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NOTES REGARDING BIG BUG PLACERS

The lower ranch on which pay gravel has been developed is owned by Charles Lawson and could probably be purchased or operated under lease. It is estimated that there are about 200,000 yards of gravel on this property. The next section of the Big Bug is owned by Shanks and Frank Sovoia and extends along the creek for about 5000'. It is estimated by the Owner that this ground contains about 1,500,000 yards ~~than~~ less/what has recently been worked out by the Pantle Brothers who dug something over 60,000 yards and recovered $31,000 in gold. Their loss in tailings is not known, but the gold is fairly coarse and clean so that it is assumed that a good recovery was made. The average width of the gravel on Shank's property is ~~close to 1000'~~ over 500' but a portion is cut out by the present channel of Big Bug. The height of the bank is from 20' to 30', possibly an average of 25'.

Above the Shank's property is the Farnum Placer, now owned or controlled by Smith and Roby. This comprises 40 acres but only a portion contains gravel and practically all of the bank has been mined out by drifts along the bedrock, put in largely by Mexicans at intervals since the 1880's. It is probable that some breasting was done from these tunnels and recently a man named Wilson installed a shovel and washing plant on the right bank of the creek and washed a small quantity of gravel mostly from near the surface, which is said to have averaged 35¢ in recoverable gold per yard. The height of this bank will average 30' but the lower sections have been so largely worked out in the past that it would be unsafe to estimate any average value in excess of 30¢ and the total remaining yardage probably does not exceed 60,000. Above the

Farnum place is a claim owned by Heffleman of Mayer, which is similar to the Farnum except that it has been even more extensively worked in the past and is practically honeycombed. The average width of gravel on the Heffleman and Farnum properties is not much over 400'.

Above Heffleman, is Fitch and above Fitch, Ed Hill, and further up at the mouth of Eugenie Gulch is a claim now being worked by Cornell, who is said to recover about 1 oz. of gold per hour. Capacity of his plant is not known.

The bedrock is Yavapai schist on all of the properties mentioned and the gravel is fairly uniform in character with from 50 to 70% of boulders, but these are not large on the Shanks property and can all be handled by a one yard shovel and easily piled in rows after being discarded as oversize from a trommel. The size of the boulders increases going up stream and mining would bedome more expensive, although the average value was probably larger near the head of the creek and the gold undoubtedly coarser. Most of the gold on the Shank property is coarse colors and fine pin points, but nuggets are occasionally found. There does not appear to be much clay in any of this gravel and it all disintegrates easily in a trommel. The gold is clean and should concentrate readily, but the bedrock is very uneven, which would make it difficult to operate a dredge or in any manner where the bedrock could not be readily cleaned.

The flow of water in Big Bug varies on the surface from several hundred inches for short periods of time to practically nothing, but there is a steady underflow of upwards of 40" according to Herrick and Shank and this should be sufficient for washing

12,000 to 15,000 yards per day using the return water. Apparently all of these ranches have equally good water rights to the entire flow in the creek and at present Cornell is using a considerable amount of water but returning it through the Heffleman and Farnum Claims.

Considering the amount of old digging which has been done in the upper portions of the creek I do not consider that new operations on a large scale would be justified above the Shanks property but would recommend that the Shank and Lawson claims should be combined if possible, as these are practically virgin ground except for the recent work of Pantle and the total yardage available ~~might approach~~ should exceed 1,000,000, altho this could not be estimated until a considerable amount of exploration and development is completed.

The records seem to show without much question that the average value of the gravel on these claims is in the order of ~~25¢~~ 50¢ per yard recoverable and some additional values might be secured from the treatment of the black sands which has not yet been attempted.

The cost of working has been variously given and some claim is made that Pantle operated for as little as 10¢ per yard, but from what I actually saw of his work and experience elsewhere under similar conditions I believe that the total cost should be figured at not less than 25¢ per yard, although it might be reduced to perhaps 20¢. Shanks leased on the basis of a 10% royalty, which is not included in the above estimate of cost, but he also demanded a minimum royalty per month whether mining was in progress or not. I believe that a reasonable deal to lease or purchase could be made with both Shanks and Lawson and it might pay to hold for a time an option

on the Farnum Claims for the purpose of further protecting the water rights and provided this last did not involve any large outlay of money.

Yours truly,

Big Bug Placer File

NOTES RE: MECHANICAL MINING OF PLACER GROUND

On January 25th, 1935, I visited the placer mine operated by Pantle Brothers on Big Bug Creek near Mayer Arizona.

The benches of gravel along Big Bug Creek and Wash have an average height at this point of about 12 feet to bed-rock. They are composed of sand, coarse gravel, clay, and some boulders, and the digging conditions are quite similar to those which would exist in the stripped bed-rock gravel in the Loftus pits except that the height of the banks on Big Bug is somewhat greater and there is a larger percentage of clay and a somewhat smaller percentage of large boulders.

The average value of the Big Bug gravel is given at 50¢ per cubic yard.

The digging is done with a Thew, one yard power shovel mounted together with a gas engine on caterpillars and this excavates at the rate of ~~two~~ one cubic yard per minute, but after making allowence for the time required for moving, etc., approximately 400 yards are actually dug per eight hour shift. The repairs are made on over-time.

The shovel is followed by a washing plant also mounted on cats and towed by the shovel. The dipper of the shovel delivers directly into a small hopper from which the gravel passes over a short belt into a trommel, which is about 12' long by 5' diameter and fitted with ½ inch screen. The waste or oversize from the trommel goes to a stacker belt which carries it out behind the washer for a distance of about 30' and piles it in stacks or rows to a height of about 15'.

The fines from the trommel are sent to four Ainlay bowls each of about 36" diameter and the gold recovery is made in these bowls. The clean-up is made at the end of each shift.

Four men are employed, one operating the shovel, two operating the washing plant, and one on general work. I believe that a fifth man was running a truck and does odd jobs around the workings. The details of cost of the operation were not given me, but it seems certain that the labor cost does not exceed $25.00 per day and fuel, repairs, etc. should not exceed $15.00, making the total cost $40.00 per day or around 10¢ per cubic yard of gravel washed.

The amount of water required for this operation is from 250 to 300 gallons per minute or say a maximum of 30 miner's inches and since the water runs down to a pond along with the tailings from the Ainlay bowls a large percentage can be recovered and pumped back into the washing plant if desired.

The steam shovel was purchased second hand and the washing plant was built by the Pantles, but it is in all essential points similar to the four bowl plant manufactured by Sterns-Rogers of Denver in conjunction with the Ainlay Company and rated at a capacity of one yard per minute. The cost of this washing plant is $16,895 f.o.b. Denver, which seems to me far too high. Manufacturers of steam shovels quote approximately $13,000 for a new shovel of one yard capacity, but excellent reconditioned second hand shovels can be obtained at many points for about half that figure.

It appears to me that with some modification ~~the~~ a digging and washing unit similar to that just described above would be very suitable for work on the Loftus ground after the top gravels had been sluiced off, and I am confident that the entire cost of such a unit including freight, transporation to the property and erection

would not exceed $30,000, although absolutely new equipment might run the figure up to $35,000. I believe that a working cost of 10¢ per cubic yard could easily be maintained and 30 miner's inches of water should prove ample for each unit, and the tailings, together with the waste water, could be run down the present drain sluices where some additional recovery of gold might be made in the ~~riffles~~ riffles and on an undercurrent.

J. W. C.

1/31/35

See also Adams Report on the Lyttles

COPY

March 15th, 1934

Mr. D. H. Simpson
Phoenix, Arizona

Dear Sir:

Pursuant to your instructions of recent date, I proceeded to the Smith Placer ground on the Bigbug creek about four miles north of Mayer, in Yavapai County, Arizona. I arrived on the ground February 2nd, 1934, and have steadily sampled the ground in various ways since that time. We have employed two and three men on this work.

The Smith Placer ground contains forty acres of patented land with an inalienable water right in the Big Bug Creek of two hundred miners inches of water, which is about the flow of water that will pass through a 14" pipe continuously running 24 hours each day. The ditches and other equipment connected with the water right are in place and have been in constant use for many years. This water right was confirmed by Congress by the act that admitted Arizona to the Union. A small orchard was planted on the land many years ago and the old trees look thrifty and are now covered with bloom.

A considerable amount of gold has been extracted from this ground in the past by crude hand methods, rockers, long toms, sluices, and the ever present gold pan. The old timers followed the high grade streaks and old channels with open cuts and tunnels that open up the ground in such a manner that sampling is much simplified.

The abundance of water in the ditch on the high side of the bars on the west side of the creek is an added convenience in sampling the ground. The Santa Fe Railroad to Mayer, skirts on the East side of the property with the main highway only a few yards distance east. The Arizona Power Company has a line to the lower end of the property and running through the upper half, which is available for power and lighting. The supply of water, and electric and the nearness of transportation and telephone are all factors that greatly enhance the value of the property from the standpoint of installing a plant to handle a large yardage.

Our attention has been confined to the bars on the west side of the creek by reason of the limited time at our disposal and the convenience of the water supply. On this ground is a full 600,000 yard of alluvial gravel and sand containing gold in quantities to be highly profitable to work with a suitable plant. Preliminary sampling with the gold pan and other hand work determined this fact beyond question.

We then started an open cut from near the creek, going west into the bar. This cut is located between the lower two thirds of the bar and the upper third. This cut was run about 100 feet into the bar and produced about 80 yards of gravel and boulders and surface

soil free
/all of which was washed through a Denver Mechanical Gold Pan. The/gold thus produced, weighted and assayed for fineness, amounted to $41.23 or an average value of 51.5¢ per yard of material handled. Regarding the much greater value of gold contained in black sand, but which we were unable to recover with the means at hand, more will be said further.

A cut was run a short distance south of #1, from which five yards were taken with a return of $10,00, in weighed gold or $2.00 per yard of free gold. The operation was then transferred to a point north and east of #2 here, we are now working on a proposed 20 yard sample. This will represent a large bank of material that appears to be of even better grade than that from cut #2.

During the months of July and August of 1933 I worked out eight samples on this ground of from five to twenty yards each, with the express purpose of determining whether or not the so-called over-burden or waste material would pay for the handling of this waste.

The samples gave an average value in free gold of 53¢ per yard. While taking these samples last summer eight samples of "black sand" or iron particles contained in the gravel were taken and all visable gold cafefully separated from it and the clean black sand assayed with the result of an average value of better than $35.00 a ton. The amount of black sand varies greatly in different parts of the ground buta very conservative estimate would be 3% of this by weight or about 84 lbs. per cubic yard of black material.

Allowing for the usual losses in any concentrating plant 25 yards of bank material will produce one ton of black sand with a present value of $35.00 or $1.40 per yard of bank material.

Thus a plant able to save the black sand as well as the free gold will return a gross value of $1.93 per yard of material handled. It must be remembered though that these figures are based on material that would ordinarily be considered as waste. From my experience with the Kirkland plant, I feel safe in saying that this ground can be handled for a sum not to exceed 25 cents per yard, which would give a net profit of $1.68 per yard.

There is a large yardage of material on the North bank of the creek where it makes an abrupt turn to the South, which is of good grade, as evidenced by the old tunnels and open cuts made by the old timers in stripping bedrock. We have done no sampling of this bar, but as the material is of the same kind and character as that we are sampling it will no doubt prove to be of the same value.

A careful study of the conditions present indicate that a washing and sizing plant consisting of scrubber, trommel, or other screening and sizing device with suitable gold traps for the coarse gold and some standard concentrating tables for the fine gold and black sand is required. The most economical tailings disposal would be by conveyor belt so arranged that it could be extended as the necessity arose.

The mining should be done by power shovel and the material delivered to a bin by dump truck, and fed to the scrubber by conveyor belt running freely under the bin. Such a plant equipped with two good tables will handle twenty-five yards an hour, A three quarter yard power shovel and two dump trucks with the above plant would constitute a well-balanced lay out.

By using good second-hand equipment in the washing plant, the cost of material and construction will not exceed $2,500.00 and would not take over 90 days to put into operation. These figures are based on my experience of designing,purchasing material, and constructing a similar plant at Kirkland last year. The time consumed in construction was 67 days.

The cost of a good second-hand shovel and new trucks would be about $5000.00 purchased outright. It is possible that a satisfactory arrangement could be made to lease or rent this equipment at the present time, or a contract could be made with a contractor with this equipment to deliver the material to the plant at a yard price. As a rule this is not satisfactory due to part of the operation being not under the direct control of the management. Trucks and shovel can be purchased on time with a down payment of less than $1000 and the balance paid out of production.

A plant such as outlined would handle 200 yards per eight hour shift at a profit of $10,080.00 per month. A two shift per day program is possible and I believe desirable as there is sufficient water and electric power for lighting as well as operating the plant.

Yours very truly,

(signed) Bert Roby

Owned by A. B. Smith, San Carlos, Ariz 3/4/21

February 18th, 1936

Mr. Frank W. Manegold
707 Valley National Bank Building
Tucson, Arizona

RE: BIG BUG PLACERS

Dear Mr. Manegold:

Your letter of the 17th is received today and I shall reply to your questions as fully as possible, although not exactly in the order in which they are asked.

The placer property which I described to you is owned by a man who is not in Phoenix today but his local agent and representative, who has been handling this property, tells me that it was still open for negotiation up to a couple of days ago and that he is quite sure that such is still the case but will positively check this matter upon the return of the owner, which is expected before the end of this week.

The property consists of forty acres of unpatented land of which about fifteen acres contain placer gravel. It is owned in fee simple and was formerly a ranch and it carries with it a prior water right to a flow of two hundred miners' inches on Big Bug Creek, which passes right through the property. Two hundred miners' inches is equivalent to a flow of twenty-two hundred gallons per minute, which is more than usually flows in Big Bug, but there is at all times ample water for the operation of a washing plant which would treat up to 1500 yards in twenty-four hours. I notice in your letter that you mention that the capacity of your washing plant is 1500 yards in eight hours, but this was not my previous understanding and I do not think you could count on operating at this rate continuously along the Big Bug. However, by building a small storage dam the water could be conserved for the entire twenty-four hours and probably you could wash upwards of 2500 yards per day or possibly as much as 3000 if your plant actually has so large a capacity.

As mentioned above the water flows right through the placer ground so that no pipe line would be required except from the intake to the location of the washing plant, which would naturally be a very short distance.

The electric power line of the Arizona Power Company also passes right across the property and power could be taken from this line at the plant merely by the installation of

transformers and a very short stub line.

The property in question has been operated in the past in a very small way by hand methods, using rockers, longtoms, and pans. A thorough investigation of the available gravel was made in 1934 by an experienced miner with whom I am well acquainted, and while he is not a mining engineer I have generally found that his results were reasonably reliable. This man, with the help of two or three assistants, spent about six weeks in testing and sampling the ground, digging a number of pits and trenches and taking a large number of samples, all of which showed good values. His statement to me, as I told you in conversation, was to the effect that he had estimated that the average heights of the banks of pay gravel was close to 30 feet and that these contained 600,000 cubic yards with an average value of 66¢ per yard at present price of gold. In a statement which is given to me today I find that he also mentions that some additional values should be saved from the black sands, but since I have nearly always found that there is a tendancy to over-estimate the value in any bank of gravel I personally doubt if the general average of this yardage will exceed a recoverable value of 50¢ per yard. The working costs are estimated at 25¢ per yard, which is just about what they were at a neighborhing property with whose operations I was personally familiar and there also the recovery was about 50¢ per yard. The probable profit may therefore be figured at about 25¢ per yard or a total of $150,000.00 for the entire bench less the royalty or purchase price and the expense of installation which last I should figure at about $25,000 if new material were secured but which, of course, will be very greatly reduced if you are able to utilize the plant which you now have at Greaterville with some minor changes and additions.

The purchase price of this property as given to me and confirmed by the owner's agent is $15,000.00 or the owner would lease on the basis of the operator paying a royalty of 10%. I presume that a satisfactory lease with option to purchase at any time during a certain period could be secured and the agent of the owner assures me that an option will be given to responsible parties without payment for a sufficient period of time to permit a thorough re-examination of the mine, which could probably be completed in less than sixty days or might not require more than half that time if a sufficient crew were employed.

In respect to the possibility of the operator's obtaining a Government loan I cannot give you any encouragement for although I did not think wekllto discuss this matter with the owner's agent I am very sure that it would not make any appeal. In the first place the Government only makes loans against a first-mortgage and therefore the new operators would either have to purchase the property or the owner would have to join in giving such a mortgage, which very few owners of mining property will consider unless they intend to operate themselves.

In the second place you could not expect to secure a Government loan until after the property had been thoroughly resampled by the Government engineers, and this they would only ~~consider to~~ do after your own engineers had made an examination and convinced them that there was substantial yardage of pay gravel. Probably there would be no great difficulty about this but the Government is at present so swamped with mining applications that I do not believe that there would be any chance of their completing their investigation for some six or eight months and it is most unlikely that the owner would allow you to tie up his property for that length of time unless you paid him a substantial monthly rental.

In reference to the personal part of your letter my charges for professional work, as you state, would be at the rate of $50.00 per day plus expenses. If you entrusted me with a certain piece of work that would involve quite a length of time I would make some reduction from this basis, which could be discussed later, and particularly if I were not obliged to devote my time continuously to the work but could leave it at intervals to take care of some of my other interests.

As to the total expense of examining the Big Bug Placer described above I believe that a sufficiently thorough examination could be made for somewhat less than $2500.00 including my own fee. It would be necessary to employ two or three men, ~~including~~ my own fee, and also to procure a rocker or some type of washing equipment, but I can lay my hands on one of these second-hand or might perhaps rent it for the occasion. The sampling of a placer must be done fairly thoroughly in order to have any value unless it is definitely determined that the values are very uniform in different portions of the gravel and if this should prove to be the case the expense of the investigation would be substantially reduced but probably under no circumstances to less than $1500.00, and I can assure you, with no thought of personal work, that it is mighty good insurance to spend such a sum for investigation before actually embarking in any mining operation.

In respect to the equipment of your present plant I hope that you did not misunderstand my remarks, which were not intended as a criticism of your equipment, which I have not seen and which would have been particularly out of place since I am not familiar with the actual character of the ground that you are working. I did say that under most conditions it was advisable to provide some means of washing or disintegrating the gravel before it went to a shaker screen, and this is particularly true if there is much clay in the ground and a trommel

often gives satisfactory results.

I also said that I had nearly always found it advantageous to use quicksilver in the riffles and to install some form of device for saving the fine values after the ~~gold~~ dust had passed through the sluice. Sometimes this can best be accomplished by shaking tables or an undercurrent or tables covered with blankets or corduroy, but every gravel washing problem is a ~~long study~~ case unto itself and must be studied in detail in order to determine the best metallurgical procedure and this might be entirely different at Greaterville and at the Big Bug. Such a study would be an important part of my work if I undertake the investigation of this property.

I trust that the above will give you the desired information and shall be glad to supplement it further so far as possible. I shall probably be away from Phoenix tomorrow on a mining trip unless the weather is very bad, in which case I may not go until Thursday but shall pretty surely be here Friday and Saturday of this week and I will get in contact with the owner of the property just as soon as he returns to Phoenix.

Yours very truly,

G. M. Colvocoresses

GMC:DF

P. S. You will understand that the flow in the Big Bug varies greatly at different seasons of the year, and I am using minimum figures. At certain times you might be able to wash a much larger daily quantity of gravel.

Looking over some notes on the property given me today I find that the sampling and estimate only covers one side of the Creek and while the other bank has not been sampled it pretty certainly contains an additional yardage of similar material. To sample this additional yardage would mean an expenditure beyond my estimate given above and I think you would be justified in proceeding if a check sampling confirmed the values in the 600,000 yards previously discussed.

From my recollection of the property itself I believe that the height of the bank is overstated and that it probably would not exceed an average of 20', which will be advantageous rather than otherwise from a working standpoint. I also think that because of the very favorable water and power conditions the cost of operating can probably be reduced from my estimate and very likely will not exceed 20¢ per yard but much more definite figures can ben given on the completion of the proposed investigation.

D. H. Kinnett called 3/4-36
[illegible] placers

February 25th, 1936

Mr. Frank W. Manegold
707 Valley National Bank Bldg.
Fucson, Arizona

RE: BIG BUG PLACERS

Dear Mr. Manegold:

In further reference to my letter of yesterday. I saw Mr. Smith, the owner of the Big Bug Placer, late yesterday afternoon.

Smith is not disposed to give any long-time option for examination, saying that he has a deal on with some other people, although it is not closed, but he will give a thirty day option or possibly a forty-five day option for the examination of his ground, which he thinks can be completed in that time. He will option the property for $15,000, of which $2500.00 would be payable in cash at the end of the option period, another $2500.00 six months later; $5000.00 in twelve months, and $5000.00 in eighteen months from date of option contract. I suggested that he might be willing to make a substantial reduction for cash and he said that he would be glad to do so if full payment could be made in thirty or sixty days.

If the operators wish to take over the property on a royalty basis he says that he would ask a total purchase price of $30,000.00 to be paid out of a royalty of 12½% of the value of the product which royalty, of course, would apply on the purchase price.

Smith at first wished to increase the total payment in order to take care of his local agents here, but I convinced him that this was not fair since his representative had previously named a purchase price of $15,000 and he finally agreed to provide the commissions from this payment.

I believe that somewhat better terms can be obtained by discussion but since I have no definite advice as to your intentions I thought it best to let the matter stand and told Smith that I would probably arrange for

another conference in the near future at which I hoped you would be present. It is my personal opinion that Smith has no immediate chance of doing business with other people but of course there are always a number of promoters and others who are making tentative offers for any reasonably promising property and I think that if you are seriously interested it would be very advisable to take further action without delay.

You will understand that in all these negotiations I have taken the liberty of acting as if I were your representative without, of course, disclosing your name, and I have done this on the assumption that you would probably wish to have me take charge of the technical end of the investigation if such investigation is to be made. We can discuss this matter or any alternative arrangement in respect to my personal connection with this venture somewhat later, but please let me know if you intend to return to Phoenix shortly and whether you wish to have me arrange for a conference with Smith.

Yours very truly,

GMC:DF

Tucson, Arizona.
February 17, 1936.

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

Dear Sir:

You will recall my conversation with you several days ago, at which time you mentioned certain placer property on Big Bug Creek. I have today conferred with one of my associates in the Greaterville property, and we have deemed it advisable to get certain further information which we will wish to submit to other associates in Chicago, and I, therefore, request that you inform me on the following matters.

You were to check, and I now wish to inquire if this property is available.

If it is available is it so owned that, if desirable, it would be possible to submit same under conditions necessary for a government loan?

Under what terms would the owner consider the operation of the property, whether proceedure be under private financing and/or under government loan provided new operators prefer to proceed under government loan?

It is my understanding that your fees for your personal work will be charged for at the rate of $50.00 per day, plus expenses, maximum, subject to some reduction, provided your services would be necessary over a continued period of successive days. In addition to the foregoing, what would you estimate conservatively,(without binding yourself to a definite figure)would be a reasonable expenditure for making proper tests as to values contained in the area?

Have you or can you obtain any information as to the probable cost of bringing electrical power onto the property?

It is my understanding, from our conversation, that there is sufficient water immediately available on these grounds for the successful operation of placer

equipment handling between 1200 to 1500 yards per 8-hour day.

I believe you had certain criticism on our shaker screen washer because it might not remove certain surface adhearings which would make amalgamation practical, and we have, therefore, concluded that it might be advisable to put in a previous step, or operation consisting of a trommel scrubber, which we understand can be attached to our present machine, correcting the condition you feel might be objectionable.

In so far as the present plant had no equipment beyond the riffles, for recovery, what would you suggest would be necessary in addition to what we now have, and if possible give us an approximate cost on same.

Just one more thing I can think of now. If the available water is not directly on these grounds, how many lineal feet of pipe, and what diameter of pipe would be necessary to supply the plant.

Trusting I may hear from you at your early convenience, and thanking you in advance for such information as you can supply me on the foregoing matters, I remain,

Very truly yours,

Frank W. Manegold

Frank W. Manegold
707 Valley National Bank Bldg.,
Tucson, Arizona.

NOTES REGARDING BIG BUG PLACERS

The lower ranch on which pay gravel has been developed is owned by Charles Lawson and could probably be purchased or operated under lease. It is estimated that there are about 200,000 yards of gravel on this property. The next section of the Big Bug is owned by Shanks and Frank Sovoia and extends along the creek for about 5000'. It is estimated by the owner that this ground contains about 1,500,000 yards less what has recently been worked out by the Pantle Brothers who dug something over 60,000 yards and recovered $31,000 in gold. Their loss in tailings is not known, but the gold is fairly coarse and clean so that it is assumed that a good recovery was made. The average width of the gravel on Shank's property is over 500' but a portion is cut out by the present channel of Big Bug. The height of the bank is from 20' to 30', possibly an average of 25'.

Above the Shank's property is the Farnum Placer, now owned or controlled by Smith and Roby. This comprises 40 acres but only a portion contains gravel and practically all of the bank has been mined out by drifts along the bedrock, put in largely by Mexicans at intervals since the 1880's. It is probable that some breasting was done from these tunnels and recently a man named Wilson installed a shovel and washing plant on the right bank of the creek and washed a small quantity of gravel mostly from near the surface, which is said to have averaged 35¢ in recoverable gold per yard. The height of this bank will average 30' but the lower sections have been so largely worked out in the past that it would be unsafe to estimate any average value in excess of 30¢ and the total remaining yardage probably does not exceed 60,000. Above the Farnum place is a claim owned by Heffleman of Mayer, which is similar to the Farnum except that it has been even more extensively worked in the past and is practically honeycombed. The average width of gravel on the Heffleman and Farnum properties is not much over 400'.

Above Heffleman, is Fitch and above Fitch, Ed Hill and further up at the mouth of Eugenie Gulch is a claim now being worked by Cornell,

who is said to recover about 1 oz. of gold per hour. Capacity of his plant is not known.

The bedrock is Yavapai schist on all of the properties mentioned and the gravel is fairly uniform in character with from 50 to 70% of boulders, but these are not large on the Shanks property and can all be handled by one yard shovel and easily piled in rows after being discarded as oversize from a trommel. The size of the boulders increases going up stream and mining would become more expensive, although the average value was probably larger near the head of the creek and the gold undoubtedly coarser. Most of the gold on the Shank property is coarse colors and fine pin points, but nuggets are occasionally found. There does not appear to be much clay in any of this gravel and it all disintegrates easily in a trommel. The gold in clean and should concentrate readily, but the bedrock is very uneven, which would make it difficult to operate a dredge or in any manner where the bedrock could not be readily cleaned.

The flow of water in Big Bug varies on the surface from several hundred inches for short periods of time to practically nothing, but there is a steady underflow of upwards of 40" according to Herrick and Shank and this should be sufficient for washing 1200 to 1500 yards per day using the return water. Apparently all of these ranches have equally good water rights to the entire flow in the creek and at present Cornell is using a considerable amount of water but returning it through the Heffleman and Farnum Claims.

Considering the amount of old digging which has been done in the upper portions of the creek I do not consider that new operations on a large scale would be justified above the Shanks property but would recommend that the Shank and Lawson claims should be combined if possible, as these are practically virgin ground except for the recent work of Pantle and the total yardage available should exceed 1,000,000, altho this could not be estimated until a considerable amount of exploration and development is completed.

tion and development is completed.

The records seem to show without much question that the average value of the gravel on these claims is in the order of 50¢ per yard recoverable and some additional values might be secured from the treatment of the black sands which has not yet been attempted.

The cost of working has been variously given and some claim is made that Pantle operated for as little as 10¢ per yard, but from what I actually saw of his work and experience elsewhere under similar conditions I believe that the total cost should be figured at not less than 25¢ per yard, although it might be reduced to perhaps 20¢. Shanks leased on the basis of a 10% royalty, which is not included in the above estimate of cost, but he also demanded a minimum royalty per month whether mining was in progress or not. I believe that a reasonable deal to lease or purchase could be made with both Shanks and Lawson and it might pay to hold for a time an option on the Farnum Claims for the purpose of further protecting the water rights and provided this last did not involve any large outlay of money.

G. M. Colvocoresses

Mattson, - operated dredge in 41

Yavapai Counts Placer Yardage

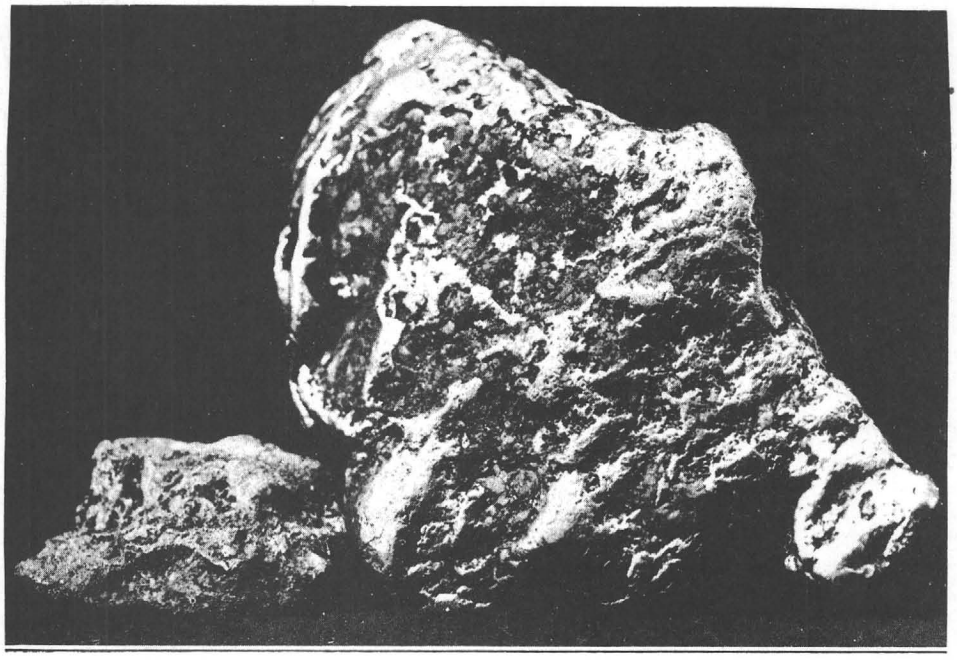


Plate 6. Nugget from Big Bug placers, nearly actual size.
(From Arizona Bureau of Mines Bulletin #135)

Big Bug Placer file

MY MISFORTUNE MEANS SOMEBODY'S OPPORTUNITY.

In the heart of the famous Big Bug Placer Field of Arizona, surrounded by the activities described in the article from Los Angeles Times, I own 40 acres of the choicest placer ground - own it in fee with perfect title.

From the Engineer's report, I quote: "I spent three months with a small outfit and four men, sampling this ground in the late summer of 1934 and worked certain parts of the ground the following summer by hand. The results of these operations indicate a yardage of approximately 600,000 yards.....The average value per yard of material handled and calculated on the basis of the money received for the gold recovered, was 76 cts. per yard. Or a gross value in gold contained in this alluvial deposit of $456,000.00." (unquote)

Big Bug Creek furnishes the water. A power line built to the property and already paid for, makes power immediately available. Only 25 miles from Prescott by good highway. On Railroad and daily mail line. Good climate away from the desert heat.

This is an ideal placer set-up and its location, just below the timber line in the picturesque Bradshaw Mountains, makes it a good mountain homesite.

(From L.A.Times, Nov. 17th,1940)

TALK ABOUT OLD AGE SECURETY. Where on this earth could be found a better guarantee?

For years, I have held this property with the expectation of some day making it my home and its operation my business. But a sudden turn of the fortunes of 1940 puts me up against the real need of a little cash. I have many proposals for an operating contract, but my need for cash is NOW.

Somebody gets this immensely valuable property for the "give away" price of only $5000.00. Why not investigate? An easy day's drive puts you right on the property.

Ben Smith

Ben Smith,
1038 W 7th St., Los Angeles.
Phone Vandike 7217.

BIG BUG PLACER 10/17/35

Bert Roby (may be reached care of Garner at 137 W. Monroe Street) described the Farnham Homestead on the bend of Big Bug Creek near Poland Junction,--a short distance below the Thomas Ranch and above the Shanks' property, formerly operated by the Pantle Bros (q.v.) On this Farnham property 15 acres of patented land has now been taken over by Ben Smith (partner of Roby) and Roby says that he has measured and carefully sampled the ground and estimates 600,000 cubic yards of gravel with average gold value of 76¢ per yard at $35.00 price. This is in an old channel and has an average depth of about 30 ft. Smith would lease or sell for $15,000 on fair terms.

Cost of operating at rate of 1000 yards per day should not exceed 25¢ per yard and might be reduced if ample water could be developed through sinking a well. Total cost of plant and equipment might be around $60,000. If Roby's estimate is eorrect the returns from this operation would be $456,000

Less purchase price & equipment $75,000
Less working cost. 150,000

$225,000

Leaving net profit of---------- $231,000

to be earned in about two years.

MIGHT PAY TO INVESTIGATE FURTHER.

W. B. Smith
San Carlos

Smith prop

Term 2500 ~~escrow~~ 30 days

2500 6 mos

5000 12 mos

5000 15

Price 30000 on 12 1/2 % royalty

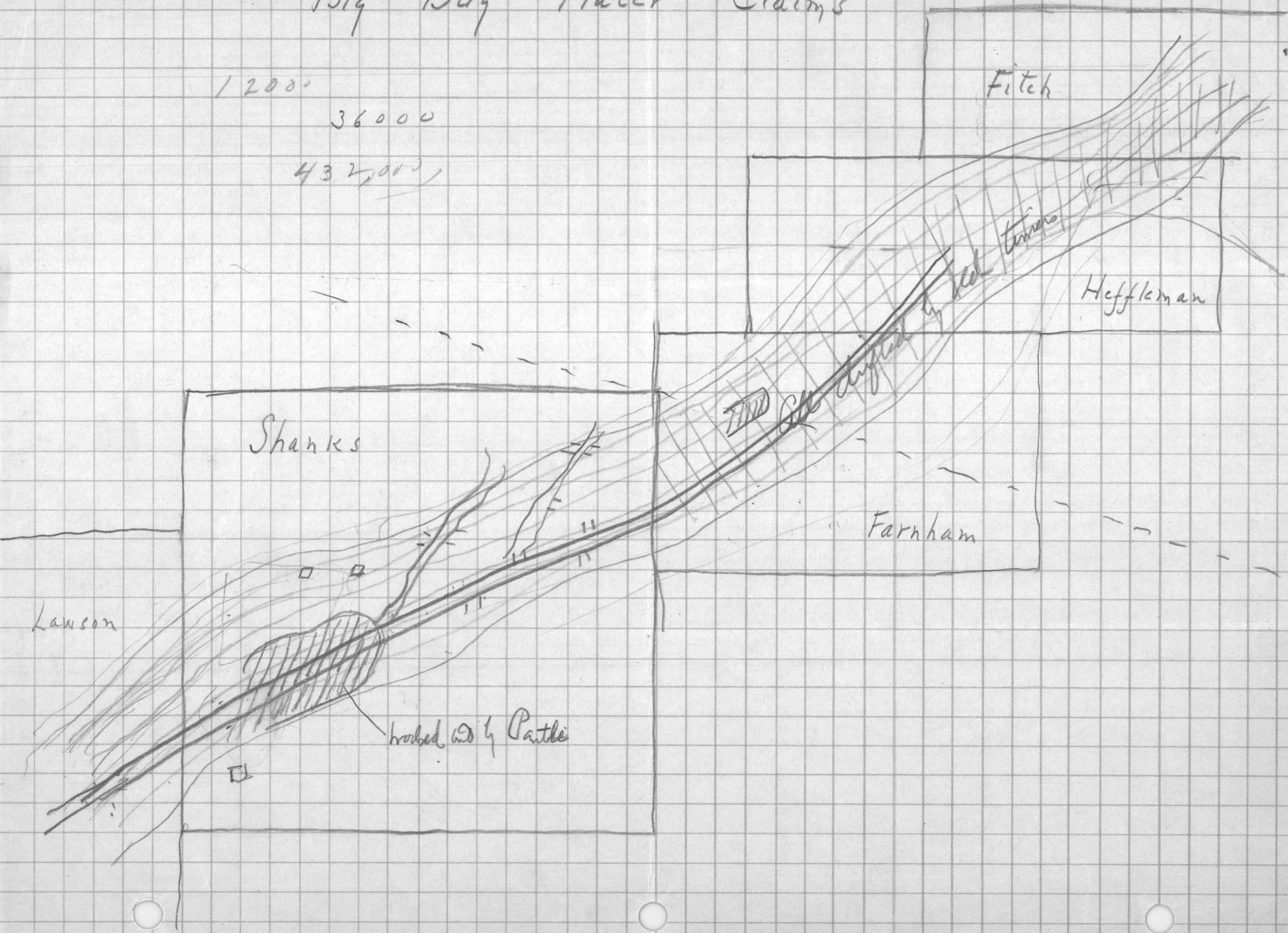
+ ~~$2~~ 2500 cash payment

Big Bug Placer Claims

1200'

36000

432,000



Revised Calculation re Diamond Joe (2 Copies)

Assume ores of mine are,

		$
Au = 0.02	gross value	0.70
Ag = 11.00	"	8.52
Pb = 8.00%	"	7.20
	Total	16.42

Assume concentration at ratio of 7 : 1 with recovery of 85% of value.

Then 1 ton of concentrate will assay,

Au = 0.12 oz.
Ag = 65 oz.
Pb = 47.6% = 952#.

		$
Smelter will pay for Au @ 31.00		3.72
" " 95% Ag @ 73.		45.08
Pb less 30# @ 3.10 = 1922# @ 3.10		28.58
Value of one ton concentrate		77.38

Less charges.

Handling & trucking	3.90	(allow 15% moisture
Freight to El Paso, 350 miles	7.88	" " "
Treatment charge	7.50	
Sundries	1.00	
Penalty for unidentified	3.00	
	23.38	
Credit on Au	1.40	
	21.98	21.98
Net return for ton concentrate		55.40
" " " " ore		7.91

Less. Cost of mining developed ore 2.00
" " walking 2.00
Taxes etc. 21
Total operating costs 4.21
Net profit per ton 3.70
" " " day $185

Should be increased to $400 per day when operating at 100 tons per day