised the best delivery) in August intending one of them for use at the Harqua Hala and especially for repairing the water lines. We are still unable to get the trucks although we are now at the top of the list of the dealer's orders in this territory. We have a fair stock of timber on hand but not enough to do any great amount of construction work, and our dealers told us last week, and again this week, that the prospect of securing anything in this line in the near future was very indefinite. I am making no point of the shortages, however, because I am willing to assume that difficulty as one of my burdens. I wrote to Mr. Martin on June 27 explaining the actual effect of the July 1 order L-208 and that its limitations would be of no help to us. I think that we will find after checking further that October 1st was the date when labor and material restrictions were finally lifted which would make it practicable to engage in gold mining.

As repeated above, I will give you the exact date later, and it is my understanding that the payment obligations should properly run from that date, whatever it may be.

Regards.

Yours very truly,

J. H. Byrd

A large, stylized handwritten signature in dark ink, appearing to read 'J. H. Byrd', is written over the typed name. The signature is fluid and cursive, with a long horizontal stroke extending to the right.

JHB:lc

January 12, 1946

Mr. J. H. Byrd
C/o Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

Enclosed is a copy of a letter received from the R. F. C. in reference to the application you made for a Government loan. No doubt they have written you also directly in regard to this matter, and personally I do not regret their decision because I believe that it is far, far better to carry on a mining operation without assistance from the R. F. C. if that is at all possible.

Roughly I should say that the extra expense in operating under Government supervision runs to several hundred dollars per month and sometimes makes all the difference between profit and loss.

Regarding our telephone conversations of yesterday, I feel that the work which Mr. Dillard is now carrying on at the mine may prove of great importance. I had understood that samples of loose material taken along the surface by Elliott and other parties gave very erratic and on the whole rather discouraging results, but it may be that these people did not know where or how to take such samples, and of course the cost of drilling such ore merely for screening out the fines and then using tables or perhaps flotation would be much cheaper than fine grinding and cyaniding. *treating*

I never paid much attention to this surface material myself and the record of good values in the placer gravel found in the old shaft did not seem very reliable but the whole subject is well worthy of careful study and may serve to change the picture and to permit you to operate for a time after making a very small capital expenditure and to use the returns from shipments to carry out the drilling and other exploration of the main ore body. I believe that the large quantity of low grade ore still remains in place or caved into the glory hole or the old stopes.

Shall certainly be interested in learning of your further progress.

Yours very truly,

S M C

GMC: IW

RECONSTRUCTION FINANCE CORPORATION

WASHINGTON 25, D. C.

Copy of Byrd

*Copy sent to Byrd
1/12/46*

January 7, 1946

Harvey Hals

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Re: J. H. Byrd
Docket No. B-127

Dear Mr. Colvocoresses:

The application of J. H. Byrd for a loan from the Reconstruction Finance Corporation has been given careful consideration by the Directors of this Corporation, and I am directed to advise you that the Corporation is unable to approve the loan.

This action was taken largely because a careful study of all the information submitted with the application and other reliable data available to our engineers indicated that the gold-bearing material is too low in grade to sustain a successful mining operation.

Very truly yours,

D.M. Rait
D. M. RAIT
Chief, Mining Section

2/12/46

November 13, 1945

Mr. J. H. Byrd
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala Mine

Dear Mr. Byrd:

No mail was delivered here yesterday, but this morning I received yours of the 10th with enclosures.

The powers of attorney being dated should serve their purpose without difficulty and I think that the other information which you have given me, either on the application sheet or in your letter and financial statement will enable me to answer all of the questions in the application which is already prepared in rough.

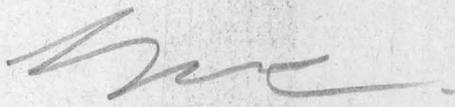
The application together with the exhibits must be sent in duplicate to the R. F. C., and since I had not retained duplicate copies of the reports, etc., a very substantial amount of typing is involved. I propose to send copies of the reports of Tovote and Farish as well as copies of my report with the maps.

I am limiting the present application to \$20,000 since the information circular states that this is the greatest amount which will be granted on account of the original application, and Washington would be likely to turn down any request for a larger sum of money; however, further loans may be obtained after the first \$20,000 has been expended and if the results of the work favorable up to that time there should be no difficulty in obtaining supplementary accommodations.

I note that you will leave for Denver shortly and I shall go right ahead with the filing of the application and will do everything possible to see that it receives prompt consideration.

Yours very truly,

GMC: IW


Re Martin the - ok. L. J.

December 3, 1945

Mr. R. A. Byrd
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

As per telephone conversations, etc. I went to Salome on the afternoon of November 27, and there met your brother also Mr. Diller and Mr. Wood.

The following day we went to the Harqua Hala Mine and spent the morning going over the surface of the property and also some maps which I had with me and some reports.

I think that Mr. Wood got a much clearer idea of the location and extent of the ore body than had previously been the case, particularly since he was able to note outcrops and workings on the Iron Vein.

However, you will note from copy of my letter to him which is herewith enclosed that I have been able to locate another map of which I will send him a print if he desires.

Mr. Wood felt that in so far as the interest of his company was concerned, he did not care whether the lower levels of the mine were unwatered or not, and since I feel that this would be quite an expensive procedure, let me suggest that you delay the same until after there has been some further correspondence with the R. F. C. which may outline their policy.

The large body of low grade ore which, I believe, may prove of value is practically all above the present water level but no doubt there is some higher grade ore in the vein that could be mined from below the level if the water were taken out.

I am enclosing herewith a statement of account for the month of November.

Yours very truly,

GMC:IW

Enclosures 2

January 7, 1946

Mr. J. H. Byrd
Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

Thank you for your letter of January 5 which I found this morning on returning to Phoenix, also for your check for \$125.00 in payment for my account which I have herewith receipted and am returning.

I am sorry that Dr. Schmitt should have had the bad luck to fall sick when recently visiting the Harqua Hala Mine, and if he could interest the New Jersey Zinc Company in that property, I should think it would be to your interest to try very hard to work out a deal as they would be excellent people to carry out a large operation.

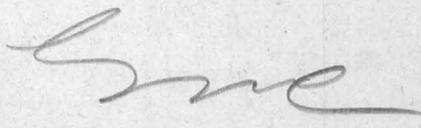
However since you seem to feel that it is unlikely that a mutually satisfactory arrangement can be reached with New Jersey Zinc, I will communicate in the near future with my friend from California mentioned in my last letter to you, and since I understand that he expects to be in Tucson at some time in the near future, it is very likely that he may call on you or otherwise communicate by letter. His name is Ralph H. Pfeffer and he has been operating to some extent in Yavapai County and also in the vicinity of the Vulture Mine for some years past and has always maintained an excellent reputation and met his obligations extremely promptly. I do not know just whom he represents, but understand that most of his funds come from personal friends in San Francisco.

I am interested in what you write concerning the assays obtained from surface material by Mr. Dillard, and I imagine that you will find that there is a wind-blown concentrate of gold values at many points on the surface as this was also the case with the old tailings pile, but in the tailings at least the gold values did not extend more than a few feet below the surface and sometimes only a few inches.

I regret to have missed your visit last Saturday but will hope to see you when you are again in Phoenix.

Your good wishes for the New Year are happily reciprocated.

Sincerely,



GMC: IW

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

January 5, 1945

A 1/7 46

Mr. George M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Dear Mr. Colvocoresses:

I am favored with your letter of January 2 and enclose check for \$125.00 being the balance due you on account.

Dr. Schmitt took quite sick with a bad cold or threatened influenza, and I had to keep him two days in bed in Wickenburg. After losing this much time, there was no possibility of our stopping to see you as we intended, in fact, Dr. Schmitt did not feel that he was able to stop and talk business. He will be back over this way probably before the end of the month, and I think he will want to talk with you. He says it will take \$15,000 to sample the open pit area of the Harqua Hala and that the New Jersey Zinc Co. will pay for the sampling if we can agree on a deal. Schmitt is an old close personal friend, and he is building up a general mining organization for the New Jersey Zinc Co. in the West, being under contract to give them half of his time. He was impressed with your report, and it was more on the strength of the report than anything else that he is willing to recommend a sampling job. He says it might cost as much as \$20,000 or possibly \$25,000 to make the sampling and tests that he would want to make. His conception of the kind of a deal that the New Jersey Zinc Co. would want would hardly suit us and could scarcely be made to square ^{with} Mr. Martin's contract requirements. I don't think, therefore, that we would be able to get together.

I am planning to put some men to work on the loose material lying on the mountain side between the canyon floor and the open pit. We have taken some samples of dirt and gravel and other loose material and plan an operation to perhaps crush the larger pieces of rock and screen loose material partly crushed and partly uncrushed, and I expect to start the work in the next few days. No ore either in the pit or rock in place will be mined or handled. This loose material after fifty or sixty years contains a large amount of scrap iron and steel which would ruin a crusher. My contract for having this work done calls for screening

2 - G. M. Colvocoresses - Jan. 5, 1945

this material out so that later in the event open pit mining is undertaken, the area will be free from metal. I stopped into your office to talk to you about this today and some other matters of importance, and I am going to try to see you again next week.

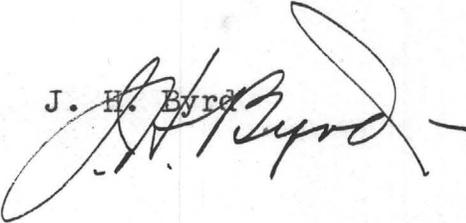
In view of what I have written above, I would be open to consider a proposition or to make a proposition on the Harqua Hala, and you may so advise your California clients.

Mr. Dillard has made some assays of loose material mentioned which has accumulated over a period of so many years and the results, I can say, are astounding. He also is now convinced that the dirt and gravel in the canyon floor can be made commercial although caliche will have to be crushed before the material is screened. I have arranged to start a small operation with this, but it may turn out to be a big one. ?

I hope you will have a fine New Year, and I am with regards,

Yours very truly,

J. H. Byrd



JHB:lc
Enc. Check

RECEIVED
JAN 10 1945

RECONSTRUCTION FINANCE CORPORATION

WASHINGTON

325 Heard Building
Phoenix, Arizona
November 16, 1945

ka

W. B. Gohring
11/17
45

Mr. G. M. Colvocoresses
1102 Luhrs Tower
Phoenix, Arizona

Re: J. H. Byrd (Harqua-Hala)
Docket No. Phx. B-532

My dear Mr. Colvocoresses:

I acknowledge receipt of the application of J. H. Byrd for a loan of \$25,000.00 on the Harqua-Hala gold mine in Yuma County, Arizona.

The data submitted is very complete as to the general features of the property and its former operations and history, but there is very little sampling data that has a bearing on the objectives of the proposed loan, presented in support of your own opinion, and that of others you submit, that there is a large tonnage of commercial gold ore here. I do not know just what attitude the R.F.C. would take as to their authority to grant a loan under these circumstances and I am therefore referring Mr. Byrd's application direct to them. They have previously had an application on this property which is not on file in this office and it may be that some of the data they already have will have a bearing on your application.

I am asking them for instructions and you will be advised shortly.

Yours very truly,

W. B. Gohring
W. B. GOHRING
Supervising Engineer

WBG:gmk



November 9, 1945

Mr. J. H. Byrd
Byrd Mining Operations
Post Office Box 5226
Tucson, Arizona

RE: Harqua-Hala

Dear Mr. Byrd:

Your letter of the 8th did not carry any special delivery stamp and only reached my office at 2:00 this afternoon.

I shall be very glad to carry out your request in respect to making up the application for the development loan from the R. F. C., but as I told you this morning on the telephone, it will not be possible to submit this application until sometime early next week since the exhibits which must accompany it will have to be copied in my office and also I shall have to have prints made of the maps which can be done from the originals that I retained here when I prepared the report on the property for you last August.

After considerable delay I was able to get Gohring on the telephone and learned from him that while the application and exhibits must be made in duplicate, he will perhaps be able to forward one copy before the second copy is completed.

He says that it will be satisfactory for me to sign the application, etc. as your attorney, and attach the power of attorney which accompanied your letter.

The printed form which you sent was entitled "Experience Statement" and referred to sale and purchase of gold, having nothing whatever to do with an application for a mining loan, but I have obtained from Gohring's office the proper form of application, R. F. C. form L-340, and will proceed to have this filled out and attach the exhibits just as quickly as possible. This document will be delivered to Gohring and he promises to forward it promptly to Washington, but you must expect that there is likely to be a certain amount of delay in passing on the loan by the Washington officials, although Gohring and I will do all that we can to speed things along.

I note that you are now unwatering the mine which should not require any long time as it only makes some six or eight gallons per minute in dry weather, and I shall be interested to know if the lower levels are still starting up so that they would be accessible for examination.

Standing

Mr. J. H. Byrd--page 2

If the loan is granted and you so desire, I shall be very glad to act in an advisory capacity supervising the expenditure of the exploration and development money, but we can discuss that matter later as well as other points in your letter which I shall not attempt to answer at the moment as I shall have my hands full for awhile during the time that I am making up the loan. *applied*

Yours very truly,

GMC: IW

PS The duplicate power of attorney enclosed with your letter was not dated and hence would have no legal force or effect. Same is herewith returned and will you kindly affix a date which should also be affixed by the notary public so that I can present this document with the application for the loan. The date should preferably be November 8, 1945.

I am also enclosing one of the application forms which, although it mentions a mining loan must be used, according to Gohring, for a development loan as well.

Under Exhibit A note several items which I have marked in pencil and which you will have to answer unless you wish me to leave them blank. I think that I can handle all of the questions which I have not marked on the enclosed.

Enclosures 2

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

November 8, 1945

Mr. George M. Colvocoresses,
1102 Luhrs Building,
Phoenix, Arizona.

Dear Mr. Colvocoresses:

28000
I wish to make an application to borrow \$25,000.00 from The Reconstruction Finance Corporation for core drilling and/or other exploration work on the Harqua-Hala, and I would like for you to make the application for me, either as agent or attorney-in-fact if you have no objection.

During the summer after talking with Mr. Gohring and Mr. Lane, I was very much discouraged about the probability of securing Reconstruction Finance Corporation money for this purpose. After studying the matter over I wrote to the Washington office on October 14th, and received a reply dated October 24th. I enclose a copy of the letter and the reply.

You will note that in my letter I undertook to carefully state all essential facts that I have secured about the property, as well as the substantial details of my contract with The Bonanza & Golden Eagle Mining Company. The letter I received from Washington in response to my letter, convinces me there will be no difficulty in securing the loan. I have other reason to believe that the loan will be available.

X I also enclose a copy of a letter I wrote to Mr. Martin on November 1st, together with a copy of his reply dated November 3rd. I want the application to make it very clear that the property is not pledged but only my lease and option rights together with the proceeds of ore treated, all subject to my lease and option contract provisions.

If for any reason you prefer not to make the application as my agent or attorney-in-fact, I wish to employ you to fill out the details in the necessary forms and send them to me for my signature. I wish to get the application in as quickly as possible and on the theory that you will be able to make the application for me, I am executing and forwarding in this letter a power of attorney for that purpose.

I have equipment now on the ground and have employed Mr. Harry F. Green to pump out the water so that the lower levels can be sampled. I have found that the compressor which I secured at Wickenburg and shipped to Mr. Green, is in poor condition

Nov. 8, 1945

and this has delayed us somewhat. I will either have this compressor repaired by the people from whom I secured it or ship another compressor which I have at Duquesne and which will be available in a short time.

X
7
One reason that I wish to have you make the application, or at least prepare the application, is that I want it prepared in such a way as to meet Mr. Martin's approval. If, and when, the funds are available I would like to have you direct the exploration work. You have at hand the facts and figures, or at least more dependable facts and figures as to the several operations on the property than anyone else and that is another reason why I think it is better for you to make or at least prepare the application for me. Probably with Mr. Martin's help you can approximate the production of previous operators closely enough to satisfy the requirements in the application.

Elliott?
Stans
The last man who ran a mill on the property is said, by some, to have not made a success of the operation. Fletcher Merrill, however, who had charge of the mining during this period, tells me that in his opinion this party netted at least \$50,000.00 which he got away with. If this is true, and Merrill is quite positive of the approximate sum, I assume there has never been an unprofitable operation of the property.

If it is possible, I would like to get the application in this week so that a copy can be forwarded to Washington. Along with the power of attorney and copies of the letters mentioned, I am sending you one of the forms that Mr. Gohring's office sent me some months ago. I know the essential facts about the property but I would be lost in trying to fill out all the details required in the forms.

X
(2 copies)
After dictating the letter thus far, I have talked with you on the telephone and we appreciate your getting the application out as soon as convenient. The application has to be filed with Mr. Gohring in Phoenix and they will probably require several copies.

Very truly yours,

J. H. Byrd
J. H. Byrd

JHB:jpp
enc: 5

October 14, 1945

VIA AIRMAIL

The Reconstruction Finance Corporation
Gold Mining Loan Department
Washington, D.C.

Gentlemen:

X We are planning to pump the water out of the Harqua Hala, and have already secured a pumping compressor for this purpose. I have elaborate reports by W. Tovote and by George M. Colvocoresses. The latter report was made just a few weeks ago. These reports indicate that there are at least 200,000 tons in the old glory hole which was made by a cavein that will run between \$3.00 and \$4.00 per ton in gold without the richer portions of the vein material left in the old workings between the surface and the bottom of the caved area - and that, sweetened up with this richer vein material, open pit mining would recover ore of the value of \$4.00; that there are many thousands of tons in the lower workings that will average from \$11.00 to \$13.00; and that, within the area related to the old workings, there is a possible, if not a probable, 4,000,000 tons of presently commercial ore. I have an elaborate assy map of the lower workings, made by Mr. C. C. Thompson in 1914. Much of the best ore has been taken from the levels embraced by the assay map, but a large amount of ore remains with an average of \$13.69 on the old price of gold. The average of 457 assays, including several drifts of the barren country rock, shows an average value of \$11.20 per ton at the old price.

The regulations restricting the purposes for which gold mining loans can be made are no doubt very clear and, yet, I am not sure that I do not have a picture that would come within your requirements for a loan. As soon as I get the water pumped out, all of the mine above the 150-foot level would be very accessible.

X Assuming that these reports can then be in a general way verified, why can I not borrow the money necessary to undertake a development of more ore, or why would I not then qualify as a borrower under R.F.C. requirements? We need \$25,000.00 to do this work. I believe, there is enough commercial ore in sight now to justify a 150-ton mill, but this is all cyaniding material. If any very large additional tonnage were developed, I think much of it would be sulphide, in which case, as the doctors say, flotation would be "indicated". The picture we have now is that very likely a million tons of ore that would lend itself to cyaniding, and the possible, if not probable, additional 3,000,000 or 4,000,000 tons that might call for flotation.

X Please understand that everything that I have said is intended to deal with an area originally mined and its' environs. The entire oblong mountain, 2,400 feet north and south, and 1,600 feet east and west, is mineralized and Colvocoresses tells me that there is no reason to assume

Oct. 14, 1945

that other hot spots similar to that originally mined may not be discovered. Neither the area north, south, nor east of the old workings had been prospected to any great extent.

all
All the mining done on the property has been confined to highgrading. The extraction has been about 200,000 tons which produced 200,000 ounces of gold. I can pledge the ore in sight, including 200,000 or 300,000 tons in the open pit resulting from the cavein, which I think would be adequate collateral for any amount of money that I would need to borrow. I don't know whether the owners of the property would allow mortgaging the ground itself. However, the ore in sight in which my contract permits me to pledge is all the present visible security that has any value.

W
I have what I believe to be an exceedingly favorable lease and option contract on this property. I start off with \$100.00 per month minimum royalty payment which I have paid for several months, about January 1st the royalty increases to \$200.00 per month, and, after nine months, to \$600.00 per month minimum. The exploration work which I want to do should be completed before the \$600.00 monthly minimum becomes effective. The royalty is 5% on recoverable values of \$5.00 or less per ton; 7½% on recoverable values between \$5.00 and \$10.00 per ton; 10% on values between \$10.00 and \$15.00 per ton; and 15% on values exceeding \$15.00 per ton of milled or recovered gold. All minimum monthly payments for royalty apply on the purchase price of \$250,000.00. Also, I have to pay to the owners \$3,000.00, and to others \$10,000.00 in January, which I am prepared to pay, together with all the monthly minimums out of my own funds.

*to associates
& am buying out.*
The property is located in Yuma County, 8½ miles southwest of Salome, Arizona, and is very accessible in every way. Eight miles of water line have been built to the property from the Centennia Wash where there is an unlimited supply of water for a mill of any size. This line, aside from minor repairs, is in excellent condition. There are several good houses on the property. All taxes are paid. The title has been held by the same owners for 50 years. Acreage is about 100 acres. The vertical depth of the mine is about 350 feet, and the only water in the mine is accumulated surface water which can be pumped out in a few days. The core drilling, including water and fuel, can be contracted for about \$3.00 per foot.

Before designing or building a plant to treat the Harqua Hala ores, the potentialities of the property should be explored to determine not only the amount of ore available but the size and type of plant required.

I doubt whether, in the entire southwest, there is a mine where as much commercial gold ore is likely to be developed with such a small amount of money needed as the Harqua Hala.

Please let me hear from you.

Very truly yours,

J. H. Byrd.

RECONSTRUCTION FINANCE CORPORATION
Washington 25, D.C.

October 24, 1945

Mr. J. H. Byrd,
P. O. Box 5226,
Tucson, Arizona.

Dear Mr. Byrd:

We have given careful consideration to your letter of October 14, 1945, in the light of the information contained in your earlier letter addressed to Mr. R. C. Allen, Vice President of Metals and Minerals, War Production Board.

Inasmuch as you plan to unwater the Harqua Hala mine and render the underground workings accessible for inspection, we will be pleased to give consideration to an application for a development loan.

If you decide to file an application, the necessary forms may be obtained from our Supervising Engineer, Mr. W. B. Gobring, at Phoenix, Arizona.

Very truly yours,

Chas. W. Tully - Signed

CHAS. W. TULLY
Assistant Chief, Mining Section.

See you as King -

November 1, 1945

Mr. Donald M. Martin,
44-1/2 North First,
Phoenix, Arizona.

Dear Mr. Martin:

I believe I wrote you that we are preparing to unwater the mine and it is likely that in the near future we shall have some strong interests associated with us in carrying out our plans for the Harqua-Hala.

On the other hand I would like to say to you in very great confidence that I have a letter from Washington indicating that there will be no trouble in securing the necessary money to carry out my plans, from Reconstruction Finance Corporation, if we should decide to use Reconstruction Finance Corporation funds.

According to present regulations the Reconstruction Finance Corporation requires either a mortgage on the property or other security outside of the proceeds of the mine, but in this particular instance I can get the loan, I think, by pledging only the proceeds of the mine and strictly subject to payment of your royalties. In other words, your royalties would come first but any other profits made would have to apply on the Reconstruction Finance Corporation loan until it was paid off.

I thought there was a clause in the contract that gives me the right to make such an agreement although I think I would have that right any how without impairing any of your rights. I remember talking with you about it and I thought we had that provision in the contract but in looking it over today I cannot find any such consent or provision and it may be that in the near future we shall want to have your consent to such a loan, with the understanding that there is no mortgage on the property.

I think we will go ahead and make the application for the loan even though we may decide not to use Reconstruction Finance Corporation money.

The parties who will likely join us might be glad to have the Reconstruction Finance Corporation loan to take care of the preliminary investment. I think we will make the first application for \$25,000.00. Then as we progress and need more money, I am sure we can get it from Reconstruction Finance Corporation, both for further core drilling, exploration work and plant construction if that should be desired.

Regards,

Very truly yours,

BONANZA AND GOLDEN EAGLE MINING CO.
44 North First Avenue,
Phoenix, Arizona.

November 3, 1945

Mr. J. H. Byrd,
P. O. Box 5226,
Tucson, Arizona.

Dear Mr. Byrd:

We were glad to learn from your letter of November 1, that you have the equipment on the ground and will soon start unwatering the mine.

You will probably recall from our conversations that we would object to placing a mortgage on our property to secure a loan from the Reconstruction Finance Corporation. However, we would not object to such a loan provided it did not impair our rights or our rights with you under our contract.

Yours very truly,

BONANZA & GOLDEN EAGLE MINING COMPANY

BY: Donald M. Martin. - Signed.

November 15, 1945

Mr. W. B. Gohring, Supervising Engineer
Reconstruction Finance Corporation
Heard Building, Phoenix, Arizona

RE: Harqua Hala Bonanza Mine

Dear Sir:

At the request of Mr. J. H. Byrd, lessee of the above named property, and with the approval of the owner; also in line with our recent telephone conversation, I am herewith submitting in duplicate an application for a mining loan of \$25,000 on R. F. C. Form L-340.

To the first copy of this application and in support of same, I have attached copies of the following special exhibits:-

- Kept*
- (1) Power of Attorney, authorizing me to make this application, dated November 8, 1945.
 - (2) Agreement of Lease and Option to Purchase between Bonanza and Golden Eagle Mining Company and J. H. Byrd, dated June 28, 1945.
 - (3) Financial Statement of J. H. Byrd.
 - (4) Report on mine by T. E. Farish, dated January 29, 1906.
 - (5) Report on mine by W. Tovote, - no date but presumably made in 1915 or 1916.
 - (6) Report on mine by G. M. Colvocoresses, dated August 9, 1945, and accompanied by prints of maps marked Ex. A, B and C. *no dupl.*

To the duplicate copy of the application the same special exhibits are attached, except for (4) the Report by Farish, which is so much out of date that I doubt if you will consider it of any importance, and the claim map which accompanies (6) as Ex. A. No extra copies of these last two mentioned exhibits are available at the moment, but they can be prepared and forwarded later if you so desire.

*Also Expense Sheet Byrd & Co
" Claim & Ex B. J. Gopher*

Mr. W. B. Gohring--page 2

In connection with all the above I wish to call your attention to the fact that the Harqua Hala Mine was described quite fully in U. S. G. S. Bulletin #451 at Page 37; to which reference may be made concerning the general geology and ore occurrence although the mining situation has materially changed since that report was prepared in 1909.

The possibility of developing and working a large tonnage of low grade ore naturally does not seem to have occurred to the old operators, but now that so many other similar operations have proved to be successful, I am strongly of the opinion that the Harqua Hala should be thoroughly explored and developed with that end in view.

Yours very truly,

GMC:IE

PS Should Government regulations limit the amount of such a loan to a maximum of \$20,000, will you kindly consider the application as for \$20,000 in place of \$25,000?

November 15, 1945

Mr. J. H. Byrd
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala Mine

Dear Mr. Byrd:

A letter from your secretary, dated November 14, arrived this morning enclosing an extra copy of my report on the property with a print of the assay map, also an extra copy of the Tovote report. An extra copy of my report had already been made in this office but the Tovote report is used in making the application also the extra assay map, and unless Gohring insists on an extra copy of the Farish report and of the surveyors map of the claims, I believe that the duplicate copy of the application is all in order and will be sent to his office today, accompanied by my letter of this date of which a copy is attached hereto.

I hope that you are having a pleasant trip to Denver and that this application will receive prompt attention by Government officials.

I will keep you advised of progress.

Yours very truly,



GMC: IW

Enclosure

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

November 14, 1945

W 11/15/45

Mr. George M. Colvocoresses,
1102 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvocoresses:

Your letter of November 13th received and since Mr. J. H. Byrd will not return from his Denver trip until probably tonight, I am sending copies of the reports to which you referred in your letter to him.

I am sending copies of these reports in order to save you the cost of time and typing the reports and thus facilitate the forwarding of the application to the Reconstruction Finance Corporation.

Respectfully yours,

Lois W. Sullivan

Lois W. Sullivan, Sec'y.

LWS:jpp
enc: 3

Colvoco Report - already copied
Invoice " - used
Assy report - control used

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

November 10, 1945

A. 11/13. 45

Mr. G. M. Colvocoresses,
1102 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvocoresses:

Your letter of November 9th. I am returning the power of attorney and also the application blanks which I prefer for you to sign for me.

You go ahead and do the best you can. I am entirely satisfied to leave everything in your hands. The power of attorney should give you ample authority to do anything you need to do. If not I will make it so if you will advise me anything more that is needed to give you the necessary authority.

I am leaving for Denver and will be gone perhaps a week and this is your authority in making the application to handle the matter just the same as if you were doing it for yourself.

Yours very truly,

J. H. Byrd

J. H. Byrd

JHB:jpp
enc: 2

I enclose financial statement so if you want to use it - O.K. I consider my mining interests to have a value of nearer \$250,000.00, altho as presently developed, they would not bring that much!

J. H. Byrd

*My additional information provided -
JHB:jpp
529
89 29 85 2032*

August 13th, 1945

Mr. J. H. Byrd
P. O. Box 5226
Tucson, Arizona

RE: Harqua Hala Mine

Dear Mr. Byrd:

Am enclosing two more copies of my report on this property, one copy having been mailed to you on the 11th.

I am very sorry that this work was delayed for reasons which have been explained.

I shall be only too glad to give you any additional information concerning this property which I may possess or to further discuss your program of exploration, although I may be away from my office during much of the balance of this month.

Am also enclosing statement of account.

With all good wishes for the success of your venture, I remain

Yours very truly,

George M. Colvocoresses

Statement of Account

August 13th, 1945

Mr. J. H. Byrd
c/o Byrd Mining Operations
P. O. Box 5226, Tucson, Arizona

to
G. M. Colvocoresses

For report on Harqua Hala Bonanza Mine as per agreement	\$ 250.00
Less, check on account 8/6/45	<u>100.00</u>
Balance due	150.00

Received payment

November 17, 1945

Mr. J. H. Byrd
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala Mine

Dear Mr. Byrd:

Mr. Gohring has acknowledged the application for the \$25,000 loan which was delivered to him on the 15th, and in this connection he writes as follows:

"The data submitted is very complete as to the general features of the property and its former operations and history, but there is very little sampling data that has a bearing on the objectives of the proposed loan, presented in support of your own opinion, and that of others you submit, that there is a large tonnage of commercial gold ore here. I do not know just what attitude the R.F.C. would take as to their authority to grant a loan under these circumstances and I am therefore referring Mr. Byrd's application direct to them. They have previously had an application on this property which is not on file in this office and it may be that some of the data they already have will have a bearing on your application.

I am asking them for instructions and you will be advised shortly."

Of course the low grade ore in the mine has never been properly sampled and the great bulk of it is inaccessible and can only be investigated by additional underground work or particularly by drilling. This was made very clear in my report and the other data which accompanied the application.

His reference to a previous loan application on this property is not clear to me unless he refers to your letter which went direct to the R.F.C. in Washington, and that matter will probably be cleared up as soon as the authorities in that city receive the regular application.

I will keep you informed of all new developments.

Yours very truly,

GMC: IW

Mr. J. H. Byrd--page 2

PS Since the above was transcribed, I have your letter of the 16th and since Gohring did not comment on the fact that the application was made for \$25,000, I agree with you in thinking that the R.F.C. may grant this amount; although, we can not tell until Gohring hears from Washington.

I was pleased to learn that the Humphreys Gold Corporation of Denver will join with you in taking and operating the Harqua Hala property. I shall be very glad to discuss the situation with Mr. Wood when he comes to Phoenix.

You may rest assured that Mr. Martin will be very reasonable in respect to the terms of the lease agreement and I am quite sure that he will make any concessions that may seem to be in order, but consideration of this matter can be delayed until a later date.

Yours very truly,

BYRD MINING OPERATIONS

MAIN OFFICE
TUCSON, ARIZONA
P. O. BOX 5226
TELEPHONE 2032

November 16, 1945

A. 11/17
45

Mr. G. M. Colvocoresses,
1102 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvocoresses:

Thanks for your prompt handling of the application.

The Reconstruction Finance Corporation, in answer to my letter indicating that I needed \$25,000.00, stated in substance that they had given careful consideration to my presentation and I am quite certain that we will get the \$25,000.00 if we go to the mat for it.

I suggest, therefore, that you insist on \$25,000.00. The worst that can happen then is that they themselves will cut the loan. However, I don't think they will.

These observations, you understand, are not by way of criticism and I am sure you are doing a nice job for me.

I returned from Denver last night having executed while there a tentative agreement, under the terms of which Humphreys Gold Corporation will join us in the Harqua-Hala contract provided their preliminary inspection of the property makes it interesting. Mr. Wood, their chief engineer, will leave Denver as soon as he can get tires for his car, which will probably be Saturday or Monday. He will come directly here; bring his wife who expects to stop and visit friends in Phoenix. He understands that on this trip it will not be possible to see the mine unwatered because I advised him yesterday that the equipment which I had sent there has been found to be inadequate and we will probably have to have it unwatered by a contract.

What we are planning to do then is to have Mr. Wood inspect the surface, talk with you in Phoenix, and if possible arrange to discuss the property with Mr. C. C. Thompson. I am mailing Mr. Thompson copy of this letter at Bouse in the hope I can locate him, perhaps about Wednesday or Thursday of next week to talk with Mr. Wood. I may come with Mr. Wood, or one of my brothers may come with him and in any event we will arrange to have him get in touch with you as he goes through Phoenix.

The deal with Humphreys contemplates their joining us in the development of other properties as well as the Harqua-Hala and he will likely spend several days in this territory.

Mr. G. M. Colvocoresses
Page #2

November 16, 1945

If the loan should be restricted to \$20,000.00 that would not be enough to carry out the development provisions of my contract with Mr. Martin. It occurs to me that if the loan is so restricted, I might get Mr. Martin to agree that so long as I was carrying on the development work he would, for a reasonable time, extend the time limit required to do this work, perhaps from one to three months.

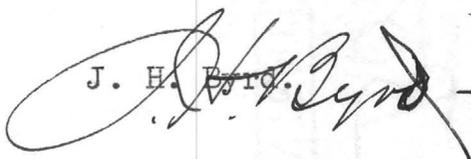
Another thought is that if the loan is limited to \$20,000.00 and the expenditure of that amount of money shows encouraging results, there would be no difficulty then in getting whatever additional money we needed from The Reconstruction Finance Corporation to continue the development. I am sure we could get another \$20,000.00 if results justified it. As a matter of fact, I have had in mind all along the probability that this property justified a \$40,000.00 to \$50,000.00 exploration program and it has been my intention, assuming the first expenditure was successful, to ask for enough more money to complete the exploration that I think the property justifies.

This answers your letter of November 15th and brings our correspondence up to date. I received the copy of the letter to Mr. W. B. Gohring, Supervising Engineer, presenting the application.

I am, with regards,

Yours very truly,

J. H. Boyd



JHB:jpp
cc: C.C.Thompson-Bouse, Ariz.
Humphreys Gold Corp.-
Denver, Colorado.

December 19, 1945

Mr. A. R. Byrd, Jr.
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala Mine

Dear Mr. Byrd:

I acknowledge yours of the 18th instant and thank you for the check for \$148.50 which was enclosed on account.

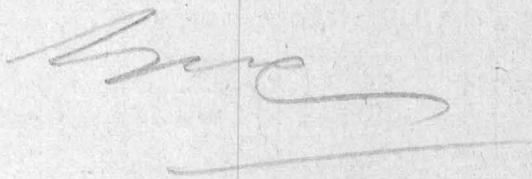
I am sorry that the Humphreys Gold Corporation decided not to proceed with the development of the Harqua Hala Mine, but I am pleased that Mr. Wood should have agreed with my opinion of the property, and in the last paragraph of my report to J. H. Byrd dated August 9, 1945, I also estimated that it would cost about \$25,000 to properly sample and investigate in order to determine its future value.

I think that Mr. Wood will find it very difficult to locate any property in which there will be indications of a large body of low grade ore where his company will not have to spend at least \$25,000 for preliminary sampling and investigation, and in many cases the amount will be much larger, but I presume that he is making a general investigation of quite a number of properties, and he may perhaps come back to you later in respect to the Harqua Hala.

I hope that your brother and Dr. Harrison Schmitt will call on me as they pass through Phoenix, and while I have not met Dr. Schmitt personally, I know him very well by reputation as he has done a great deal of work for the A. S. & R. Company, and his opinion regarding Harqua Hala should be most valuable if he takes the time to give the matter careful study.

Personal regards and wishing you all the compliments of the Christmas season.

Yours very truly,



GMC: IW

A. R. BYRD, JR.
MINING
TUCSON, ARIZONA

A. 12/19

P. O. BOX 5226

December 18, 1945

45

Mr. George M. Colvocoresses,
1102 Luhrs Tower
Phoenix, Arizona

Dear Sir:

I inclose herewith \$148.50, which is in payment for your expenses and one-half of the fee charged us as per your bill of December 3rd. The balance will be coming forward in the near future.

The Humphreys Gold Corporation, with whom we have had a contract, giving them an option to proceed with development of the Harqua Hala, have released the option and advised us that they would not proceed. My brother, J. H., had a telephone conversation with Mr. Wood today and he stated that he agreed with you in all matters in connection with the Harqua Hala but that they estimated that it would cost \$25,000 to sample the mine. In other words, they would have to spend this much before they could be sure of whether there was a sufficient quantity of commercial ore.

My brother has gone up to the Harqua Hala with Dr. Harrison Schmitt, a geologist from Silver City, New Mexico. I expect that they will call on you on their return through Phoenix.

Very truly yours,

A. R. Byrd, Jr.

L.W.S.

Check inclosed
ARB/S

Look up by report & note Byrd

January 2, 1946

Mr. J. H. Byrd
Post Office Box 5226
Tucson, Arizona

RE: Harqua Hala

Dear Mr. Byrd:

I am disappointed that you and Mr. Schmitt have not stopped in Phoenix on your way back from Harqua Hala, but I suppose that you probably passed through in the evening.

If you have been successful in arranging for cooperation from some company as a result of Mr. Schmitt's visit to the property, you will doubtless be proceeding with the development work at the mine in the near future.

In case you have not yet made any other arrangement, I wish to mention that one of my clients from California who seems to have very good financial backing was recently in my office and asked me particularly if I knew of any large, low grade gold mines that would be available.

I told him that I did not know of any such mine except such as required quite a substantial amount of money for exploration and preliminary development, and mentioned that one property in particular held a promise of proving up some 4,000,000 tons of \$3.00 to \$4.00 ore that could be worked by an open pit, but that an initial investment of some \$25,000 would be required to determine the actual tonnage of the low grade ore. I did not mention the Harqua Hala; although I had this in mind, and my friend said that if the said property were available, he would be very much interested to hear more details, and should you so desire, I would be very glad to put you in touch with him and give him any further information that you may think proper.

I wish to you and your organization a very happy and prosperous New Year.

I shall be leaving for a mining trip to California early January 3, but will be back here again by the first of the following week.

Enclosed herewith is a statement of account. — *D. J. D. 1/25/46*

Yours very truly,
[Signature]

January 9, 1946

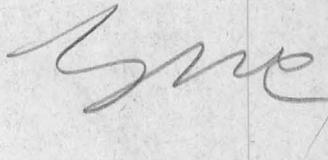
Mr. Jay P. Wood
C/o Humphreys Gold Corporation
First National Bank Building
Denver 2, Colorado

RE: Harqua Hala

Dear Mr. Wood:

Thank you for returning the documents listed with your letter of January 2, and while I regret that your company decided not to proceed with the furthering of exploration and development of the Harqua Hala Mine, I wish to express my personal pleasure at having met you and Mrs. Wood and to hope that you will drop in and pay me a visit in Phoenix any time that you may happen to be in this vicinity, and Mr. Edmund Newton also wishes to express similar sentiments and we wish to you and your company a very happy and prosperous New Year.

Sincerely,

A handwritten signature in cursive script, appearing to read "J. P. Wood", is written in dark ink.

GMC: IW

A. E. HUMPHREYS, PRESIDENT
I. B. HUMPHREYS, VICE-PRESIDENT

JUDSON S. HUBBARD
SECRETARY AND TREASURER

HUMPHREYS GOLD CORPORATION
FIRST NATIONAL BANK BUILDING
DENVER, COLORADO
(2)

January 2, 1946.

A. K. 46

Mr. George M. Colvocoresses,
Mining & Metallurgical Engineer,
1102 Luhrs Tower,
Phoenix, Arizona.

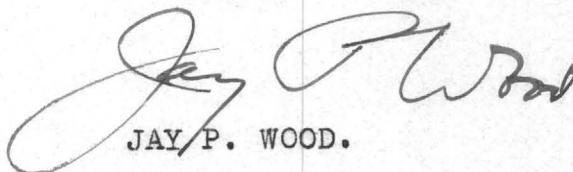
Dear Mr. Colvocoresses:

We are returning to you herewith copy of your report dated August 9, 1945, on the Harqua Hala Bonanza Mine, copy of report by W. Tovote, map of the Harqua Hala Mine, and excerpts from "Ore Deposits in Northern Arizona", U.S.G.S., Bul. 451.

We decided in December not to accept Mr. Byrd's proposals on this and the Oro Grande property.

Thank you very much for permitting us to use this material, and with kindest regards and best wishes for the New Year,

Yours very truly,


JAY P. WOOD.

JPW/MMH
Encs.

December 3, 1945

Mr. Jay P. Wood
910 First National Bank Building
Denver 2, Colorado

RE: Harqua Hala

Dear Mr. Wood:

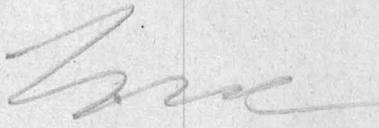
I have yours of November 3 from Wickenburg. I am glad to have you retain for a time the maps and reports on the Harqua Hala property which I loaned you, and I note that you will have an opportunity to discuss them with your associates in Denver.

Since returning here I have finally succeeded in securing a topographical map of the property which I had loaned some months ago to the Arizona Bureau of Mines, and if you would care to have a print of this map, I should be very glad to have a print made and send it to you. It shows the contours of the surface over a much greater area than the other maps now in your possession and locates the Quinn Shaft and some other workings.

Please let me know if you would like to have a copy.

Yours very truly,

GMC: IW



910 FIRST NATIONAL BANK BUILDING
DENVER 2, COLORADO

A 12/13

Wickenburg, Ariz 45
11/30/45

Mr George M. Colvocoresses
1102 Lubus Tower
Phoenix, Ariz

Dear Mr Colvocoresses:

My pen is as dry as Hall's frog
at Palome so I'll have to use pencil. My plans are
changed somewhat. Instead of returning through Phoenix
I am going to Prescott and Flagstaff in the morning, so
will have no chance to see you again on this trip.
As I have no adequate envelope with me in which to
return the Hargra-Hala map and your report as well
as the report by Tovote, and the excerpts from Bulletin
451, I'll take them with me and mail them back from
Denver. Hope you won't mind this deviation from
the plan when I left you at Palome. It will give me
a chance to discuss the project with Mr Humphreys to
better advantage than is possible with the small photo-
stat map we have at the office.

Please remember me to Mr Newton.
Hope to have the pleasure of seeing both of you when I
get this way again. Thanks very much for your

HARQUA HALA

Notes, RE: Trip to Salome and mine on November 27 and 28, 1945 with Edmund Newton.

Drive to Salome (112 miles) on afternoon of 27th and there met C. A. Byrd and Miss Harris (Secretary) and George Dillard of Wickenburg also Jay P. Wood, Engineer for I. B. Humphreys Gold Corp. of 1st Nat. Bank Bldg., Denver, and Mrs. Wood.

On morning of 28th Newton and I drove out with Wood to Harqua Hala Mine and went over maps, reports, and portion of surface with Dillard and showed location of Iron Vein and body of low grade ore near surface of which Wood got a clear idea for the first time.

Wood is not interested in having the lower levels of the mine unwatered. Water now stands on 6th level and Fletcher Merrill has told them of the ore which was formed in the Bonanza Vein on the 7th, 8th, and 9th levels, the quantity of which I think he has exaggerated.

Wood seemed to be fairly well impressed with situation and Dillard pointed out the possibility of screening out the fines in the low grade mass which in his opinion would carry most of the values.

Returned to Phoenix in afternoon with Newton.

The Quinn Shaft mentioned in the various reports seems to be off the maps that I have and may develop another vein in the footwall of the Iron Vein in which case there may be a deeper stratum of low grade ore and this possibility should be investigated.

APPLICATION FOR A MINING LOAN

This application should be prepared and executed *in duplicate*, excepting as to maps, assay reports, and other documents of which it is difficult to furnish more than one copy. Both copies should be delivered or mailed to the nearest RFC Loan Agency, or Mining Section Field Office, or they may be mailed to Reconstruction Finance Corporation, 811 Vermont Avenue NW, Washington 25, D. C. For identification, name of applicant should appear on each sheet of application and accompanying papers.

NAME OF APPLICANT: J. H. Byrd
ADDRESS: # P. O. Box 5226 (128 N. Church St) Tucson Arizona
Number, Street or Building, etc. City State

NAME OF CORRESPONDENT: George M. Colvocoresses (Power of Attorney Attached)
ADDRESS: 1102 Lehrs Tower Phoenix Arizona
Number, Street or Building, etc. City State

Location of mine: County Yuma State Arizona Nearest railroad station Salome
is 8.5 miles from the mine. Mineral or metal produced: Gold

Applicant hereby applies to RFC for a loan of \$ 25,000.00 for the purposes herein stated.

Applicant is not at the time of making this application indebted to RFC in any amount, and neither the applicant nor anyone on applicant's behalf has applied to RFC heretofore for a loan, except as follows: (Insert "No exceptions" if none)

If a loan is approved, applicant requests that the proceeds of the loan be disbursed to and deposited in Valley National at Phoenix Ariz.
Name of Bank City State

or a bank selected by RFC, for the use of applicant for the purposes of the loan, under the supervision of RFC.

(No fees or commissions shall be paid by applicant for the purpose of procuring a loan, but reasonable compensation may be paid for proper services actually and necessarily rendered to applicant. Applicant agrees that all such compensation shall be subject to the approval of the Corporation.)

All fees, commissions, salaries, charges, compensation, and things of value paid or delivered or agreed to be paid or delivered, or contemplated to be hereafter paid or delivered by or on behalf of applicant in connection with the application and/or any loan granted, are as follows: None except for professional services in preparation of documents, maps, estimates etc.
(If none, so state)

Applicant warrants the representations in the application and exhibits to be true and complete, and authorizes Federal, State, Municipal, and other authorities to permit representatives of RFC to have full access to and to furnish RFC with any and all information, records, reports, returns, and files pertaining to or filed by or on behalf of applicant.

Dated: Nov 15, 1942

Signed: J. H. C.
a per George M. Colvocoresses

(Corporate application to be executed by the President and Secretary with corporate seal affixed; partnership application to be executed by a general partner. If any signature is under a power of attorney or trust agreement, attach a copy of such document.)

See Exhibits attached for information and papers to be attached hereto.

Exhibit A (Item 4)

Applicant has had 35 years of business experience including 20 years in banking and financing and 15 years in mining operations in the United States and Mexico.

Applicant intends to place technical direction and management of exploration work etc. in charge of G. M. Colvocoresses who has had over 40 years of mining experience; the last 30 of which was in Arizona where he was general manager of the Consolidated Arizona Smelting Company and its successor, the Southwest Metals Company at Humboldt, from 1913 to 1930, and subsequently has practiced as a consulting engineer with office at 1102 Luhrs Tower, Phoenix.

Is registered as a Professional Mining and Metallurgical Engineer in Arizona, #761.

APPLICATION FOR A MINING LOAN

EXHIBIT A

Supply the following information on separate sheets, and attach the following documents, arranged, numbered and lettered to correspond herewith. *This is required as a part of all applications.*

1. IF APPLICANT IS A CORPORATION, SUPPLY THE FOLLOWING:

- (a) Principal office and place of business.
- (b) When organized, and under laws of what state.
- (c) Other states in which qualified to do business.
- (d) Names and addresses of all officers and directors.
- (e) Amount and kind of capital stock or corporate securities issued and outstanding.
- (f) Copy of Articles of Incorporation, By-Laws, and certificates of authority to do business, with all amendments to date.

had a corporation

2. IF APPLICANT IS AN INDIVIDUAL OR A PARTNERSHIP, SUPPLY THE FOLLOWING:

- (a) Names and addresses of all partners; indicating if any are limited or special partners.
- (b) Copies of all partnership affidavits and agreements.
- (c) Statement of marital status of the individual or all partners, and the names of husbands and of wives.

Individual

3. FINANCIAL STATUS; LITIGATION:

Married, name of wife Helen Hall Byrd.

- (a) Submit current financial statement (following page), and state terms of notes payable, mortgages, debts, etc., giving maturity dates, rate of interest, etc.; and describe any other liens. Give a complete list of creditors, including taxes, assessments, fees, etc. *(See statement attached)*
- (b) If applicant or the mining property is or has been recently involved in receivership, bankruptcy, or reorganization, or in any title dispute or litigation, or if applicant has made an assignment for or compromised with creditors, explain fully. *Property has not been involved in any title dispute or litigation for many years.*

4. EXPERIENCE: Give in full the mining and general business experience of the applicant and of the person who will manage the project.

See sheet attached

5. APPLICANT'S INTEREST:

- (a) Attach copy of the deeds, leases, or other documents conveying to applicant the present interest of applicant in the mining property. *Copy of lease attached*
- (b) If applicant has assignment of a lease or other document, attach also the copy of such lease or other document. If any such documents are executed under a power of attorney or a trust agreement, attach copy of such power or agreement.
- (c) Include all recording data if available, - *noted in copy of lease.*

6. LEGAL DESCRIPTION. SUPPLY THE FOLLOWING:

- (a) Mining district in which property is situated, section, township, and range.
- (b) Names and survey numbers of patented claims, and a map.
- (c) Names, dates of location, place and date of recording, book and page record of all unpatented locations, and a sketch map.

See pages 14 & 2 of Cobrocoensis Report, attached also maps Ex. A, with same

7. TYPE AND WORKINGS: State type of mine, whether open pit, placer, shaft, tunnel, and whether dry or wet.

See report on Cobrocoensis Report & maps Ex. B & C.

8. HISTORY AND PRESENT CONDITION: Give a full statement of previous development, operation, and production of the mining property, with reasons for suspensions, and include all information with regard to the mineral deposit.

- (a) Attach maps and sections of the mine workings, or if these are not available, pencil sketches, drawn to scale, or with dimensions otherwise shown. Show in detail the existing workings, noting caved areas and those areas proposed to be developed or mined.
- (b) Give all available assays of samples. State clearly how samples were taken and show on the map the location, width, and assay of each sample, with numbers corresponding to those used in assay reports and certificates. Attach certificates, when available. In case of placer deposits, give the values obtained from each shaft or drill hole and state how the values were determined. Submit logs of all drill holes or shafts. Show estimated yardage and value.
- (c) List present equipment on the property and describe its condition. *Equipment probably worthless, - some building in fair condition.*
- (d) Give character and state of repair of road to the mining property. *Good dirt road from Salome to mine.*
- (e) Furnish any reports available that apply to this application, including results from any metallurgical investigations. Give present name and any old names by which the property has been known. *See sheet attached*

See attached reports by Cobrocoensis, Smith & Farish.

9. WATER SUPPLY: State whether water supply for all proposed operations is sufficient during all seasons of year. State amount in gallons per minute, miners' inches, or second-feet. If available, state the maximum, minimum, and average flow. Describe the source of the water supply, its dependability, water rights, etc.

See Cobrocoensis Report pages 14 & 15.

APPLICATION FOR A MINING LOAN

10. PURPOSES OF LOAN: Specific purposes for which applicant proposes to expend proceeds of loan applied for. (Detailed information should be given.)

Nature of Expenditure	Amount
<p>Sampling of ball rock between and around the old stopes from which high grade ore was mined with some short drifts and cross-cuts; - had mostly core drilling from surface & underground workings to determine tonnage & value of low-grade ore left in area between surface & 300 ft depth which could advantageously be mined by glory hole</p>	<p>\$ 2,500.00^(X)</p>

Expenditure of first \$20,000 should permit approximate estimate of final results.
 (If additional space is required, use separate sheet numbered as above)

11. Indicate amount of loan funds required for first 90 days' operation. *about 7500.00*

12. Give Current Financial Statement as of *Nov 10th 1945* attached in connection with Item 3, Ex A.
Date

Assets

CURRENT ASSETS:

- 1. Cash
- 2. Notes Receivable
- 3. Accounts Receivable
- 4. Inventories, materials on hand, etc.

TOTAL CURRENT ASSETS

FIXED AND OTHER ASSETS:

- 5. Plant, lands, and buildings used in business
- 6. Machinery
- 7. Equipment, furniture, fixtures, etc.

Use & possession granted under the terms of the lease.

TOTAL ASSETS

Liabilities

CURRENT LIABILITIES:

- 8. Notes Payable
- 9. Accounts Payable
- 10. Other current liabilities

None in connection with this operation except as set forth in lease.

11. Liabilities accrued but not yet payable (interest, rent, taxes, wages, payments, due on account of leases, options, or other contracts, etc.)

TOTAL CURRENT LIABILITIES

FIXED AND OTHER LIABILITIES:

- 12. Mortgage debt, etc.
- 13. Contracts for lease, royalty, or purchase which constitute charges:

14. Other liabilities (describe)

TOTAL LIABILITIES

15. Contingent liabilities (describe)

INSTRUCTIONS.—In addition to the foregoing statement, attach a copy of latest balance sheet.

Exhibit B.

(1) Maps B and C show location of old workings which are wholly or partially surrounded by lower grade ore the tonnage and average grade of which it is expected to determine by the exploration and development for which this loan is requested.

(2) No production from this mine in recent years.

(3) If body of commercial ore is developed it will have to be milled on the property as it could not stand shipment to any custom mill (none operating in this locality) nor to a smelter.

(4) See Colvocoresses' Report, page 15.

(5) Power

For exploration and development work small individual power units will be used.

Should mining and milling be later undertaken on a large scale it is understood that arrangements can be made to connect with the nearest power line of the U. S. Reclamation Service which passes a few miles north of Salome. The initial cost of obtaining this power would probably be in the order of \$20,000 and, judging by the rates charged to other large users of power, the price at which it might be sold should not exceed 4 to 5 mills per kw. hour.

(6) (a) Prior to the war the labor supply in this district was generally satisfactory and such a condition may again be expected by the time that large scale operations can be started.

Exhibit B (continued)

(b) & (d) While only exploration and development is in progress a crew of 10 or 12 men should be sufficient and present living accommodations with some minor repairs should house them comfortably.

(c) Men will probably receive the current wage scale paid by the copper mines, - say \$7.50 to \$8.50 per shift.

(7) Applicant's equity in this property is based entirely upon the Lease and Option, of which copy is attached. The title held by the Lessor is believed to be absolutely valid.

APPLICATION FOR A MINING LOAN

EXHIBIT B

(See separate sheet attached)

Supply the following information on separate sheets and attach the following documents, arranged, numbered and lettered to correspond herewith. This is required as a part of all applications.

1. On maps and drawings, show location and extent of proposed development. If mine contains blocked-out ore, show also the location, tonnage, and grade of ore blocks. *(See map)*
2. State recent daily, monthly, and annual production (if any) and proposed production. *none*
3. Explain fully whether the product produced is or is to be milled on the property, shipped to custom mill or smelter, or shipped direct to the mint, or otherwise marketed. In any case, supply all cost data with regard to marketing, including cost of smelting or custom milling. *to custom mill and if done would a later mill build to be erected on prop.*
4. Estimate cost of mining and milling, past and proposed:
 - (a) Detailed mining cost, per ton (or other unit) of product, and per foot of development work.
 - (b) Detailed milling cost. *no part records available from by cost of large hole dig & also*
5. POWER:
 - (a) Give detailed estimate of total power requirements. *depend on scale of op.*
 - (b) Give distance to nearest electric power line. *about 1/2 mile*
 - (c) Give cost of electric power at nearest point available for purchase and cost of extending line. *prop*
 - (d) Give cost of electric power used on nearby properties. *Public power*
 - (e) State kind and cost of any other power to be used. *from nearby business*
6. LABOR:
 - (a) Are experienced workmen, such as miners, millmen, etc., available in district? *by the mill he will go*
 - (b) State number of additional men who will receive employment because of loan. *10-15 this day*
 - (c) Make brief statement as to current wage scales. *cannot give scale*
 - (d) What facilities does applicant have for housing workmen? *office by hand*
7. If a loan is approved, evidence of applicant's title to the mining property, with title opinion by applicant's attorney, usually will be required. *title held by you & I delinquent - accord & loan if you & partner & I own*

FOR GENERAL LOANS.—If a General Loan is being applied for, supply also the information and documents required by Exhibit C, on following sheet.

APPLICATION FOR A MINING LOAN

EXHIBIT C

If a General Loan is being applied for, supply the following information on separate sheets and attach the following documents, arranged, numbered and lettered to correspond herewith.

1. Outline briefly any trade agreement and/or close affiliation through stock ownership, interlocking directorates, mutuality of management, or otherwise, with any other concerns.
2. Give the names and addresses of former owners, so far as known.
3. State in detail expenditures made by applicant since acquisition of mining property, also amount expended by applicant's predecessor if there is any common interest between such predecessor and applicant.
4. (a) If the property is in operation, how many men are employed?
(b) If the loan is made, what will be capacity of operation, and how many men will be employed?
5. ORE OR MINERAL RESERVES:
 - (1) If deposit is other than placer:
 - (a) Submit maps showing location of each ore body or mineral deposit in the mine. If mine has more than one working level, submit a composite map and a map of each level separately.
 - (b) Show on the level plans the location, width represented, and analysis of each sample taken. Number each sample to correspond with certificate of analysis.
 - (c) Submit section along plane of ore body or mineral deposit showing blocked-out reserves, probable reserves, stoped areas, and any old workings; designate inaccessible areas.
 - (d) Show on section maps the location, width represented, and analysis of each sample taken from raises, shafts, drifts, stopes, and winzes. Number each sample to correspond with certificate of analysis.
 - (e) Give detailed estimates of developed tonnage and method and analyses used in estimating same. If more than one ore body or mineral deposit, list each separately.
 - (f) Give detailed estimates of probable reserves and supporting data.
 - (g) Explain method of taking samples in detail, whether channel, drill hole, etc.
 - (2) If a placer deposit:
 - (a) Give estimated yardage and value of ore-bearing gravel and method of testing and calculating the same. If more than one deposit, list each deposit separately.
 - (b) Submit map showing location of ore reserve yardage and location of all holes drilled or shafts sunk to prove values and yardage of gravel. Number to correspond with drill or shaft log and show depth and values of each hole or shaft.
 - (c) Describe gravel, stating whether it is fine, medium, or coarse; loose, tight, cemented, or frozen, and whether it contains boulders more than 1 foot in diameter; if so, how large, and in what proportion.
 - (d) Describe bedrock, giving type (granite, sandstone, shale, etc.) and stating whether it is hard or soft; smooth, uneven, or rough.
 - (e) Describe overburden, stating whether loose, tight, or cemented; and fine or coarse texture, and furnish estimate of amount.
6. State any known production of neighboring properties with dates and names, and references to source of information.
7. Describe in detail mining method to be used.

APPLICATION FOR A MINING LOAN

8. MILLING:

(a) If product is treated in applicant's mill or a leased mill:

- (1) State capacity, percentage of extraction, ratio of concentration, and submit flow sheet of mill.
- (2) Describe mill building, condition of same, etc.
- (3) Give inventory of equipment in mill building. State whether in good working condition.
- (4) State rental cost if leased mill.
- (5) State whether there is ample room for disposal of tailings.
- (6) State whether tailings pollute any streams, lakes, or other sources of water supply.
- (7) Submit tables showing complete total tonnage treated, tonnage of concentrates made, and analyses of heads, concentrates, and tailings, for the last year of operation.

(b) If product is sold to a custom mill:

- (1) Submit table showing complete total tonnage shipped, including settlement sheets for last year of operation. Give name and location of mill purchasing product.
- (2) Submit copies of all contracts with the mill covering purchase of ores or minerals.

(c) If applicant proposes to build a mill:

- (1) Describe proposed milling operation. *Depend on quantity of ore.*
- (2) Submit a flow sheet of the proposed mill, and state capacity.
- (3) Submit copies of all metallurgical or other tests. *Must give all*
- (4) Describe mill site showing location of mill with respect to mine. *old site*
- (5) State whether there is ample room for disposal of tailings. *yes*
- (6) State whether tailings may pollute any streams, lakes, or other sources of water supply. *no*
- (7) Submit detailed cost of proposed mill.
- (8) Submit, if available, plans and specifications of proposed mill. *Depends on quantity of ore*

9. SMELTING:

(a) If concentrates or ore are sold to a custom smelter: *Cyanide*

- (1) Submit tables showing tonnage of ore or concentrates shipped to smelter, including settlement sheets, for last year of operation. Give name and location of smelter purchasing same.
- (2) Submit copies of all contracts with the smelter covering purchase of ores or concentrates.

(b) If applicant proposes to build a smelter, describe in detail. *in*

10. Give complete information concerning method and cost of transportation.

11. If mine has been in operation, give operating costs by years for each year during the last five years. *not for last*

12. State sources of funds, and proposed schedule of repayment of the loan.

13. Fill in the following, or use separate sheets if necessary:

Collateral Offered as Security for Loan ?

Ore or mineral reserves	Estimated tons	Gross value per ton	Recoverable value per ton	Estimated cost of Production	Estimated profit per ton	Total Estimated profit
Developed reserves:		\$	\$	\$	\$	\$
Probable reserves:		\$	\$	\$	\$	\$

See report attached & letter from Applicant to the R. F. C. dated Aug 14th

Fill out as per pencil copy

APPLICATION FOR A MINING LOAN

This application should be prepared and executed *in duplicate*, excepting as to maps, assay reports, and other documents of which it is difficult to furnish more than one copy. Both copies should be delivered or mailed to the nearest RFC Loan Agency, or Mining Section Field Office, or they may be mailed to Reconstruction Finance Corporation, 811 Vermont Avenue NW, Washington 25, D. C. For identification, name of applicant should appear on each sheet of application and accompanying papers.

NAME OF APPLICANT: *J. H. Byrd*

ADDRESS: *Box 5226* *(128 N. Church St)* *Tucson* *Ariz.*
Number, Street or Building, etc. City State

NAME OF CORRESPONDENT: *George M. Colvocoresses* *(Power of attorney, attached)*

ADDRESS: *1102 Luhrs Tower* *Phoenix,* *Arizona*
Number, Street or Building, etc. City State

Location of mine: County *Yuma* State *Arizona* Nearest railroad station *Salome*

is *8.5* miles from the mine. Mineral or metal produced: *Gold*

Applicant hereby applies to RFC for a loan of *\$25,000.00* for the purposes herein stated.

Applicant is not at the time of making this application indebted to RFC in any amount, and neither the applicant nor anyone on applicant's behalf has applied to RFC heretofore for a loan, except as follows: (Insert "No exceptions" if none)

No exceptions

If a loan is approved, applicant requests that the proceeds of the loan be disbursed to and deposited in _____

Valley Natl Bank, at *Phoenix*, *Ariz*
Name of Bank City State

or a bank selected by RFC, for the use of applicant for the purposes of the loan, under the supervision of RFC.

(No fees or commissions shall be paid by applicant for the purpose of procuring a loan, but reasonable compensation may be paid for proper services actually and necessarily rendered to applicant. Applicant agrees that all such compensation shall be subject to the approval of the Corporation.)

All fees, commissions, salaries, charges, compensation, and things of value paid or delivered or agreed to be paid or delivered, or contemplated to be hereafter paid or delivered by or on behalf of applicant in connection with the application and/or any loan granted, are as follows: **None except for professional services in preparation of documents, maps, estimates, etc.**
(If none, so state)

Applicant warrants the representations in the application and exhibits to be true and complete, and authorizes Federal, State, Municipal, and other authorities to permit representatives of RFC to have full access to and to furnish RFC with any and all information, records, reports, returns, and files pertaining to or filed by or on behalf of applicant.

Dated: *November 15,* _____, 19*45*. Signed: _____

(Corporate application to be executed by the President and Secretary with corporate seal affixed; partnership application to be executed by a general partner. If any signature is under a power of attorney or trust agreement, attach a copy of such document.)

See Exhibits attached for information and papers to be attached hereto.

Copy

POWER OF ATTORNEY

STATE OF ARIZONA)
COUNTY OF PIMA) ss

Tucson, Arizona
November 8, 1945

This is to evidence that I, J. H. Byrd, of Tucson, Pima County, Arizona, do hereby constitute and appoint George M. Colvocoresses of Phoenix, Arizona, my true and lawful attorney-in-fact to execute for me in my name, stead, and place, and as fully as if I were my self present, any and all instruments, documents, papers and applications in connection with the matter of securing a loan of \$25,000.00 from The Reconstruction Finance Corporation, to be expended in exploration work on the Harqua-Hala mining property which I hold under lease and option contract from The Bonanza and Golden Eagle Mining Company. The authority herein granted shall continue for a minimum period of thirty (30) days from this date and thereafter until revoked. J. H. B.

I hereby confirm whatever my said attorney may do in the premises.

J. H. Byrd

NOTARY PUBLIC

STATE OF ARIZONA)
COUNTY OF PIMA) ss:

Personally appeared before me, Fred W. Fickett, a Notary Public, in and for said state and county, J. H. Byrd, and acknowledged his execution of the foregoing Power of Attorney.

My commission expires Feb. 15, 1947.

Fred W. Fickett
Tucson, Arizona
November 8, 1945

Exhibit A (Item 4)

Applicant has had 35 years of business experience including 20 years in banking and financing and 15 years in mining operations in the United States and Mexico.

Applicant intends to place technical direction and management of exploration work etc. in charge of G. M. Colvocoresses who has had over 40 years of mining experience; the last 30 of which was in Arizona where he was general manager of the Consolidated Arizona Smelting Company and its successor, the Southwest Metals Company at Humboldt, from 1913 to 1930, and subsequently has practiced as a consulting engineer with office at 1102 Luhrs Tower, Phoenix.

Is registered as a Professional Mining and Metallurgical Engineer in Arizona, #761.

Furnished in connection with Item
3 of Ex A of Application Blank

FINANCIAL STATEMENT OF J. H. BYRD
November 10, 1945

Assets:

Interest in other mining properties <i>more than</i>	\$ 50,000.00
Interest in unliquidated Sales Contract	12,500.00
Cash on hand	551.20
Total	<u>\$ 63,051.20</u>

LIABILITIES:

Contingent liability to the Valley National Bank, indorser on note	\$ 5,750.00
Current bills	<u>150.00</u>
Total	\$ 5,900.00

COPY

APPLICATION FOR A MINING LOAN

EXHIBIT A

Supply the following information on separate sheets, and attach the following documents, arranged, numbered and lettered to correspond herewith. *This is required as a part of all applications.*

1. IF APPLICANT IS A CORPORATION, SUPPLY THE FOLLOWING:

- (a) Principal office and place of business.
- (b) When organized, and under laws of what state.
- (c) Other states in which qualified to do business. **Not a corporation**
- (d) Names and addresses of all officers and directors.
- (e) Amount and kind of capital stock or corporate securities issued and outstanding.
- (f) Copy of Articles of Incorporation, By-Laws, and certificates of authority to do business, with all amendments to date.

2. IF APPLICANT IS AN INDIVIDUAL OR A PARTNERSHIP, SUPPLY THE FOLLOWING:

- (a) Names and addresses of all partners; indicating if any are limited or special partners.
- (b) Copies of all partnership affidavits and agreements. **Individual**
- (c) Statement of marital status of the individual or all partners, and the names of husbands and of wives.

3. FINANCIAL STATUS; LITIGATION:

- (a) Submit current financial statement (following page), and state terms of notes payable, mortgages, debts, etc., giving maturity dates, rate of interest, etc.; and describe any other liens. Give a complete list of creditors, including taxes, assessments, fees, etc. **See statement attached**
- (b) If applicant or the mining property is or has been recently involved in receivership, bankruptcy, or reorganization, or in any title dispute or litigation, or if applicant has made an assignment for or compromised with creditors, explain fully. **Property has not been involved in any title dispute or litigation for many years.**

4. EXPERIENCE: Give in full the mining and general business experience of the applicant and of the person who will manage the project. **If I am to handle the work I will fill in the latter part of this question. (see sheet attached)**

5. APPLICANT'S INTEREST

- (a) Attach copy of the deeds, leases, or other documents conveying to applicant the present interest of applicant in the mining property. **I will send copy of the lease. (Copy of lease attached)**
- (b) If applicant has assignment of a lease or other document, attach also the copy of such lease or other document. If any such documents are executed under a power of attorney or a trust agreement, attach copy of such power or agreement.
- (c) Include all recording data if available. **I will take care of this (Noted on copy of lease)**

6. LEGAL DESCRIPTION. SUPPLY THE FOLLOWING:

- (a) Mining district in which property is situated, section, township, and range.
- (b) Names and survey numbers of patented claims, and a map.
- (c) Names, dates of location, place and date of recording, book and page record of all unpatented locations, and a sketch map.

See pages 1 & 2 of Colvocoresses' Report, attached also map Ex. A with same

7. TYPE AND WORKINGS: State type of mine, whether open pit, placer, shaft, tunnel, and whether dry or wet.

See Colvocoresses' Report and Maps Ex. B & C.

8. HISTORY AND PRESENT CONDITION: Give a full statement of previous development, operation, and production of the mining property, with reasons for suspensions, and include all information with regard to the mineral deposit.

- (a) Attach maps and sections of the mine workings, or if these are not available, pencil sketches, drawn to scale, or with dimensions otherwise shown. Show in detail the existing workings, noting caved areas and those areas proposed to be developed or mined.
- (b) Give all available assays of samples. State clearly how samples were taken and show on the map the location, width, and assay of each sample, with numbers corresponding to those used in assay reports and certificates. Attach certificates, when available. In case of placer deposits, give the values obtained from each shaft or drill hole and state how the values were determined. Submit logs of all drill holes or shafts. Show estimated yardage and value.
- (c) List present equipment on the property and describe its condition. **Equipment probably worthless, some buildings in fair condition**
- (d) Give character and state of repair of road to the mining property. **Good dirt road from Salome to mine**
- (e) Furnish any reports available that apply to this application, including results from any metallurgical investigations. Give present name and any old names by which the property has been known. **I will supply this See attached reports by Colvocoresses, Tovote, and Farish.**

9. WATER SUPPLY: State whether water supply for all proposed operations is sufficient during all seasons of year. State amount in gallons per minute, miners' inches, or second-feet. If available, state the maximum, minimum, and average flow. Describe the source of the water supply, its dependability, water rights, etc. **I will supply this See Colvocoresses' Report pages 14 and 15.**

APPLICATION FOR A MINING LOAN

10. PURPOSES OF LOAN: Specific purposes for which applicant proposes to expend proceeds of loan applied for. (Detailed information should be given.)

Nature of Expenditure	Amount
Sampling of wall rock between and around the old stopes from which high grade ore was mined with some short drifts and cross-cuts, - but mostly core drilling from surface and underground workings to determine tonnage and value of low-grade ore left in area between surface and 300' depth which could advantageously be mined by glory hole.	\$ 25,000.00*
*Expenditure of first \$20,000 should permit approximate estimate of final results.	

(If additional space is required, use separate sheet numbered as above)

11. Indicate amount of loan funds required for first 90 days' operation. about \$7500.00

X 12. Give Current Financial Statement as of November 10, 1945 : attached in connection with Item 3, Ex. A
Date

Assets — None on property?

CURRENT ASSETS:

- 1. Cash \$
- 2. Notes Receivable
- 3. Accounts Receivable
- 4. Inventories, materials on hand, etc.
- TOTAL CURRENT ASSETS

FIXED AND OTHER ASSETS:

- 5. Plant, lands, and buildings used in business
- 6. Machinery Use and possession granted under
- 7. Equipment, furniture, fixtures, etc. the terms of the lease.
- TOTAL ASSETS

Liabilities — None in connection with lease?

CURRENT LIABILITIES:

- 8. Notes Payable None in connection with this
- 9. Accounts Payable operation except as set forth in
- 10. Other current liabilities lease.
- 11. Liabilities accrued but not yet payable (interest, rent, taxes, wages, payments, due on account of leases, options, or other contracts, etc.)
- TOTAL CURRENT LIABILITIES

OK
JHB

FIXED AND OTHER LIABILITIES:

- 12. Mortgage debt, etc.
- + 13. Contracts for lease, royalty, or purchase which constitute charges: Rental?
- 14. Other liabilities (describe) None?
- TOTAL LIABILITIES
- 15. Contingent liabilities (describe) None?

INSTRUCTIONS.—In addition to the foregoing statement, attach a copy of latest balance sheet.

Exhibit B.

- (1) Maps B and C show location of old workings which are wholly or partially surrounded by lower grade ore the tonnage and average grade of which it is expected to determine by the exploration and development for which this loan is requested.
- (2) No production from this mine in recent years.
- (3) If body of commercial ore is developed it will have to be milled on the property as it could not stand shipment to any custom mill (none operating in this locality) nor to a smelter.
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For exploration and development work small individual power units will be used.

Should mining and milling be later undertaken on a large scale it is understood that arrangements can be made to connect with the nearest power line of the U. S. Reclamation Service which passes a few miles north of Salome. The initial cost of obtaining this power would probably be in the order of \$20,000 and, judging by the rates charged to other large users of power, the price at which it might be sold should not exceed 4 to 5 mills per kw. hour.

- (6) (a) Prior to the war the labor supply in this district was generally satisfactory and such a condition may again be expected by the time that large scale operations can be started.

Exhibit B (continued)

(b) & (d) While only exploration and development is in progress a crew of 10 or 12 men should be sufficient and present living accommodations with some minor repairs should house them comfortably.

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APPLICATION FOR A MINING LOAN

EXHIBIT B (see separate sheet attached)

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1. On maps and drawings, show location and extent of proposed development. If mine contains blocked-out ore, show also the location, tonnage, and grade of ore blocks.
2. State recent daily, monthly, and annual production (if any) and proposed production.
3. Explain fully whether the product produced is or is to be milled on the property, shipped to custom mill or smelter, or shipped direct to the mint, or otherwise marketed. In any case, supply all cost data with regard to marketing, including cost of smelting or custom milling.
4. Estimate cost of mining and milling, past and proposed:
 - (a) Detailed mining cost, per ton (or other unit) of product, and per foot of development work.
 - (b) Detailed milling cost.
5. **POWER:**
 - (a) Give detailed estimate of total power requirements.
 - (b) Give distance to nearest electric power line.
 - (c) Give cost of electric power at nearest point available for purchase and cost of extending line.
 - (d) Give cost of electric power used on nearby properties.
 - (e) State kind and cost of any other power to be used.
6. **LABOR:**
 - (a) Are experienced workmen, such as miners, millmen, etc., available in district?
 - (b) State number of additional men who will receive employment because of loan.
 - (c) Make brief statement as to current wage scales.
 - (d) What facilities does applicant have for housing workmen?
7. If a loan is approved, evidence of applicant's title to the mining property, with title opinion by applicant's attorney, usually will be required.

FOR GENERAL LOANS.—If a General Loan is being applied for, supply also the information and documents required by Exhibit C, on following sheet.

APPLICATION FOR A MINING LOAN

EXHIBIT C

If a General Loan is being applied for, supply the following information on separate sheets and attach the following documents, arranged, numbered and lettered to correspond herewith.

1. Outline briefly any trade agreement and/or close affiliation through stock ownership, interlocking directorates, mutuality of management, or otherwise, with any other concerns.
2. Give the names and addresses of former owners, so far as known.
3. State in detail expenditures made by applicant since acquisition of mining property, also amount expended by applicant's predecessor if there is any common interest between such predecessor and applicant.
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 - (1) If deposit is other than placer:
 - (a) Submit maps showing location of each ore body or mineral deposit in the mine. If mine has more than one working level, submit a composite map and a map of each level separately.
 - (b) Show on the level plans the location, width represented, and analysis of each sample taken. Number each sample to correspond with certificate of analysis.
 - (c) Submit section along plane of ore body or mineral deposit showing blocked-out reserves, probable reserves, stoped areas, and any old workings; designate inaccessible areas.
 - (d) Show on section maps the location, width represented, and analysis of each sample taken from raises, shafts, drifts, stopes, and winzes. Number each sample to correspond with certificate of analysis.
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 - (f) Give detailed estimates of probable reserves and supporting data.
 - (g) Explain method of taking samples in detail, whether channel, drill hole, etc.
 - (2) If a placer deposit:
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 - (b) Submit map showing location of ore reserve yardage and location of all holes drilled or shafts sunk to prove values and yardage of gravel. Number to correspond with drill or shaft log and show depth and values of each hole or shaft.
 - (c) Describe gravel, stating whether it is fine, medium, or coarse; loose, tight, cemented, or frozen, and whether it contains boulders more than 1 foot in diameter; if so, how large, and in what proportion.
 - (d) Describe bedrock, giving type (granite, sandstone, shale, etc.) and stating whether it is hard or soft; smooth, uneven, or rough.
 - (e) Describe overburden, stating whether loose, tight, or cemented; and fine or coarse texture, and furnish estimate of amount.
6. State any known production of neighboring properties with dates and names, and references to source of information.
7. Describe in detail mining method to be used.