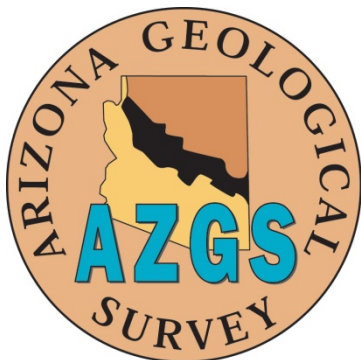




CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the G. M. Colvocoresses Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

April 22nd, 1936

Mr. L. R. Smith
5357 Alta Canyada Road
La Canada, California

RE: FLOUR GOLD PLACER

Dear Mr. Smith:

In further reference to my investigation of the above property I spent a portion of yesterday with Tom Young and a man named Howard Rawlings watching their procedure in treating some of the gravel from the Flour Gold Placer by a forced amalgamation process which I understand is known as the Ewell Gold Separation Process.

This is one of the many efforts to improve on ordinary amalgamation and similar to several others which I have had occasion to investigate in the past. It depends largely upon the activation of the mercury through the use of sodium which has been treated by some secret chemical and in the commercial plants which the Ewell Company (now represented by Mr. Rawlings) has built in the past, but none of which seem to be operating, the pulp is brought into contact with the mercury in a bath where the solution is sodium hydroxide plus some other chemicals, the nature of which was not disclosed.

The testing work, however, was done with an ordinary copper pan dressed with a coating of the activated mercury and ten pounds of the material which we obtained from the Flour Gold Placer was treated in this manner after the oversize on a twenty mesh screen had been rejected. This oversize represented seventy per cent of the entire sample.

A certain amount of apparently very dirty amalgam was obtained and this is being assayed today so that I shall add to this letter a note stating the value of the gold recovered.

Another test was made by Young through a simple panning procedure without the use of mercury and some fine gold was noted in the pan, but I should judge that the value was only a few cents per yard and in any event the sample

2- Mr. L. R. Smith

which Young tested in this manner was one which he had procured himself so that I have no personal knowledge concerning same.

As to the Rawlins test I can only say that even if a considerable amount of gold should be found in the amalgam I could not accept this as having any great value since it is a very easy matter to employ sodium or other reagents which contain a certain amount of gold and unless all of the reagents including the mercury had been carefully tested in advance it would not be possible to certify that the gold actually came from the placer gravel.

I can only repeat that this entire matter should either be dropped as it stands or made the subject of a thorough metallurgical investigation aimed to determine whether or not gold which cannot be detected by the fire assay actually occurs in Young's gravel and if so whether this gold could be commercially recovered by any economical procedure. I should not have been disposed to carry the investigation as far as I have done except that Young told me that you were fully aware of the fact that the gold occurred in some form which could not be detected by the fire assay and that you were prepared to follow the matter up on that basis, but I shall go no further with this matter until I receive further instructions from you on that point.

Young and his associates now plan to have Rawlins install a small plant at the well, which is located about six miles from his property, and they intend to treat a certain amount of gravel by first screening and then concentrating the screenings so that the material which goes to the plant and which they believe will contain most of the gold in the gravel will only represent about one-thirtieth of the gravel as mined from the bank. They expect to treat six tons of this concentrate per day obtained from mining about one hundred and eighty tons and if, as they claim, the gravel will run about \$5.00 per ton they should recover some \$900.00 per day less the losses in tailings.

Of course if this plan is actually put to practice and anything like \$900.00 value in gold is daily recovered it will, as Young states, furnish excellent proof that his contentions in regard to the value of the gravel are correct, but personally I do not believe that any such results will be obtained.

I expect to leave Phoenix Friday in connection with some mining work in the northern part of the state and will probably be back here again the early part of next week. I shall hope to hear from you tomorrow by wire if you wish me to do anything further at the moment or otherwise to find a letter on my return to Phoenix. I believe that Young plans to go to Los Angeles in the near future and no doubt will see you in person if you are at your home.

Yours very truly,

L. M. C.

April 23rd, 1936

Mr. L. R. Smith
5357 Alta Canyon Road
La Canada, California

RE: FLOUR GOLD PLACER

Dear Mr. Smith:

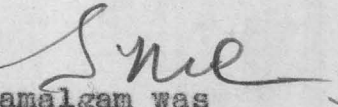
In further reference to my letter of the 22nd the gold in the amalgam obtained from Mr. Young's experiment could not be weighed until late last evening. The results indicate that the particular sample of material tested contained just a trifle over one cent value in gold per cubic yard and it is therefore apparent that the procedure of forced amalgamation as applied by Mr. Rawlins did not in this particular case serve to recover any more gold than was previously indicated in the fire assay, in fact the assays averaged a considerably higher content, but the sample tested by forced amalgamation may have represented some of the material which assayed only a trace.

I must definitely conclude that the content of the Flour Gold Placer is of no commercial value so far as has been demonstrated to date, and I should not be prepared to alter this conclusion unless Young can demonstrate very positively that there is an error.

If Young carries out his present plans and installs a small testing plant on the property the actual results of operating this plant will undoubtedly demonstrate the true situation in the course of a very short time, but I do not personally believe that any further expense is justified in continuing the investigation on the samples which we have taken or which might be taken on the occasion of future visits to the property.

Assuming that this work is now completed at least for the present I am enclosing herewith my account and I shall be very glad to carry out any further instructions.

Yours very truly,



P. S. The amount of silver contained in the amalgam was reported as merely a trace. The value can be considered negligible.

April 18th, 1936

Mr. L. R. Smith
5357 Alta Canyon Road
La Canada, California

Copied

RE: FLOUR GOLD PLACER

Dear Mr. Smith:

The samples on this property have just been assayed and results are as follows:

My No. 1 taken from the cut in bank of the arroyo from surface to depth of 5' claimed by Young to carry better than \$5.00 per ton showed gold--Trace; silver--Trace. My No. 2 grab sample from dump of No. 1 shaft which Young claims to assay gold, -.14; silver 1.86 actually gave gold, -.005; silver--Trace. My No. 3 from dump of No. 2 shaft which Young claimed should run 1.5 oz. in gold actually gave gold .005; silver .2. My No. 4 representing screenings from the dumps at No. 1 and No. 2 shafts effecting a concentration of perhaps 10 to 1 also showed gold--.005; silver-- .1. My No. 5 from dump at No. 3 shaft which Young claimed should run .19 oz. in gold actually gave gold Trace; silver Trace.

From the above it is evident that none of my samples represent any commercial gravel in so far as the values can be determined by an extremely reliable assayer using the ordinary and well-established methods. It

2- Mr. L. R. Smith

is apparent that the shafts were sunk in what appeared to be the best portion of the placer and from surface to a depth of 30 or 40 feet the values are less than 30¢ per yard, which I consider entirely worthless, taking into account the location and nature of the gravel. The sample from the arroya bank showed only a trace of gold and a trace of silver and it would appear that there is no commercial ore likely to be found on this property unless possibly just above the bed rock, which has not been reached by the shafts.

It remains to consider what importance, if any, should be given to the statement of Young and his associates that the gold in this particular placer cannot be detected by the ordinary fire assay, but can be detected by assaying with special fluxes and temperature control and also that it can actually be recovered by air concentration and treatment of the concentrates with cyanide or by forced amalgamation with activated quicksilver.

In other words this problem narrows down to one of chemistry and metallurgy and becomes a search for what is commonly termed "queen gold" which usually exists only in the imagination of the interested parties, although as mentioned yesterday there is always a theoretical possibility that such gold may occur, but the burden of proof in this regard certainly rests upon the owners of the claims.

If you should decide to follow this matter any further I think we could safely use the samples taken on

3- Mr. L. R. Smith

the occasion of our recent visit since it is evident that these were not salted with any detectible amount of metal and any further work should in my opinion be carried on in a well-equipped and absolutely dependable laboratory such as that of the Western Precipitation Co. in Los Angeles where Young or his assayer from San Diego could be given every opportunity to demonstrate the existence of such gold as they could find by any scientific method, by working under careful supervision and using only chemicals and reagents which were known to be absolutely pure.

If the gold is actually in the ground in any form whatever I have no doubt but that it can be recovered by some metallurgical process, but I am so far forced to doubt the actual existence of the values claimed by Young and his associates and even though he may bring me in, as he promises to today, some gold which he claims to have recovered from this gravel by forced amalgamation I could not accept this as any reliable evidence, knowing nothing of the manner in which he conducts his amalgamation nor the materials which are used in working out his process.

I shall be very glad to follow any further instructions that you may wish to give in regard to this matter.

Yours very truly,

J. M.
G. M. Colvocoresses

April 17th, 1936

Mr. L. R. Smith
5357 Alta Canyon Road
La Canada, California

RE: FLOUR GOLD PLACER

Dear Mr. Smith:

As per your recent telephone request I spent yesterday with Mr. Young at his Flour Gold Placer, from which we returned late last evening. I am having some samples assayed today and have been going over all of the records and maps which Young has in his possession and will probably watch some experiments which he expects to make in the treatment of this material by a special forced amalgamation process.

The placer gravel fills a basin in the east slope of the Eagle Tail Range of Mountains, eighty miles west of Phoenix by road and thirty-five miles from Hassayampa the nearest railroad point. This section of the state has never been known as a well-mineralized district and no successful operations have been carried on, although there have been some productive mines further west in the vicinity of Kofa and north in the Harqua Halas.

The Eagle Tail Mountains rise some 700 feet from a desert plain with an elevation of approximately 1500 feet above sea level. They are composed largely of volcanic eruptives such as diorite, agglomerate, and porphyries, apparently thrust up as intrusions through sedimentary and granitic rocks.

2- Mr. L. R. Smith

A few quartz veins were noted but comparatively little iron-stain or indications of sulphide minerals.

General conditions did not appear particularly favorable to the existence of any substantial body of gold ore. The gravel which lies in the basin has evidently resulted from the erosion of the surrounding hills but some may have been carried there by an ancient river of which the course is no longer easily traceable. The surface area of the basin comprises several hundred acres and if, as seems probable, the average depth is about thirty feet then the 480 acres now staked by Young might contain some twenty-four million cubic yards of gravel and a much larger yardage underlies the flat extending further to the south and east.

The amount of prospecting and development is trivial. Thirty test pits were sunk only two or three feet at various points on the surface and the samples from these as reported by the former owners after eliminating all assays of over \$11.00 per ton give an average \$6.20 per ton or say over \$9.00 per yard. The work done by Young and his associates consists of three shafts respectively 28 feet, 35 feet, and 42 feet in depth. Young reports average value of the dirt taken from these shafts was in excess of \$8.00 per ton and he considers a fair average after throwing out the high assays to be about the same as the surface pits, say \$7.00 per yard in gold and \$2.00 per yard in silver. Similar gravel is also exposed by the many arroyas which cut through sections of these claims.

The shafts could not be descended or sampled since

3- Mr. L. R. Smith

there were no timbers, ladders or windlass, but I took samples from the dumps on the surface which presumably were representative although there is always a possibility that such dumps might have been salted. The results of these samples will be sent you as soon as possible.

We also took about 400 pounds from the dumps of the 42 foot shaft which Young claims to have averaged better than \$6.00 per ton in gold and silver and which he considers representative of his average ore body. This material I shall hold pending your instructions, but suggest that it would be advisable to wait until we have obtained some further information concerning the true value of the gravel before going to the expense of having it shipped to Milwaukee or elsewhere for treatment.

If the remarkably high values in this gravel as reported by Young and the previous owners can be verified the property should have great value. The material as far down as ^{be} opened up could/easily and cheaply dug with a steam shovel or any type of excavator and although there is no water within six miles and probably only a very small amount would be obtained at that point it is evident that such extremely high grade gravel could be treated in one way or another even if it were necessary to pump water all the way from the Gila River, distant some thirty-five miles.

The gravel on or near the surface appears to be quite dry and this conditions maintains as far as I could see down the shafts, but since there is evidently some seepage of water along the bed rock I expect that the moisture will increase with depth very probably to a figure of 5% or 6%. I also think that

4- Mr. L. R. Smith

some cemented material will likely be found near bed rock as is usual in such cases, but this should also be the richest ore and if further development is to be done I would recommend immediately deepening one or more of the shafts until bed rock is reached.

The crux of the proposition lies in the actual gold and silver content of the gravel and one/^{is}naturally skeptical of any statement that these values cannot be properly determined by standard fire assay. The United States Government and some of the largest mining companies have been investigating for many years all claims that have been made concerning gold which could not be detected by fire assay and to date no such gold has been found to exist. There is, however, a possibility that gold and silver might occur in some chemical form such as a volatile compound which would make it difficult to assay in the ordinary manner, and this, as I understand it, is the claim which Young makes in connection with the occurrence of these metals on his property.

If the samples which I have now taken to the best assayer in Phoenix should give unsatisfactory results I suggest that some additional investigation would be in order to prove or disprove the statements made by Young and his associates. Such an investigation would involve obtaining fresh samples from the pits and banks under such conditions that no salting would be possible and testing these with proper safeguards and after complete chemical analyses,--by standard methods as well as any which Young might propose. If to date no one but the owners

5- Mr. L. R. Smith

and their assayer have been able to find any substantial quantity of gold in this gravel then one must naturally refuse to accept their representations ^{until} ~~unless~~ they can be properly verified.

The average value that may be definitely determined to exist in the test pits and shafts can only be considered as properly representative of a comparatively small yardage, but the indications point to the probability that conditions and values would be similar throughout a large part of the basin and I should therefore consider that further development was very well justified if the gravel in the area which has been prospected proves to carry an average of anything like \$9.00 per yard as claimed or even one-fifth of that value.

Yours very truly,

J. M.

GMC:DF

Value 1 kg gold = 112 £

Val 1 kg gold in 10th sample found

be $.112 \times 200 = 22.4$ £ per ton

Actual weight of gold in sample. 0.35 kg.

Value of gold per ton of sample. 0.784 £/kg

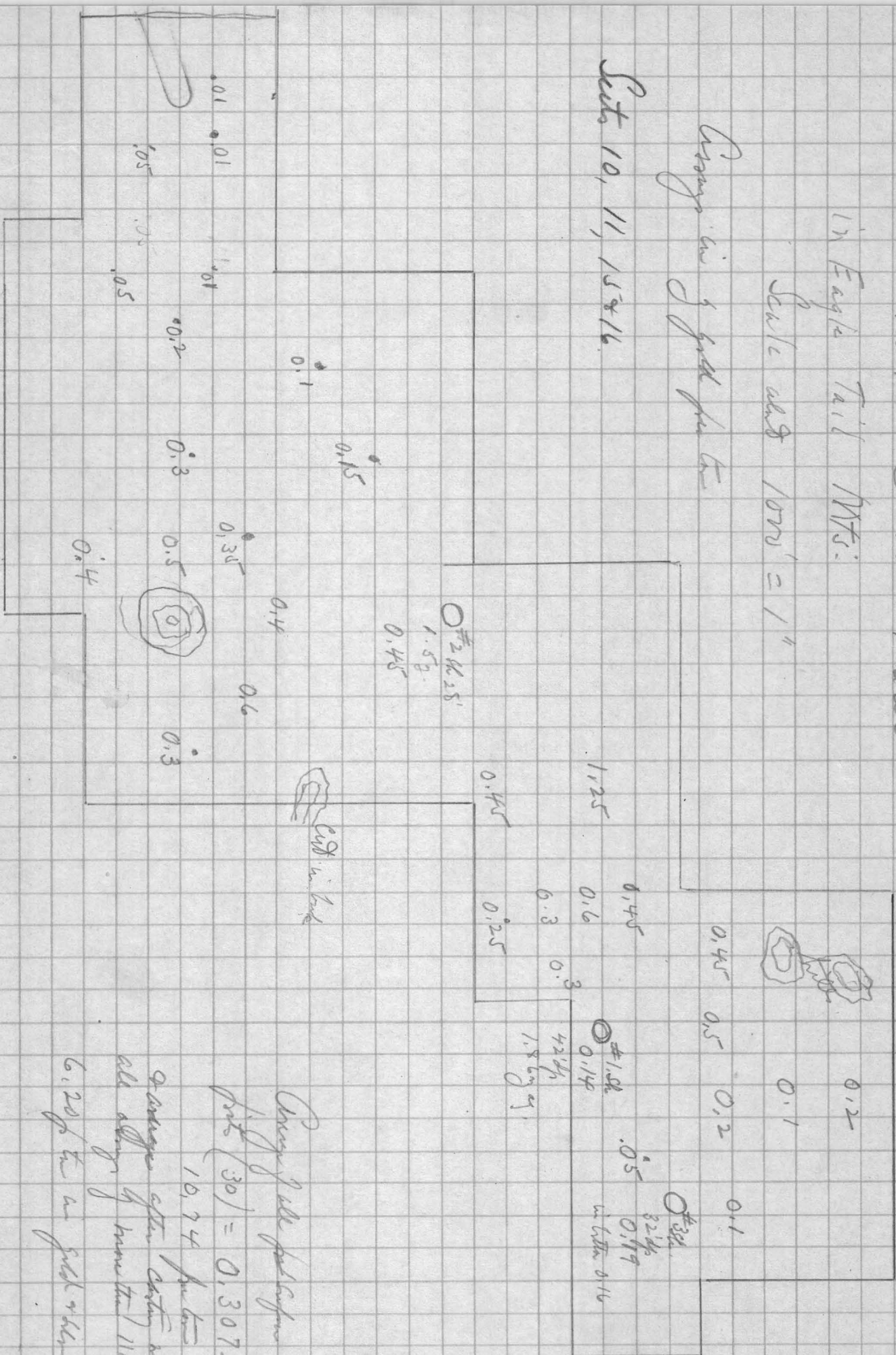
ton a kg just a little over 1 £
per cubic yard - which is
quite worthless

13 Eagle Tail Nts.

Scale unit /mm' = 1"

Always in good love

Sets 10, 11, 15 & 16.



Charge of all performance
 price (30) = 0,307 =
 16,74 per ton
 2 average of the existing and
 all average of new the 1100 =
 6,20 of the in fresh water

No. 34 Co

Phoenix, Arizona,

CHAS. A. DIEHL

Apr 17 36

ARIZONA ASSAY OFFICE

Phone 3-4001

315 North First Street

P. O. Box 1148

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

[illegible]Charges \$ 6.25

Assayer Arizona Assay Office.

No. 36 Co

Phoenix, Arizona,

CHAS. A. DIEHL

Apr 22 36

ARIZONA ASSAY OFFICE

Phone 3-4001

315 North First Street

P. O. Box 1148

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

MARKS	SILVER		VALUE (Oz.)	GOLD		VALUE (Oz.)	TOTAL VALUE	PERCENTAGE				REMARKS
	Ounces	Tenths		Ounces	Hundths		Of Gold and Silver					
Mercury sample			.035 mg									(In 10 # sample = about 1 lb for cubic yard of bank gravel 7 lb for 1 cu yd)

Charges \$ 1.00

Assayer Arizona Assay Office. *C.A.D.*