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Copy of Report
of
G. M. Colvocoresses
to
David Mines, Inc.

August 23, 1934

Mr. George G. Moore,
David Mines, Inc.,
Monterey, California

Dear Sir:+

I beg to submit the following report on the property now under option to the David Mines, Inc. upon which I have conducted, under your instructions, an investigation since July 1st of this year.

The property described in this report is known as the Rich Hill Placer, or locally as the Merrill Placer. According to the map furnished by Merrill, this comprises placer claims covering nearly ten square miles or say, 6,000 acres, located along Weaver Creek and its tributaries, Jap, Slaughter House and Oro Fino. The claims extend from the south slope of Rich Hill southward for a distance of some six miles along Weaver Creek and the average width of the ground is nearly a mile. The map which accompanies this report shows only a portion of the area indicated the sections which have been sampled to date and on which it is proposed that commercial operations should first be undertaken.

The general features of the property will be touched upon very briefly since they have been investigated and described by many other engineers whose findings are available.

LOCATION:

The proposed site for the washing plant (which may be considered as headquarters for operations) is located fifteen miles by road from the town of Wickenburg which is on the Prescott and Phoenix branch

of the Santa Fe Railroad. The elevation at the washing plant is 2800 ft. and it is seven miles by newly made road from the Harqua Hala siding on the same line of railroad.

CLIMATE:

Dry and very hot in summer, but delightful in winter. The mean annual rain-fall is about 6", but the creeks drain the west slope of Weaver Mountains where the rain-fall is as much as 15" to 18". Frost is rare and operations can be carried on continuously thru-out the year.

TOPOGRAPHY:

Typical semi-desert country, - sand and gravel ridges separating narrow valleys and arroyas. Highest ridges on the property rise about 80', most of them from 20 to 40'. No timber and the only vegetation is mesquite, catsclaw, paloverde, ironwood, greasewood, cactus, and small desert shrubs and bunch grass. Surface is rocky or shady with some red iron clay in places.

WATER:

No water flows on the surface except for short intervals after the infrequent rains. It is reported that drill holes have found water at less than 100' below the surface near Antelope Creek, but I doubt if this represents a permanent water table. It will later pay to investigate the possibility of securing a local water supply by sinking wells or shafts to the bed rock along Antelope and Weaver Creeks, but pending the result of this investigation it must be assumed that the nearest water supply is found in the Hassayampa River where, the underflow at "The Box" according to available records exceeds 4,000 gallons per minute. Application has been made for ten second feet (4,400 gallons per minute) but it is evident that no such quantity could actually be taken from the river without injuring the rights of other parties who are at present using about 1,000 gallons per minute. The requirements of your washing plant cannot be definitely figured until the character of the gravel has been determined and the amount of return water which can be recovered is established, but tentatively I have assumed that you will require approximately 500,000 gallons per day and it should be possible

tertiary times and have been indicated by certain exploration carried on at intervals in the past, but have not been definitely located and most investigations of the placer ground have been confined to the shallow beds of gravel and sand lying along or near the surface above the top layer of caliche and formed during very recent times.

These top gravels vary in depth from one to five yards and the bed of caliche on which they lie was formed by a cementation of the gravel thru the filtration of alkaline solutions frequently carrying a large percent of lime. Locally, this caliche is termed the "false bed-rock". It is quite apparent that the gravel below this caliche also contains gold and in some sections there are several seams of caliche separated by from 10' to 20' of gravel. It is reasonable to suppose that the bottom gravel lying on the true bed-rock should carry the best values of all, but this has never been explored and it is desirable that such an investigation should be undertaken at a later date.

The gravel itself is made up of iron stained sand and clay with large pebbles and boulders which represent from 10% to as much as 70% of the yardage in various localities. The higher percentage of boulders is found near the heads of the present creeks.

Very few of these pebbles or boulders are well rounded or show any evidence of travel or water wear and the gold itself occurs mostly in fine sharp grains or angular nuggets, indicating that it has not travelled any great distance from its original source. The bulk of the course gold naturally occurs along the upper reaches of the streams, but the finer gold is well distributed thru the gravel along the banks and on top of the low mesas between them. The richer section of these gravels lie just above the caliche, but there is also a surface concentration on top of the ground which is sufficient to permit drypanning in places or ground sluicing after each heavy fall of rain.

The gold is mostly clean and bright and can be readily amalgamated. There is very little flour or rusty gold found on this property, therefore, the recovery of a high percentage of values can

to pump up to double this amount of water from "The Box" without infringing upon other users or depriving them of any needful water supply.

The present plan for supplying water to the washing plant contemplates the sinking of large wells in the river bottom at the "Box". These wells should be lined with a 16" to 20" perforated steel casing with gravel envelope to prevent the inflow of sand. I believe that two such wells will be necessary and they should be sunk to bed-rock which is reported 70' below the level of the sand bed. Deep well centrifugal pumps will lift the water to a sump on the bank where the main pumping plant will be located at an elevation of approximately 2200' above sea level.

The main pumping plant should consist of two 500 gallon centrifugal pumps which will lift the water thru an 8" pipe line to a reservoir or stand-pipe located some 2 miles distant and at an elevation of about 2900' along the east slope of Round Mountain. The pumps may be driven by electric power and the pipe line should have a diameter of at least 8"; the type of pipe to be selected later, as favorable opportunity for purchase presents itself.

From the reservoir on Round Mountain the water will run by gravity thru a lighter pipe for a distance of $3\frac{1}{2}$ miles with a drop of 100' to the washing plant where another reservoir should provide storage for at least one days' requirements.

GEOLOGY:

The underlying rocks appear to be mostly pre-Cambrian granites and schists with some intrusions of quartz-diorite and volcanic agglomerate in the vicinity of the Octave Mine and remnants of tertiary lavas covering the tops of some of the higher mountains.

The ancient rocks were intruded by many dykes of igneous origin and they are traversed by a great number of quartz veins, many of which are gold bearing. Erosion of these rocks and veins has been responsible for the sand, gravel and clay which covers large sections of the slopes and plain to the west and south of the Weaver Mountains and extend for a long distance to the westward. The ancient channels of Antelope and Weaver Creek which existed in tertiary or pre-

be expected from a well designed washing plant.

PREVIOUS HISTORY AND INVESTIGATIONS:

The Weaver placers, of which the Merrill property forms a part, have attracted attention since the original discovery of gold on Rich Hill early in the 1860's. Many small mining operations have been conducted at intervals, mostly near the heads of the creeks, but none of these have covered a large area or resulted in any permanent operations or sustained production of gold.

Mr. R. M. Merrill began to acquire his property in 1919 and since that time has gradually increased his holdings which have been made the subject of several examinations, conducted at intervals by various Engineers, mostly in the employ of prospective purchasers. During these investigations a great number of pits and several shafts 30' or more in depth have been sunk in various sections of the property and in the aggregate a large amount of money must have been spent in the various samplings.

It is unfortunate that so little of the results of this work now appears to be available and while many letters, and some reports and assays have been submitted, generally giving a favorable opinion or recommending additional exploration, yet I have not been able to obtain the complete reports of Ray, Sawyer, Nichols, Draper, Stinnes, and other well known Engineers who have examined the property and it seems to me obvious that they either did not recommend the property to their clients or that the clients could not make satisfactory terms with Merrill since no active development and mining has been carried on to-date.

The reports of Mc Neer, Habecker and others submitted by Mr. Merrill do not appear very convincing and I cannot place any great confidence in assays of samples calculated from panning since these are dependent too largely on the personal equation and represent an opinion rather than a scientific determination of values.

However, the entire situation has been materially changed by the increase in the value in gold from \$20.67 to \$35.00 per ounce, and all calculations must be made on this new basis which brings up

the value of gravel which was worth 10¢ per yard in former years to 18¢ per yard in 1934.

PROCEDURE OF SAMPLING:

At the outset of our work it seemed advisable to make several changes in the equipment of the test washing plant and to some extent in the method of taking samples.

The attempt to sample with a power shovel, as described below did not prove successful and only covered a very small area.

When operating the steam shovel a cut was made thru the bed of Weaver Creel about 8' deep and samples of one cubic yard were taken at intervals to the washing plant, every effort being made to make these samples representative of the average value between the surface and the bottom of the cut. However, the depth of top gravel at this point was 12' to 13' and in order to secure a proper average sample it was obviously necessary to sink pits below the bottom of the cut down to the caliche and to average the samples obtained from these with those obtained by the shovel; two such pits were dug and sampled but I am not at all satisfied that fair results were obtained as heavy rains made the sampling very difficult.

When digging samples with the steam shovel, we covered the top of the truck with a 4" grizzly so that all rocks larger than this size were discarded at the start and this is similar to the practice which it is proposed to follow when loading railroad cars with a large steam shovel, altho the grizzly in that case will probably have an 8" or 12" opening. The samples sent to the plant represented in each case 1.3 cubic yards of broken gravel as nearly as could be measured, which should be equivalent to one cubic yard of gravel in place. Elsewhere our sampling followed the standard practice of digging test pits from the surface to the upper layer of caliche. We bottomed these pits a few inches below the top of the caliche since experience indicated that no substantial values would be found at greater depth. Boulders were sorted out from the excavated material and the percentage of the bank which they represented was measured and estimated after which the sand and gravel representing one cubic yard, or in some cases

two cubic yards, were trucked to the washing plant where the further procedure followed, as nearly as possible, that which would maintain in a commercial plant.

At the testing plant the sample was dumped into a hopper feeding into a cement mixer where it was washed and thoroughly agitated with the object of cleaning the rocks and pebbles and disintegrating the clay which was prevalent in some of the samples and likely to carry off much fine gold unless entirely broken up.

From the cement mixer the samples were next washed over a $1\frac{1}{2}$ " screen, the over-size being rejected thru a sluice provided with riffle bars and the under-size passing into a revolving trommel with $\frac{1}{4}$ " openings where the material was again thoroughly shaken and agitated and the over-size rejected.

The under-size from the trommel passed to a rubber shaking riffle where much of the coarse gold was saved and from the riffle the overflow went to a Denver-Mechanical-Pan provided with one quick-silvered amalgamating tray and with two rubber mats.

After each sample had been run thru, the entire plant was carefully cleaned and the black sand removed from the concentrates by recleaning with the rubber riffle. The final cleanup was carefully panned and amalgamated by hand and the resultant amalgam taken to the Arizona Assay Office in Phoenix where it was treated by laboratory methods for the separation of the gold from the mercury and all other impurities. The resultant gold was refined and weighed and the value of each sample calculated back to determine the value of the fine gold in the bank and in the pay-dirt which would be sent to the commercial washing plant after the boulders had been separated.

Previous tests on the black sand had indicated a value of about \$2.00 per ton and our two tests averaged \$2.45 per ton which in itself is too low grade to be commercial, altho it will be advisable at a later date to make some effort to concentrate the values from the black sand and in this way it may be possible to save an additional two or three cents per yard of gravel, but no exact figures can be given at this time.

Panning of all of the tailings and reject products were

taken at frequent intervals and I feel justified in saying that our work has been carefully done by skilled men and that the results and values as shown by the samples are representative of the recoverable values of gold in the portions of the gravel which were sampled. These results may, therefore, be considered as reflecting the value of the gold from these sections which will be recovered by similar procedure in a commercial plant.

I wish to point out that the total area of gold bearing gravel in this property is extremely large and that the time allotted for sampling made it impossible to test more than a very small portion of the mineralized area so that this report is of necessity based upon data which is not nearly as complete as I could wish, as will be pointed out in my estimate of yardage and values.

GENERAL DESCRIPTION OF GRAVEL:

The placer ground, covering some 6,000 acres of superficial area may be roughly divided into four different classes as follows:

(a) The high mesas which appear to be benches formed by old streams and rivers, the course of which can no longer be traced. The extent of these may be roughly figured at 2,000 acres. There is no logical reason to assume that these mesas would carry any pay values near the surface and such pits as have been sunk on them do not appear to be in commercial gravel. They may later be made the subject of another investigation, but for the time being I must class them as barren.

(b) The low mesas such as lie between portions of Weaver and Oro Fino and between and in the vicinity of the two Oro Fino's. The total area of these may be roughly figured at 3,000 acres and a few pits sunk at scattered points have indicated that gold is sometimes found down to the first layer of caliche but the depth is comparatively shallow, rarely more than one yard, and the character of the material is largely reddish clay which would be difficult to wash. It is possible that a large section of these mesas may prove to be commercial gravel and the total yardage down to the upper caliche runs up to a figure of 15,000,000. No thorough investigation

of this ground has been attempted and from such information as is available it would appear possible to mine some 15% gravel from the upper yard of top soil if such mining can be carried on with any profit.

(c) The upper stream gravels and benches located along and near the present beds of the principal creeks, especially Weaver, Slaughter House, Jap, and big and little Oro Fino. The total superficial area is about 1,000 acres and of this we have partially sampled only about sixty acres in which I estimate that the depth of the top gravel is about three yards along Weaver Creek and two yards along Oro Fino. Details of sampling and value are given in another portion of this report.

If further sampling should indicate that all of this gravel has a similar grade and depth, the total yardage in this class would be about 15,000,000.

(d) The deeper gravel underlying the top layer of caliche and extending down to the true bed-rock which lies at a great depth varying from 50 yards to perhaps as much as 150 yards below the present surface. This gravel represents the building up of the old benches and channels of Weaver and Antelope Creek and their tributaries. It consists of unclassified layers of sand, boulders, and pebbles, laid down in times long past and separated into layers during intervals of small rain-fall by beds of caliche which constitute several different seams of false bed-rock.

Theoretically, there should be some rich gravel found upon each of these strata of caliche and a very rich layer of old channel gravel should lie along the true bed-rock. Indications obtained from drill holes and from a few deep shafts confirm the first portion of this statement, but do not give any information regarding the bottom channel which has never yet been penetrated. It is possible that the old placer found at the top of Rich Hill represents an elevated section of one of these deep channels and if that can be considered as a fair sample, then it may be expected that an extremely rich de-

posit lies on the true bed-rock and should be well worth investigating. Such a buried channel could probably be mined by shaft and drifts as has been done in the drift mines of California and elsewhere with substantial profit. Reference to this possibility is made by Stinnes and Michols and it has been mentioned by others but no positive date has yet been obtained regarding the extent or value of such a channel and the best procedure to obtain such data would probably involve a geophysical survey to determine the contour of the true bed-rock and water level (if any) followed by three or four shafts at favorable locations penetrating to the bed-rock and from which sampling drifts could be run both along and across the channel.

ESTIMATE OF YARDAGE AND VALUES:

From our recent investigation of this property, I am only able to describe certain portions of the top gravel along the creek bottoms, classed under "c" above.

Along Weaver Creek I include all of the samples taken by the steam shovel and from the pits below the steam shovel cut, but value these only as two separate samples. I also include the pit samples taken along Slaughter House and Jap Gulches as these were near the Junction with Weaver Creek. The average of values are purely arithmetical since the pits were spaced in such an irregular manner (in order that the truck might reach them) that it is practically impossible to calculate any weighted average.

On this basis I figure that our sampling has partially covered along Weaver Creek some forty acres of ground to a depth of three yards, thus representing some 600,000 cubic yards of gravel which averages in the bank, from our thirty-one samples, 14.22¢ per yard. From this material, after discarding the larger boulders, we would mine 300,000 cubic yards of pay dirt with an average recoverable value of 28.44¢ per yard. The total value to be recovered from this section is \$85,320.

Along Oro Fino we have taken twenty-five pit samples, partially covering about twenty acres of ground to an average depth of

two yards and I find the average value to be 27.88¢ per yard in bank from which we would expect to mine and send to the plant approximately 160,000 yards of pay dirt with an average recoverable value of 34.85¢ per yard. The recoverable value in this block of ground is \$55,760.

The total recoverable value in these two areas is, therefore, \$141,080, or say \$2700 per acre and there are althogther about 1,000 acres of the same class of ground, a large part of which may reasonably be expected to carry similar values. The somewhat higher average obtained during the first two weeks sampling was probably due to the fact that the pits which we sunk during that time were located mostly near the junction of the various creeks where there was a certain amount of local enrichment which did not extned thru-out the entire area.

On the low mesas we only put down three scattered pits to an average depth of one yard and these show a value of 16.27¢ per yard with a very small percentage of boulders to be thrown out. Obviously these pits on the nesas do not give any basis for an estimate of tonnage or value, altho, they do indicate that gold is found in this class of material and suggest the possibility of mining over a very large additional area if it should be determined that the working costs of such a shallow bank would be low enough to leave any reasonable margin of profit.

COMMERCIAL OPERATIONS AND EQUIPMENT:

Preliminary:

If, on the basis of the present sampling and other available data, it is decided to put this property on an operating basis, the following preliminary procedure will be in order after the titles have been verified and the water permit obtained:

(1) Conduct a careful metallurgical study of the exact character of the gold and the most efficient means of affecting a high percentage of recovery. It is a great mistake to suppose that all placer gold is similar or adapted to similar methods of treatment and a procedure highly successful in Alaska or California might prove entirely unsuited to your work at Weaver.

(2) According to the results of this investigation, design the washing plant with reference to the contours of the proposed site

which should first be carefully surveyed.

(3) Survey for the power line from near the Octave Mine down to the washing and pumping plant (total distance about eight miles) and obtain the permit for construction from the State and Federal authorities.

(4) Survey for the pipe line and reservoirs and obtain the necessary right-of-way over lands belonging to other parties.

(5) Obtain from the State of Arizona the proper lease to permit mining operations on such claims (if any) as are located on State property.

(6) Survey for the railway with proper grades, switches, etc.

(7) Locate by survey and construct a much better road from the railway to the site of the washing plant to permit the easy transportation of heavy equipment. I think that such a road will cost close to \$3,000.

The costs of all the above, including fees, legal and engineering services, etc., may be roughly estimated at \$8,000, and the time required to complete this work will be close to two months.

PLANT AND Plant and Equipment:

For excavating the gravel I concur in your plan of using two steam shovels of about $3\frac{1}{2}$ cubic yards capacity. I believe that you already have such shovels under option and accept your figures as to their cost.

For transportation, it is proposed to use two oil burning 56 ton locomotives and ten 40 ton steel dump cars which will be equipped with grizzlies designed to permit the passage of boulders up to 8" or 10" diameter. I also use your figures for the cost and freight on this equipment, but have added the cost of installing the grizzlies.

Two ore trains will thus run on a standard gauge track (65 lb. rails) from the diggings to the washing plant and this equipment appears to be amply sufficient to dig up to 10,000 yards of bank gravel per day and transport some 6,000 yards of pay dirt to the washing plant.

Because of the higher values found along Oro Fino, I recommend that the first mining should start along Weaver just below its junction with this creek and should then proceed up Oro Fino. The first digging will be very close to the washing plant, but in order to get a proper grade, the construction and operation of at least one mile of railway track is probably necessary and later on this will be extended as the work proceeds further up Oro Fino or swings over to the mesas or Weaver Creek.

Power for the washing and pumping plants will be obtained from the Arizona Power Company, whose high tension line crosses the Merrill property near the Octave Mine less than three miles from the washing plant. The exact cost of power cannot be accurately figured until the total requirements and especially the load factor are determined, but it should certainly not exceed 2¢ per K.W. hr. and may be reduced to close to 1½¢ by plant design and management. A still further reduction could be obtained by the use of Diesel Engines and shovels, but this might involve a considerable increase in the capital investment.

The main water supply and pipe line have been previously discussed and some auxiliary pumps and lines will be required to return the waste water from the tailings pond and to permit using any water that may be stored in dams on the creeks or developed in their underflow.

The washing plant should not be designed until the metallurgy of the ore has been studied and there has been no opportunity to do this to-date. Tentatively, we may assume that it will follow along the general lines proposed by the Nutual Engineering Company and will cost approximately the same figure which they have bid, plus the extra expense for additional bin capacity and trommels as well as additional gold saving devices. The capacity of this plant will represent 6,000 cubic yards of pay dirt in bank per day, equivalent to about 7,500 yards of broken material as it will come by the cars.

A considerable amount of auxiliary equipment must be provided for any operation of this nature, particularly when it

is to be conducted many miles from a town or railway. Living accommodations must be built for the workers, also office and laboratory facilities at the plant. Fuel tanks must be constructed at the railroad and at the plant and trucks purchased to haul the oil and other supplies between them. Also, automobiles for general utility and for repairs a small machine shop and carpenter shop will be essential.

Operating Procedure:

After the water supply and power have been provided and the railway and washing plant constructed, I should advise that actual mining be commenced a little below the junction of Weaver and Oro Fino and that the digging should proceed up along Oro Fino where the best gravel so far sampled is located.

The details of the operations have been carefully planned and since the large boulders in this section of the property do not exceed 20% of the yardage in bank, the work should be planned so as to dig approximately 7,200 yards of bank per day from which 6,000 yards would go to the washing plant. The proposed digging and washing equipment should be ample to take care of this yardage.

After the material has passed thru the washing plant and the gold has been recovered, the disposal of the rejected over-size gravel and of the fine tailings becomes of great importance. This disposal should not only be carried out with every possible economy, but also in such a way that the tailing dam will serve to form a reservoir for the storage of the waste water from the plant which will be settled to some extent and then pumped back and re-used as often as possible.

The site selected for the washing plant permits this to be done since the tailings will at first be dumped into a little dam on the east of the ridge on which the plant is to be located and afterwards in the bed of Weaver and Oro Fino, after the upper gravel has been mined from that section. and assuming that there is no question of attempting to mine the deep channel in this locality.

The gold recovered as metal from the riffles or as amalgam from the tables, plates or amalgamating equipment should be

retorted and melted at the plant so that bullion could be shipped direct to the Mint and the cost of marketing kept to the lowest possible figure.

The estimated costs of construction, etc., and for operation are tabulated on the attached sheets; many of the figures, as noted, being based upon the prices which you have given me as representing firm bids or contracts now in your possession.

CONCLUSIONS AND RECOMMENDATIONS:

To sum up the results of our investigation, I can say that the Merrill Placers undoubtedly contain a very large quantity of gold bearing surface gravel. Our investigation was limited to only one class, namely, the stream beds and covered only about 6% of that area, i.e., 60 acres out of 1,000. It is obvious that no definite value can be assigned to the great bulk of this property from these results, but we have partially sampled approximately 800,000 cubic yards of bank gravel with an average value of 17.6¢ per yard from which about 460,000 yards of pay dirt could be mined and shipped to the washing plant after the boulders had been discarded. The average value of this dirt would be slightly in excess of 30¢ per yard.

There is no logical reason to believe that the area which we sampled was any better or any worse than the balance of the stream beds and if the entire 1,000 acres should be mineralized to a similar extent this area would contain approximately 13,300,000 yards of gravel in bank from which there could be sent to a washing plant approximately 7,670,000 yards of 30¢ dirt. The total recoverable value of this gravel would be \$2,301,000 and the profit which might be realized would amount to \$1,227,000 spread out over a period of four years, if operations continued along the scale which is now planned.

The physical condition of this property is of such a nature that sampling is extremely difficult and expensive and to cover any large section of the property with sample pits would involve an expenditure greater than the cost of the commercial operating plant which you propose to build and which, by its operation, will serve to furnish sample the property and to make such sampling more than self-supporting.

I believe that you are justified in assuming that the total yardage of material similar to that which we have sampled will prove more than sufficient if treated at the estimated cost to repay the expense of equipment and construction as well as the operating expense of the commercial plant and to leave a reasonable margin of profit which may later be increased if working costs can be somewhat reduced.

I also believe that a better grade of surface material than was found in the sampled area occurs along the upper stretches of Weaver Creek, Slaughter and Jap, and mining these sections should show a larger margin of profit than I have figured, even considering that the digging costs will be somewhat higher than estimated because of the larger percent of boulders and hauling charges slightly higher, because of the greater distance to the washing plant.

For the treatment of the surface gravel in accordance with your present plans and on the basis of washing approximately 6,000 cubic yards of pay dirt per day, I believe that you will have to spend somewhat more than the \$105,000 set down in the detailed estimate of construction costs and in addition some \$40,000 should be provided for warehouse stock and supplies and for working capital. When your operations are conducted on a regular basis it appears that working costs will be around 14¢ per cubic yard of pay dirt washed, including the royalty to the owner, and that the expected profit will amount to 16¢ per yard, - say \$960.00 per day.

I am now well satisfied that large steam shovels will dig the gravel efficiently and economically and I believe that the cost of transportation to the central washing plant will fall within the estimate. The location and arrangement of the washing plant seem satisfactory, but the equipment for gold saving should not be definitely decided upon until the character of the gravel and the best means of recovering the maximum amount of gold have been made the subject of further study, which can be done while the other construction is in progress. It should be quite feasible to affect a higher saving of values for the estimated cost of operation.

It is my personal opinion that the great potential value of this property lies in the chance of developing in the lower channels of Weaver Creek, a body of extremely high grade ancient gravel which should lie on the true bed-rock and form the main lead or channel. I understand that this possibility is one of the principal reasons why you and your Associates are attracted to this enterprise which might otherwise seem to promise a lower margin of profit than is generally required for ventures of this nature and that it is your idea to eventually devote some portion of your working profits to the exploration of the deeper channel from which it is quite possible that extremely large profits might be won.

While there is no very exact date regarding the Rich Hill deposit it seems to me reasonably certain that this did represent an elevated section of an ancient channel and very probably a portion of the ancient channel of Antelope or Weaver Creeks and I think there is an excellent chance that some or all of the other portions of these channels still lie buried at a depth varying from 100' to 500'.

Mr. Stinnes, in a letter of which you have a copy, has stated quite definitely that it is his opinion that such ancient channels exist under both Antelope and Weaver Creeks and that they should carry values in excess of \$2.00 per square foot of bedrock, which is equivalent to many dollars per cubic yard or per ton, depending on the height of the rich bed-rock deposit. With this opinion Mr. Nichol and others are in agreement and I have long been struck with the similarity of the conditions in the vicinity of Weaver Creek to those which exist in certain other localities with which I am familiar and where very profitable driftmining has been conducted along the bedrock, altho in all such cases it must be remembered that the working costs are comparable to those in lode mines and not to the costs which prevail in placer operations.

The Merrill property includes one stretch of upper Antelope Creek, about one mile in length and seven miles along the length of Weaver Creek, and these areas may well contain a far greater quantity of gold in the deep channels than is found in all of the surface area,

and it would probably occur in a highly concentrated form which should yield a profit of several dollars per yard mined.

A geophysical survey for the purpose of determining the location and depth of the buried channels would cost from \$2,000 to \$5,000, depending upon the area covered, but would, of course, give no indication as to values.

Following this, some four or five shafts could be sunk to bedrock for a total cost of probably \$50,000, (depending upon the depth and water conditions) and additional drifting from the bottom of these shafts across and along the ancient channels would involve the expenditure of another \$50,000 which should definitely serve to determine the approximate quantity and quality of a very large yardage of deep gravel.

While there is no positive assurance that any such valuable deposit will be found, I feel that the chance is an excellent one and well worth while as a piece of mining exploration.

With the understanding that my conclusions and recommendations are not based upon nearly as complete an investigation as I could have wished to make, and with the further understanding that there is a distinct element of financial risk in every enterprise of this nature, I now recommend that you proceed with your plans to equip the property for surface operation, and especially bear in mind the advisability of later on exploring the deep channels wherein a much larger return may be hoped for.

Attached to this report, and forming a part of it, is a map showing certain portions of the property including the area sampled with the location of the pits and the site of the proposed test plant. A record of the samples and values in bank is noted on the map. There are also attached to this report detailed estimates of the cost of construction and of the working costs per operating day, and per yard of bank and of pay dirt.

Yours very truly,

S/ G. M. Colvocoresses

ESTIMATE OF OPERATING COSTS PER YARD OF
BANK GRAVEL AND PER YARD OF PAY DIRT WASHED

	Per Yard Bank Gravel	Per Yard of Pay Dirt
Excavating with Steam Shovels - - - - -	\$ 0.018	\$ 0.030
Railroad transportation, moving track, etc. - - - - -	0.15	0.025
Washing dirt and recovering gold, including water supply - - - - -	0.021	0.035
Disposal of waste rock and tailings - -	0.006	0.010
General expense and overhead - - - - -	0.006	0.010
Royalty to Owner -, - - - -	0.018	0.030
Total	\$ 0.084	\$ 0.140

In the above calculations it is assumed that the pay dirt will represent 6,000 yards per day and the bank gravel 10,000, but it should be understood that the relative percentage of bank gravel and pay dirt will vary to a considerable extent in different portions of the property.

Mr. Scott

AUGUST
3
1934

Mr. George G. Moore,
Monterey, California.

Re: DAVID MINES

Dear Mr. Moore:

The sampling has progressed to date as rapidly as conditions would permit. Principal delay has been in connection with the steam shovel, as will be mentioned later.

The results of the last samples taken with the steam shovel show an average of about 12¢ per cubic yard of gravel in place. This is about what I expected and no definite estimate of the true value of this gravel can be made until we can put down pits below the shovel cut to the bed rock (or caliche) and sample the lower gravel which is presumably much better than that which we have sampled to date.

The average values shown by the last eleven pits is somewhat disappointing, being only 21¢ per cubic yard. These pits have been sunk near Weaver and Oro Fino Gulches, working upwards from the junction between these two creeks and to the north of the holes which had previously been put down.

The average values were considerably reduced by two or three pits which were sunk some distance away from the creeks and which only carried two to eight cents per cubic yard. This would seem to indicate that the better values are found near to the present creek beds and along the comparatively narrow strip and that these values do not extend any great distance away from the creeks toward the high banks or mesas. It is true that good surface samples can frequently be obtained on the higher ground, but this is due to recent surface concentration and does not hold good when the gravel is sampled at these points down to the bed rock.

In order to estimate the probable value of any substantial area containing, say, a million yards or thereabouts, it is very important that the sampling work should be continued for approximately six weeks beyond August 15th so that the area sampled could include the strip of gravel along Weaver Creek between its junction with Oro Fino and its junction with Slaughter House and also cover a longer area extending northward up Oro Fino. It is also particularly important, as previously mentioned, that pits should be put down below the shovel cut on Weaver, which work is now in progress.

As a sampling device the steam shovel has proved very

8/3/'34.

costly and of little value. Your men seem to think that the shovel which is now working is in very poor condition and actually it had been in operation up to July 30th only thirty-two hours out of a possible eighty hours and it had dug only 854 yards of bank, - an average of 8.5 yards per hour, or 26 yards per hour of operation.

The criticism of the present shovel would probably not apply to a large 3-1/2 yard shovel which should easily go thru the heavy ground where the present shovel removes only with the greatest difficulty, but in any event, I do not consider that the sampling of this ground with a steam shovel is efficient or economical, and the present cost of the shovel sampling represents about 5¢ per cubic yard of bank which can be estimated from the samples whereas sampling with pits will cost only about 3/10 of 1¢ per cubic yard. I, therefore, very strongly recommend that the operation of the shovel be entirely discontinued and future sampling conducted entirely by digging pits from surface to bed rock at intervals.

In reference to the water situation, - Mr. Dodds and I rode horse-back on August 1st up to the lower dam site, which is about eight miles above the box on the Hagsayampa River. The lower dam site did not appear to us to be a satisfactory location for your proposed pumping plant since, as far as we could judge by eye and by the use of the contour map, the hills and ridges which surround this portion of the river are extremely high and rugged and any pipe line from a pumping plant on the lower dam site would have to be carried over a lift of approximately 800 feet or otherwise make very long swings around the contours which would increase the air line distance to the washing plant of seven miles to a pipe line distance of ten to twelve miles.

The rise in elevation of the bed of the river between the box and the lower dam site is 370 feet, but the other conditions, as mentioned, make it far preferable to pump from the box and moreover there is unquestionably a great deal more water available at the box than there is at the lower dam site.

A careful study of the water situation as it affects your project is now being made in my office and more detailed data will be furnished somewhat later.

As nearly as I can estimate, the additional cost of continuing the present work of sampling, without the use of the steam shovel, from August 15th to October 1st will be \$5,000, and I most strongly recommend that this money should be appropriated for this purpose as such an expenditure will permit the recommendation or condemnation of the entire project to be made on the basis of Engineering data which would positively not be available by August 15th, and if

Mr. George G. Moore, -3.

8/3/'34.

any conclusion in respect to the construction of a commercial excavating and washing plant, pipe lines, etc., must be drawn by August 15th it will have to be based upon a number of guesses, some of which are likely to prove extremely inaccurate and to lead to costly and unnecessary mistakes.

Yours very truly,

G. M. Colvocoresses

G. M. Colvocoresses.

GMC/HC

No. 87 Co

30000 / 100

Phoenix, Arizona,

CHAS. A. DIEHL

Aug 25 34

ARIZONA ASSAY OFFICE

Phone 3-4001

315 North First Street

P. O. Box 1148

This Certificate That samples submitted for assay by Mr. Geo. M. Colvocoresses contain as follows per ton of 2000 lbs. Avoir.

MARKS	SILVER		VALUE (Oz.)	GOLD		VALUE At \$20.00 per Oz. \$35.00	TOTAL VALUE Of GOLD and SILVER	PERCENTAGE				REMARKS
	Ounces	Tenths		Ounces	Hundths							
95				5.05		\$176.75						(nearly all value held in mercury)
<p>ht of Sample .35 of assay ton + quinine</p> <p>= 1/100,000 of ton so total gold & silver = 57 of assay 604</p> <p>4.94 by 7 quib. 176750</p> <p>total</p>												

Charges \$ 1.00

Total Assayed 1 assay ton Assayer Arizona Assay Office. C.A.D.

GEORGE M. COLVOCORESSES
 MINING AND METALLURGICAL ENGINEER
 1108 LUHRS TOWER
 PHOENIX, ARIZONA

March 14th, 1935

STATEMENT OF ACCOUNT

David Mines, Inc.
 c/o Mr. George G. Moore
 Monterey, California

to: G. M. Colvocoresses, Mining Engineer
 1108 Luhrs Tower
 Phoenix, Arizona

(Charges made in accordance with terms of agreement of June 30, 1934)

Account rendered August 6th, 1934

Due G. M. Colvocoresses for services
 and expenses. \$1199.21

Payment to G. M. C. July 25th	\$200.00
" " " August 1st.	500.00
" " " August 6th.	500.00

Account rendered August 25, 1934.

Services and expenses \$19.41

Account rendered November 16, 1934.

Services and expenses. 70.80

	\$1200.00	\$2178.82
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Interest on above debit balance
 to March 1st, 1935 - 8% per
 annum, compounded monthly. \$2.55

Balance of account due G. M. Colvocoresses March 1st, 1935. (as per statement rendered)	\$1011.37	
	\$2211.37	\$2211.37

Wm F. Stumpff
 120 Broadway, N.Y.

Paid by Stumpff & Pollock
 in May 1935

A S S I G N M E N T

In consideration of the sum of One Thousand and eleven Dollars and Thirty-six Cents (\$1011.36) paid to me by check from William H. Stumpfel and Edward B. Robinette, receipt of which is hereby acknowledged, I hereby set over, transfer, and assign to said William H. Stumpfel and Edward B. Robinette jointly, all of my claim against the David Mines, Incorporated, the said claim representing the heretofore unpaid portion of my account, including accrued interest, for professional services rendered to and expenses incurred on behalf of the said David Mines, Inc., in accordance with the terms of an agreement for personal services entered into in July, 1934 and supplemental agreements with Mr. George G. Moore. The said accounts were rendered on August 25, 1934 and November 16th, 1934 and subsequently at monthly intervals and they are herewith recapitulated on the receipted statement attached.

L. H. C.

WITNESS

Dorothy Ferguson

STATEMENT OF ACCOUNT

David Mines, Inc.

to G. M. Colvocoresses
1108 Luhrs Tower
Phoenix, Arizona

SERVICES

August 1st-16th as per original agreement	\$500.00
Subsequent to August 16th as per special request from Mr. Moore.	
5 days @ \$50.00 per day.	250.00

EXPENSES

Assaying samples	66.50
Employment of engineer on water investigation and supplies, blueprinting, etc.	85.91
Trips to mining property and office expenses including telegraphs, postage, etc.	87.20
	<u>\$989.61</u>
Less overpayment of last expense account.	<u>10.79</u>
	\$978.82
Accrued interest to March 1st, 1935.	<u>32.55</u>
TOTAL	\$1011.37

Received payment in full by endorsed checks from William H. Stumpfel for \$505.68 (Check #10437, dated April 29th, 1935 on the Chase National Bank of New York and Edward B. Robinette for \$505.68 (Check No. 2723, dated April 30th, 1935, on The Pennsylvania Company, Philadelphia, Pennsylvania.)

J. M. C.

LAW OFFICES

GRAHAM, McMAHON, BUELL & KNOX

ONE CEDAR STREET
NEW YORK CITY

CABLE ADDRESS
"GRAMACBUK"

EDWARD WARD McMAHON
RALPH P. BUELL

WILLIAM H. HALL
CHAS. HENRY SCOTT, JR.
JOHN F. KIERNAN
HENRY A. MULCAHY

April 29th, 1935.

A 5/2/35

Mr. George M. Colvocoresses,
1108 Luhrs Tower,
Phoenix, Arizona.

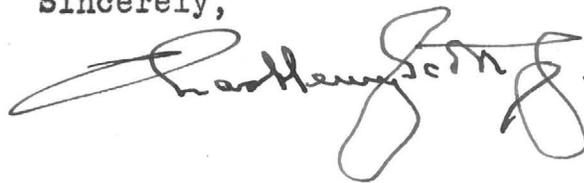
Dear Colvo:

I have passed on your request to both Mr. Stumpfel and Mr. Robinette and have asked them to send you each a check directly for the amount due you by David Mines, according to your last bill. I hope that this will reach you by the first of May and want to assure you that I have done my best to have it happen so. I wish you would have prepared an assignment of your claim against the Company, making it run to Edward B. Robinette and William H. Stumpfel, jointly, as their interests may appear. This is a very simple document and should simply specify that you are assigning your claims against the Company, specifying in detail what those claims are. I am somewhat rushed at the moment and want to get this off air-mail or I would prepare the form myself. I am sure that if I have any suggestions for the protection of my own clients, you will not mind changing whatever you have signed.

George Moore left for Europe Friday night and should arrive in London on Thursday. There are several reasons why the prospects of success are better than heretofore, but naturally we cannot count on them until we have favorable word. Meanwhile, as usual, I hope for the best.

Kind regards,

Sincerely,



CHS:ML

Air-mail

April 1st, 1935

Mr. Percy Black
c/o Continental Oil Company
Subway Terminal Building
Hill Street
Los Angeles, California

re: David Mines

Dear Mr. Black:

The very excellent telegram which you sent to Mr. Scott on the 28th seems to have had a good effect and on my return here I found a telegram from Scott and this morning received quite a lengthy letter.

Scott and his associates and clients, some of whom are very excellent people evidently realize the responsibility which they have incurred in connection with the affairs of the David Mines Company and perhaps are beginning to agree with me in doubting that proper financing will ever be obtained through the sales of stock in Canada and England as proposed by Mr. Moore.

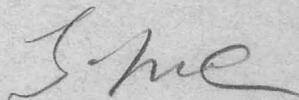
Scott made me a tentative proposition which if confirmed by his clients will be entirely satisfactory to me, and I believe also will work out in a very advantageous manner to Mr. Merrill and his associates.

In view of the above I shall not take any legal steps at present nor without advising you further. I sincerely hope that these will become altogether unnecessary as I should have deeply regretted to file any suit which would have involved either Scott's associates or Mr. Merrill and his property, and you may rest assured that if matters are straightened out I will be only too glad and ready to cooperate in any plan that may seem mutually advantageous. Thank you very much for your assistance in this matter.

Personal regards.

Yours very truly,

GMC: DF



JUNE
30
1934

David Mines, Inc.,
c/o George G. Moore,
Monterey, California

George G. Moore

Gentlemen:

Referring to my conference with Mr. Moore of yesterday and our visit to your property near Wickenburg, I understand that you wish to have me take full charge of the technical operations involved in sampling and testing this property and in the subsequent installation of proper commercial machines and equipment for handling the gravel on a large scale and in the operation of the property on a commercial basis, assuming that I am able to form a favorable opinion of the probable results of such operations and that you are satisfied with my services and with the plans which I may outline and the manner in which my work will be conducted.

I am prepared to undertake this work, - my services to begin on July 1st, and my compensation to be fixed, as agreed upon with Mr. Moore, at a salary of \$1,000 per month, payable semi-monthly, plus the repayment to me of out-of-pocket expenses incurred in connection with this work and on trips to your property.

I shall not be able to give this work my entire time and attention, but I feel confident that I can give it quite as much time and attention as may be necessary or essential to conduct the same in a thoroughly efficient manner and I expect to secure competent assistance, as discussed with your Mr. Moore.

Following Mr. Moore's instructions, it will be my first duty to arrange for the accurate sampling of certain portions of the placer ground which appear to be most favorably situated for operation and to contain the best gold values, and for this purpose I shall arrange to install and operate a thoroughly efficient testing machine and to test as rapidly and accurately as possible the samples from various pits and trenches which I will locate and which will be taken with the power shovel that you are to provide, or otherwise as may be agreed upon.

On or before the 15th of August, and sooner if it is possible, I shall prepare and furnish you with a report based upon such data and information as I have been able to obtain and as has already been obtained by other Engineers, and I shall estimate as accurately as may then be possible the quantity and quality of certain portions of your gravel and advise you in reference to the best procedure for commercial operations and the probable results of mining and treating this gravel.

6/30/'34.

I understand that the general policy of the Company will be outlined by Mr. Moore, or other Officials, by whose instructions I shall be guided, but that the technical work and engineering will be exclusively under my charge and that I shall be authorized to employ competent and reliable assistants upon whose work I can absolutely rely in obtaining the essential information and conducting the testing and subsequent operation of the property.

After the work which I am to undertake has progressed to a certain point so that I am able to better determine the probable results of operations, I shall be very glad to consider the re-arrangement of my cash compensation for services and an adjustment of same coupled with a certain percentage of net operating profits.

Will you kindly confirm this arrangement by letter at your early convenience? Meanwhile, I am losing no time in following out the program arranged with Mr. Moore.

Yours very truly,

G. M. Colvocoresses.

GMC/HC

cc - Mr. Chas. Henry Scott,
c/o Graham, McMahon, Buell & Knox,
One Cedar Street,
New York City, N. Y.

Mr. W. F. Stunfel,
120 Broadway,
New York City, N. Y.

LAW OFFICES

GRAHAM, McMAHON, BUELL & KNOX

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CABLE ADDRESS
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EDWARD WARD McMAHON
RALPH P. BUELL

WILLIAM H. HALL
CHAS. HENRY SCOTT, JR.
JOHN F. KIERNAN
HENRY A. MULCAHY

July 25, 1934

AIR MAIL

Mr. George M. Colvocoresses,
1108 Luhrs Tower,
Phoenix, Arizona.

Att 27.34

Re: David Mines, Inc.

Dear Colvo:

I had a wire from Mr. Moore a few days ago stating that present sampling shows substantial increase over former results and quotes figures of Hole No. 307, Japp Gulch, former sampling 29¢, now showing 47½¢; and Hole No. 212, Orofino, previous sampling 19½¢, now showing \$1.02. He does not state where he gets his information, but I am assuming that you have your new sampling plant in operation and that these results come from you. I wish you would drop me a line upon receipt of this, telling me how things are going and what results, if any, you have had to date. The reason for this is that Mr. Robinette has returned from Europe and is anxious to know how matters are progressing. This information, of course, is not confidential and I don't want you to tell me anything you would not tell to Mr. Moore or Mr. Stumpfel. As a matter of fact, everything you write me is passed on to Mr. Stumpfel immediately. Mr. Robinette wants to discuss this matter with some of his associates next week and therefore it would be important for me to hear from you, as above outlined.

It happens that Mr. Stines, formerly of the U. S. Smelting Company, and who has made a report on this property, is a particular friend of Mr. Robinette, and he is anxious to get in touch with him to obtain, if possible, a full copy of Stines' report. Do you by any chance know where Stines may be reached by mail, or can you find out?

Hope everything is going along satisfactorily. Mr. Moore appears much pleased with the way you are taking hold. If your ultimate opinion is favorable and this matter goes ahead to successful development, I should think there was every reasonable possibility of its being a most important piece of work from your point of view. I certainly hope that this is the way it will work out, and that everyone concerned will profit.

With kindest regards,

Sincerely,

Chas. Henry Scott, Jr.

CHS-d

AUGUST
4
1934

Mr. George G. Moore,
Monterey, California.

Re: DAVID MINES, INC.

Dear Mr. Moore:

As per your verbal request, I hand you a brief interim report on your property known as the Rich Hill Placers, based on the examination of same which has been conducted during the past month under my direction.

Inasmuch as this investigation is only partially completed and much of the gathered data has not yet been put into a form which will permit of any exact calculations, I shall have to apologize for making only approximate statements and estimates, all of which may have to be substantially revised at a later date.

I shall not attempt to cover the general features of the Rich Hill Placers, which have been fully described by other Engineers, but will state briefly that this property comprises approximately 6000 acres, much of which is known to be gold bearing, particularly in and along the beds of the principal creeks, namely Weaver and Oro Fino. Many investigations of this property have been made in the past, but unfortunately the reports of the more reliable Engineers are not available and such reports as have been submitted appear to be largely based upon the results of sampling with a pan which are extremely unreliable in nine cases out of ten.

The sampling recently conducted by Mr. Vahrenkamp gave unfavorable results and indicated in so far as it went that the value

Mr. George G. Moore, -2.

8/4/'34.

of the gravel in the banks was less than 14¢ per cubic yard. It is my opinion that these low values can be partially attributed to the inefficient equipment of the testing plant in which his samples were run, which did not properly disintegrate the clay nor recover the fine gold which could not be caught on the riffles.

In taking over this operation we added to the plant by installing a concrete mixer for disintegrating clay and by placing beyond the riffles a Denver mechanical amalgamating pan which recovers fine gold thru the use of mercury and on rubber matting. Results todate indicate that from thirty to forty percent of the gold in our samples is recovered by the Denver pan.

Our method of sampling consists primarily in digging pits from surface to the first layer or seam of caliche, which constitutes the false bed rock. In this connection it should be explained that gravel is also found below as well as above this caliche and in fact there are probably several different seams of caliche at various levels between the surface and the true bed rock which lies at a very considerable depth and to which it has been impossible to explore with the limited time and facilities at our command.

The upper stratum of caliche is from three to fifteen feet below the surface and may be tentatively assumed to lie at an average depth of 6', namely 2 yards, and all of our samples have been confined to the upper bed of gravel above the caliche. At a later date it will be very important to thoroughly investigate the character and values of the lower gravel down to the true bed rock, since it is quite possible that very rich material may be found at a substantial depth below the surface and it might

Mr. George G. Moore, -3.

8/4/'34.

eventually be possible to work banks of pay gravel 60' to 150' in height. However, at this time there is no evidence at all to prove or disprove this supposition, which is merely mentioned for future study.

From the sample pits we set aside and carefully estimated the approximate yardage of large boulders and speaking roughly, I should say that in the ground so far sampled approximately 50% of the bank yardage is represented by boulders exceeding 6" in diameter, which would not be sent to the washing plant. This percentage varies in different sections of the property, - the boulders considerably exceeding this figure in upper Weaver, but in lower Weaver and Oro Fino representing only 10 to 20% of the excavated material.

From the dirt excavated from each pit approximately one cubic yard, and in some cases two cubic yards were taken to the washing plant and treated under conditions which are believed to approximate as closely as possible the condition which would exist in a commercial plant for treating a large yardage of gravel. The values given may, therefore, be considered to represent in each case the recoverable value of the gold in the pay dirt and no allowance is made for losses in treatment since these should be no greater than in our testing plant.

The general results of such sampling as we have carried on to date may be briefly given as follows:

Twenty-five samples taken from various pits have a mathematical average of about 23¢ per cubic yard of bank, while the samples taken by the steam shovel, when crossing Weaver Creek a short distance below Slaughter House, have a mathematical average of 13¢ per cubic yard of bank. This last figure is not a fair representation of the value in the gravel at this point since it is entirely reasonable to assume that the better

Mr. George G. Moore, -4.

8/4/'34.

grade of gravel lies below the steam shovel cut and pits must be sunk and sampled from that depth down to the caliche in order to obtain a fair average which I would estimate to be probably 20¢ per yard of bank.

If the pits to be dug under the shovel cut should show up as well as expected, I feel that we could estimate that approximately 400,000 cubic yards of bank gravel had now been partially sampled, having an average value of over 20¢ per yard and from which it would be possible to mine and ship to the treatment plant, after the boulders had been thrown out, about 200,000 yards of pay dirt with an average value of 40¢ per yard. These figures will be verified or revised to some extent as soon as the samples from the pits under the shovel cut have been assayed, which will probably be by Tuesday, August 7th, when telegraphic advice on that matter will be sent to New York.

Several scattered pits on the other portions of the property indicate that similar values are distributed over a considerably wider area and it is to be expected that additional sampling will permit a large increase in the tonnage now estimated and if the present program of sampling is continued until October 1st, it should then be possible to give a reasonably close average on the value of about one million yards of bank gravel.

Second only in importance to the gold value of any placer mine is a sufficient water supply to permit the proper treatment of the ore. As far as can now be determined, there is no adequate source of water in the vicinity of your property excepting the Hassayampa River, where the flow and underflow at "the Box" have been measured for many years. A careful study of all available data is now being made and the data so far

Mr. George G. Moore, -5.

8/4/'34.

obtained seems to show conclusively that while the stream flow is sometimes down to 250 gallons per minute, one could definitely count upon a minimum underflow of more than 4000 gallons per minute at "the Box", which seems to be the logical site for your pumping plant and is located five and one-half miles from the site of the washing plant. The elevation of the "Box" is approximately 600 feet lower than that of the washing plant and it will be advisable to lift the water a vertical distance of some 700 feet during the first two and one-half miles of pipe line and then to let it run by gravity thru the balance of the pipe line to the washing plant.

A permit from the State Water Department to use water at this point and a filing of rights up to a maximum of 4,400 gallons per minute have been applied for by your Attorneys, and I understand that such a permit will probably be granted, altho it is possible that conflicting claims may later cause legal difficulties and all these matters should be very thoroughly investigated before any heavy expenditure is made.

Electric power for the pumping and washing plant can be obtained from the Arizona Power Company, whose high tension line crosses near the Rich Hill Placer ground approximately two and one-half miles northeast of the site of the washing plant so that the total length of a new power line which would have to be built to the washing and pumping plants would be approximately eight miles.

Subject to pay values being found in a sufficient body of gravel to justify the construction and operation of a commercial plant, I entirely concur with the plan of operations which you have outlined. This consists in excavating the gravel bank with large steam shovels, loading the material into hopper bottom dump cars on which grizzlies will be fixed

Mr. George G. Moore, -6.

8/4/'34.

to discard the large boulders, transporting the pay dirt to a central washing plant where it would be disintegrated, sized and washed and the gold saved on riffles, tables or some special equipment designed for amalgamating with mercury. Similar excavating practice has been pioneered in California and elsewhere and altho there are some special difficulties which might present themselves in the case of the Rich Hill Placers, it would seem to me that these can be overcome without great expense or hindrance.

The site selected for the washing plant is centrally located and has many natural advantages, particularly an excellent dumping ground for the tailings and the practice which would be followed in such a washing plant has been well standardized by the large gold dredges and mines and the cost of operating can be estimated with accuracy while the recovery of a high percentage of gold is well assured except in cases where the gold occurs as flour or badly oxidized and fortunately this is not the case at the Rich Hill Placers, so far as our sampling has progressed.

I have not sufficient personal experience in the operation of steam shovels and industrial railways to make any worth while suggestions regarding these operations, but you and your Associates have been very successful in similar work under different conditions and modifications of your methods will doubtless suggest themselves when these are applied to the local situation. I believe that the general outline of the washing plant which has been submitted to you by the Mutual Engineering Company of San Francisco should be satisfactory provided the capacity of the storage bin is enlarged and provided that ample trommel capacity is installed to disintegrate the clay and mud, but in advance of actual operations it is impossible to figure just what trommel capacity is required and I can only

Mr. George G. Moore, -7.

8/4/'34.

suggest that provision be made for additions to the trommels if this be found advantageous. The plan for the disposal of waste seems to be satisfactory, but the gold saving devices should be considerably amplified and I suggest that in addition to the shaking riffles it will be found essential to install tables, amalgamators, Ainsley bowls, or some similar device for catching the fine gold.

As to the cost of constructing and installing the necessary equipment, I give herewith a tabulation showing figures given me by you, and based upon options or contracts to sell equipment which I understand are already in your possession. No attempt has been made to estimate the cost of labor or material involved in the installation and this will run to a considerable sum of money and may easily be under-estimated since construction costs in any out of the way place are bound to be much higher than in the vicinity of a large City where skilled labor is always available and machine shop facilities and warehouse stocks can be drawn upon at short notice.

In considering the cost of operation, we have tabulated principally the labor and the main items of supplies such as power and fuel. These figures are, I think, conservative, and an ample allowance for incidental expenses has been made to bring the total up to \$700 per day. I feel very confident that under normal conditions the operation of the plant can be carried on for approximately this figure, but I do not personally feel confident that the two shovels can dig 6000 cubic yards of pay dirt per day, which means excavating from 10,000 to 12,000 yards of bank gravel, nor do I believe that the railroad facilities will be sufficient to handle this amount of material unless more cars are provided than is contemplated

Mr. George G. Moore, -8.

8/4/'34.

in the estimate of construction costs. The careful study of cost of construction and operation was something which I had intended to follow up during the next two weeks so that I am not really properly prepared to make any definite estimate on these points and may wish to revise the figures now given to a substantial extent.

One of the principal objections to digging gold bearing material with shovels or other types of excavators is due to the fact that the gold continually sifts down thru the agitated gravel and sand and settles on the bed rock.

If enuf water can be spared to sluice off this bed rock the cost of cleaning will be small but if insufficient water is available or if the caliche proves too porous to permit sluicing it will be necessary to resort to hand sweeping and scalping which will mean some additional labor and may possibly run up your cost by perhaps one cent per yard beyond the estimated figures.

My first and principal recommendation is that the sampling should be continued along present lines from this date until October 1st. The yardage which we have sampled to date is not yet sufficient to justify the expenditure involved in constructing and equipping the commercial plant and while there is no apparent reason for believing that we have sampled only the best of the gravel, still it is always possible that such has been the case and from an Engineering standpoint I feel that it is most important that figures should be made available on approximately 1,000,000 yards of bank gravel before a definite decision is made in respect to proceeding with construction and operation. The additional cost of continuing the sampling

Mr. George G. Moore, -9.

8/4/'34.

with pits only, and without attempting to use the steam shovel will be approximately \$5,000 from August 15th to October 1st, and I am very sure that this money will be well spent and enable estimates to replace mere guesses in regard to the tonnage and value of an additional 600,000 yards of gravel.

Assuming that the sampling continues to give similar results to those which have been obtained to date and proves up the desired yardage of bank gravel having an average value of at least 20¢ per yard, and further assuming that the legal rights to the water supply can be positively secured and the existence of an ample available supply of water properly verified, I recommend that your company ^{then} proceed to carry out your plans and install the necessary equipment for commercial operations, designing the plant to handle approximately 6,000 yards of pay dirt per day.

I am satisfied that the operating costs should not greatly exceed \$700 per day, unless it is necessary to go to very heavy expense for hand cleaning the bed rock gravel, and if it is possible to put thru 6,000 cubic yards of pay dirt this will represent a recovery of \$2,400 or a profit of \$1700 per day. Even if the difficulties of operating the shovels and railroad should reduce the yardage by 50%, the recovery should still be \$1,200 per day and a profit of approximately \$500, which would pay back the cost of plant and equipment within a reasonable length of time and leave a fair margin of profit.

Assuming that the minimum gold value is actually found to exist in the gravel, I can visualize only two reasons why this venture might fail. First, - the impossibility of handling any substantial yardage with steam shovels or any other type of mechanical equipment. Such a condition

Mr. George C. Moore, -10.

8/4/'34.

appears highly improbably to me, and I am assured that it is a practical impossibility by those who know a great deal more than I about steam shovel operations. Second, - the absolute failure of the water supply. This might be caused thru litigation which should be guarded against as far as possible by thorough preliminary investigation of all the water rights which might come in conflict with those of the David Mines Company. It might also be caused by an absolute failure in the flow of the Hasseyampa River. The last eight years have been the driest ever known in this part of the country and another two or three years of deficient rain fall might reduce the available water in the Hasseyampa to nearly the vanishing point. I know of no way to guard against this last possibility and consider that it is one of the inherent risks which must be taken in any venture of this nature.

Yours very truly,

G. M. Colvocoresses.

GMC/HC

P. S. I am assuming that your Attorneys have thoroughly investigated the titles to the mining claims which you have under option, and satisfied themselves that these are valid and that the claims are in good standing.

G.M.C.

RANCHO SAN CARLOS
MONTEREY, CALIFORNIA

Jan. 10, 1935

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Mr. G.M.P. Colvocoresses.
Luhr Towers, Bldg.,
Phoenix, Ariz.

My Dear Mr. Colvocoresses:

I am in receipt of your recent favor, I am rather a poor letter writer until I have something to say and what you wish to hear from me I cannot yet tell you.

On Dec. 28th. I completed terms of a new lease with Mr. Merrill and received a certificate showing good title from P.C. Black, covering all the Merrill property also contract on the lands carrying 200 inches of water upon which a payment has to be made early in the year. This work has been the major delay but a few days ago I received a wire from Montreal that the Quebec Securities Commission were requiring that we qualify the Arizona David Mines Co., under the Blue Sky law of that State. I have tried to cure this by securing two certificates from the Arizona Commission; one that the David Mines is in good standing in that State and the other that for stock issued outside of Arizona no qualifications are required under the blue Sky law.

Mr. Granville of Kippen & Co., is in London I am informed awaiting a cable that our company is in legal possession of its property and authorized to issue the necessary stock for sale.

You will hear from me as soon as I can act because I am most anxious to get the job under way.

Most sincerely yours,

George F. Moore

(Gm)

Handwritten scribbles at the top of the page.

MONTEBELLA CALIFORNIA

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MONTEBELLA CALIFORNIA

32

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MUTUAL ENGINEERING COMPANY

South San Francisco, August 2, 1934.

David Mines, Inc.,
Attention: Mr. George G. Moore.

Gentlemen:

We are submitting to you our drawing No. 6671 in duplicate, covering the proposed layout of your gravel handling plant in Arizona.

General Description:

We understand that the material is to be loaded on 30 yard cars by a steam shovel. These cars are to be of the bottom dump type, each car fitted with its individual grizzly for the separation of the large sized boulders and material. The cars are to be hauled by locomotives, and to discharge directly into a bin of approximately 450 tons capacity.

From the bin the material is fed thru a hopper to a plate feeder having a variable speed motor so capacity can be adjusted to suit your conditions.

From the feeder the material is discharged on a 36" conveyor, 52' centers, which in turn discharges same thru a hopper into the scrubbing trommel, which is 6 ft. in diameter, 31' long. This trommel is fitted for 14' with 1" and 1 1/2" perforations. The washing section is 14' long, so arranged that it will handle at least 14" sized rocks. The fine material passing thru this trommel screen is discharged in a hopper on to a short belt conveyor, which in turn feeds a revolving trommel 5' in diameter, where the separation is made down to minus 1/4".

The oversized material from both the 6' trommel and the 5' screening trommel is discharged on to a 36" belt conveyor, 25' centers, which discharges same into a bin of 100 tons capacity. This bin is arranged with a bottom dump discharging into a four yard car, which is operated with a small hoist, allowing the car to run down the incline by gravity and to automatically dump and be hauled back for refilling. What passes thru the 1/4" screen will be discharged into a launder, and from the launder to a vibratory riffle 36" wide and 60' long, where the finer separation is made.

The plant is so arranged that all equipment, outside of the 6' scrubbing trommel, will have a capacity of 400 tons per hour. By the addition of another 6' trommel the entire plant can be brought up to this capacity. This trommel has an estimated capacity of 200 tons per hour.

All machines are driven with their individual motors, and the following is the estimated power for driving these machines.

Feeder - - - - -	5 h.p.
36" x 52' conveyor - - - - -	30 "
6' trommel - - - - -	40 "
36" conveyor to screen trommel - - - - -	5 "
Screening trommel - - - - -	30 "
36" x 25' waste rock conveyor - - - - -	7 1/2 "
Vibratory riffle - - - - -	15 "

David Mines, Inc., -2.

The following are the prices on the above material f.o.b. cars
South San Francisco:

1 - 6 ft. trommel complete with motorized reducer - - - -	\$5756.00
Extra sections of screen for 6' trommel, price per sect.	154.00
1 - 36" x 52' conveyor with motorized reducer - - - - -	2070.00
2 - 36" x 25' conveyor with motorized reducer - - - - -	1880.00
7 - hoppers - - - - -	2600.00
1 - vibratory riffle 36" wide, 60' long with motorized reducer - - - - -	1980.00
1 - 5' x 24' - 1/4" mesh screen - - - - -	<u>3745.00</u>
	\$ 18185.00

The above figures comprise the equipment without any erection or supporting frames. They do not include any cars or hoist, but include the complete gravel handling plant outside of the equipment for bringing the material to the plant and taking the discharged material away from the plant erection or supporting frames.

Yours very truly,

Mutual Engineering Company

(Signed) P. F. Schneider

PFS/T

The amount of \$3023.00 paid April 20th will be deducted from the above price.

C
O
P
Y

Mr. George G. Moore,

Calif

Dear Sir:

On my visit to Clarke's Gold Placer Washing Plant, I find they have a link belt shovel of $1\frac{1}{2}$ yards dipper working in a bank of about 20 feet of gravel and clay. Shovel was loading the gravel and clay into a string of nine. Side dump western cars of four and six yards capacity. These nine car trips are then hauled to the tipple or washing plant one mile distant by a five or six ton Plymouth gasoline locomotive. The grade to plant being in favor of the loads.

These cars of gold bearing material are then dumped into a bin or dipper of about 30 to 50 yards capacity; the hopper or bin has a reciprocating feeder at the bottom feeding the material into a scrubber which is about 5 feet in diameter and about 18 to 20 feet long lying horizontal. The scrubber has spiral baffles which keep throwing the larger gravels around and by this method breaking up the chunks of clay which contains gold, in fact, the gravel acts in the scrubber the same as steel balls do in a ball mill.

The scrubber has at the end, and attached to it, a cylinder screen about 6 to 8 feet long and flaring out at the end to about 7 feet in diameter, perforated with holes commencing at the end of the scrubber with $\frac{1}{2}$ inch holes and gets larger toward the outlet of said screen; - it also has spiral baffles in it.

All of the fine sands and small gravel going out thru

the holes which is about 50% of total. This goes on into the sluice boxes of which there are two leading from the scrubber or screen. These sluice boxes are about 100 feet long, and about 3 feet wide and at about 50 feet there is placed in the bottom two of the sluice boxes a screen taking the fines over and into another sluice box in which is another fine screen in the bottom taking out all the fine black sands. These sluice boxes have numerous Hungarian riffles placed in them, also a number of ingenious sets of board riffles lying flat with holes about $3/4$ " bored into the board about $1/2$ " deep with mercury dropped into these holes; in this manner he has been recovering all of the gold.

The large gravel, or about 50% of the total yards dumped into the hopper comes out of the scrubber and screen falls onto an endless belt or conveyor which runs at about 20 degrees up to the top of a hopper 75 feet distant. This hopper has about 20 yards capacity and is so arranged that a 6 yard side dump car can go under said hopper. The car is then filled or loaded with the gravel; - the car is then let run by gravity out on the dump which is about 600 feet across and 50 feet high, forming a dam for the water storage which is used in the plant. All of the water going thru the washing plant is diverted back into this reservoir and it settles and is used over and over again.

For water supply they have a Byron Jackson Pump located at the river $1-3/4$ miles away. 90 H.P. motor attached to the pump, 6000 feet 8" pipe, 245 ft. head, pressure 107 lbs. and after water gets over the hill they have an open ditch. 1,000 ft. long, - water running thru this ditch by gravity to the reservoir. This pump is in active service about four hours per day; 2500 gal. per minute at the reservoir.

600,000 gal. for 2250 yds = 266 gal. of gold ✓ 6 hours 1500 g.p.m.

They have another pump 40 H.P. which pumps the water up the hill 95 ft. in height to the washer or into a sludge tank or reservoir; 8" pipe leading to washer supplies all of the water needed by gravity.

C O S T S

Producing 2,250 yds. 2 - 8 hour shifts.

Shovel	0.03170
R. R. Haulage	0.01682
Washing plant	0.01187
Water Supply	0.00590
Tailings	0.00593
Electric Power	0.00724
Overhead	0.00100
Contingencies	0.00680

Each shift, - 8 hours

- 1 Shovel man
- 2 Locomotive runners
- 1 on dumping cars
- 2 on refuse dump
- 1 on scrubber
- 1 repairing car
- 1 Superintendent

Water = 160 gal per car per yr

JULY
27
1934

Mr. George G. Moore,
Monterey, California.

Re: DAVID MINES, INC.

Dear Mr. Moore:

In this report I shall briefly cover the work which has been done to date in sampling your Rich Hill Placers and will review the more important data which was given you in my first report of July 30th.

Up to the present time we have sampled altogether twelve pits and the general average of these is slightly in excess of 30¢ per cubic yard of bank. The locations of the various pits will be shown on the assay map which I shall prepare as quickly as possible and of which copies will be sent you either with this letter or to follow shortly as the draftsman may not be able to finish his work today.

The pits sampled were from various sections of the property, mostly along Weaver Creek near the junction of Jap Gulch and Slaughter House Gulch and further down toward the junction of Oro Fino. Other pits were sampled along the Oro Fino Gulch and it is now planned to dig and sample additional pits going up Weaver from Oro Fino and up Oro Fino beyond the pits which have been sampled to date.

The work which has been done does not yet enable me to give you any estimate of yardage or value, but it does indicate that there are substantial sections of the placer ground which sample down to the false bed rock (caliche) in excess of 30¢ per yard in place and where the gravel varies in depth from one to three yards.

The sampling during the last week has been largely confined to the cut which is being made by the steam shovel across Weaver Creek at a distance of 650' below the junction of Weaver and Slaughter House. This cut started on the east bank of the creek and one sample, our #13 was taken in the shallow red clay on the top of the bank. This showed a value of 50.38¢ per yard, confirming the fact which I have pointed out to you that there is a concentration of values along the surface of the ground and particularly in the red clay, but this does not extend more than a foot or so below the surface and the gravel will normally be low grade from that point until within a foot or two of the caliche.

The steam shovel had advanced up until the evening of the 25th 148' from its start, but only 80' in a direct line from the bank

7/27/34.

of the creek. As the advance progressed the shovel was able to cut down deeper and is now working about three yards below the surface, the samples being taken from this depth up to the top of the bank. The average of twenty samples taken by the steam shovel is close to 15¢ per yard of bank in place and I consider this extremely encouraging since we are working in the comparatively low grade portion of the deposit and much better values can be expected from this depth down to the bed rock, which we believe lies about 15' below the surface.

In order to sample this lower gravel as quickly as possible, it has been arranged to put in pits below the steam shovel cut and these will be dug in the very near future and some results may be available next week. The work of the steam shovel is very thorough and gives us a great many samples within a comparatively small area of gravel, but in view of the short time allotted to complete the examination it seems essential to continue the digging of pits both in connection with the steam shovel work and in other portions of the property and from this time forward only a certain percentage of our samples will be taken by the steam shovel.

My principal desire is to connect up as far as possible the area on upper Weaver Creek, which is being sampled by the shovel, with the area in the vicinity of Oro Fino where several pits have been dug and thus to obtain some basis for estimating the entire yardage along Weaver Creek and between these two points, which are approximately two miles apart, but it will not be possible to do this in less than two months of continuous work with the steam shovel and pits.

In connection with all the values mentioned above, it should be noted that these refer to the bank in place as is usual in estimating placer ground. In this particular placer so far as we have investigated there is approximately one yard of pay gravel which would go to the washing plant to one yard of boulders larger than six or eight inches in diameter which would be discarded over the grizzlies when operating with a steam shovel. Therefore, the gravel or pay dirt which would go to your washing plant would actually have a value of approximately double the figures quoted, i.e., over 60¢ per yard when taken from the area sampled by the pits and over 30¢ per yard when taken from the area sampled to date by the steam shovel. This last figure will almost certainly be largely increased when we can sample under the steam shovel cut down to the bed rock. Of course, the yardage going to the washing plant will only represent approximately 50% of the yardage estimated in the bank, but when I come to make up my report I will clearly explain this matter and figure costs of operation in both ways, and actually only the cost of excavating and of discarding the boulders will apply to the yardage in the bank and all further costs of transportation, washing, and refining will apply only to the yardage of pay dirt sent to the plant.

Mr. George G. Moore, -3.

7/27/'34.

Up to the present time our methods of sampling appear to be accurate and efficient, altho progress has not been as fast as I could wish, being limited by the steam shovel and other conditions which cannot now be changed. The addition of the concrete mixer and of the Denver mechanical amalgamating pan seem to have improved the operation of the testing plant since we no longer find any clay balls passing over into the tailings and a number of approximate determinations have indicated that a very considerable proportion of the gold in our samples is being recovered in the Denver pan which was not in use when the sampling was carried on by the Engineers who preceded us.

No attempt has yet been made to thoroughly investigate the water situation, but as per your instructions I shall now follow this up as fast as possible and endeavor to submit some reliable data within the next two weeks.

The proposed site for the commercial washing plant which had previously been selected by Mr. Vahrenkamp, and which we recently visited together, appears to me very suitable and offers many physical advantages as well as a central location. It will, however, be necessary to pump water over a considerable elevation in order to reach this plant from any accessible point on the Hassayampa River and this matter will be given careful consideration.

I find that it will probably be impossible to plot in the various pits on the copy of the map which will be sent you with this letter and it will probably be best to defer such plotting until our work has progressed for another two weeks. You may expect another interim report in about a weeks time, together with the results of samples taken during that period.

Yours very truly,

G. M. Colvocoresses.

CMC/HC

cc - Mr. Chas. Scott, Jr.,
Mr. W. F. Stumpf

P.S. Attached is detailed report of samples todate.

AUGUST
14
1934

AIR MAIL

Mr. George G. Moore,
Monterey, California.

Re: DAVID MINES, INC.

Dear Mr. Moore:

Yesterday, as you requested, I made some investigations around Wickenburg in reference to the water rights on the Hassayampa and saw Mr. Upton who gave me considerable information, some of which I have checked over this morning by conference with Mr. E. S. Clark.

There is no question but that you should be able to take at least 1,000 gallons, and perhaps 2,000 gallons per minute from the Hassayampa in the vicinity of the "Box" without injuring anyone who is actually using the water at the present time and I would not anticipate that you would have any difficulty in obtaining the permit, which Mr. Clark thinks will be issued in about ten days or two weeks, as soon as certain legal formalities are complied with.

I discovered that in October of 1930 the Wittman Company filed an amended application for a water permit to be used on their irrigation district some distance south of Hot Springs Junction. Under their new plan they abandon all idea of taking any water out of the Hassayampa either at the lower dam site or at the "Box" since the cost of constructing flumes from either of these points down to the irrigated lands would be prohibitive and they now plan to withdraw water at the location known as White Point which is about three and one-half miles down the river from Wickenburg. Under these circumstances all of the water which you might take from the river, except such as would be lost thru evaporation, would find its way back into the stream well above the point of diversion and I am sure that no objection could logically be raised by the Wittman people to your use of the water as contemplated. This also applies to the pumping plant now in use by the City of Wickenburg.

However, the Wittman people did apply for a permit to build two dams for storage purposes only and one of these was to be located approximately 500' below the Upton well at the "Box" and was to be built to a height of 160' which would back up the water for some six miles up the river and obviously drawn out ~~any~~ the pumping plant that might be built at or near the "Box".

Mr. Clark was quite surprised when I brot up this matter in conference with him and promptly telephoned the water commission to

Dear Scott,

This carbon of a letter to Mr. Moore may be of interest to you.

G.M.C.

AUGUST
31
1934

Handwritten signature

Mr. George G. Moore,
c/o Mr. Wm. F. Stumpfel,
120 Broadway,
New York City, N. Y.

Re: David Mines, Inc.,

Dear Mr. Moore,

Referring to the sample which you left with me, and which represented a black sand concentrate panned from our tailings below the little testing plant, an assay of this shows that it would have a value of \$176.75 per ton. This is not at all unusual for a panned concentrate of this nature and a greater part of the value was contained in tiny globules of mercury which we did not catch in the washing plant. The total value of gold in the sample was only a few cents and I am still convinced that our results represent a recovery of from 80 to 90% of the total values in the samples. Of course, we lost some gold for no treatment plant will recover 100% and in a commercial plant we might use mercury traps and other gold saving devices which would perhaps increase the recovery to a small extent, but it would not be safe to figure on any higher value of recoverable gold than was shown by our assays.

The panning which we took from time to time of the tailings from the individual samples showed a very low metal value, but, of course, there is a concentration of such values below the tailings launder and it is not at all surprising that Tomasson or anyone else could pan out some high values from these tailings after seventy odd samples had been run thru the plant.

Regarding the water situation, - I am most distressed over the delay which has arisen in securing your water permit. I feel that this matter might have been followed up some weeks ago, and the entire difficulty straightened out while we were still sampling and this would have seemed a more logical procedure.

Since you left town I have kept in touch with Mr. Clark almost daily and am pleased to learn this morning that the City Attorney of Wickenburg has approved of the resolution and that there is every prospect that the town council will pass the same and I trust that this may remove one obstacle and hurry the decision of the ~~Board of the Water Commission~~ upon which I assume that you and your Associates are still awaiting before taking any definite action regarding your future policy.

At Mr. Clark's request I expect ^{have} to sign ^{ed} an affidavit this morning certifying that from my investigation of the subject no

Mr. George G. Moore, -2.

8/31/'34.

harm will be suffered by the town of Wickenburg thru your proposed operations, but Mr. Clark seems fearful that there will still be some question raised as to the rights of the Wittman project and I do not know how this obstacle can be overcome without further negotiation and delay, all of which I am sure is very annoying to you and the other parties interested.

Personally, I could have wished that the conditions in respect to water supply had been decidedly different from what they actually are as I feel that the supply of water may always be a limiting factor in the operation of the Weaver placers, but I will do everything that I can to carry out your wishes and bring the matter to a favorable conclusion as quickly as possible.

I sincerely trust that the funds to cover the final expenses of the examination have been provided in accordance with your promise and that of your Associates and that a check covering my last account will arrive very shortly. I am leaving town today to be gone from this office until September 5th and probably you will be returning West by that date or soon after.

With personal regards.

Yours very truly,

G. M. Colvocoresses.

GMC/HC

Mr. George G. Moore, -2.

8/14/'34.

find out why they had not advised him regarding the proposed dam. We learned that such a permit was actually on file, but that no action to grant this permit had been taken by the Commission and apparently they were not favorably disposed toward making such a grant and if favorable action is not taken the application will expire in December of this year and have no further force and effect.

It is highly probable that the Wittman people cannot raise the money to proceed with their plans, but some of their local friends think that they may be able to obtain assistance from the R.F.C. and this is a possibility that must be faced.

Mr. Clark advised me very definitely that if our permit were actually granted and use were made of the water before the permit for dam was granted the Wittman Company that our right would be considered prior and even if the dam should eventually be built that the Wittman Company would be obliged to remove our plant to a suitable location at their expense and allow us to pump water from the reservoir created by their dam, which would obviously be greatly to our advantage. This, I understand is also the position in which Upton finds himself and he told me that he was not at all worried over anything that the Wittman people might do as his right was of twenty years standing and any changes in his plant would have to be made with his approval and at the expense of the Wittman Company. Personally, I think it would be well to investigate this matter a little more fully and check up the law as it may have been established by any similar cases which have been adjudicated.

Upton suggested that it might be to the advantage of the David Company to take an option on some of his placer ground which lies further up Slaughter House than the Merrill ground and extends over onto Antelope. Upton said that this would strengthen our position since a portion of his water rights would thus be assigned to us, but personally, I think that this matter can very well be considered at a later date and I have no information regarding the value of Upton's ground from a mining standpoint, altho I have heard it well spoken of.

Mr. Clark, in conversation, brot up a very interesting point in connection with the mining claims which please consider as confidential to you and your immediate associates. It appears that a considerable percentage of Merrill's claims are located on land which belongs to the State of Arizona and there are special rules and regulations which govern mining operations on State lands and which do not permit the patenting of unpatented claims nor acquiring title as can be done when claims are located on the public domain, i.e., on land which belongs to the United States Government. The State of Arizona will only lease mining claims and mining rights and this is another point which you will no doubt wish to thoroughly investigate in the near future.

Some of the land over which the pipe line would pass

Mr. George G. Moore, -3.

8/14/'34.

also belongs to the State of Arizona, but there is no difficulty in securing a right of way across such property and procedure is similar to that in the case of the public domain.

Mr. Clark was strongly of the opinion that it would be advisable to have a survey of the proposed pipe line made just as quickly as possible and felt that this should be done even before your water permit is granted, altho I do not agree with him in this matter, but pass it along to you for judgment. When the survey is made, and it will have to be on file and approved before you take any steps to actually utilize the water, it will have to show in detail the contours of the ground and the route of the pipe line and indicate just thru which sections and townships the line will pass and this will be a necessary preliminary to secure the right-of-~~water~~ way.

Mr. T. R. Johnson, the young Engineer who has been doing some of the drafting for me and other work in connection with your water application, would be quite competent to make this survey and I shall be glad to supervise the same in a general way, but I do not think that anything would be lost by waiting until the permit is actually granted and some other information obtained regarding titles, etc.

I shall be leaving for Los Angeles tonite to keep a long deferred appointment on some other work, but will be back here on the morning of the 17th and by that time the assays of the final samples should be available and I will be in a position to continue working on my report and putting this in final form, altho that will require some little time if it is to be prepared and submitted in a careful and workmanlike manner.

I presume that I shall see you back in Phoenix during the next week or so and we can then discuss several matters which time did not permit covering when we met at Wickenburg, and you will also go more into detail regarding just what services you wish me to continue to perform for the David Company after the present report is submitted.

With best personal regards.

Sincerely yours,

G. M. Colvocoresses.

GMC/HC

LAW OFFICES

GRAHAM, McMAHON, BUELL & KNOX

ONE CEDAR STREET
NEW YORK CITY

CABLE ADDRESS
"GRAMACBUK"

EDWARD WARD McMAHON
RALPH P. BUELL

WILLIAM H. HALL
CHAS. HENRY SCOTT, JR.
JOHN F. KIERNAN
HENRY A. MULCAHY

June 21, 1934

Mr. G. M. Colvocoresses,
1108 Luhrs Tower,
Phoenix, Arizona.

A 6/23
34

Dear Colvo:

I received your wire last Monday, but not the promised letter. I gathered from the wire that you had not examined this particular property, but at least thought that you had not and that you were giving me the customary caution as to careful investigation before starting anything. If you know anything in connection with this property, either for or against it, I would much appreciate knowing what you have to say.

The company which is known as David Mines, Inc. obtained some time ago a lease of the Merrill property and has conducted some testing through its engineering force. The reports which we have had to date are not as satisfactory as might have been expected from pre-existing reports of the same property, one of which was made by our old friend Stephen of the U. S. Smelting & Refining Company. However, there does appear to be some value there which I think can probably be recovered through the process which we will install, if we go ahead. This necessitates the use of steam shovels which will load the gravel on small railway cars to be taken down to the plant for washing. It is now proposed to conduct a geophysical examination for the purpose of determining the contour of bed rock in parts of the property and also the possibilities of obtaining water of our own there.

At the present time a somewhat complicated and difficult situation has arisen with the present engineers and it may be that they can no longer be of use to us. If this takes place, the company will need to some extent at least the services of a consulting engineer for various purposes. Just by way of looking ahead I have suggested you as a possible candidate and have explained what I knew of your experience and my former connection with you. I have told our people that I did not know how much experience, if any, you had had in placer mining or in gold mining in general, but that I knew you had had experience with geophysical surveying and that so far as I was concerned I could vouch for your general ability and absolute honesty.

The gentleman who is the moving spirit in the whole matter is Mr. George G. Moore of Monterey, California. Mr. Moore has had

Mr. G. M. Colvocoresses.

-2-

wide experience in all sorts of big business and at one time was the head of large stripping mines in the coal districts of Illinois and Indiana. He and his associates are the most widely experienced steam shovel operators that could be found in this country. Mr. Moore is quick and excitable and of a highly nervous disposition and perhaps difficult to understand until you know him. As he puts it, the only kind of an engineer he can get along with is one who is sound, sane and not hysterical. He has become interested in my description of you and if things turn out as I think perhaps they may, there may very well be something in this for you.

Mr. Moore is at present in New York, but will be leaving for Wickenburg in a little while, probably next week. If you are in a position to talk business with him, I think it would be advisable for you to meet him upon his return, either in Phoenix or possible at Wickenburg. I will let you know what the program is when it develops, and in the meantime you might send me an air mail reply, telling me whether you would care to meet Mr. Moore and go over the situation with him. Not having heard from you in so long, I cannot tell whether you are overburdened with work or have other interests which would make this connection, if it develops, impossible. I thought, however, you would perhaps be interested in meeting Mr. Moore and going over the situation with him in any event.

With kindest personal regards, I am

Sincerely,

A handwritten signature in black ink, appearing to read 'G. M. Colvocoresses', written in a cursive style.

CHS-d

*File with Red Bank
Placer*

J U N E

1 8

1 9 3 4

Mr. Charles Henry Scott, Jr.,
c/o Graham, McMahon, Buell & Knox,
One Cedar Street,
New York City, N. Y.

Dear Mr. Scott:

I have yours of June 16th, and was very pleased to hear from you, also to learn your address in New York, for while I have no plans for an immediate trip in that direction, it is possible that I may go East in the fall and might have an opportunity to see you and renew our pleasant acquaintance.

Regarding the "Rich Hill - Weaver" mining property, it is a little hard for me to answer your question. The old placer workings on Rich Hill produced a substantial amount of gold from very rich diggings back in the 60's and 70's. The operations during recent years have amounted to very little and so far as is known, the placer on Rich Hill is entirely worked out, altho there are some vein mines working on a small scale in that vicinity and when I was last in that district some three or four months ago I heard that attempts were being made to reopen the old placer ground.

Near the foot of Rich Hill there are two gulches known as Weaver and Antelope and the entire vicinity is sometimes referred to as the Weaver district. At various times efforts have been made to operate placers along both Weaver and Antelope creeks and some other small creeks which are tributary to them, and as far down as the Hassayampa into which they flow.

I recall that Mr. R. M. Merrill, who formerly resided in San Francisco, but at one time was quite active in Arizona claims, did have very large holdings of placer ground in this vicinity. I knew Mr. Merrill slightly and have been over some of his ground, but have never investigated it in a professional way and recently I have been told that there is considerable doubt as to the *validity* of some of Mr. Merrill's titles to the mining claims and also to the water rights which would be essential in order to operate his property. This, however, is merely hearsay.

At one time in 1930 I made an examination of some placer claims held by the Red Bank Mining Company and located along Weaver Creek somewhat higher up than Merrill's property. This appealed to me as worthy of further exploration and development and I so advised the parties for whom I made the report, but the Company was, at that time, controlled by an ~~and~~ out and out swindler who is now, or recently was in our State Penitentiary and I believe that he used all of the

Mr. Chas. Henry Scott, Jr., -2.

6/18/'34.

money subscribed by the stockholders for his personal expenses and that the Red Bank Company blew up entirely and is no longer in existence.

If the parties whom you represent are dealing with Merrill, I can only suggest that before they actually spend any money for development or operation, it would be very wise for them to have a thorough examination conducted by a Mining Engineer and a reputable local Attorney and to be guided by the results and recommendations which may be made to them by these parties. The Red Bank property is the only one in that district on which I have ever made a report and this would be of no particular value unless Merrill has since acquired the property which was then held by the Red Bank Company. I do not know whether or not such is the case, but in any event, Merrill's principal holdings were further down the creek and comprised a very large area of quite different gravel.

I am embodying the gist of this information in a day letter, collect, as you requested, and enclose confirmation of same.

Meteor Crater Company is still in about the same condition as it was two years ago. We have not yet been able to interest any parties in financing the continuation of our exploration, but we have held onto the property largely at my personal expense, and have kept up the payment of taxes and other requirements of the lease agreement and I am still hopeful that exploration work can be resumed when and if general financial conditions improve.

I trust that everything is going nicely with you and shall be only too pleased to be of further service to you or your clients, if occasion should arise.

Personal regards,

Yours very truly,

G. M. Colvocoresses

GMC/HC

EDWARD WARD McMAHON
RALPH P. BUELL

CHARLES B. CRANE
WILLIAM H. HALL
JOHN F. KIERNAN

LAW OFFICES
GRAHAM, McMAHON, BUELL & KNOX
ONE CEDAR STREET
NEW YORK CITY

CABLE ADDRESS
"GRAMACBUK"

A 6/18
34

June 16th, 1934.

Mr. G. M. Colvocoresses,
1108 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvocoresses:

It is some time since I have seen you or heard from you, but recently I was reminded of the fact in an entirely different connection from our old association in Meteor Crater.

I represent certain parties who are interested in a mining property in Arizona which is called, "Rich Hill - Weaver" and is located near the town of Wickenburg. The property is owned by a Mr. Merrill and is a placer gold mining claim. I have been told that at one time you made an examination of this property or some of it, either for Mr. Merrill or the previous owner, and I am wondering whether you have any recollection of it and whether you could say anything for or against it. I understand our people have been furnished with a copy of your report, but I have personally not seen it.

Anything you tell me would be entirely from memory and be personal and confidential, nor would it involve any responsibility on your part. All the reports we have had from previous examinations have been extremely favorable, but I do not know the engineers and I feel that from my personal point of view a word from some one I know and trust would be very helpful. I would greatly appreciate your sending me a day letter, collect, when you receive this.

I have not heard anything about the old Meteor Crater for a long time and am wondering what the situation now is and whether the Company has definitely lost the lease.

I received your circular of November 8th and probably should have answered it, although

Mr. G. M. Colvocoresses

-2-

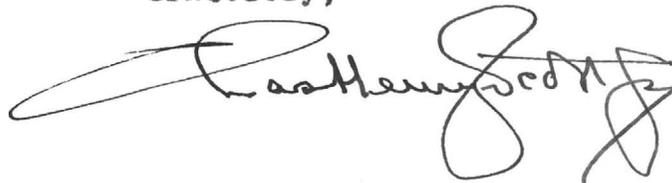
June 16th, 1934.

there was nothing that I could personally do because all the stock and notes I own are really held for the benefit of my former partners in Philadelphia.

I have been here in New York for several years and everything is going along very nicely. If you ever get this far, do please stop in and see me and renew our acquaintance.

I remain, with very kindest regards,

Sincerely,

A handwritten signature in cursive script, appearing to read "Charles Henry Scott". The signature is written in dark ink and is positioned to the right of the typed name "Charles Henry Scott".

CHS:ML

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

(12)

R. B. WHITE
PRESIDENT

NEWCOMB CARLTON
CHAIRMAN OF THE BOARD

J. C. WILLEVER
FIRST VICE-PRESIDENT

SIGNS

- DL = Day Letter
- NM = Night Message
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Received at 20-22 North Central Avenue, Phoenix, Arizona. Tel. 33173

1934 JUN 30 PM 1 13

SA257 24 DL=LN LOSANGELES CALIF 30 1200P

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER

G M COLVOCARESSES=
PHOENIX ARIZ=

R M MERRILL GLENDALE CALIFORNIA WILL MEET YOU ON THE PROPERTY
ANY TIME YOU WIRE HIM AND GIVE YOU ALL THE INFORMATION HE HAS=

GEO G MOORE.



WESTERN
UNION

1934 JUN 30 PM 1 14

1934 JUN 30 PM 1 14

J U L Y

2

1 9 3 4

Mr. Geo. G. Moore,
Monterey, California.

7
Amos J. Employment
July 12
Geo. G. Moore
Re: RICH HILL PLACERS

Dear Mr. Moore:

Since I last wrote you on Saturday, I have very carefully gone over the reports which you left with me, also the map and a considerable amount of other data bearing on the Merrill properties which I had in my files. I regret to say that the reports appear very disappointing and rather fragmentary and they do not give any satisfactory basis upon which the sampling and exploration can be started. Apparently the map was not prepared with reference to the results of the sampling of any of the other Engineers than Mr. McNeer and it would be very interesting to obtain similar information concerning the other investigations which have been made of the property. It occurs to me that you probably have some reports from Mr. Vahrenkamp and if so, I hope that you will send these to me at the same time that you send me the results of the recent samples which I trust may arrive very shortly.

I received your telegram stating that Mr. Merrill would be glad to meet me on the property and I shall certainly take advantage of his offer since he will undoubtedly be able to give me much valuable information, but I would prefer to ask him ^{not} to do this until I have seen the reports which you will send me, also until Dodds returns to the property, since it would be well to have him present when the matter is discussed.

I am unable to find the name of H. H. Ray either among the members of the American Institute of Mining Engineers, or listed in Who's Who in Engineering, so that I have no way of locating him at present, but if you can tell me something of his recent employment I might be able to get track of him from some mutual acquaintance in the engineering profession.

I found among my papers a somewhat lengthy report by J. M. Nichol, which is not quoted among the reports which you gave me and which gives considerable data of value, but Nichols says that he personally took no samples at that time and therefore his conclusions are based upon the sampling done by others, which however, he accepts as accurate.

I expect to revisit your property tomorrow, but probably shall not remain very long since I assume that Dodds will be away bringing in the steam shovel and it will be necessary to await his return and also the arrival of the documents concerning the previous sampling and the information concerning the best type of washing machine, before taking any very definite steps towards selecting the area which is to be more thoroughly sampled with a view to later commencing operations.

Mr. Geo. G. Moore, -2.

7/2/34.

Meantime, I am arranging to employ one or two trustworthy assistants, as discussed between us, and I will try to have everything in readiness to go ahead with the actual work just as fast as possible and will probably arrange for a conference with Mr. Merrill as soon as Dodds and the shovel arrive, which I presume will be during the latter part of this week.

Mr. E. S. Clark, who was out of Phoenix during the week end, - but I talked to him today over the 'phone about the water right situation, and he tells me that there is no question but that your company can secure a permit to sink a well on the Hassayampa and to pump such a quantity of water as you may need provided this does not interfere with the power rights to water which have already been established on the river. Clark mentioned particularly the priority of the town of Wickenburg and of the Wittman project, but did not believe that your pumping would ever interfere with either of them unless it should assume very large proportions.

Clark said that he had not recently been informed as to just what you wished to have him do, but that he was quite ready since you so instructed him and named the corporation in whose favor the right should be requested, to proceed at once to present this right and secure the necessary permit. He gave me to understand that you had suggested that 2000 gallons a minute should be applied for and I told him that while this might be alright for the moment, I felt that care should be taken not to name this figure or any other figure as the ultimate limit of your requirements and to this he readily agreed.

I suggest that you should write to Mr. Clark direct on this subject, but if you prefer, I will follow the matter along with him.

Meantime, I shall be away from Phoenix a good deal of the time so you will understand any delay which may occur in replying promptly to your letters or telegrams.

Yours very truly,

G. M. Colvocoresses.

GMC/HC

J U L Y
2 0
1 9 3 4

AIR MAIL

Mr. George G. Moore,
Monterey, California.

Dear Mr. Moore:

This will serve as a brief report on the progress of the sampling of your Rich Hill placers todate.

Considerable delay was caused at the outset by reason of the necessity of re-arranging the washing plant for testing the samples and adding to it equipment which seemed necessary to break up the clay and to recover the fine gold by amalgamating with mercury. There was also a shortage of labor since all of the available men were occupied in moving the steam shovel from LaFaz.

On the 15th we started washing the first samples which were taken from material previously dug from pits excavated under Mr. Vahrenkamp's direction, or which were cut from those pits as a check on his samples. Up thru the 18th we had washed ten samples, the results of which are given on a separate sheet attached hereto.

As was to be expected, these results showed a wide variation in value and they are really not representative of any particular portion of the property since they were of necessity taken from various sections of the ground where samples were readily available and no one portion of the property is sufficiently covered to permit any calculations as to average values. There was one especially rich sample running better than \$1.00 per yard, which came from hole 213 in Oro Fino Gulch and which brings up the average. There were two very low samples, - from hole No. 211 on Weaver Creek, and No. 306 from Jap Gulch, but in this last sample a small nugget was found which is not included in the value listed but which I shall keep with such other nuggets as may be found to be averaged over the entire sampling when this is completed.

The arithmetical average of the samples taken todate is 32.41¢ per yard, and if the nugget were to be included the average would be close to 33¢.

Three of our samples may be considered as checks on Vahrenkamp's work. Our sample No. 7 showed 12.41¢ per yard where Vahrenkamp showed 14.8¢. Our sample No. 6 showed 13.19¢ per yard, where Vahrenkamp showed 14.6¢. Our sample No. 3 showed 47.23¢ per yard, where Vahrenkamp showed 29¢, but our sample of this pit No. 307 did not include caliche where Vahrenkamp's sample did, which undoubtedly brot down his value to a considerable extent.

Mr. George G. Moore, -2.

7/20/'34.

The above statements are merely made for purposes of record and can only be considered as an indication of a comparative agreement with Vahrenkamp on these particular samples and further results may change this situation to a very substantial extent.

In looking over the holes which were sunk by Vahrenkamp I was impressed by the fact that many of these were not favorably located nor truly representative of any large section of the ground and we shall hope to obtain samples which are much more representative of substantial yardage and which will give a more accurate value of the portions of the property which we are able to sample within the allotted time.

I wish to again point out that the area covered by your placer ground is extremely large and that many varying characters of gravel are found in different sections and that any thorough sampling is bound to require a substantial amount of time and money, particularly because it is well known and proved by all previous reports that the values in various sections are extremely erratic and likely to vary within wide limits from two or three cents up to two or three dollars per yard.

The steam shovel finally reached the area on Weaver Creek near Slaughter House Gulch where it was decided that our new sampling should commence and the results of the samples which we shall be able to take with this shovel will be much more interesting and important than those which are recorded todate.

I shall plan to bring or send down a batch of these samples to Phoenix each week as it is necessary to have them refined and weighed by the local Assayer who is a very competent man and as soon as results are known (in the present case it was not until last evening) I shall make up the calculations and send you reports similar to the above. In this case I wish to mention that my figures were made up very hurriedly last nite and will have to be rechecked so that there may be some slight changes, but I do not think that they will change the picture to any degree, and I am hopeful that the average of future samples will be decidedly better than those taken todate.

In connection with our high assay on hole No. 213, would state that this sample did not contain any nuggets, but did contain aside from a certain amount of fine gold some twelve or fifteen grains which might each be worth four to five cents. The weight of the nugget from hole #3 was 155.7 Mg, but as some rock was attached to this I shall call it 120 Mg, fine gold value say 13¢.

As per our telephone conversation, which interrupted the dictation of this letter, I am not sending any information to your New York Associates at the present time for I understand that you prefer to have our work proceed somewhat further before any regular report can be made and this is also my own preference. The above must

Mr. George G. Moore, -3.

7/20/'34.

therefore, be taken as merely a tentative progress report, subject to revision at a later date.

Yours very truly,

G. M. Colvocoresses.

CMC/HC

P. S.

In copying off calculated figures last nite a mistake was made in the decimal point on sample No. 8, hole #214, which I reported to you over the telephone as running 5.99¢ per yard, but which actually ran 59.9¢ per yard. This will bring up the average to over 32¢ per yard as noted in the letter and corrected report of the sample attached.

G.M.C.

P.P.S.

None of the samples recorded in this letter came from anywhere near the location of the steam shovel which will start working along Weaver Creek about 1000' below the junction with Slaughter House and on a section of property which was recommended by Thomasson as containing high values and which appealed to you and to me as being suitable for mining on a large scale with steam shovels.

G.M.C.

Am here Copy to Salt
October 12, 1934

Mr. George G. Moore
Hotel Mount Royal
Montreal, Canada

Re: David Mines

Dear Mr. Moore:

I received your telegram this morning and am replying as per confirmation inclosed. I have already written to Mr. Scott in some detail regarding the new plan for obtaining water from the Cameron Ranch, and I presume he has showed you my letters.

The istuation is about as follows: In Arizona as well as other western states, water rights were originally granted to the owners of land adjoining the rivers and streams. The deed to the land included also the deed to a certain amount of water, in this case 200 miners inches (approximately 2000 gallons per minute) and the water might legally be used for any purpose whatever, including agriculture, mining, etc. No special permit to use this water was required nor is such a permit yet required by law when the rights were secured under these old regulations. I know this to be a fact from personal experience because at Humboldt our mining, milling, and smelting company purchased a ranch on the Agua Fria River together with the water rights and we used this for milling and for our smelter without being required to obtain any permit.

More recently legislation was passed requiring that any party desiring to use water must apply to the water commissioner for a permit and specify for what purpose this water was to be used. If it was requested for agriculture purposes it could not be used for mining and visa versa. It is for this reason that the Wittman project lost their right to use or dispose of water for mining purposes and merely retained their rights to use water for agriculture, but such regulations do not apply in the case of the older rights such as those which you propose to purchase with the Cameron Ranch.

In all cases it is, however, necessary to show that some beneficial use is being made of the water and has been made more or less continuously over a period of several years. I recollect that in passing over the Cameron Ranch last summer I noticed that they were using water through ditches for irrigating and I am advised by several people that it can be conclusively proved that the Cameron water has been used continously

2- G. M.

for a number of years and that the rights are in good standing and would be perfectly valid in the hands of any new purchaser.

From the above you will understand that if you buy the Cameron Ranch and water rights you will not be required to obtain any permit from the water commissioner, but can simply go ahead to develop by wells or otherwise use as much water as you can obtain on this property and pump it over to your washing plant through any pipe line for which you may have secured a proper right of way. This last is not a difficult matter.

Of course, you will still be subject to the general law governing the use of water. If, at a later date your use should deprive other users, such as the town of Wickenburg or some of the ranches on the rivers of the water which they require and which they had previously used, you would be liable to suits for damage and the amount of water which you could take from the river might be restricted, by court decision, even to a much lower figure than the 200 miners inches which are granted in the Cameron deed. ~~to the~~

However, we have previously discussed this latter point and we know that the water which you will use will all filter back into the river above Wickenburg pumping plant, except only that which is lost by evaporation or remains absorbed in the tailings. We also know that there are no others using any large quantity of water along the Hassayampa and there is no prospect of any such ~~use~~ except possibly by the Wittman project, who now plan to draw their water from a point well below Wickenburg.

I believe that you are reasonably safe, therefore, in relying upon the Cameron Ranch for your water supply, and I hope that you will be able to close the deal that Weinfeldner has worked up and to promptly secure this water as a basis for your operations.

If you should for any reason fail in this attempt it would be possible to secure a similar water supply from George Upton, who has rights at "The Box" secured in the same manner as the Cameron rights, that is, through the ownership of a ranch, but I think the Cameron deal is probably preferable and I hope that it may be concluded promptly.

I do not quite understand from your telegram whether the financing of your property is still dependant upon the water or whether you are already financed and your return to Arizona hinges upon the water situation. In any event I judge that you have been making progress and I sincerely hope that you will be able to proceed promptly with the development and equipment of the placer and that we shall soon see you back in Arizona.

As I wrote Mr. Scott, I expect to be away from Phoenix during all of next week, but will be back here in the office on the 22nd.

Personal regards.

Yours very truly,

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DAY LETTER	DEFERRED
NIGHT MESSAGE	NIGHT LETTER
NIGHT LETTER	WEEK END LETTER

Patrons should check class of service desired; otherwise message will be transmitted as a full-rate communication.

WESTERN UNION

NEWCOMB CARLTON, PRESIDENT

J. C. WILLEVER, FIRST VICE-PRESIDENT

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ACCT'G INFMN.
TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

GEORGE G. MOORE
HOTEL MOUNT ROYAL
MONTREAL, CANADA

ATTORNEYS AND OTHERS ASSURE ME CAMERON WATER AVAILABLE FOR ANY
PURPOSE INCLUDING MINING (STOP) THESE RIGHTS OBTAINED PRIOR TO
PRESENT REGULATIONS AND NO PERMIT FOR USE REQUIRED BY LAW (STOP)
CLARK ALSO WIRED YOU TO THIS EFFECT (STOP) GLAD YOUR PLANS MAKING
PROGRESS HOPE SEE YOU BACK SOON REGARDS

E. M. COLVOCORESSES

COLLECT

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2. In any event the company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the sum of five thousand dollars, at which amount each message is deemed to be valued, unless a greater value is stated in writing by the sender thereof at the time the message is tendered for transmission, and unless the repeated-message rate is paid or agreed to be paid, and an additional charge equal to one-tenth of one percent of the amount by which such valuation shall exceed five thousand dollars.
3. The company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.
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5. No responsibility attaches to this company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the company's messengers, he acts for that purpose as the agent of the sender.
6. The company will not be liable for damages or statutory penalties in any case where the claim is not presented in writing within sixty days after the message is filed with the company for transmission.
7. It is agreed that in any action by the company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.
8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.
9. No employee of the company is authorized to vary the foregoing.

THE WESTERN UNION TELEGRAPH COMPANY
INCORPORATED
NEWCOMB CARLTON, PRESIDENT

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WEEK-END LETTERS

At still lower rates. Similar to Cable Night Letters except that they are accepted up to midnight Saturday for delivery Monday morning, if telegraphic delivery is selected. Minimum 20 or 25 words charged for.

Octave, Arizona,
Sept. 8th. 1934.

Copy this

A 9/13. 34

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

Dear Sir;

It has been brought to my attention, recently, that your company is contemplating the purchase- or has purchased, a tract of placer ground- from R.M. Merrill, of Glendale, California.

In that deal, he has probably included all of Section 7, township 9, north, Range 4, West. I wish to call to your attention the fact that R.M. Merrill has no title to any part of that section.

As a matter of fact, his title to the entire tract is somewhat cloudy.

By a system of relocations covering a period of years, and the avoiding of assessment work by such relocations, he has claimed some ten square miles of land.

During these relocations he has covered land owned by other parties, and on which assessment work has been honestly done by the owners.

On the first day of July 1928, he covered my claim with a relocation, and In July 1931, he made another relocation on this same claim.

The claim in question is located in the North West Quarter of Section 7, Township 9, North, Range 4, West, and in the South West Quarter of the same Section and Township and Range. And including a strip in the North East Quarter and the South East Quarter of the same Section, Township and Range.

Merrill made his relocations after I had located and recorded. He has twice sold this claim to other parties, and on one occasion I resold the claim to one of the parties to whom Merrill had previously sold it.

I have one hundred and twenty acres of land, starting at the Section post on the west bank of Weaver Creek.

I have no objections to the taking of samples on this claim. And the claim is for sale. But I shall not permit the working of this claim until a sale has been made. As to other claimants, I have no brief for them. And there are others.

No doubt, you have noticed a sign that I have posted on my ground. And before doing any work on my ground, I would advise a thoro search of the records at Prescott. I can give you book and page of all of the relocations made by Merrill during the past eight years.

Trusting that you will carefully investigate this matter, I Am,

Very Truly Yours,

Frank J. Gillick
Frank J. Gillick.

Sgt.- At-Arms,
IIth. Senate.

David Mines file

Octave, Arizona,
Sept. 17th. 1934.

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

Dear Sir;

Please accept my thanks for your interest in my affairs. I did not know the address, or name of the mining company who have the option on the Merrill placer. That is the reason that I wrote to you. That, and the fact that I know of your reputation as a square shooter.

The only dispute that I have with Merrill is, that I will not give him a quit claim deed to my ground. He has hogged this country for the past fifteen years, and held his ground illegally by a system of relocating to avoid assessment work. He proved this by relocating on top of me two different times in the past three or four years.

My sale of the claims was to a company in which Merrill had fifty one per cent of the stock. They failed to make payments and I withdrew the papers from escrow. I have the records of that sale.

In almost forty years of residence in Arizona, I have yet to see the time that I will permit a lousy Californian bulldozer to ride rough shod over my rights as a locator of mining property. Or to run me off of a claim that I hold legally.

There are other locaters in that section who have their rights also, and my advice to the David Mines Co., is to watch their step carefully when doing business with Bob Merrill.

Five square miles of relocations by Merrill, in 1928, and three square miles in 1931, are proof positive of his avoidance of assessment work.

And yet, he claims all of the ground since 1919, and says that he has done all of his assessment work since that time.

My location of 120 acres was all that I felt that I could decently take and do the assessment work on, and no one is going to jump it without a contest.

I realize that this is of no interest to you, but it is well to know all of the circumstances in regard to the matter.

Thanking you again, I beg to remain,

Very Sincerely Yours

Frank J. Gilliek

Frank, J. Gilliek.

GEORGE M. COLVOCORESSES
MINING AND METALLURGICAL ENGINEER
1108 LUHRS TOWER
PHOENIX, ARIZONA

Copy
September 13, 1934

Frank J. Gillick

Octave

Arizona

Dear Sir:

Replying to your letter of September 8, I wish to state that my connection with The David Mines Company who have an option on the Merrill Placer is purely of a professional nature and the investigation of the titles to the Merrill property is not in my hands, but has been undertaken by the attorneys for The David Company.

I have noted the contents of your letter and in due course of time will bring this to the attention of the officials of The David Company or their attorneys, but I recollect that Mr. Merrill mentioned his dispute with you in regard to the title of certain claims and I have no doubt but that this matter will be thoroughly investigated in any event.

Yours truly,

J. M. C.

GMC:F

Oro Grande Consolidated Mines

CAPITAL \$3,000,000

Wickenburg, Arizona

Aug. 17th. 1934.

A. J. 18, 34

Mr. George M. Colvocoresses,
1108 Luhrs Tower,
Phoenix, Arizona.

Dear Mr. Colvocoresses:-

Referring to our recent conversation in reference to the water problem, in connection with the Rich Hill placers; I submit the following solution.

We have three sources of water supply; First, the flow of water, in normal seasons, over our patented mining claims, on Antelope Creek; Rights acquired through constant usage, covering a period of 38 years; In normal seasons there is a constant flow during the Fall and Winter months, lasting usually until June; In 1928 we had a number of heavy run offs and after floods, had nearly $7\frac{1}{2}$ second feet of water for approximately seven months. On this property I have a dam-site below our mill, at the outlet of a basin that will impound 45 acre feet with a dam 35' feet high; Average width of outlet, between solid rock walls, about 70 feet; My idea would be, not to impound water, but to put in a low diversion dam at this point, to pipe water to lower end of my ground on Antelope; This is the southern end of the N. W. Quarter of Sec. 1. After using the water there, it could again be picked up and used over on other ground below that point; My plan has always been to work up stream or North, on all placer workings, in order to have the undisturbed clay and gravel on the lower side, to retain water.

The second source for water at the upper end of my ground, are wells in the schist; I have three; This schist belt is nearly vertical and has a strike of Northeast, directly through to the large springs on the East side of Peoples Valley; These springs form the head waters of Kirkland Creek, Santa Marie River and Bill Williams river. There is a strong flow of water through this schist belt, proven in our wells. One well in Antelope Creek, in hard schist from collar to bottom, 27' has a strong flow and is only lowered a few feet by a pump that throws approximately 50 gal per minute; My plan has always been to lower this well 20 feet and crosscut 50 feet. Would carry the crosscut large to increase flow and for underground storage; No timber required; Believe this one well would supply 200 G. P. M. and it is not influenced by drouth. Additional flow could be obtained by continuing crosscut.

The third source for water supply for the lower or Merrill ground would be our Hassayampa River water rights; The Copperhead Mill Site was located by us April 1st. 1901 and claims all water and water privileges thereon or appurtenant thereto.

I submit the following proposition for the consideration of Mr. George Gordon Moore and David Mines Inc. I will give an option on

my placer ground on Antelope Creek, in Antelope Gulch and in Sec. 1, amounting to approximately 300 acres, including water, on a lease and royalty basis; Royalty to be 15% gross. Minimum royalty payments to be \$250 per month. Requirements for developing additional water, the sinking of at least one well an additional 20 feet and crosscutting fifty feet. Low diversion dam to be constructed on Antelope Creek, at narrow point below mill; This dam to divert water by pipe line to lower end of N. W. Quarter of Sec. 1. Parties to have the right to conserve water at that point for usage on any ground they may have further south. Water used from wells or pumped from Antelope Creek bed, to be used on ground on upper end of Slaughter House Gulch, to be conserved, if so desired, at lower end of Upton Placer Number Two, and used on any ground the David Mines Inc. may have below my ground.

Water from the Copperhead Water Right, at a monthly rental of \$200; If well is not sufficiently large to furnish water for continuous pumping for both the Oro Grande milling purposes and the David Mines, the latter company to enlarge well at their expense and timber same in a substantial manner.

There is no question but what the three sources will supply all the water necessary for the operations of the David Mines and at a very reasonable cost. Consider the reports of engineers, on the Rich Hill Placers and estimated costs for water, ranging from \$500,000 to \$1,000,000;

You will, in case you sample the upper end of Slaughter House Gulch, find some very rich ground; The gulch heads below the slide (old placer workings) on the West side of the mountain; This is directly opposite the slide on the Weaver side below which more gold, in nugget form was found than at any other point on the Weaver side of the mountain. A slide that took a large section of the top of the mountain, buried the richest placer on the Stanton side and this ground has never been worked. The Antelope Gulch contains both the Rich Hill placers and the old channels, Pre-Tertiary.

Kindly take this up with your people at the earliest possible date; Gene is now working with a party in Northern California, on a deal for the placer ground; If we close with them it will carry all water privileges we have on the upper ground.

With kindest personal regards, I remain,

Very truly yours,

G. B. Upton,

DAVID MINES, INC.

Condensed Record of Sampling - July, 1934.

NOTE: Fineness of gold in samples as determined by Phoenix assayer is 940
 Fine gold valued @ 0.11¢ per Mg. which allows for refining and
 minting charges.

Sample No.	Hole No.	Location	Value of bank in cents per cu. yd.	Vahrenkamp value per cu.yd.	REMARKS
1	216	Oro Fino	15.2		
2	217	" "	23.8		
3	206	Jap Gulch	9.05	22.7	We sampled only the caliche. Recovered one nugget which would raise value to 22¢.
4	307	" "	47.23	29.0	We sampled only above the caliche.
5	213	Oro Fino	102.9		Several grains of gold of 4-5¢ value each.
6	215	" "	13.19	14.6	
7	301	Slaughter House	12.41	14.8	
8	214	Oro Fino	59.9		
9	211	Weaver	2.79		
10	210	Weaver	<u>39.67</u>		
			324.14		

Arithmetical average 32.41¢ per yard, or say 33¢, including the nugget in #3 sample.

Condensed Record of Sampling, - July 1934.

Sample No.	Hole No.	Location	Value of bank in cents per cu. yard	REMARKS
11	303	Weaver	15.00	
12	209	"	17.50	Previously dug but not worked.
13	Shovel	"	50.38	Surface cut in red clay.
14	303(A)	"	30.60	
15	Shovel	"	6.50	
16	"	"	11.50	Shovel is cutting.
17	"	"	14.20	Across Weaver Creek 650'
18	"	"	5.80	below the junction with
19	"	"	9.22	Slaughter House. At point
20	"	"	8.39	where #33 was taken it had
21	"	"	9.33	advanced 148' but the curve
22	"	"	9.73	of cut was only 80' from
23	"	"	13.97	east bank of creek.
24	"	"	26.40	
25	"	"	20.58	
26	"	"	14.58	
27	"	"	20.82	
28	"	"	12.50	
29	"	"	6.20	
30	"	"	16.94	
31	"	"	17.38	
32	"	"	7.92	
33	"	"	13.48	

Condensed Record of Sampling, - July 1934.

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24	"	"	26.40	
25	"	"	20.58	
26	"	"	14.58	
27	"	"	20.82	
28	"	"	12.50	
29	"	"	6.20	
30	"	"	16.94	
31	"	"	17.33	
32	"	"	7.92	
33	"	"	13.48	

Sample No.	Area	Location	Volume of Curb in cu yds.	Remarks
11	303.	hearer	15.00	
12	209	h	17.50	Primarily dug and not hauled.
13	Shovel	"	50.38	Surface cut in red clay.
14	303(A)	"	30.60	
15	Shovel	"	6.50	
16	"	"	11.50	Shovel is cutting
17	"	"	14.20	across brown Curb
18	"	"	5.80	
19	"	"	9.22	6.50' below the
20	"	"	8.39	
21	"	"	9.33	junction with
22	"	"	9.73	Slagstone Run.
23	"	"	13.97	
24	"	"	26.40	
25	"	"	20.58	At point where
26	"	"	14.58	* 33 has taken it
27	"	"	20.82	
28	"	"	12.50	had advanced 148'
29	"	"	6.20	but the distance cut
30	"	"	16.94	but was only 80
31	"	"	17.38	from east bank of
32	"	"	7.92	Curb
33	"	"	13.48	
34	"	"		
35	"	"		

George M. Colvocoresses
Mining and Metallurgical Engineer
1108 Luhrs Tower
Phoenix, Arizona.

May 26, 1930.

Mr. John B. Ehrhart,
Phoenix,
Arizona.

REPORT ON WEAVER GULCH GOLD PROPERTY

Dear Sir:

In compliance with your request, I visited this property on the 22nd inst., and made a very brief examination in order to advise you concerning its probable merit. My examination, as you realize, was of a preliminary nature, and cannot be made the basis for a detailed report, but I think that the information obtained is of considerable importance.

LOCATION, GEOLOGY AND HISTORY

Your claims are located in the southern part of Yavapai County, Arizona, along Weaver Creek, being about seven miles in an air line or twelve miles by fair road distant from the railway at Congress.

The camp on the creek has an elevation of slightly over 3,000 feet above sea level, and the ground rises rapidly to the east, forming the western slopes of the Weaver Mountains, with Rich Hill just to the north. The surface is rough and stony; there are no trees except along the washes and only scant vegetation consisting of cacti and various desert shrubs.

The country is Pre-Cambrian granite and schist, the higher mountains being capped by Tertiary lava. Placer ground in this section comprised a total area of about eight by five miles, principally a sloping mesa composed of boulders, clay and sand formed by the erosion of the mountains and hills.

Gold was first discovered here in the 1860's and

for several years there was great mining activity at the vein mines on Rich Hill and vicinity and at the placers along Weaver and Antelope Creeks. The yield of gold prior to 1883 is said to have amounted to over \$1,000,000 value. Only sporadic mining has been continued since that date and according to the records of the State Bureau of Mines, the reported yield has been only \$75,000 since 1900, and practically negligible since 1914.

RED BANK PLACER

This is located along the banks of Weaver Creek and I am given to understand that the property which you have under option consists of five unpatented placer mining claims of 20 acres, each, standing in the name of John B. Ehrhart.

The boundaries of these claims as pointed out to me would make the workable limits of the placer approximately 3,000' in length along Weaver Creek, in an east and west direction, 2,000' in width, and the average depth from the surface to bedrock is estimated, from comparatively meager data, at 15'. All of this ground consists of a sedimentary fill between steeply rising hill sides, and is composed principally of boulders and rocks of all sizes and dimensions, cemented together with gravel, sand and clay; the gold occurring in small nuggets and specks. The total content of the placer ground which might be worked on these claims is about one million cubic yards, and a rough estimate of the percentage of boulders to gravel and dirt indicates that the boulders represent approximately 80% of the total yardage.

DEVELOPMENT

Aside from the surface exposure of the entire mesa, extending from Weaver Creek to the point where the mountains rise

sharply, the deposit is cut through to bedrock near its south side by the creek and much of the north bank stands up quite sheer and permits easy inspection and sampling. In this bank a number of short tunnels have been driven and one comparatively long tunnel near the camp has been run, as per sketch, attached to the report, which is based on a rough survey with a Brunton Transit. On this sketch the locations of samples taken are noted.

QUALITY OF MATERIAL

A preliminary estimate was made in the following manner: A number of pans of dirt were picked up at various points on the surface of the mesa and dry-panned by Dan Lucero, who was exceptionally skillful at this kind of work. These pans averaged about 12 lbs. apiece and the specks and colors I judged by the eye to run about 6% per pan. Along the bed of the creek and in the banks several other samples were panned which gave somewhat erratic results, but appeared to average about the same as the samples taken from the main tunnel. In the tunnel itself five samples were taken by picking down the cementing material between the boulders at points varying from 2' to 5' above the bedrock. These pans were carefully washed and the gold obtained from four of them aggregated 380 milligrams, derived from about 45 lbs. of dirt. The specks of gold were all comparatively coarse and showed evidence of considerable travel and the recovery by panning was probably about what might be expected from any other form of concentration. The fineness of the gold in Weaver Gulch, as given by the U.S.G.S. is 910, and, using the mean value of the surface samples and those obtained from the tunnel and assuming that the dirt susceptible to panning represented about 20% of the total cubic content of the ground, these tests indicated that each yard of your placer ground, boulders and rocks included, contains slightly over \$2.00 value in gold. The total value of the gold which might be recovered from this placer might, therefore, be figured at approximately \$2,000,000.

METHODS OF MINING

In considering the possibility of operating this placer, the quantity of water available is of vital importance. Water as at present developed in some small springs or rock tanks along the bed of Weaver Creek and its tributaries shows that there is a certain amount of underflow which is said to be continuous throughout the year. However, the topography of the ground, coupled with the average rainfall which does not exceed 10" or 12" per annum, except near the tops of the mountains, would not indicate that there is any large amount of water locally available, although no definite statement on this point can be made without further investigation. Although some water might be obtained from Antelope and Martinez Creeks to the west, the nearest flow of any importance is found in the Hassayampa River five to six miles south and east and about 600' below the level of the placers.

Placers similar to the Red Bank, where the gold is free and comparatively coarse, are generally worked by one of the following methods, excluding dry concentration which the moisture in the sand and clay would pretty surely render very inefficient.

First - Mining by pick and shovel and washing by hand in pans or rockers.

Second - Mining on a larger scale by pick and shovel, or with plow and scrapers, and washing in sluice boxes with riffles or in ground sluices.

Third - Mining by mechanical means such as power scraper, drag line excavator, dredge, or steam shovel, and recovery in sluices or washing plant.

Fourth - Hydraulic mining, that is, washing down the banks with a stream of water under high pressure and running the dirt into washing plants or through sluices with riffles.

RECOMMENDATIONS

I, accordingly, recommend:

First - That the legal status of the claims should be thoroughly investigated to determine whether the locations are valid and the claims in good standing, and whether the parties with whom you are dealing would be able to deliver clear title.

Second - If the matters mentioned above are found to be entirely in order, that you extend your present option from the owners for as long a period as possible.

Third - That you should further investigate the value and extent of your ground and the possibility of hydraulicing, first, by carefully studying the water supply and calculating the maximum amount of water which might be obtained from the various sources, and the approximate cost of bringing this water to one or more suitable points. If it appears that sufficient water can be obtained without prohibitive cost, I suggest that several pits should be sunk from the surface to bedrock and at least three more tunnels run in for say 100' from the bank and if the results are favorable that an experimental plant should be provided through purchasing or leasing a small high-pressure pump to be driven by a gas engine and equipped with pipe line, nozzle, (giant) and to be installed in connection with collecting flumes and sluices in which riffles would be provided. The water for such an experiment could probably be obtained from the well located near the camp which ought to be sufficient to permit a fair trial and an experimental operation of this nature conducted over a period of say three or four weeks should give extremely valuable data, particularly in respect to the following:

First - The quantity and pressure of water required to actually break down the gravel from the boulders which it now cements and disintegrate the clay. Records of various placer operations indicate that the water required varies within such wide limits that no definite estimate can be made regarding any particular placer ground except after an experimental test of this kind.

Second - The average percentage of boulders and rocks and the cost of handling them to open up channels through the deposit for advancing the hoses and nozzles and installing the sluices.

Third - The average recovery of gold per cubic yard excavated which can be made the basis of reliable calculations as to the ultimate profit, if any, that might be obtained from following this procedure on a much larger scale.

While this experiment was in progress more detailed estimates could be made regarding the initial supply of water required and cost of obtaining same and of reclaiming as much of the water from the tailings as possible and returning this to the storage tanks.

Everything considered, I am inclined to believe that there is a chance of operating this deposit with a reasonable margin of profit. But, if you decide to proceed, it would be very advisable to first obtain if possible without much expense, options on additional placer claims located further down the gulch, since if operations proved successful in one section of the gulch, the price at which all other claims could be obtained will mount rapidly. In the lower sections of Weaver Gulch it is to be expected that the percentage of boulders will decrease in proportion to the gravel so that operating costs should diminish, but, on the other hand, the gold will naturally be finer and probably scarcer so that a lower recovery, as well as cheaper costs, must be expected.

Hydraulicizing operations have generally only been successful where a large flow of water was readily available, but for the most part these have been conducted on ground where the values were much less than is the case at the Red Bank.

CONCLUSION

Summing up, I am satisfied that there is a great deal of gold in the placer and that the average values will probably prove to be in the order of those cited. I do feel that further exploration and investigation is justified and advise you to proceed along the lines indicated without making any large expenditure except for development and testing from which the recovered gold should cover a portion of the expense.

The money which will have to be spent to pretty definitely prove or disprove the value of your property will be essentially a mining gamble and may be entirely lost or yield many hundred per cent of profit.

I think that this is a good gamble and that it should make an appeal to people who are willing and able to engage in such a speculative venture especially at the present time when the price of all other metals is low and when gold mines are being more sought after than at any time during recent years.

Very truly yours,

GMC:ABM

G. M. Coloproesses

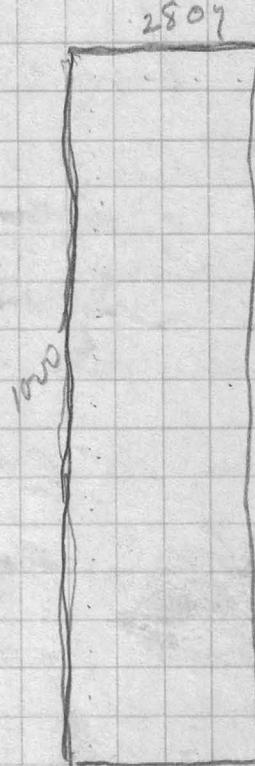
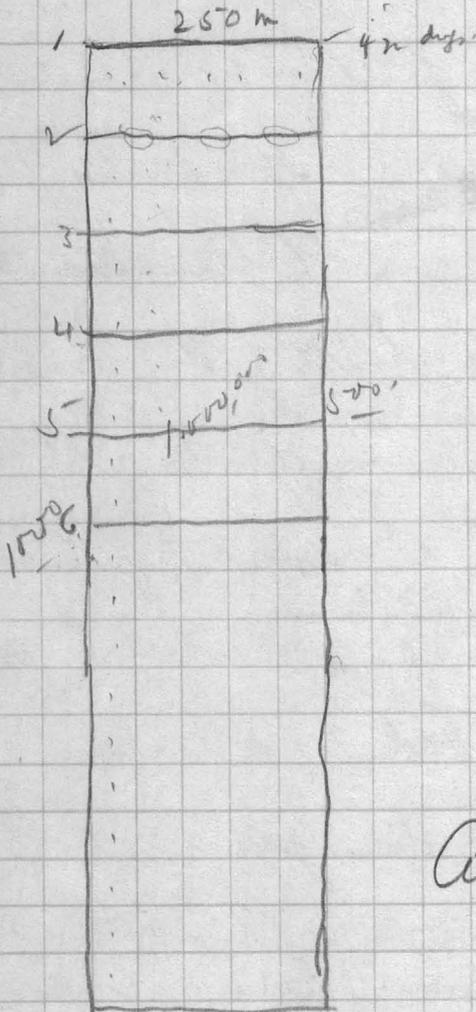
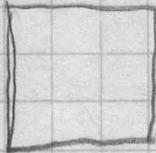
Plan for Simple Rich Hill

1 acre, ^{43500 sq ft} call 4840 sq yds, ~~43500 sq ft~~
 5 to depth 1 yd =
 Side face call 70 yd For each yd = 4840 cu yd

1600
 29/ 43520
 1600
 1600
 220
 70

145,200

Pusher is to simple dist 600m.



280
 5
 280,000



Pusher
 Side face 70 yd
 area = 5000 cu yd
 for each yd

Area: 250 m wide }
 500 m long } = 500,000 sq m³
 4 m deep }

50000
 50000

1500 layers in time
 4
 6000 cu meters if we have it
 12000
 6000
 = 12000 sq ft @ 1/10.

43520
 3
 29/ 130680 (4)
 1160
 146
 4840
 9/ 43520
 36
 75
 2236

Character & Extent of gravel.

254) $\frac{66}{50} = 1.32$
 $\frac{50}{50} = 1.00$

(1) First there is probably a true bed rock of granite (?) which may lie at 300 to 500' below ground surface.

(2) Laid on, true bed rock - probably the tertiary channel sands gravel of 1 around Hominye River & of its tributaries such as Martony, Beaver & Centenary Creek; the location of the channel (x & b & side) has been found & indicated in reports by Nicol, Sturmer & . The extent of the primary bedrock gravel over a large area has been noted by ^{most of} the ^{map} ^{has} been examined to date. The depth of this ~~lower~~ gravel is probably 400' or more in character & b ^{some} ^{scale} & 1. City level gravels + only a moderate % of boulders & 0 to 7% boulders, some chance for concentration in channels.

The value of gravel - 2' to 3' below as 1 & 2 ^{is} ^{not} ^{to} ^{be} ^{measured} compared to 5'-10' above true bed rock & has been a ^{partly} ^{been} ^{reached}, & L ^{has} ^{been} ^{of} ⁰ - some gold 2'. The

ground water level must vary to some extent & probably 150-300 down. Brulle says that there may be several acres of caliche or similar material + zones of enrichment above each of these strata.

(3) Above ^{all} primary gravel, ^{at} ^a ^{few} ^{feet} ^{below} ^{surface}, ^{or} ^{its} ^{near} ^{always} ^{found} ^a ^{strata} ^{of} ^{caliche} (gravel & sand & has been impregnated by ^{the} ^{prop.} ^{alkaline} ^{solution} & generally contains lime.

a 5' thick vein a depth of 2' to 5' ft + L of the land, false bed-rock. ~~But~~ The value seen to vary to a great extent according to the amount of impurities of gold which it carries & for upper ground. In all cases it is found to sample & at a place, it is found to work ~~refined~~ of the lower ground can be traced but for 1' and found in some cases it is for 1' present & back along on top of it or down into it only 6" to 1'

(4) The top gravel is the material of prime importance for the moment. It is made up of 50-80% boulders & rocks & 1/3rd clay & sand. The best of the top gravel is in a heavy ground washer when it represents the recent concentration of the top gravel. The average depth is probably 1.5 yds. so that over 7500 cu yds per acre. & a good deal of gravel will go before area will have to be stopped to make yardage and it will take 66 acres ~~to make 100,000 cu yds.~~ to make 500,000^{cu} yds. or 132 acres to 1 million yds. In sample 5 in v. pl. hole a and then + 1 1/2 yd. sh. & sub. side, big boulders, - then the sh. has held them 1/2 ft. then a 2" gage & below a side for + 1 poorer sh. & sub. side, then + 1. 4 in

yds of broken gold $\times r =$ about 1 yd = price. This gold
 is refined & 1 total cubic inch of material which holds a lot
 of 1 lb of all 1 exa & 6 cubic in. of 10 a yd
~~$r = 1$ yd ^{supra} $\times 3.00$, 1 total cubic inch of 30¢ a
 $s =$ total cost~~

8	$d = 0$	0	44	$d = 0$	0
2	y.	@ 3.00	6.00	6	9.8 = 3.25.00
			6.00	in 9 = 60¢	1.8¢

The value paid in 1 a yd supra & 6 multiplied by 1 # of
 yds of line total time for 1 exa & 1 lb & 6 ft + no net
 to 8) total val of exa $v = 1$ # of yds of 1/2 d exa
 at 5 & 6 dir of 1, total yds exa.

e.g. Exa 10 yds. of $\times 2$ r find a 8.2 d.

$L = 3.00, \times 2 = 6.00$ the net = 60¢ per yd ex

or 10 yds. exa of $\times 3$ r find a 7.2 d

net of sup = 2.50, $\times 3 = 7.50 =$ an 75¢ per yd

At present price gold & coin prices of < 9.00 figure
 at 1 mg gold = 0.10¢,

Crew Required of Sigs & Procedures

Steam Shovel

1 Engineer

1 Shovel man

4 labour. to turn into ladder for sample
piles & sift sample thru screen & finish loading truck

Truck

1 driver

Grading Plant

1 Engineer

2 Operators

1 Panner. ?

1 labourer for tailing

12 men.

Crushing rate = $\frac{1}{50}$ sec ft = 9 gal per min.

1 Sec ft = 450 gal per min = $7\frac{1}{2}$ gal per sec.

Hourly rate = 900 g. per min X - in hour.

heavy rain + hot sun etc for

Sampling Record.

p. 4

Date	Supp #	Location	Depth (ft)	Cu yds exposed	Cu y. holder	Cu y ground	Value gold in holder	Value gold in pit	Value bank for weight	Cu yds like am to sample	Remarks
2/3	57	401 317 (W)	2.8	4.0	2.0	2.0	40.52	81.04	10.18		2 y. Sample
2	58	" 315 (W)	4.8	8.0	1.5	6.5	10.78	70.07	4.88		2 y. Sample
7	59	" 318 (W)	3.4	7.3	2.0	5.3	11.77	59.38	8.13		1 "
8	60	" 321 (W)	3.2	7.0	3.0	4.0	14.48	57.92	8.25		
8	61	" 319 W	2.8	7.6	2.0	5.6	10.12	56.67	7.46		
8	62	" 320 W	2.0	4.0	0.5	3.5	16.50	57.75	14.44		
8	63	" 324 W	3.5	9.0	5.0	4.0	32.23	128.92	15.44		
8	64	" 225 G.F	2.3	4.0	1.5	2.5	81.62	204.05	51.01		
9	65	" 226 G.F	2.1	3.5	0.5	3.0	18.15	54.45	15.85		
9	66	" 227 G.F	2.4	4.0	0.5	3.5	38.06	133.21	33.30		
9	67	" 229 G.F	1.8	3.0	0.3	2.7	32.01	86.43	28.81		
9	68	" 228 G.F	1.9	3.2	0.4	2.8	17.93	50.20	15.69		
9	69	" 316 W	3.2	6.0	2.5	3.5	17.82	62.37	10.39		
10	70	" 325 W	3.3	8.0	4.0	4.0	13.75	55.00	6.88		
10	71	" 323 W	2.3	4.0	2.0	2.0	24.09	48.18	12.05		
10	72	" 230 G.F	2.1	3.5	0.5	3.0	39.82	119.46	34.13		
11	73	" 231 G.F	2.3	4.0	0.5	3.5	18.48	64.68	16.17		
11	74	" 322 W	3.5	9.0	4.0	5.0	12.32	61.60	6.84		
11	75	" 327 W	1.9	3.2	1.0	2.2	7.15	15.73	4.92		
12	76	" 401 Simkat	2.0	3.3	2.0	1.3	39.60	51.48	15.60		Pit under shovel cut
12	77	" 326 W	1.9	3.2	1.9	1.3	25.74	33.46	10.45		
12	78	" 232 G.F	1.3	2.0	0.2	1.8	12.65	22.77	11.39		
12	79	" 233 G.F	2.0	3.3	0.7	2.6	47.41	123.26	37.36		
13	80	" 234 G.F	2.2	3.6	0.6	3.0	28.16	84.48	23.47		
13	81	" 402 Simkat	1.0	1.75	1.0	0.75	15.84	15.84	9.05		0.75 y. Sample
13	82	" 244 New G.F	1.0	1.7	0.2	1.5	9.24	13.86	8.15		0.75 y. Sample

Sample Record P. 5

date	Sample	Location	Depth	Core	Core	Core	Core	Core	Core	Remarks
to		of hole	(ft)	Exp	in hole					
13	83	243 G.F. base	1.0	1.9	0.2	1.7	17.35	29.55	15.56	
14	84	235 G.F.	1.7	2.0	0.3	1.7	12.98	22.06	11.03	
14	85	236 G.F.	1.0	1.5	0.3	1.2	39.60	47.52	31.68	
14	86	237 G.F.	1.0	1.3	0.3	1.0	14.63	14.63	11.25	
15	87	332 base	3.0	6.0	3.0	3.0	13.97	41.91	6.98	
15	88	331 "	3.5	8.0	5.0	3.0	13.53	40.59	5.08	
95	89	335 "	3.5	7.0	4.0	3.0	14.96	44.85	6.41	

328 base } holes dug but not sampled.
 330 " "
 336 " "

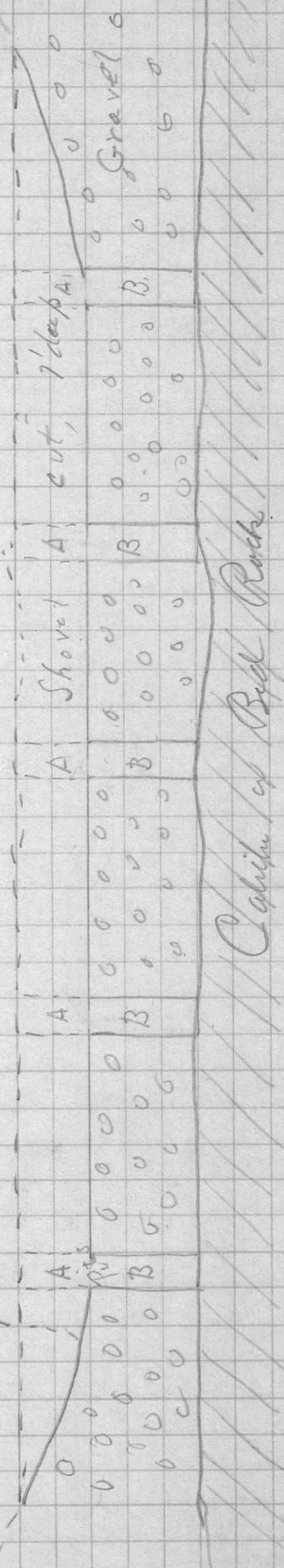
Black sand. *Chrysoberyl*, *Able*. 52, 53, 54 & 55 Silver 0.13, gold *4.55 per ton
 " " 57 & 58, Silver trace, gold .01 = *0.35 per ton.

Fineness of gold from all samples averages 940. Results on these sheets are given in fine gold

Sample across Weaver Wash



27 rods



Steam Shovel Lease

(Ryft)
\$ 2nd

Shovel (1 yd) arrived on project on July 17th & started digging July 21st. Including the 30th (10 days) with possible operating hours = 80, shovel had actually operated 32 hrs. & had dug 854 yards = 85 yds. per day or 213.5 per shift or 26 yds per working hour.

Excavation (cut) is 191' = (100' in line from tree of east bank) and width 20', depth 6'

Cost of quarry from ship	Sub (20) / by	\$
	gar etc.	10 00
	Paint	5
		20
		<hr/>
		35.00 = 30 days

Two cuts across beam would require moving (2) 600 x 6 x 3 =
\$ 20,000 yds = 6000 & build duffer @ 600' yds 120,000 yds. @
cost of 5¢ per yd. (\$ 0.05) across.

Leaving 7 pits 100' wide & 9' deep = 12 pits = 100' x 9' x 7
dig = \$ 324.00 @ cost 0.3¢ (\$ 0.003) Can dig 16
times as much yardage by same cost of pits as by a steam
shovel.

Yardage + Values

July

Samples.

on for Law Firm

Weaver

#	#	#	depth of pit	Value for yard lab	depth x Value = # - yd
Sample		Dist			
10	21	0	2.20	39.67	87.27
11	30	3	2.90	65.0	43.50
12	20	9	2.0	17.5	35.00
14	30	3A	2.2	30.6	67.32
15	15	+ J.C.	1.5	6.50	9.75
16	2nd	✓	2.0	11.50	23.00
17	3rd	✓	2.0	14.20	28.40
18	4th	✓	2.2	5.80	12.76
19	5th	✓	2.3	9.22	21.21
20	6th	✓	2.3	8.39	19.30
21	7th	✓	2.4	7.33	17.59
22	8th	✓	2.4	9.73	23.35
23	9th	✓	2.4	13.97	33.53
24	10th	✓	2.4	26.40	63.36
25	11th	✓	2.6	20.58	53.51
26	12th	✓	2.6	14.58	37.91
27	13th	✓	2.5	20.82	52.05
28	14th	✓	2.5	12.50	31.25
29	15th	✓	2.5	6.20	15.50
30	16th	✓	3.0	16.94	50.80
31	17th	✓	3.0	17.38	52.10
32	18th	✓	2.9	7.98	23.15
33	19th	✓	2.7	13.48	36.30
34	20th	✓	2.7	11.48	31.00
35	21st	✓	2.6	6.78	17.65
36	22nd	✓	2.6	8.67	22.55
38	23rd	✓	2.5	19.40	48.50
39	24th	✓	2.3	15.05	34.60
40	25th	✓	2.3	16.54	38.10
41	26th	✓	2.3	13.81	31.80
43	27th	✓	2.3	16.61	38.25
44	28th	✓	2.3	10.29	23.65

Yardage & Values (Wearer cont'd)

Sample No.	Pit No.	Depth of Pit	Value per Yard of Exc.	Depth x Value = \$-Yd.
49	313	2.7	7.57	20.50
51	314	2.3	19.00	43.75
54	29th S.C.	2.1	13.15	27.60
55	30th +	2.1	10.07	21.15
56	312	3.7	?	

~ ORO FINO ~

1	216	1.6	15.20	24.30
2	217	2.3	23.80	54.70
5	213	1.8	102.90	185.00
6	215	1.4	13.19	18.46
8	214	2.1	59.90	126.00
37	218	0.7	35.70	25.00
42	219	2.0	19.70	39.40
46	220	1.7	15.73	26.75
47	222	1.9	28.60	54.40
48	217	2.3	34.37	79.10
50	221	2.5	13.14	32.85
52	223	2.0	47.60	95.10
53	224	2.2	1.80	3.96

Crew Required of Lifter & Procedure.

Steam Shovel.

1 Engineer

1 Shovel man

4. labour. to turn out buckets for sample
piles & sift sample thru screen & finish loading truck

Truck

1 driver

loading Plant.

1 Engineer

2 Operators

1 Janitor. ?

1 labourer for handling

1 2 men.

avg bucket vol = $\frac{1}{50}$ sec ft³ = 9 gal per min.

1 sec ft³ = 450 gal per min = $7\frac{1}{2}$ gal per second.

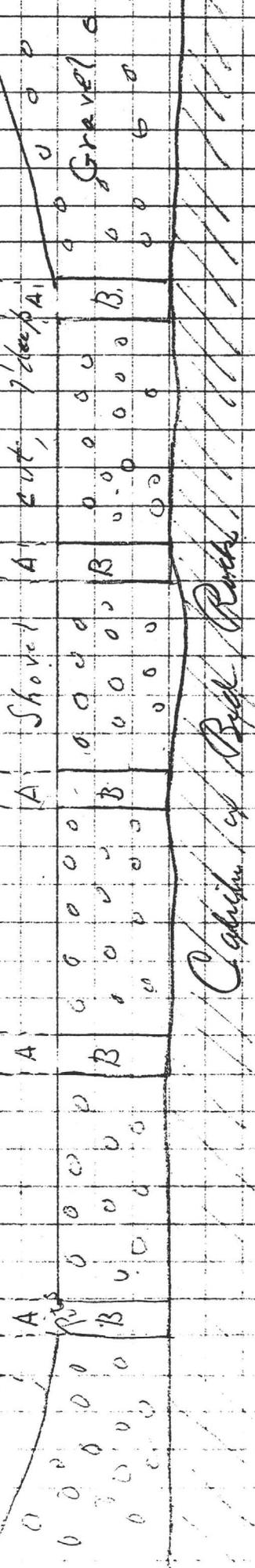
Handling per = 900 g. per min x - in road.

Date	Sample #	Location	Depth ft. (41)	Sample	Round (Continued)			p. 3.			Remarks
				Core depth feet	Core yds. pouch	Core yds. pouch	Value gold in Sample 4	Value gold in p. 3.	Vol. Calc. for core.	Core yds. Calc. from other samples	
25	31	heaven, Shovel cut 17	3.0	2.0	1	1.0	34.76	34.76	17.38		
25	32	" 18	2.9	2.5	1.5	1.0	19.80	19.80	7.92	Adm 15' 4	
25	33	" 19	2.7	2.5	1.5	1.0	33.70	33.70	13.48	made notes 163' ft. str.	
26	34	" 20	2.7	2.5	1.5	1.0	29.70	29.70	11.48		
26	35	" 21	2.6	3.0	2.0	1.0	20.35	20.35	6.78		
26	36	" 22	2.6	2.5	1.5	1.0	21.67	21.67	8.67		
26	37	Hole " 218 G.F.	0.7	1.1	0.1	1.0	39.27	39.27	35.70	Core from here used.	
26	38	Shovel 23	2.5	2.2	1.2	1.0	42.68	42.68	19.40		
26	39	" 24	2.3	2.2	1.2	1.0	33.11	33.11	15.05	96' in creek	
27	40	" 25	2.3	2.5	1.5	1.0	41.36	41.36	16.54		
27	41	" 26	2.3	2.0	1.0	1.0	27.61	27.61	13.81		
27	42	Hole 219, G.F.	2.0	3.3	0.3	3.0	21.67	65.01	19.70		
27	43	heaven 27	2.3	2.0	1.0	1.0	33.22	33.22	16.61		
28	44	" 28	2.3	2.0	1.0	1.0	20.57	20.57	10.29		
28	45	Hole 311. (mass)	1.2	3.0	0.3	2.7	20.13	54.35	18.12	1 475' of stone mass of clay	
29	46	" 220. (G.F.)	1.7	3.2	0.6	2.6	19.36	50.34	15.73		
29	47	" 222 (G.F.)	1.9	3.3	0.3	3.0	31.46	94.38	28.60		
29	48	" 217 (G.F.)	2.3	9.0	4.0	5.0	67.85	309.25	34.37	Check sample Sample 29d X	
30	49	" 313 (heaven)	2.7	7.1	3.6	3.1	34.65	53.72	7.57		
30	50	" 221 G.F.	2.5	4.2	0.4	3.8	14.52	55.17	13.14		
30	51	" 314, heaven	2.3	6.7	0.7	6.0	21.12	126.72	19.00		
31	52	" 223 G.F.	2.0	3.3	0.7	2.6	60.39	157.00	47.60		
1	53	" 224 G.F.	2.2	3.6	0.4	3.2	1.98	6.34	1.80		
1	54	heaven, Shovel 29	2.1	2.0	1.0	1.0	26.29	26.29	13.15	104' 2 cm	
1	55	" " 30	2.1	2.0	1.0	1.0	20.13	20.13	10.07	108 "	
2	56	" Hole 312	3.7	10.0	4.0	6.0	12.54	75.24	7.52	121 (29 Sample) X	

Sample across Weaver Nasa



127 m



1 deep A1

2 ut, A

Shovel A

A

A

A

A

A

A

Gravel

Capitulum of Beak Rocks

Steam Shovel Lease

(Ry) }
2nd

Shovel (1 yd) arrived on property on July 17th & started digging July 21st. Including the 30th (10 days) with possible operating hours = 80, shovel had actually operated 32 hours had dug 854 yards = 85 yds per day or 213.5 per the working shifts or 26 yds per working hour.

Excavation (cut) is 191' = (100' in line from tree of road bank) area width 20', depth 6'

Cost of quantity from slips	July (22) / 4	\$ 10 00
	gas etc.	5
	Paint	20
		<hr/>
		35 = 30th day

Two cuts across house would represent moving (?) $600 \times 6 \times 2 =$
 of 20,000 yds. = 6000 ft wide surface @ 600' yds 120,000 yds. @
 cost of 5¢ per yd. (\$ 0.05) across.

Slugging of pits 100' apart & 9' deep = 12 pits = 1108' ft of pit
 dig = 324.00 @ cost 0.3¢ (\$ 0.003) Can dig in 16
 times as much yardage by 1 hour cost of pits as by a steam
 shovel.

Yardage & Values

(109)

Samples: ... of ...

Weaver

#	# Sample	# PZ	depth ft	Value per yd	depth x Value = \$ - yd
	10	210	2.20	39.67	87.27
	11	303	2.90	15.0	43.50
	12	209	2.0	17.5	35.00
	14	303A	2.2	30.6	67.32
	15	1st J.C.	1.5	6.50	9.75
	16	2nd ✓	2.0	11.50	23.00
	17	3rd ✓	2.0	14.20	28.40
	18	4th ✓	2.2	5.80	12.76
	19	5th ✓	2.3	9.22	21.21
	20	6th ✓	2.3	8.39	19.30
	21	7th ✓	2.4	7.33	17.59
	22	8th ✓	2.4	9.73	23.35
	23	9th ✓	2.4	13.97	33.53
	24	10th ✓	2.4	26.40	63.36
	25	11th ✓	2.6	20.55	53.51
	26	12th ✓	2.6	14.58	37.91
	27	13th ✓	2.5	20.52	52.05
	28	14th ✓	2.5	12.50	31.25
	29	15th ✓	2.5	6.20	15.50
	30	16th ✓	3.0	16.94	50.82
	31	17th ✓	3.0	17.38	52.10
	32	18th ✓	2.9	7.98	23.15
	33	19th ✓	2.7	13.48	36.30
	34	20th ✓	2.7	11.48	31.00
	35	21st ✓	2.6	6.78	17.65
	36	22nd ✓	2.6	8.67	22.55
	38	23rd ✓	2.5	19.20	48.00
	39	24th ✓	2.3	15.65	36.00
	40	25th ✓	2.3	16.52	38.00
	41	26th ✓	2.3	13.51	31.00
	43	27th ✓	2.3	15.65	36.00
	44	28th ✓	2.3	10.28	23.65

Yardage & Values (Weaver cont'd)

Sample No.	Pit No.	Depth of Pit	Value per Yard of Exc.	Depth x Value = \$ - Yd.
49	313	2.7	7.57	20.50
51	314	2.3	19.00	43.75
54	304 305	2.1	13.15	27.60
55	304	2.1	10.07	21.15
56	312	3.7	?	

~ ORO FIND ~

1	216	1.6	15.20	24.30
2	217	2.2	23.30	51.20
5	213	1.3	102.90	133.70
6	215	1.4	13.19	18.46
8	214	2.1	59.90	125.70
37	218	0.7	35.70	25.00
42	219	2.0	19.70	39.40
46	220	1.7	15.73	26.75
47	222	1.9	27.00	51.30
48	217	2.3	34.37	79.10
50	221	2.5	13.14	32.85
52	223	2.0	47.60	95.20
53	224	2.2	1.80	3.96

DAVID MINES, INC.

Condensed Record of Sampling - July, 1934.

NOTE: Fineness of gold in samples as determined by Phoenix assayer is 940
 Fine gold valued @ 0.11¢ per Mg. which allows for refining and
 minting charges.

Sample No.	Hole No.	Location	Value of bank in cents per cu. yd.	Vahrenkamp value per cu.yd.	REMARKS
1	216	Oro Fino	15.2		
2	217	" "	23.8		
3	206	Jap Gulch	9.05	22.7	We sampled only the caliche. Recovered one nugget which would raise value to 22¢.
4	307	" "	47.23	29.0	We sampled only above the caliche.
5	213	Oro Fino	102.9		Several grains of gold of 4-5¢ value each.
6	215	" "	13.19	14.6	
7	301	Slaughter House	12.41	14.8	
8	214	Oro Fino	59.9		
9	211	Weaver	2.79		
10	210	Weaver	<u>59.67</u>		
			324.14		

Arithmetical average 32.41¢ per yard, or say 33¢, including the nugget in #3 sample.

Condensed Record of Sampling, - July 1934.

Sample No.	Hole No.	Location	Value of bank in cents per cu. yard	REMARKS
11	503	Weaver	15.00	
12	209	"	17.50	Previously dug but not worked.
13	Shovel	"	50.38	Surface cut in red clay.
14	303(A)	"	30.60	
15	Shovel	"	6.50	
16	"	"	11.50	Shovel is cutting.
17	"	"	14.20	Across Weaver Creek 650'
18	"	"	5.80	below the junction with
19	"	"	9.22	Slaughter House. At point
20	"	"	8.39	where #33 was taken it had
21	"	"	9.33	advanced 148' but the curve
22	"	"	9.73	of cut was only 80' from
23	"	"	13.97	east bank of creek.
24	"	"	26.40	
25	"	"	20.58	
26	"	"	14.58	
27	"	"	20.82	
28	"	"	12.50	
29	"	"	6.20	
30	"	"	16.94	
31	"	"	17.38	
32	"	"	7.92	
33	"	"	13.48	

Condensed Record of Sampling, - July 1934.

Sample No.	Hole No.	Location	Value of bank in cents per cu. yard	REMARKS
11	303	Weaver	15.00	
12	209	"	17.50	Previously dug but not worked.
13	Shovel	"	50.38	Surface cut in red clay.
14	303(A)	"	50.60	
15	Shovel	"	6.50	
16	"	"	11.50	Shovel is cutting.
17	"	"	14.20	Across Weaver Creek 650'
18	"	"	5.80	below the junction with
19	"	"	9.22	Slaughter House. At point
20	"	"	6.39	where #33 was taken it had
21	"	"	9.33	advanced 148' but the curve
22	"	"	9.73	of cut was only 80' from
23	"	"	13.97	east bank of creek.
24	"	"	26.40	
25	"	"	20.58	
26	"	"	14.58	
27	"	"	20.82	
28	"	"	12.50	
29	"	"	6.20	
30	"	"	16.94	
31	"	"	17.38	
32	"	"	7.92	
33	"	"	13.48	

Sample No.	Hiker No.	Location	Value of loads in outfit in yds.	Remarks.
1	303.	hansen	135.00	
12	209	" "	17.50	Primarily dug but not worked.
13	Shovel	"	50.35	Shovel cut in red clay.
14	303(A)	"	30.60	
15	Shovel	"	6.50	
16	"	"	11.50	Shovel is cutting
17	"	"	14.20	across Hansen Creek
18	"	"	5.80	
19	"	"	9.22	650' below the
20	"	"	8.39	
21	"	"	7.33	junction with
22	"	"	9.73	Slough. When
23	"	"	13.97	
24	"	"	26.40	
25	"	"	20.58	cut point when
26	"	"	17.58	
27	"	"	23.52	It was taken the
28	"	"	12.50	
29	"	"	6.20	had advanced 148'
30	"	"	16.94	but the course of cut
31	"	"	17.38	left on. at 150
32	"	"	70.7	from west bank of
33	"	"	13.45	of creek.

ANNEX I,

TABLE OF RESULTS OF SAMPLING
Part of
PRELIMINARY REPORT ON RICH HILL PLACERS;
MERRILL HOLDINGS
by

VAHRENKAMP & SANDERS

Total Value Gold Recovered.	Value Gold per cu. yd.	Total Weight Black Sand Recovered.	Black Sand per cu.yd. of gravel	Assay Value of Black Sand per ton of Bl.Sand
68.7 ¢	7.85¢	340#	39.0#	\$ 2.80
47.3 ¢	5.81¢	398#	49.0#	2.10
\$ 1.395	23.3 ¢	61#	10.0#	35¢
6.25¢	3.12¢	19#	10 #	
87.2 ¢	19.6 ¢ ?			
15.6 ¢	14.6 ¢ ?			
39.1 ¢	4.73¢	398#	48.4#	2.45
40.5 ¢	3.97¢	280#	28 #	1.05
39.6 ¢	3.96¢	215#	21.5#	0.70
28.2 ¢	3.06¢	165#	18 #	Trace
81.4 ¢	7.45¢	236#	21.7#	3.50
68.75¢	5.3 ¢	218#	16.8#	
62.5 ¢	5.57¢			
78.0 ¢	11.55¢			
\$ 1.66	21.4 ¢	(310)		
\$ 1.60	22.7 ¢	138#	19.6#	2.10
1.96	29.0 ¢	77#	11.4#	
4.22	56.7 ¢	83#	11.2#	
\$ 1.18	14.8 ¢	77#	9.6#	2.10

NOTES: © Value of gold calculated on the basis of 856 fine (figure obtained by Mr. Heikes from Local gold buyer at Octave) and

\$35 per oz. Black sand assays on basis of gold at ~~\$35~~ \$35 per oz.

ANNEX I,

TABLE OF RESULTS OF SAMPLING
Part of
PRELIMINARY REPORT ON RICH HILL PLACERS;
MERRILL HOLDINGS
by

VAHRENKAMP & SANDERS

Total Value Gold Recovered.	Value Gold per cu. yd.	Total Weight Black Sand Recovered.	Black Sand per cu.yd. of gravel	Assay Value of Black Sand per ton of Bl.Sand
68.7 ¢	7.85¢	340#	39.0#	\$ 2.80
47.3 ¢	5.81¢	398#	49.0#	2.10
\$ 1.395	23.3 ¢	61#	10.0#	35¢
6.25¢	3.12¢	19#	10 #	
87.2 ¢	19.6 ¢ ?			
15.6 ¢	14.6 ¢ ?			
39.1 ¢	4.73¢	398#	48.4#	2.45
40.5 ¢	3.97¢	280#	28 #	1.05
39.6 ¢	3.96¢	215#	21.5#	0.70
28.2 ¢	3.06¢	165#	18 #	Trace
81.4 ¢	7.45¢	236#	21.7#	3.50
68.75¢	5.3 ¢	218#	16.8#	
62.5 ¢	5.57¢			
78.0 ¢	11.55¢			
\$ 1.66	21.4 ¢	(310)		
\$ 1.60	22.7 ¢	138#	19.6#	2.10
1.96	29.0 ¢	77#	11.4#	
4.22	56.7 ¢	83#	11.2#	
\$ 1.18	14.8 ¢	77#	9.6#	2.10

NOTES: a Value of gold calculated on the basis of 856 fine (figure obtained by Mr. Heikes from Local gold buyer at Octave) and

\$35 per oz. Black sand assays on basis of gold at \$35 per oz.

2.4

DAVID MINES, INC. - Sampling Record

Date	Sample No.	Location and Pit No.	Depth of Pit yards	Cu. yds. Excavated	Cu. yds. of boulders + 4"	Cu. yds. of gravel - 4"	Value gold in Sample	Value gold in Pit	Value bank per cu.yd.	Cu. yds. bank ^{referred} over to this sample	REMARKS
7/15	1	OroFino 216	1.6	4.5	1.5	3.	68.60	68.60	15.2		Washed 3 yd. sample dug previously.
7/15	2	OroFino 217	2.3	9.0	4.0	5.0	42.9	214.5	23.8		Sampled by Sawyer @ 75¢ curdy & mull
7/16	3	Jap.G 306	2.4	7.05	4.0	3.0	21.0	63.4	19.05		Wash 1 yd. of dug caliche check on Vahrenkamp.
7/17	4	Jap.G 307	2.2	1.5	0.5	1.0	70.8	70.8	47.23		Sample to Caliche. Check on V. Dug previously.
7/17	5	OroFino 213	1.8	5.0	2.0	3.0	171.6	514.5	102.9		Dug previously
7/17	6	OroFino 215	1.4	4.0	0.5	3.5	15.07	52.7	13.19		Check on V.
7/18	7	Slaughter, H. 301	2.7	2.2	1.2	1.0	27.31	27.31	12.41		Check on V.
7/18	8	OroFino 214	2.1	8.0	2.0	6.0	79.86	479.	59.9		Dug previously, not washed.
7/18	9	Weaver 211	2.2	6.5	1.5	5.0	33.62	18.09	2.79		Check on V.
7/18	10	Weaver 210	2.2	6.0	2.0	4.0	59.51	238.	39.67		
7/19	11	Weaver 303	2.9	13.0	7.0	6.0	34.76	188.	15.0		
7/19	12	Weaver 209	2.0	7.0	2.0	5.0	24.53	122.5	17.5		Dug but not washed

DAVID MINES, INC. - Sampling Record

Date	Sample No.	Location and Pit No.	Depth of Pit Yards	Cu. yds. Excavated	Cu. yds. of boulders + 4"	Cu. yds. of gravel - 4"	Value gold in sample	Value gold in Pit	Value bank per cu. yd.	Cu. yds. bank over to this sample	REMARKS
7/20	13	Surface cut with shovel on edge of bank.	0.5	1.0	0	1.0	50.38	50.38	50.38		Red clay sample from top. Advance 30' on 20th.
7/21	14	Weaver (305A) (near 303)	2.2	2.1	1.1	1.0	64.21	64.21	30.6		Advance 31' on 21st.
7/21	15	Weaver 1st shovel out	1.5	1.5	0.5	1.0	9.82	9.82	6.50		650' below junction of Slaughter House. 4" screen.
7/22	16	Weaver 2nd shovel out.	2.0	1.4	0.65	0.75	11.15	11.15	11.50		
7/22	17	Weaver 3rd shovel out.	2.0	1.8	0.8	1.0	24.75	24.75	14.20		Advance 30' on 22nd.
7/22	18	Weaver 4th shovel out.	2.2	1.8	0.8	1.0	10.41	10.41	5.80		
7/22	19	Weaver 5th shovel out.	2.3	1.8	0.8	1.0	17.60	17.60	9.22		Advancing on curve.
7/22	20	Weaver 6th shovel out.	2.3	2.0	1.0	1.0	16.77	16.77	8.39		
7/23	21	Weaver 7th shovel out.	2.4	1.8	0.8	1.0	13.20	13.20	7.33		
7/23	22	Weaver 8th shovel out.	2.4	1.6	0.6	1.0	15.56	15.56	9.73		Advance 25' on 23rd
7/23	23	Weaver 9th shovel out.	2.4	2.0	1.0	1.0	27.94	27.94	13.97		
7/23	24	Weaver 10th shovel out.	2.4	2.0	1.0	1.0	52.80	52.80	26.40		
7/24	25	Weaver 11th shovel out.	2.6	1.7	0.7	1.0	34.98	34.98	20.58		
7/24	26	Weaver 12th shovel out.	2.6	2.0	1.0	1.0	29.15	29.15	14.58		
7/24	27	Weaver 13th shovel out.	2.5	2.2	1.2	1.0	45.80	45.80	20.82		Advance 28' on 24th
7/24	28	Weaver 14th shovel out.	2.5	2.2	1.2	1.0	27.50	27.50	12.50		

DAVID MINES, INC. - Sampling Record

Date	Sample No.	Location and Pit No.	Depth of Pit yards	Cu. yds. Excavated	cu.yds. of Boulders +4"	cu.yds. of Gravel -4"	Value gold in Sample	Value gold in Pit	Value Bank per cu.yd.	Cu.yds. bank over to this sample	REMARKS
7/24	29	Weaver 15th shovel out.	2.5	2.5	1.5	1.0	15.50	15.50	6.20		
7/25	30	Weaver 16th shovel out.	3.0	2.0	1.0	1.0	33.88	33.88	16.94		80' from bank, 148' from start of out.
7/25	31	Weaver 17th shovel out.	3.0	2.0	1.0	1.0	34.76	34.76	17.38		
7/25	32	Weaver 18th shovel out.	2.9	2.5	1.5	1.0	19.80	19.80	7.98		Advance 15' and made niche 163' from start.
7/25	33	Weaver 19th shovel out.	2.7	2.5	1.5	1.0	33.70	33.70	13.48		
7/26	34	Weaver 20th shovel out.	2.7	2.5	1.5	1.0					
7/26	35	Weaver 21st shovel out.	2.6	3.0	2.0	1.0					
7/26	36	Weaver 22nd shovel out.	2.6	2.5	1.5	1.0					
7/26	37	Hole #218 Oro Fino	0.7	1.1	0.1	1.0					
7/26	38	Weaver 23rd shovel out.	2.5	2.2	1.2	1.0					
7/26	39	Weaver 24th shovel out.	2.3	2.2	1.2	1.0					96' in creek.
7/27	40	Weaver 25th shovel out.	2.3	2.5	1.5	1.0					
7/27	41	Weaver 26th shovel out.	2.3	2.0	1.0	1.0					
7/27	42	Hole #219 Oro Fino	2.0	3.3	0.3	3.0					
7/27	43	Weaver 27th shovel out.	2.3	2.0	1.0	1.0					
7/28	44	Weaver 28th shovel out.	2.3	2.0	1.0	1.0					

DAVID MINES, INC. - Sampling Record.

Date	Sample No.	Location and pit No.	Depth of pit Yards	Cu.yds. Excavated	Cu.yds. of boulders + 4"	Cu.yds. of gravel - 4"	Value gold sample ¢	Value gold pit ¢	Value bank per cu.yd.	Cu.yds. bank over to this sample	REMARKS
8/3	57	Hole #317 Weaver	2.8	4.0	2.0	2.0	40.52	81.04	10.13		2 yds. sampled
8/7	58	Hole #315 Weaver	4.8	8.0	1.5	6.5	10.78	70.07	4.88		2 yds. sampled
8/7	59	Hole #318 Weaver	3.4	7.3	2.0	5.3	11.77	59.38	8.13		1 " "
8/8	60	Hole #321 Weaver	3.2	7.0	3.0	4.0	14.48	57.92	8.25		
8/8	61	Hole #319 Weaver	2.8	7.6	2.0	5.6	10.12	56.67	7.46		
8/8	62	Hole #320 Weaver	2.0	4.0	0.5	3.5	16.50	57.75	14.44		
8/8	63	Hole #324 Weaver	3.5	9.0	5.0	4.0	32.23	128.92	15.44		
8/8	64	Hole #225 Oro Fino	2.3	4.0	1.5	2.5	81.62	204.05	51.01		
8/9	65	Hole #226 Oro Fino	2.1	3.5	0.5	3.0	18.15	54.45	15.85		
8/9	66	Hole #227 Oro Fino	2.4	4.0	0.5	3.5	38.06	133.21	33.30		
8/9	67	Hole #229 Oro Fino	1.8	3.0	0.3	2.7	32.01	86.43	28.81		
8/9	68	Hole #228 Oro Fino	1.9	3.2	0.4	2.8	17.93	50.20	15.69		
8/9	69	Hole #316 Weaver	3.2	6.0	2.5	3.5	17.82	62.37	10.39		
8/10	70	Hole #325 Weaver	3.3	8.0	4.0	4.0	13.75	55.00	6.88		
8/10	71	Hole #323 Weaver	2.3	4.0	2.0	2.0	24.09	48.18	12.05		
8/10	72	Hole #230 Oro Fino	2.1	3.5	0.5	3.0	39.82	119.46	34.13		
8/11	73	Hole #231 Oro Fino	2.3	4.0	0.5	3.5	18.48	64.68	16.17		

DAVID MINES, INC. - Sampling Record

Date	Sample No.	Location and Pit No.	Depth of pit Yards	Cu.yds. Excavated	Cu.yds. of boulders + 4"	Cu.yds. of gravel - 4"	Value gold sample ¢	Value gold pit ¢	Value bank per cu.yd.	Cu.yds. bank over to this sample	REMARKS
8/11	74	Hole #322 Weaver	3.5	9.0	4.0	5.0	12.32	61.60	6.84		
8/11	75	Hole #327 Weaver	1.9	3.2	1.0	2.2	7.15	15.73	4.92		
8/12	76	Hole #401 Shovel Cut	2.0	3.3	2.0	1.3	39.60	51.48	15.60		Pit under shov.cut.
8/12	77	Hole #326 Weaver	1.9	3.2	1.9	1.3	25.74	33.46	10.45		
8/12	78	Hole #232 Oro Fino	1.3	2.0	0.2	1.8	12.65	22.77	11.39		
8/12	79	Hole #233 Oro Fino	2.0	3.3	0.7	2.6	47.41	123.26	37.36		
8/13	80	Hole #234 Oro Fino	2.2	3.6	0.6	3.0	28.16	84.48	23.47		
8/13	81	Hole #402 Shovel Cut pit	1.0	1.75	1.0	0.75	15.84	15.84	9.05		0.75 y. sample
8/13	82	Hole #244 Oro Fino	1.0	1.7	0.2	1.5	9.24	13.86	8.15		
8/13	83	Hole #243 Oro Fino	1.1	1.9	0.2	1.7	17.35	29.55	15.56		
8/14	84	Hole #235 Oro Fino	1.7	2.0	0.3	1.7	12.98	22.06	11.03		
8/14	85	Hole #236 Oro Fino	1.0	1.5	0.3	1.2	39.60	47.52	31.68		
8/14	86	Hole #237 Oro Fino	1.0	1.3	0.3	1.0	14.63	14.63	11.25		
8/15	87	Hole #332 Weaver	3.0	6.0	3.0	3.0	13.97	41.91	6.98		
8/15	88	Hole #331 Weaver	3.5	8.0	5.0	3.0	13.53	40.59	5.08		
8/15	89	Hole #335 Weaver	3.5	7.0	4.0	3.0	14.96	44.88	6.41		

328)
 330 Weaver) Holes dug but not sampled
 336)

Black sand Composites, - Holes #52, 53, 54, & 55 Silver 0.1 oz. gold \$4.55 per ton. Holes #57 & 58, Silver Trace gold .01 - \$0.35 per ton.

Fineness of gold from all samples averages 940. Results on these sheets are given in fine gold.