



CONTACT INFORMATION

Mining Records Curator
Arizona Geological Survey
1520 West Adams St.
Phoenix, AZ 85007
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: HORSESHOE BASIN

ALTERNATE NAMES:

BALLAM IRON AND GOLD PLACER
TURNBULL-MONTGOMERY PLACER
MONTGOMERY

PIMA COUNTY MILS NUMBER: 396

LOCATION: TOWNSHIP 15 S RANGE 2 E SECTION 14 QUARTER SW
LATITUDE: N 32DEG 06MIN 55SEC LONGITUDE: W 112DEG 09MIN 30SEC
TOPO MAP NAME: QUIJOTOA MTS - 15 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:

GOLD PLACER
IRON
COPPER
TITANIUM

BIBLIOGRAPHY:

ADMMR HORSESHOE BASIN FILE
AZBM FILE DATA
CLAIMS EXTEND INTO T16S R2E
STEPHENS, BASCOM, QUITOJOA MIN. DIST GUIDE BK
ABM BULL 160, P 72-78
HEIKES, USGS MIN. RESOURCES FOR 1912, P. 257
BLAKE, WM REPORT OF THE TER. GEO. 1899

HORSESHOE BASIN PLACERS

PIMA COUNTY

Quitotoa District

MILS Sheet sequence number 0040190496

T15S, R2E, secs 1, 12, 13, 36

T16S, R2E, secs 2, 10, 11, 12,

Stephens, Bascom A., Quijotoa Minigg District Guide Book 1884 - Geology File 14, 15

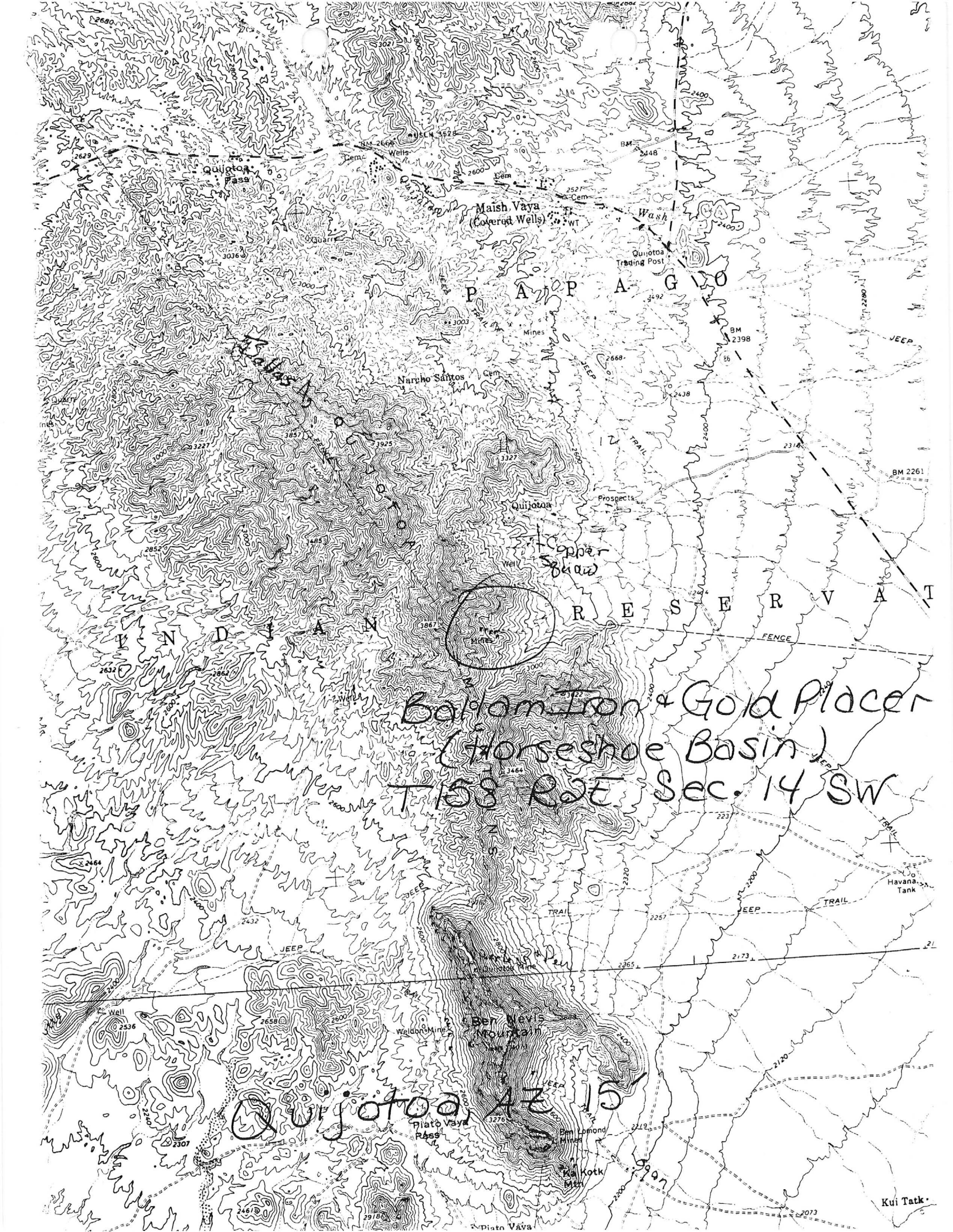
Gebardt, R. C. Geology and Mineral Resources of the Quijotoa Mountains,
1931 - Geology File

ABM Bull. 160 page 77-78

Heikes, V. C., Dry Placers in Arizona: USGS Mineral Resources for 1912, Part I
pp. 257-259.

Blake, Wm. P., Report of the Territorial Geologist, in Report of the Governor of
Arizona, 1899.

BALLAM IRON AND GOLD PLACER. CLAIMS(file)



Quijotoa Pass

Maish Vaya
(Covered Wells)

Quijotoa Trading Post

Narcho Santos

Quijotoa

Copper
Blind

Indian
Mines

Baldom Iron & Gold Placer
(Horseshoe Basin)
T158 R2E Sec. 14 SW

Quijotoa AZ 15

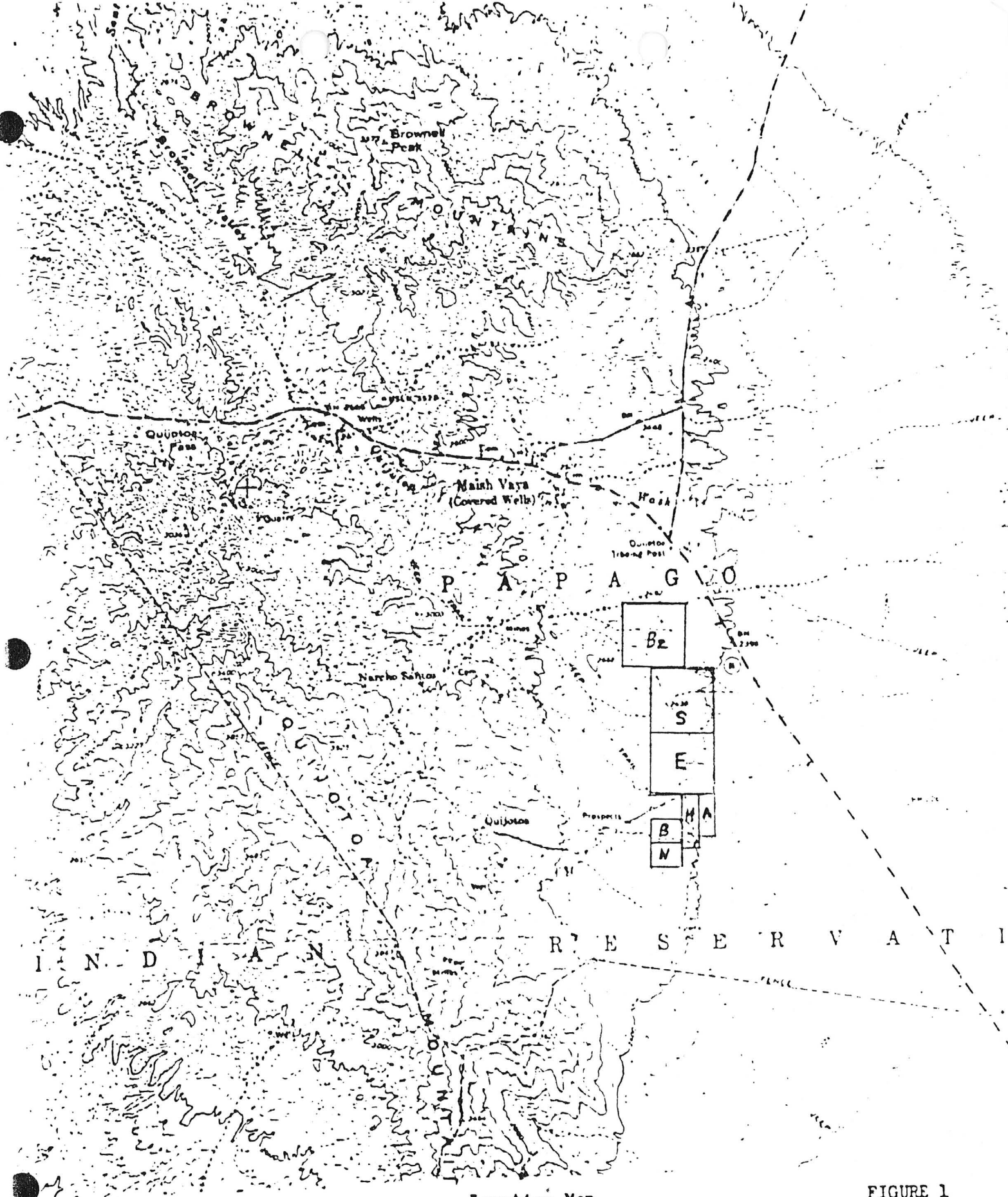
Plato Vaya Pass

Ben Nev 15

Ben Lomond Mines

Ka Koth Mine

Kui Tatk



Location Map

FIGURE 1

TURNBULL-MONTGOMERY PLACER CLAIM GROUP

A = Arizona, B = Bell, BZ = Bonanza, E = Esperanza
 H = Horse Shoe, N = Nugget, S = Shur Shot

Scale: 1" to 1 mi.

BALLAM IRON & GOLD PLACER CLAIMS

Pima County

Abstract from " Arizona Iron Ore Deposits" in IRON COMMODITY file: The Quijota Iron Deposits, Pima County, are situated along the east slope of the Quijota Mountains, 3 to 4 miles south of Covered Wells. (Sec. 11, T15S, R2E, and Sec. 13, and 24, T15S, R3E). The deposits consist of "iron dikes" which are in a belt 120-150 feet wide and have been traced for about three miles in length. The Ballam Property which appears to be typical, straddles this belt and here the iron-bearing zone is 125 feet wide and is composed of three or more magnetite bands separated by two bands of highly epidotized rock. The magnetite bands contain inclusions of badly corroded epidotized material. The magnetite bands range up to 25 feet wide but vary locally. According to Mr. George Ballam, the ore bands assayed up to or better than 60 percent iron with no appreciable deleterious impurities other than the epidotized gangue. He had tests run by the Arizona Bureau of Mines and it was found that the epidote can readily be separated by magnetic separation. Mr. Ballam felt that market conditions, at present did not permit beneficiation of the ore and agglomeration of the concentrates. The origin of this deposit is uncertain, but some evidence indicates that the granitic country rock was invaded by a "dike", which was sheared, parallel to the strike, epidotized, then reopened, and finally hydrothermally replaced in part by magnetite. The epidotization extend into the granitic wall rock for some distance but the magnetite appears to be mostly in the "dike". The reserves are unknown. The deposits are reported to be owned in part by three separate groups, including George Ballam of Quijotoa, and a Colorado Group.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Ballam Iron and Gold Placer Claims

Date January 10, 1961

District Quijotoa District, Pima Co.

Engineer Lewis A. Smith

Subject: Visit to the Ballam Claims - 1-10-61

from Casa Grande Hwy Junction

Location: 4 miles toward Sells/on the Tucson-Ajo Hwy. and thence $3\frac{1}{4}$ miles due west.

Owner: George Ballam, Quijotoa (Covered Wells).

Claims: 20 unpatented claims, end to end.

Minerals: Iron and gold placers.

Work: (1) Several open cuts crosscutting the iron deposit.
(2) Trenches in the placer ground.

Geology: The iron deposit consists of a 3 bands of magnetite and specularite, separated by bands of epidote. Near the house, this deposit has an overall width of about 120 feet. The individual magnetite beds are on the average about 25-30 feet wide. These magnetite bands assay between 62 and 70% iron and show 47% magnetism. The field evidence indicates that the specularite tends to lie in the upper zone of the deposit. The zone has been traced on a N 25°W trend for a length of at least 3 miles. In places the zone splits into two zones, with horsts of granite country rock between. The zone is essentially vertical in dip. The magnetite bands contain 20% or less of specularite near the outcrops.

The origin of the zone is not definitely established, but some field evidence indicates that the granite is more intensely sheared as the two sides of the zone are approached. The area within the zone contains no recognizable granite residuals. In many places in Arizona epidote replaces argillaceous rocks/ferromagnesian minerals in preference to others. This suggests that the granite may have been invaded by a dike, prior to iron-epidote mineralization. This dike could have been of intermediate composition. The alternative is intense or nearly complete replacement of the granite along a fault zone with two strong walls. The area between the two walls was intensely sheared. The area outside of the two walls was sheared but the shear intensity decreases outward from the walls for a considerable distance. Outside of the zone the shears are predominantly filled by veinlets of epidote. The magnetite bands locally contain rounded epidote masses (1/2 inch up to 1 foot). This, if not entirely local, would indicate that the epidote came first. Reopening of the epidotized shear fault zone would have been accompanied by the introduction of the magnetite, which could have selectively replaced residual bands of country rock and some of the olivine. The olivine bands outside of the walls range from knife edge thickness up to 1/2 inch thick. The granitic rock between the epidote stringers is altered in "halo" fashion next to the olivine. The granitic rock varies in composition from a true granite to a rock resembling monzonite. The quartz content varies greatly. It was not possible during the limited visit, to determine whether the differentiation of the granitic rocks was zoned or haphazard. However, Mr. Ballam felt that the mineralized area may have been relatively intermediate in character. No copper or other metals appear to be associated with the iron mineralization.

The banded character of the deposit would cause considerable selectivity in mining and certain portions of it would require beneficiation.

Ballam Iron and Gold Placer Claims (continued)

The iron zone stands up in relief being little effected by weathering or oxidation. However, the zone is lower than the surrounding hills, indicating that prior to mineralization the sheared zone, or dike, was weaker than the bordering granitic rocks. Thus, the iron zone is a ridge occupying a trough.

The gold area below the magnetite band consists of a layer of gold bearing placer gravels overlain in turn by caliche, a fairly well consolidated gravel, and by later loose fluvial gravels. Generally, in the Quijotoa placers, the bulk of the gold has come from the earliest gravels below the caliche. This belt extends for 4 miles in length and $1\frac{1}{2}$ miles in width along the east base of the Quijotoa mountains. The gold bearing gravels are usually red colored. Several places in the placer area operators have in the past, cut deep bulldozer trenches to reach the gold zone. Some very coarse gold has been recovered by operators since the priests worked the area in the late seventeenth century. The gold channels, according to Bellam, are somewhat transverse to the present streams. Due to heavy overburden in places the placers must assay quite well to be profitable. (The placers are described in Arizona Bureau Mines Bull. 160 (1952) pp 77-78.

The iron deposit on Ballam's property is typical of all other in the area. Several other claims are owned by a Denver group (Byall and Ed Woodworth are two of the group, but their addresses were not available at Quijotoa).

Mr. Ballam stated that at present Grove Wodell is sinking a cut on the east side of one of his claims to find gold placer. So far Mr. Wodell stated that he had encountered only low grade material.

VALIDITY EXAMINATION

Arizona, Bell, Bonanza, Esperanza,
Horse Shoe, Nugget, and Shurshot
Placer Claims

Jack R. Turnbull and Norman Montgomery,
Claimants

INTRODUCTION

The existence of these claims was determined from their inclusion in Bureau of Land Management Report #119. They were located prior to 1932 and no surface rental fee is required.

The claimants of record are Mr. Jack R. Turnbull, P. O. Box 465, Coolidge, Arizona, 85228, and Mr. Norman Montgomery, P.O. Box 941, Coolidge, Arizona. Each of these men hold one-half interest in each of the claims.

Mr. Turnbull was notified of our survey by letter mailed June 16, 1976. A second letter was sent on July 23, 1976, and several telephone calls followed in order to set up dates for field examination of the claims. The Arizona, Bell, Horse Shoe and Nugget Placer Claims first were examined on December 20, 1976, by Mr. Harold Downey and Mr. Wallace Platt, Geologists, accompanied by Mr. Turnbull. The Bonanza, Esperanza, and Shur Shot Placer Claims were examined on June 11, 1977, by myself, Donald Elkin and Edward Robb, Geologists. Mr. Montgomery accompanied us on this examination, as did Mr. L. W. Bischoff, an associate with technical interest but no legal interest in the claims. The Arizona, Bell, Horse Shoe and Nugget were examined a second time on March 3, 1978, at Mr. Montgomery's request, by Harold Downey and Edward Robb.

The claims are located approximately two miles south of the village of Quijotoa, on the east flank of the Quijotoa Mountains, on unsurveyed land that is approximately in the center of T. 15 S., R. 2 E. This is shown on the index map, Figure 1. The relationship of the individual claims is shown on Figure 2.

GENERAL GEOLOGY

Most of the area of the claims is underlain by alluvial gravels, consisting of boulders and cobbles of volcanic rocks, mainly andesite and dacite porphyry, with occasional cobbles of granite. There are local areas of outcropping bedrock.

MINERALIZATION

Gold is well documented in the alluvial gravels along the east flank of the Quijotoa Mountains. According to the Arizona Bureau of Mines (Bulletin 142, Page 59), the placer area covers at least 100 square miles, and has a history of production going back at least to 1774. In the early 1880's, lode gold deposits were discovered in the Quijotoas, and shortly thereafter placering was renewed, and there has been a small amount of activity ever since.

Gold is known to occur on several horizons or levels within the alluvium, but usually the best values occur at the bottom of the gravel on the old bedrock surface.

SAMPLING

A variety of pits, trenches and cuts exist on all of the claims, so that several sample sites were available. It was our policy to let the claimant pick the area for sampling. The sites and samples are discussed below on a claim-by-claim basis. A total of 15 placer samples were collected and official assay results are appended to this report.

Arizona Placer Claim: This claim was examined twice. On the first visit, Mr. Wallace Platt cut sample A.R.P.-1. On the second visit, Mr. Harold Downey cut sample Arizona #2. The reason for the second visit was that the original sample (ARP-1) was not taken from the bedrock surface, and Mr. Norman Montgomery, one of the claimants, requested a second examination.

Sample A.R.P.-1 was cut in a bulldozer pit approximately 500' (152 m) south of the north end line of the claim, near its center. The material was limey conglomerate, and the sample weighed 32 lbs. 11 oz. It was taken from a vertical channel cut measuring 1" x 5" x 28" (2.5 cm x 12.7 cm x .71 m).

Sample Arizona #2 was cut from the same trench after it had been deepened. It weighed 55 lbs, 2 oz and was from a horizontal slot channel 6" (15 cm) high, 4' (1.2 m) long and 3" (7 cm) deep immediately above bedrock.

Bell Placer Claim: This claim also was sampled twice, on December 20, 1976 and on March 3, 1978, by the same geologists and for the same reasons as those for the Arizona claim.

On the first visit, Mr. Platt cut sample B.E.P.-1 in a bulldozer trench near the southwest corner of the claim. This was from a vertical channel measuring 6" x 2" x 24" (15 cm x 5 cm x 61 cm) in limey conglomerate. It weighed 24 lbs, 5 oz.

On the second visit, Mr. Downey cut sample Bell #2 in the same trench after it had been deepened to bedrock. This sample was from a horizontal slot channel measuring 3" deep x 6" high x 4' long (7.6 cm x 15 cm x 1.2 m) and it weighed 53 lbs, 7 oz.

Bonanza Placer Claim: This claim was examined by C.L. Fair. Sample BNZ-111 was cut from an excavation located 220' north and 50' east of the southwest corner of the claim. The excavation consists of two parts: an upper wide trench approximately 20' x 30' x 6' (6.1 m x 9.1 m x 1.8 m), shown in Photo 1, Figure 3, in the center of which is sunk a smaller deeper pit, approximately 15' x 10' x 10' deep (4.6 m x 3 m x 3 m), shown in Photo 1 and Photo 2, Figure 3.

Sample BNZ-111 was taken by shoveling the lower 3 inches of the pit, which had bottomed on a caliche layer. The gravel was shoveled into buckets whose volume had been determined. After coarse rejects were accounted for, the remaining gravel was fed through a separator which had been assembled by Mr. Norman Montgomery one of the claimants. The separator, shown in Photos 1 and 2, Figure 4, consisted of a revolving metal drum, with $\frac{1}{4}$ " perforations in the lower half, which fed onto a set of vibrating wooden riffles attached to canvas. The gravel was fed into one end of the drum along with water, was mixed and partially screened while going through the drum, and the gold (if any) was collected in the riffles. Sample BNZ-111 was the concentrate from these riffles. It weighed 62 lbs, 13 oz.

A check sample was collected separately in the pit at the same time in case there was later reason to suspect that BNZ-111 had been salted. This check sample was not processed.

Another sample was collected and processed, however, from a nearby pit. Sample BNZ-112 was cut from a vertical channel measuring $1\frac{1}{2}$ " x 2" x $3\frac{1}{2}$ " (2 cm x 15 cm x 1.1 m) in a shallow pit 25' west of the site of BNZ-111. The sample weighed 12 lbs, 4 oz.

Esperanza Placer Claim: Reference to Figure 2 shows that the Esperanza Placer Claim is overlapped in the field by the Hard Nut Placer Claim. Both claimants profess to prior rights in point of time of location of the claims. Our previous examination of the Hard Nut Claim included sampling in the area common to both claims. This data bears upon the evaluation of the Esperanza claim and it will be discussed in this report further on. It was decided in the field during this examination of the Esperanza Claim, however, that some further samples be taken in case the claimant to the Hard Nut Claim should eventually prove to have prior rights. For this purpose, Mr. Norman Montgomery dug two new pits south of an older trench near the southwest corner of the claim. Photo 1, Figure 4 shows Mr. Montgomery operating the backhoe digging the pit from which sample ESP-931 was taken.

Sample ESP-931 was taken from the bottom 3" (7.6 cm) of the gravel in the 6' x 6' x 8' deep (1.8 m x 1.8 m x 2.4 m) newly dug pit. It was collected just above the diorite bedrock. The sample weighed 36 lbs. Photo 2, Figure 4 shows this sample being taken.

Sample ESP-932 was taken from a similar pit dug 25 feet northeast of the site of ESP-931. Bedrock in this pit was at approximately $3\frac{1}{2}$ feet. The sample was a composite of five vertical channels, 2" deep, 2" wide and 3' high (5 cm x 5 cm x .91 m) taken from surface down to bedrock. Two of these channels were from the north face, two were from the east face, and one was from the south face of the pit. The total composite weight of the sample was 32 lbs. Photo 1, Figure 5, shows part of this sample being collected by Mr. Ed Robb and Mr. Don Elkin.

Sample ESP-933 is a composite of two channel cuts in the older trench approximately 225' (68 m) north of the previous samples. The trench is 20' wide and 60' long (6.1 m x 18.3 m). The channel samples were each 2" x 2" x 18" (5 cm x 5 cm x 46 cm); one was taken in the west wall of the trench and one was taken in the east wall. Photo 2, Figure 5, is a south facing view of this trench. The standing hand shovel marks the site of the west-wall channel; Mr. Robb is standing at the site of the east-wall channel while Mr. Elkin is bagging the sample. The combined weight of the sample was 13 lbs, 4 oz.

Horse Shoe Placer Claim: This claim was examined twice. On the first visit Mr. Wallace Platt cut samples HOPL-1 and HOPL-2. On the second visit, Mr. Harold Downey cut sample Horse Shoe #2. The reason for the second visit was that the original samples (HOPL-1 and HOPL-2) were not taken from the bedrock surface, and Mr. Norman Montgomery, one of the claimants, requested a second examination.

HOPL-1 was a grab sample from the bottom of a bulldozer trench north of the road in the north-central part of the claim. Total sample weight was 72 lbs.

HOPL-2 was a vertical channel cut in the gravel measuring 2" x 4" x 26" (5 cm x 10 cm x 66 cm) in the same trench as HOPL-1. Sample weight was 20 lbs, 4 oz. The site of HOPL-2 is shown in Photo 1, Figure 6.

Horse Shoe #2 sample was collected from a short adit north of and connected to the trench mentioned above. It was from a vertical 2" x 6" x 4' (5 cm x 15 cm x 1.2 m) channel cut in the wall just above bedrock. Weight of the sample was 65 lbs, 4 oz.

Nuget Placer Claim: This claim was examined twice. On the first visit Mr. Wallace Platt cut sample NUP-1. On the second visit, Mr. Harold Downey cut sample Nuget #2.

NUP-1 was from a vertical channel measuring 1" x 4" x 30" (2½ cm x 5 cm x 76 cm) taken in the wall of a bulldozer trench located near the northwest corner of the claim. The original sample weight was 44 lbs. This was split to 22 lbs. This sample site is shown on Photo 2, Figure 6.

Nugget #2 sample was collected from the same trench, deepened to bedrock. It was removed from a vertical channel measuring 3" x 6" x 4' (7.6 cm x 15.2 cm x 1.2 m) cut in the gravel just above bedrock. Sample weight was 77 lbs, 12 oz.

Shur Shot Placer Claim: Sample EZM-101 was collected from a long trench located 100 feet north of the center of the south boundary, adjacent to the Esperanza claim. The direction of the trench is north, and it is 65' (20 m) long, 5' (1.5 m) wide, and up to 10' (3 m) deep. It is dug in well cemented, coarse, angular gravel. Bedrock may be exposed in one small spot in the deepest part. This trench is shown in the Photo, Figure 7.

The sample consisted of a composite from east and west walls. It was a horizontal channel 2½' long and 6" high (.76 m x 15 cm) taken above a caliche layer 7' down in the trench. Sample weight was 133 lbs, 14 oz. Seventy-nine lbs of this, however, consisted of coarse rejects.

DISCUSSION OF RESULTS

Assay results are appended to this report. Results are given in milligrams of gold (and sometimes silver) present in concentrate which was panned from the original sample. Milligrams of gold per gram of concentrate must be recalculated to troy ounces of gold per short ton or cubic yard. This is done in Tables 1-3.

Tables 1 and 2 show assay results which are too low to be given further consideration as representing discovery within the meaning of the Federal Mining Law. These include the results for samples labeled ARP-1, BEP-1, PNZ-111, BNZ-112, ESP-931, ESP-932, ESP-933, EZM-101, HOPL-1, HOPL-2, and NUP-1. These all give calculated values of from a fraction of a cent to a few cents per yard. As we shall see in the discussion below, several dollars/yard³ are required for consideration.

Table 3 lists assay results which are high enough that further consideration is necessary. These include samples labeled Arizona #2, Bell #2, Horse Shoe #2 and Nugget #2. It is instructive to note that these samples were all taken from the zone just above bedrock. In previous sampling on other claims

in the Quijotoa Placer field, those with valid discoveries have been those on which samples were available from the zone above bedrock. All samples taken higher in the gravel overburden have been too low to qualify.

Arizona Placer Claim: The Arizona #2 sample had an assay value of \$251.90 per yard³ in the pay zone. This sample was composed of gravel lying 6" above bedrock over an area of 4' x 1/2'. This is equivalent to 1/2 cubic foot. One cubic yard of pay zone, therefore, would cover an area 4' x 13 1/2'. Above this is a 4' x 13 1/2' x 9 1/2' = 513 ft³ = 19 yds³ of barren gravel.

8,333 yds. @ \$373.18/yd in pay streak
166,667 yds. @ \$0.01/yd in overburden

Considering outcrop distribution, gravel thickness in several pits and extrapolated surface to bedrock, it is estimated that an area 600' x 750' around the sample site is covered by gravel to a depth of 10'. This calculates to 166,667 yds³.

Weighted averages:

$$8,333 \times \$373.18 = 3,109,708.9$$

$$166,667 \times 0 = 0$$

$$166,667 \div 3,109,708.9 = \$18.65 / yd = \bar{A}$$

Bell Placer Claim: The Bell #2 sample had an assay value of \$109.98 per yd³ in the pay zone. The sample was the same size as Arizona #2. The gravel thickness on Bell #2 is 20', so by a calculation similar to that done above for Arizona #2, it can be seen that each yd³ of mineralized gravel on the Bell claim is overlain by 39 yd³ of barren gravel. (12,360 yds. @ \$162.93/yd.)

[REDACTED]

[REDACTED]

[REDACTED]


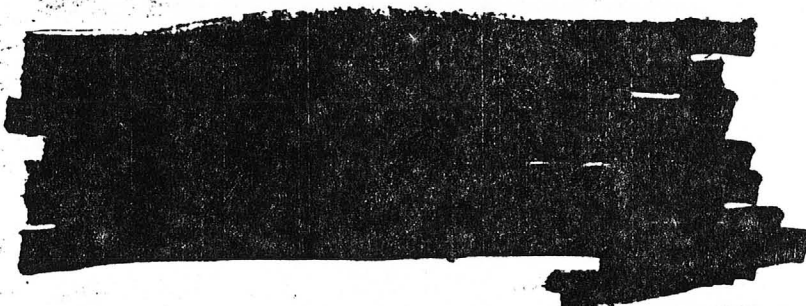


[REDACTED]

[REDACTED]

[REDACTED]


Horse Shoe Placer Claim: The Horse Shoe #2 sample had an assay value of \$49.25 per yd³ in the pay zone. Sample size was the same as Arizona #2 and Bell #2. The gravel thickness at the sample site is 20', so by a calculation identical to that on Bell #2, we arrive at a stripping ratio of 39:1.

Considering outcrop distribution and exposed gravel thicknesses, it is estimated that an area 300' x 1000' around the sample site is covered by an average of 20' of gravel. This calculates to 222,222 yds³.



Esperanza Placer Claim: Reference has earlier been made to the overlap in area between the Esperanza Placer Claim and the Hard Nut Placer Claim, which is shown on Figure 2. The sample sites used for the Hard Nut Claim evaluation were within the overlap area and therefore also lie within the boundaries of the Esperanza Claim. Assay values for the Hard Nut Claim are shown in Table 4.

Gravel thickness on the Hard Nut Claim was estimated at 12' with a stripping ratio of 12:1. The total yardage estimate for the paleochannel where the Hard Nut samples were taken was estimated at 21,667 yds³. Other channels are present but were not sampled.

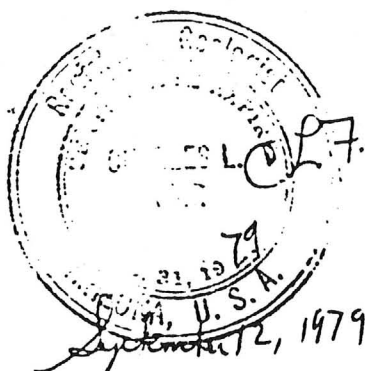


CONCLUSIONS

Sample results on the Arizona, Bell, Horse Shoe, Nugget and Esperanza Placer Claims all indicate values which could be mined at a profit under existing conditions. Both value and sufficient yardage of gravel are present. In my Professional Opinion, they possess a discovery within the meaning of the Federal Mining Law.

It does not lie within the scope of this report to decide between the Esperanza Placer and the Hard Nut Placer claimants as to who has prior rights to the ground. Technically, however, there is a discovery present. Either the Bureau of Indian Affairs, the Papago Tribe or the claimants should take action to resolve this conflict. Only one claim can be allowed to remain because the discovery site lies within the area of overlap.

It is my further Professional Opinion that no discovery has been made on the Bonanza and Shur Shot Placer claims of a character which would warrant a prudent man in the expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. I recommend, therefore, that steps be initiated by the Bureau of Land Management, acting for the Bureau of Indian Affairs to declare these claims null and void based upon this examination.



Charles L. Fair
Charles L. Fair

SAMPLE Number	TOTAL WT. OF SAMPLE		PRECIOUS METAL CONTENT		GRAMS/SH.TON		TROY OZ/SH.TON		VALUE/SH.TON		VALUE/YD ³		TOTAL VALUE
	ounces	grams	Mg-Au	Mg-Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag	yds ³
HOPL-1	1152	32,659	7.795	0.62	.216	.017	.007	.0005	\$1.89	1¢	\$1.57	--	\$1.57
NUP-1	352	9,979	0.005	tr	.0004	-	.00001	-	1¢	-	1¢	-	1¢
BEP-1	389	11,028	0.015	tr	.001	-	.00003	-	1¢	-	1¢	-	1¢
ARP-1	523	14,827	0.005	tr	.0003	-	.00001	-	1¢	-	1¢	-	1¢
HOPL-2	324	9,185	0.025	tr	.0025	-	.00008	-	0.02	-	0.018		2¢

One oz. (Avoird) = 28.35 grams.

One Short Ton = 907,184 grams.

One Gram = 0.03215 Troy oz.

Gold Market est. at \$270/oz.

Silver Market est. at \$8.50/oz.

One Sh. Ton est. = .833 yds³ (Semi-dry).

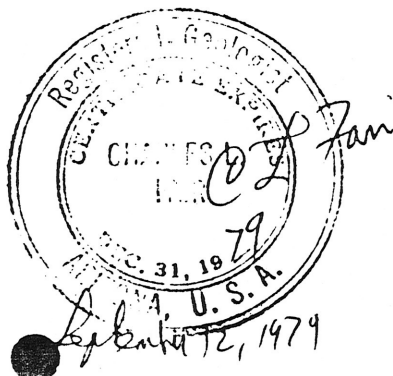
HOPL-1 $(907,184 \div 32,659) \times .007795 = \text{grams/short ton}$

NUP-1 $(907,184 \div 9979) \times .000005 = \text{grams/short ton}$

BEP-1 $(907,184 \div 11,028) \times .000015 = \text{grams/short ton}$

ARP-1 $(907,184 \div 14,827) \times .000005 = \text{grams/short ton}$

Gold estimated at 1000 fine



TURNELL-MONTGOMERY PLACER CLAIMS

TABLE 1

SAMPLE Number	TOTAL WT. OF SAMPLE		PRECIOUS METAL CONTENT		GRAMS/SH.TON		TROY OZ/SH.TON		VALUE/SH.TON		VALUE/YD ³		TOTAL VALUE
	ounces	grams	Mg-Au	Mg-Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag	yd ³
EZM-101	2142	60,726	0.235	0.04	.0035	.00005	.0001	tr	\$0.027	-	\$0.022	-	2.2¢
ENZ-111	1105	28,492	0.005	tr	.00016	-	.000005	-	1¢	-	1¢	-	1¢
ENZ-112	196	5,557	tr	tr	tr	-	tr	-	0	-	0	-	0
ESP-931	576	16,330	0.015	tr	.00083	-	.00003	-	1¢	-	1¢	-	1¢
ESP-932	512	14,515	0.030	tr	.0019	-	.00006	-	0.016	-	0.013	-	1.3¢
ESP-933	212	6,010	tr	tr	tr	-	tr	-	0	-	0	-	0

One oz. (Avoird) = 28.35 grams.

One Short Ton = 907,184 grams.

One Gram = 0.03215 Troy oz.

Gold Market est. at \$270/oz.

Silver Market est. at \$8.50/oz.

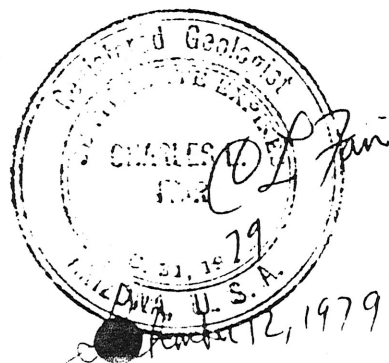
One Sh. Ton est. = .833 yds³ (Semi-dry).

EZM-101 $(907,184 \div 60,726) \times .000235 = \text{grams/short ton}$

ENZ-111 $(907,184 \div 28,792) \times .000005 = \text{grams/short ton}$

ESP-931 $(907,184 \div 16,330) \times .000015 = \text{grams/short ton}$

ESP-932 $(907,184 \div 14,515) \times .000030 = \text{grams/short ton}$



TURNBULL MONTGOMERY PLACER CLAIMS

TABLE 2

SAMPLE Number	TOTAL WT. OF SAMPLE		PRECIOUS METAL CONTENT		GRAMS/SH.TON		TROY OZ/SH.TON		VALUE/SH.TON		VALUE/YD ³		TOTAL VALUE
	ounces	grams	Mg-Au	Mg-Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag	yd ³
ARIZ #2	892	25,288	974.86	-	34.97	-	1.12	-	\$302.40	-	\$251.90	-	\$251.90
BELL #2	855	24,239	406.39	-	15.21	-	0.489	-	132.03	-	109.98	-	109.98
HORSE SHO #2	1049	29,739	223.47	-	6.82	-	0.219	-	59.13	-	49.25	-	49.25
NUGGET #2	1244	35,267	1021.49	-	26.28	-	0.845	-	228.15	-	190.05	-	190.05

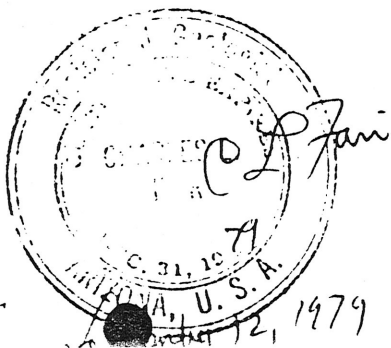
One oz. (Avoird) = 28.35 grams.
 One Short Ton = 907,184 grams.
 One gram = 0.03215 Troy oz.
 Gold Market est. at \$270/oz.
 Silver Market est. at \$8.50/oz.
 One Sh. Ton est. = .833 yds³ (Semi-dry).

ARIZONA #2 $(907,184 \div 25,288) \times 0.97486 = \text{grams/short ton}$

BELL #2 $(907,184 \div 24,239) \times 0.40639 = \text{grams/short ton}$

HORSE SHOE #2 $(907,184 \div 29,739) \times 0.22347 = \text{grams/short ton}$

NUGGET #2 $(907,184 \div 35,267) \times 1.02149 = \text{grams/short ton}$



TURNBULL-MONTGOMERY PLACER CLAIMS

TABLE 3

SAMPLE	TOTAL WT. OF SAMPLE		PRECIOUS METAL CONTENT		GRAMS/SH.TON		TROY OZ/SH.TON		VALUE/SH.TON		VALUE/YD ³		TOTAL VALUE
	ounces	grams	Mg-Au	Mg-Ag	Au	Ag	Au	Ag	Au	Ag	Au	Ag	yd ³
QDP-331	466	13,211	38,166	-	2.62	-	0.084	-	\$22.68	-	\$18.89	-	\$18.89
QDP-333	494	14,005	114,875	-	7.44	-	0.239	-	\$64.53	-	\$53.75	-	\$53.75
QDP 334	196	5,557	1,828	-	0.298	-	0.009	-	\$2.43	-	\$2.02	-	\$2.02

Weighted Average

\$30.93

One oz. (Avoird) = 28.35 grams.

One Short Ton = 907,184 grams.

One Gram = 0.03215 Troy oz.

Gold Market est. at \$270/oz.

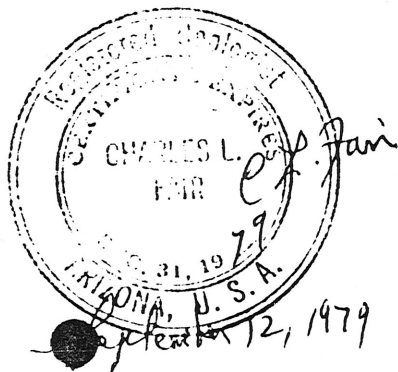
Silver Market est. at \$8.50/oz.

One Sh. Ton est. = .833 yds³ (Semi-dry).

QDP-331 (907,184 ÷ 13,211) x 0.038166 = Grs/s.t.

QDP-333 (907,184 ÷ 14,005) x 0.114875 = Grs/s.t.

QDP-334 (907,184 ÷ 5,557) x 0.001828 = Grs/s.t.



HARD NUT PLACER CLAIM

TABLE 4

NAME: Imperial Gold Mining Co. (Quijotoa or Horse Shoe Basin Placer)
Golconda, Menager, Indian Oasis area

COUNTY: Pima

T 15S 2E SEC. 1, 12, 13, 36
16S 2E 2, 10, 11, 12, 14, 15

DISTRICT: Quijotoa

Mineralization: Au with some Ag

Geology: ~~Substratum is granite~~ Only gravelly alluvium with caliche cemented bed rock. From small rich pockets

Type Operation: Placer Described and worked as early as 1774. Mexicans to 1949

Production: 1900 - 73.05 oz.
1903, 1907 (283 oz) 1910 (1202 oz), 1912 (402 Au, 102 Ag), (402 Au, 802 Ag), 1913 (24402 Au, 2302 Ag), 1936 (1802), 1937 (3602), 1941
1914 (24202 Au, 3802 Ag), 1915 (9402 Au, 2202 Ag), 1917 (2302 Au, 402 Ag), 1932 (202), 1933 (1102), 1934 (202)
Total - 8732 oz Au, 1,107 oz Ag (130,000 oz gold - H.S. Pitzer)

References: ABM file data

Wilson, 1961, p. 77-78