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A  
GEOLOGIC REPORT

of a Portion

of the

LA CHOLLA PLACERS

Yuma County, Arizona

by

Richard E. Mieritz,  
Consulting Mining Engineer

Phoenix, Arizona

September 18, 1962

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## MAPS

Regional Geology Map  
Property & Surface Map.



## INTRODUCTION

At the request of Mr. Bennie Richel, the writer completed a geological examination of those claims in which Mr. Richel and Mrs. Tom Young are co-owners with one quarter and three quarters interest respectively and which are part of the La Cholla Placer deposits located approximately eight miles south west of Quartzite, a small town on U. S. Highway 60-70 in Yuma County, Arizona.

## PROPERTY & LOCATION

The property consists of six placer claims totaling 260 acres; one claim containing 160 acres and five claims of 20 acres each. Of the five 20 acre claims, three have been consolidated as one claim, thus the property actually has but four claims from the standpoint of assessment work.

Tabulated below are the claim names, legal descriptions, area and recording information. All claims are in T. 3 N., R. 20 W. of the Gila and Salt River Base and Meridian.

		Ac.	Bk.	Pg.
Golden Cycle #2,	Sec. 23, S/2, NW/4 and N/2, SW/4.	160	267	30
Golden Cycle #3,	Sec. 14, S/2, SE/4, SE/4.	20	267	31
Golden Cycle #4,	Sec. 14, N/2, SE/4, SE/4.	20	267	32
Fat	Sec. 14, S/2, NE/4, SE/4.	20	36	
Coarse Gold	Sec. 14, N/2, NE/4, SE/4.	20	36	
James Albert	Sec. 14, S/2, SE/4, NE/4.	20	36	
		<u>260</u>		

The last three claims have been recorded as a group known as Consolidated.

All claims lie approximately six miles south and four to five miles west of Quartzite, now, a small town on U. S. Highway 60-70 in Yuma County, Arizona. Quartzite is approximately 17 miles east of the Colorado River or 21 miles east of Blythe, California. Quartzite is approximately 155 miles northwest by road from Phoenix via Wickenburg.

## ACCESSIBILITY & FACILITIES

Passenger car travel to the La Cholla Placer area from Quartzite is accomplished by branching off the new highway onto the old highway approximately 2 miles west of Junction 60-70 with State Highway 95. Approximately  $1\frac{1}{2}$  miles further west on the old road is a graveled road "T" junction to the south or left. The graveled road more or less terminates at the La Cholla area approximately six miles south.

As can be seen from the included Property and Surface Map, El Paso Natural Gas Co. maintains a gas line within a mile of the northeast corner of the property.

Electricity is also available at a point near the east  $\frac{1}{4}$  corner of Sec. 12, T. 3 N., R. 20 W.

Water, whether for culinary or operational use is a problem at this time. Whether an adequate water supply could be developed is not known at this time. It is possible that an underground channel may exist further east and lower in the valley. Local information advises the existence of a southeast trending fault zone passing south of the  $\frac{1}{4}$  corner of Sec. 11, T. 3 N., R. 20 W. to the east of  $\frac{1}{4}$  corner of Sec. 20, T. 3 N., R. 19 W. and is said to contain "moving" water. Some indication this condition may exist is evidenced by the presence of 50 feet of water in a well located near the NE. corner of Sec. 12, T. 3 N., R. 20 W. An underground water study is necessary.

### HISTORY

Existence of the La Cholla, Oro Fino and Middle Camp Gold Placers deposits on the eastern slope of the Dome Rock Mountains as well as the La Paz Gold Placers on the western slope of the same mountains date back to 1862 when the Colorado River Indians guided a trapper, Capt. Pauline Weaver and his party to the rich La Paz gravels. After spending some time panning the gravels, the party returned to Yuma for supplies and \$8,000 in gold nuggets. At a \$16.00/ounce value then, approximately 500 ounces were recovered.

Since the advent of discovery, all deposits, particularly those of the Plomosa District; La Cholla, Oro Fino, Middle Camp and Plomosa, have been worked intermittently by individual dry-washers. Even large scale operations had been planned or attempted. It is reported that more than 100 men were placering in this district in 1932-33. A recorded yield from 1934-49 was valued at \$176,000. V. C. Heikes in his article "Dry Placers in Arizona"--1912, Mineral Resources, states "The gold content per cubic yard is reported to range in coarse gold from ten cents to several dollars."

### GEOLOGY & MINERALIZATION

The La Cholla Placers cover an area 4 to 5 miles in length and one to 3 miles in width bordering the eastern foot of the Dome Rock Mountains southwest of Quartzite.

As can be noted from the Regional Geology Map, the Dome Rock Mts. are a complex of schist, granite, gneiss and principally sediments as slates. These titled bluish-gray



slates extend eastward (?) some six to ten miles beneath (?) the valley fill to the New Water Mountain range. For the most part at least, these metamorphosed slates should form the bedrock base of the placers as indicated by several vertical shafts in the area close to the Dome Rock Mountains.

Information obtained from local property owners indicate the apparent bedrock gradient to have a dip of 15-20°, locally up to 30°, and a S. 50°E. direction or a strike direction of N. 40° E. Direction-wise, this conforms basically to the strike and dip of the slate formation in the immediate area. The difference in dip between the gradient of the bedrock and the dip of the slate beds suggest that the bedrock itself should act as riffles, thus concentrating the gold values in the depressions paralleling the strike of the formation. Early information indicates this condition does exist.

The La Cholla Placer gravels consist of un-assorted aggregate of sub-angular to slightly rounded slate, schist, quartzite and gneiss fragments, more or less firmly cemented with lime carbonate. In general, fragments are of medium size, 3 to 6 inches or less, but boulders 3 to 4 feet in diameter are not uncommon.

Greatest concentrations of gold are at or close to bedrock, however it is erratically distributed throughout the entire height of the gravels. Like the gravels, the gold is characteristically angular and crystallized and ranges in diameter from that of a pin point up to a 1/8 inch or more. Twenty to forty dollar nuggets are not uncommon. The observed characteristics indicate the gold has traveled but a short distance and was no doubt derived from small veins in the nearby Dome Rock Mts. which perhaps are not now exposed, being completely eroded.

Gold mined or recovered from surface and underground workings in the vicinity of the La Cholla Shaft ranged from 920 to 924 fine. The value per cubic yard has been from \$1.20 to \$40.00. ( present price of \$35.00)

The gravel, because of its lime cementation, stands well and presents no underground mining problems. In fact, a "caliche" cover approximately 6 or 7 feet above bedrock provides an excellent roof and might be an excellent horizon for another "pay zone" at its top.

#### DEVELOPMENT

Within the confines of this property there are numerous small surface pits and trenches as well as many roads. All this work, no doubt, part of the annual assessment work.

On the southeastern part of the James Albert claim is a vertical shaft. The collar set is in place, however, the

timber does not appear safe and the ladders are gone, thus, entry was not possible. The writer measured the depth of this shaft and found it to be 155 feet from the collar set to the bottom (?). It is presumed this shaft encountered bedrock, the depth being approximately right for its elevation and location east of the gravel-bedrock surface contact near the Dome Rock Mts.

No information is available as to what was encountered or the values thereof while this shaft was sunk.

### CONCLUSIONS

The property of concern in this report is but a small portion area-wise of the La Cholla Placers but could in itself support an operation if need be, provided of course, the gold values exist in such quantities at bedrock to support operational costs plus a reasonable profit. Gold concentrations are known to exist on adjoining claims to the west, thus it is reasonable to assume that mineralization would carry into these claims.

Consideration must also be given to a possible "unitization" of this property with other acreage in the area to form a single property of common operation, thus, benefiting all concerned.

### RECOMMENDATIONS

The most important recommendation that can be made is that the vertical shaft collar be repaired and put into a safe condition to permit entry for a geologic and sampling examination and program.

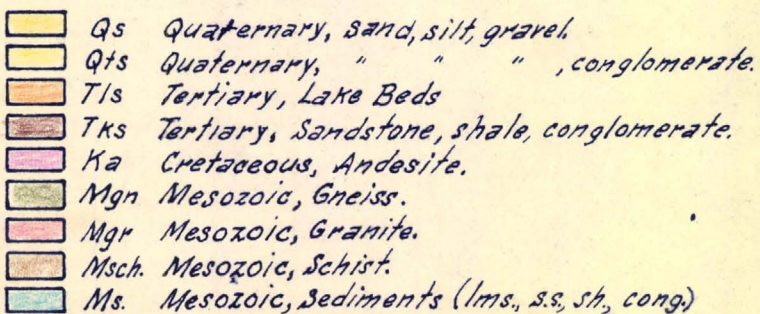
This shaft being the deepest working within the property thus becomes the logical place of beginning an underground operation.

Respectfully submitted,

Richard E. Mieritz, P. E.  
Consulting Mining Engineer  
Phoenix, Arizona

September 18, 1962

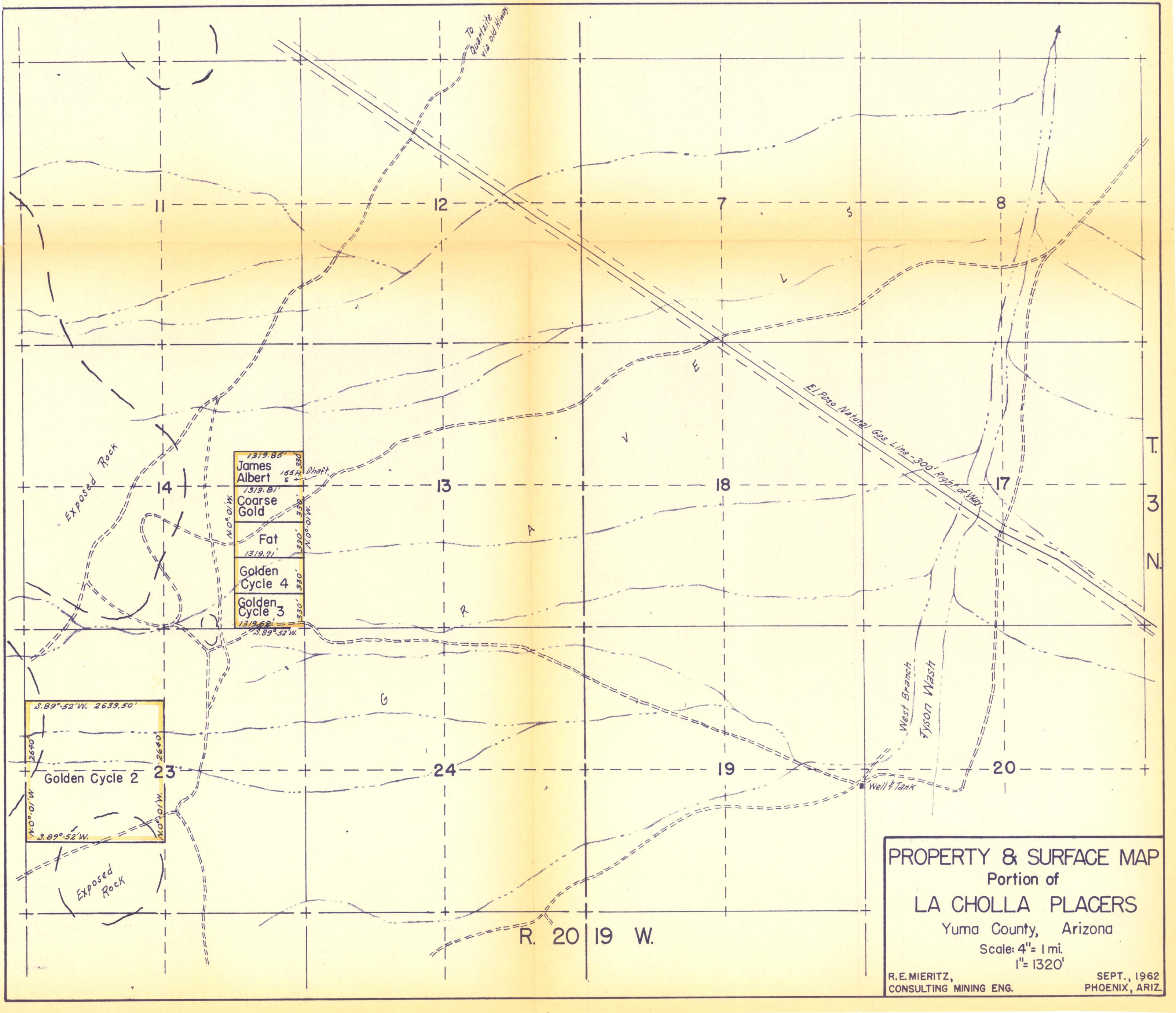




Scale: 1" = 6 mi.

R. E. MIERITZ, CONSULTING ENG. Sept, 1962





To  
Quartzite  
via old Hwy.

1319.85'
James Albert
1319.81'
Coarse Gold
1319.71'
Fat
1319.68'
Golden Cycle 4
1319.68'
Golden Cycle 3

S. 89° 52' W. 2639.50'
2640
N. 0° 01' W.
Golden Cycle 2
23
N. 0° 01' W.
2640
S. 89° 52' W.

PROPERTY & SURFACE MAP  
Portion of  
LA CHOLLA PLACERS  
Yuma County, Arizona  
Scale: 4" = 1 mi.  
1" = 1320'  
R.E. MIERITZ,  
CONSULTING MINING ENG.  
SEPT., 1962  
PHOENIX, ARIZ.



A

GEOLOGIC REPORT

of a Portion

of the

LA CHOLLA PLACERS

Plomosa Mining District

Yuma County, Arizona

by

Richard E. Mieritz  
Consulting Mining Engineer

Phoenix, Arizona

September 20, 1962

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### MAPS

Regional Geology Map

Property & Surface Map

Underground Map

## INTRODUCTION

At the request of Mr. Bennie Richel, the writer completed a geological examination of those placer claims wholly and partially owned by Mr. Richel and which are part of the La Cholla Placer deposits located approximately 8 miles southwest of Quartzite, a small town on U. S. Highway 60-70 in Yuma County, Arizona.

## PROPERTY & LOCATION

Mr. Richel is sole owner of nine placer claims totaling 1440 acres and 25% interest owner in six placer claims totalling 260 acres. Eight of the placer claims in the first group are quarter section in size and area, plus or minus 160 acres each, while the ninth claim is also 160 acres but is a mile long and  $\frac{1}{4}$  mile wide. Of the six claims in the second group, one is a quarter section in size and area, the other five being 20 acres each, but of these, three have been consolidated into one 60 acre claim.

Tabulated below are the claim names, legal description, area and recording information. All claims lie in T. 3 N., R. 20 W., except the first three claims and their position is in T. 3 N., R. 19 W.

<u>First Group--Wholly owned</u>			<u>Acres</u>	<u>Book</u>	<u>Page</u>
Rogene	Sec. 18,	SE/4, R. 19 W.	160	38	308
Unity #3	Sec. 19,	NW/4, R. 19 W.	160	161	399
Cardinal	Sec. 18,	SW/4, R. 19 W.	160	41	156
Golden Cycle #1	Sec. 23,	NE/4, R. 20 W.	160	267	29
Unity #2	Sec. 24,	NW/4, " "	160	161	398
Golden Eagle	Sec. 24,	NE/4, " "	160	38	297
New Day	Sec. 13,	NW/4, " "	160	36	270
Currier	Sec. 12,	SW/4, " "	160	38	382
New Year	Sec. 11,	S/2, SE/4, NE/4, and E/2, SE/4., and Sec. 14, N/2, SE/4, NE/4, and NE/4, NE/4.	160	36	198
<u>Second Group--partially owned</u>					
Golden Cycle #2	Sec. 23,	S/2, NW/4., and N/2, SW/4.	160	267	30
Golden Cycle #3	Sec. 14,	S/2, SE/4, SE/4.	20	267	31
Golden cycle #4	Sec. 14,	N/2, SE/4, SE/4.	20	267	32
Fat	Sec. 14,	S/2, NE/4, SE/4.	20	36	?
Coarse Gold	Sec. 14,	N/2, NE/4, SE/4.	20	36	?
James Albert	Sec. 14,	S/2, SE/4, NE/4.	20	36	?
Total Acres			1700		

The last three claims have been recorded as a group known as Consolidated.

All claims lie approximately six miles south and four to five miles west of Quartzite, now, a small town on U. S. Highway 60-70 in Yuma County, Arizona. Quartzite is approximately 17 miles east of the Colorado River or 21 Miles east of Blythe, California. Quartzite is approximately 155 miles northwest by road from Phoenix via Wickenburg.

#### ACCESSIBILITY & FACILITIES

Passenger car travel to the La Cholla Placer area from Quartzite is accomplished by branching off the new highway onto the old highway approximately 2 miles west of Junction 60-70 with State Highway 95. Approximately  $1\frac{1}{2}$  miles further west on the old paved road is a graveled road "T" junction to the south or left. The graveled road more or less terminates at the La Cholla area approximately six miles.

As can be seen from the included Property and Surface Map, El Paso Natural Gas Co. maintains a gas line within the northeast corner of the property.

Electricity is also available at a point near the east  $\frac{1}{4}$  corner of Sec. 12, T. 3 N., R. 20 W.

Water, whether for culinary or operational use is a problem at this time. Whether an adequate water supply could be developed is not known at this time. It is possible that an underground channel may exist further east and lower in the valley. Local information advises the existance of a southeast trending fault zone passing south of the west  $\frac{1}{4}$  corner of Sec. 11, T. 3 N., R. 20 W. to the east  $\frac{1}{4}$  corner of Sec. 20, T. 3 N., R. 19 W. and is said to contain "moving" water. Some indication this condition may exist is evidenced by the presence of 50 feet of water in a well located near the NE. corner of Sec. 12, T. 3 N., R. 20 W. An underground water study is necessary.

#### HISTORY

Existance of the La Cholla, Oro Fino and Middle Camp Gold Placers deposits on the eastern slope of the Dome Rock Mountains as well as the La Paz Gold Placers on the western slope of the same mountains date back to 1862 when the Colorado River Indians guided a trapper, Capt. Pauline Weaver and his party to the rich La Paz gravels. After spending some time panning the gravels, the party return to Yuma for supplies and with \$8,000 in gold nuggets. At a \$16.00/ ounce value then, approximately 500 ounces were recovered.

Since the advent of discovery, all deposits, particularly those of the Plomos District; La Cholla, Oro Fino,

Middle Camp and Plomosa, have been worked intermittently by individual dry-washers. Even large scale operations had been planned or attempted. It is reported that more than 100 men were placering in this district in 1932-33. A recorded yield from 1934-49 was valued at \$176,000. V. C. Heikes in his article "Dry Placers in Arizona"--1912, Mineral Resources, states "The gold content per cubic yard is reported to range in coarse gold from ten cents to several dollars."

### GEOLOGY & MINERALIZATION

The La Cholla Placers cover an area 4 to 5 miles in length and one to 3 miles in width bordering the eastern foot of the Dome Rock Mountains southwest of Quartzite.

As can be noted from the Regional Geology Map, the Dome Rock Mts. are a complex of schist, granite, gneiss and principally sediments as slates. These tilted bluish-gray slates extend eastward (?) some six miles or so beneath (?) the valley fill to the New Water Mountain range. For the most part at least, these metamorphosed slates should form the bed-rock base of the placers as indicated by several vertical shafts in the area close to the Dome Rock Mountains.

Information obtained locally from property owners indicate the apparent bedrock gradient to have a dip of 15-20°, locally up to 30°, and a S. 50° E. direction or a strike direction of N. 40° E. Direction-wise, this conforms basically to the strike and dip of the slate formation in the immediate area. The difference in dip between the gradient of the bedrock and the dip of the slate beds suggest that the bedrock itself should act as riffles, thus concentrating the gold values in the depressions paralleling the strike of the formation. Early information indicates this condition does exist.

The La Cholla Placer gravels consist of un-assorted aggregate of sub-angular to slightly rounded slate, schist, quartzite and gneiss fragments, more or less firmly cemented with lime carbonate. In general, fragments are of medium size, 3 to 6 inches or less, but boulders 3 to 4 feet in diameter are not uncommon.

Greatest concentration of gold are at or close to bedrock, however, it is erratically distributed throughout the entire height of the gravels. Like the gravels, the gold is characteristically angular and crystallized and ranges in diameter from that of a pin point up to a 1/8 inch or more. Twenty to forty dollar nuggets are not uncommon. The observed characteristics indicate the gold has traveled but a short distance and was no doubt derived from small veins in the nearby Dome Rock Mts. which perhaps are not now exposed, being completely eroded.

Gold mined or recovered from surface and underground workings in the vicinity of the La Cholla Shaft ranged from 920 to 924 fine. The value per cubic yard has been from \$1.20 to \$40.00. (present price of \$35.00)

The gravel, because of its lime cementation, stands well and presents no underground mining problems. In fact, a "caliche" cover approximately 6 or 7 feet above bedrock provides an excellent roof and might be an excellent horizon for another "pay zone" at its top.

#### DEVELOPMENT

Within the confines of this property there are numerous small surface pits and trenches as well as many roads. All this work, no doubt, part of the annual assessment work.

The major development of the property of concern are the two vertical shafts, one, the La Cholla Shaft on the Golden Cycle #1 claim and the other, the Anderson Shaft on the James Albert claim.

Both shafts are inaccessible because of unsafe collar sets and missing ladders, however, each apparently is "open" to bottom in as much as the writer was able to measure each, being 133 feet for the La Cholla Shaft and 155 feet for the Anderson Shaft. The writer estimates the Anderson Shaft to be approximately 20 feet lower in collar elevation than the La Cholla Shaft. Were each shaft sunk to bedrock, or perhaps a few feet into bedrock, a gradient difference of 40 feet is in evidence over a 4000 foot distance, or about a 1% grade, which is not very much, however, the direction from shaft to shaft approximates the strike of the bluish-gray slates exposed in the Dome Rock Mountains to the west. (See Property and Surface Map)

An old map of the La Cholla Shaft workings was made available to the writer. A new map has been prepared for inclusion with this report. An old sample data sheet was also given the writer, a copy of which is herein included, which indicates that the listed samples were taken from the workings outlined on the Underground Map. The old map correlated nine samples as indicated on the present included map. The sample data sheet refers the nine samples to the 90 foot level of the La Cholla Happy Days Shaft. The writer measured this shaft at 133 feet. The owner has informed the writer that the workings in the La Cholla shaft are one and the same with those shown on the Underground Map. The present owner has been down the shaft about two years ago and looked at several of the rooms or passage ways and therefor can confirm their existence at the shaft bottom. No work has been done since the present owners visit.

With the scant information available, the writer has



provided his interpretation of the erosional pattern on bedrock for the immediate area covered by the Underground Map.

Tabulated below is the sample data and results as shown on the Underground Map. These samples are referred to the La Cholla Happy Days Shaft and were samples which were obtained presumably by Mr. Watters in 1934 who apparently was the operator at that time.

Samp. #	Height Bedrock up	No. of Colors	Value Cents	No. pans of gravel	Value(1) per CuYd.	Value(2) per CuYd.
1	muck	1	4.0	1.7	\$ 2.82	\$ 4.88
2	4 ft.	3	3.0	1.5	2.40	4.15
3	5 ft.	3	1.0	1.0	1.20	2.07
4	6 ft.	4	1.5	1.5	1.20	2.07
5	6 ft.	5	2.5	2.3	1.30	2.25
6	4 ft.	1	0.1	1.0	0.12	0.20
7	5 ft.	15	60.0	3.0	24.00	41.54
8	5 ft.	19	10.0	3.0	4.00	6.92
9	5 ft.	45	80.0	2.5	38.40	66.47
Average					11.45	19.82

The column marked (1) is taken from the original data sheet and represents values based on gold at 65 cents per gram or \$20.22 per ounce. The column marked (2) is the original value converted to the present day price of \$35.00. The multiplying factor was 1.7309. The original data sheet indicated they used 120 pans to a cubic yard of gravel.

The Underground Map shows the original values in the printed form. The red figures beneath the blue dollar figures are the values based on the current price of gold.

### CONCLUSIONS

The acreage controlled by the present owner constitutes a major portion of what is known as the La Cholla Placers. As such, it is the property deserving of greatest consideration and potential.

It is the writers opinion that with proper development from the two vertical shafts, a great amount of \$10.00 or better gravel could be developed and mined at a profit. Once the pattern of erosion at bedrock has been determined, the direction of development could then be established and future development made more easy.

The samples and assays of the underground work, although limited, do exhibit that good to excellent values can be found which can be mined at a profit even though underground mining is necessary.

## RECOMMENDATIONS

The most important recommendation that can be made is that the two vertical shafts collars be repaired and put into a safe condition to permit entry for a geologic and sampling examination and program.

After a study of the bedrock erosion has been made, development in the direction of channels indicated by the study should be accomplished.

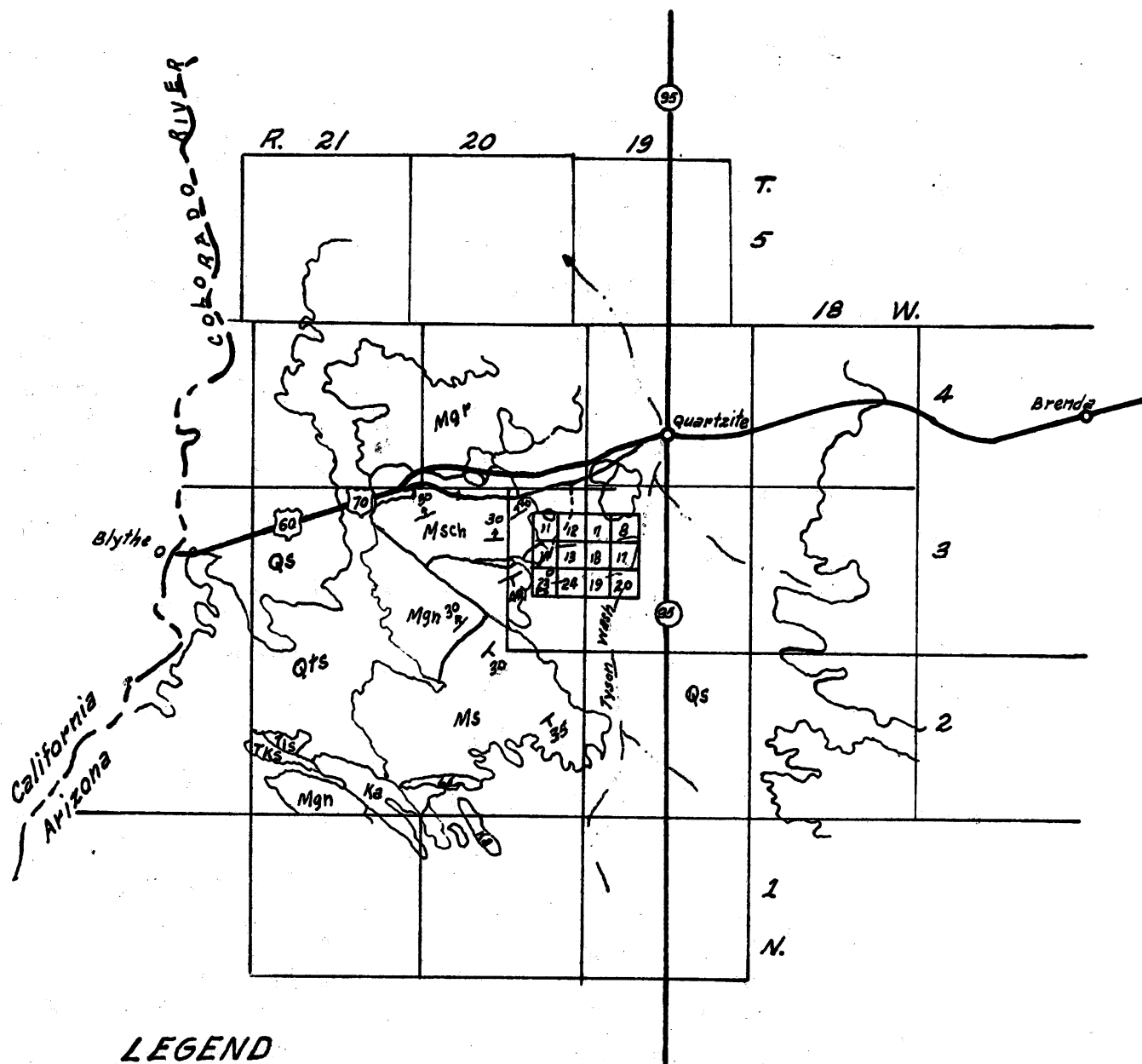
Much sorting and elimination of boulders could be done underground, thus, limiting the amount of material to be moved to the surface.

A small gravity wet mill could handle a fair amount of tonnage and provide a good to excellent concentrate.

Respectfully submitted,

Richard E. Mieritz, P. E.  
Consulting Mining Engineer  
Phoenix, Arizona

September 20, 1962



### LEGEND

- Qs Quaternary, sand, silt, gravel.
- Qts Quaternary, " " " , conglomerate.
- Tls Tertiary, Lake Beds
- Tks Tertiary, Sandstone, shale, conglomerate.
- Ka Cretaceous, Andesite.
- Mgn Mesozoic, Gneiss.
- Mgr Mesozoic, Granite.
- Msch Mesozoic, Schist.
- Ms Mesozoic, Sediments (lms., s.s., sh., cong)

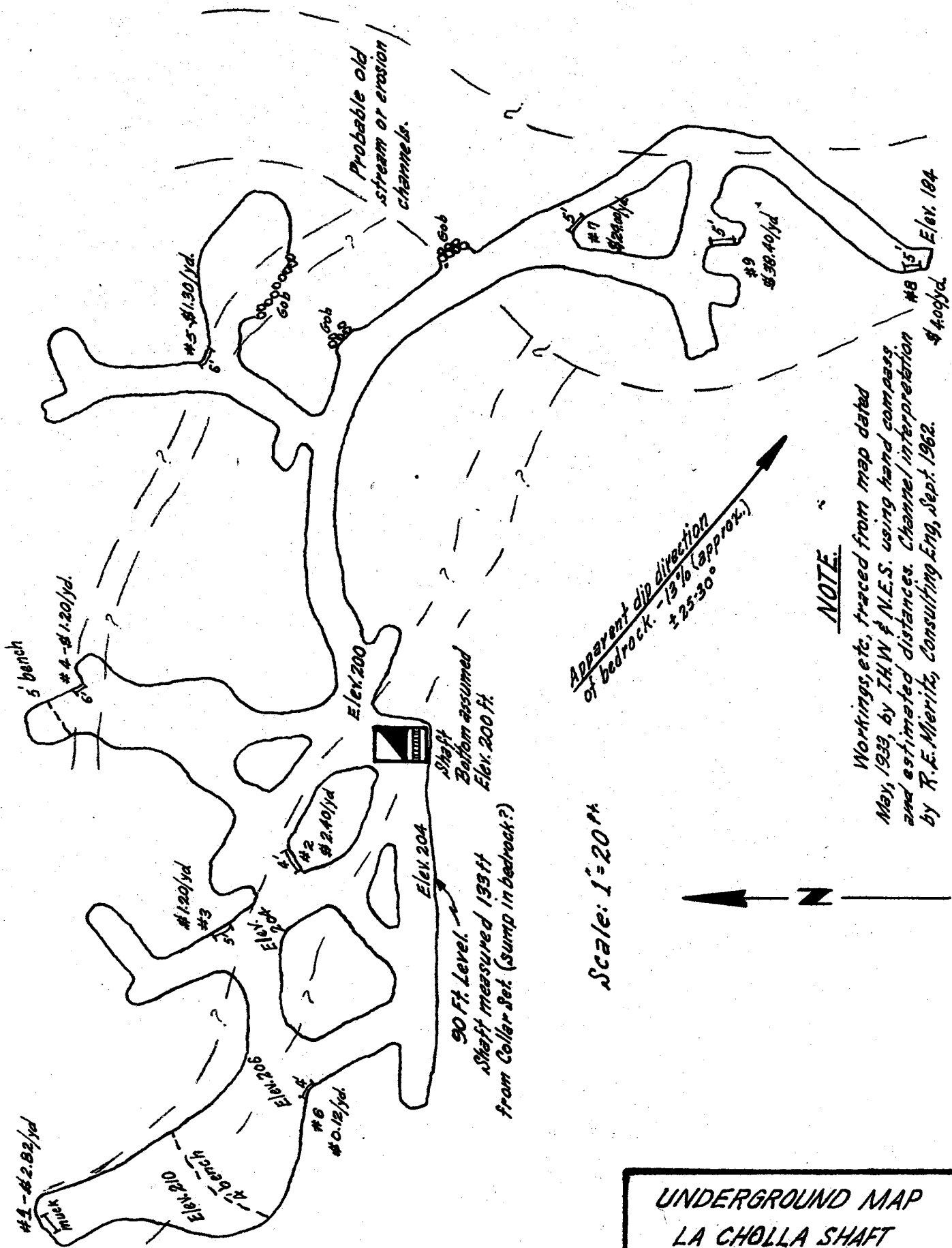
### REGIONAL GEOLOGY MAP

Quartzite-Blythe Area.

Yuma County Arizona.

Scale: 1" = 6 mi.

R. E. MIERITZ, CONSULTING ENG. Sept., 1962



Apparent dip direction  
of bedrock. -13° (approx.)  
±25-30°

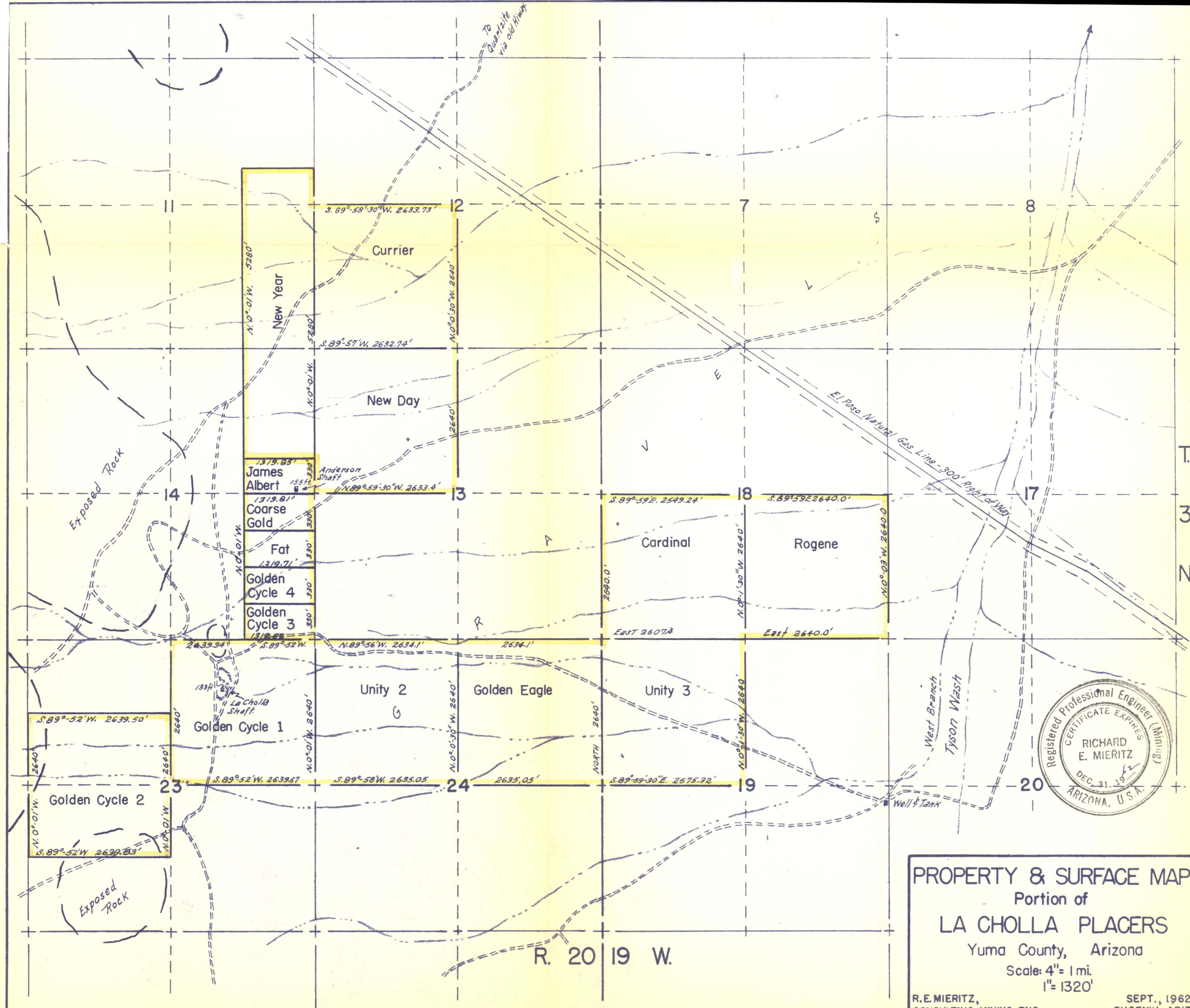
Scale: 1" = 20 ft

**NOTE**

Workings, etc., traced from map dated  
May, 1939, by I.H.W. & N.E.S. using hand compass  
and estimated distances. Channel interpretation  
by R.E. Mieritz, Consulting Eng., Sept. 1962.

**UNDERGROUND MAP**  
**LA CHOLLA SHAFT**  
Golden Cycle 1 Claim  
Sec. 23, T.3N, R.20W.  
Yuma County, Ariz.  
R.E. MIERITZ  
SEPT. 1962





**PROPERTY & SURFACE MAP**  
Portion of  
**LA CHOLLA PLACERS**  
Yuma County, Arizona  
Scale: 4" = 1 mi.  
1" = 1320'  
R.E. MIERITZ,  
CONSULTING MINING ENG.  
SEPT., 1962  
PHOENIX, ARIZ.



BOX # 79,  
QUARTZSITE, ARIZONA.

3-31-57.

Dear Ken:

Am enclosing copy of report made by Magma Copper Co.  
on my ground. There were also reports made by others which  
they added, but I do not have these copies.

However, if I prove up the values in the two claims  
at the head of the placer the continuity or extent can be  
easily determined on the ground below the two claims along  
the lines we discussed.

Hope you can interest your people.

Perle joins me in sending our best regards.

Sincerely,

TOM G. YOUNG

C  
O  
P  
Y



## I N D E X

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### LA CHOLLA PLACERS

La Cholla Placers, controlled by Mr. Tom G. Young who owns a two-thirds interest, is located about 5 miles southwest of Quartzsite, Yuma County, Arizona in Sections 7, 8, 17 and 18, T. 3 N., R. 19 W., and extending 1-1/4 miles west into unsurveyed T. 3 N., R. 20 W., Gila and Salt River Meridian. The accompanying plan shows the claims and the description by legal subdivision is listed thereon. A total area of 2840 acres is covered by the 23 contiguous placer claims. The entire area lies within the Maricopa Grazing District. Angelo Scott holds a grazing lease. The State of Arizona has relinquished all land in T. 3 N., R. 19 W. to the Federal Government.

#### CONCLUSIONS:

The evidence presented in this preliminary investigation of La Cholla Placers is sufficient to warrant a more thorough study of the problem. If the relative positions of the principle shafts and workings are as shown on the accompanying plan and assuming that the gold-bearing gravel is continuous from the Wilson and Happy Day shafts to the Anderson shaft, there is a possible 2,000,000 cubic yards, calculated at an average thickness of 10 feet, within this area. The proportion of this yardage within La Cholla ground is dependent upon a survey tying the shafts to the claim corners. The grade of \$4.26 per cubic yard in the Wilson shaft area is fairly well substantiated. The presence of gold in the Anderson shaft is known from small samples cut and panned personally.

Mr. Young has offered the property for option and sale under such terms that would seem to preclude any suggestion of misrepresentation of the property.

The development of water is of prime consideration, but there is encouraging evidence that a sufficient supply could be obtained from one or more wells.



In view of the above points, I recommend that a more accurate survey of the claims and workings, surface and insofar as possible, underground be made and at the same time, a more careful and complete geological mapping program be carried on to include the Yum-Yum, Hendrix property and the surface of La Cholla Placers. The water supply problem should be investigated further and, if possible, a pump test arranged at one or more of the existing wells. The only feasible means of testing this property is by churn drill and if the above recommended work does not disprove the conclusions of the report, I recommend that a drilling program be started. The cost for drilling and sampling is estimated at about \$7.00 and not more than \$10.00 per foot. The location of the holes is subject to information gained from a more thorough study, but I believe four or five holes spaced between the known workings of the Wilson shaft and the Anderson shaft and north of a line between the Yum-Yum and Anderson shaft, would be sufficient to prove or disprove continuity of the gravel and at least give an indication of grade.

#### HISTORY AND PRODUCTION:

A brief investigation into the history of the district and of La Cholla Placers in particular, indicated that coarse placer gold was known in the talus and alluvium of La Cholla mountains for many years and there was evidence of considerable placer workings when the first Americans came into the district. This same ground has been worked and re-worked to the present time by prospectors and snipers either dry washing or hauling water for small operations. In 1903 Mr. H. J. Beemer optioned a large area covering La Cholla Placers and plans were made to erect a 100 stamp mill to work the cemented caliche gravels on the surface, from the talus slope of the mountains out into La Posa plain. As nearly as can be determined, check sampling revealed that the original samples had been salted and in the ensuing litigation accusing the owners of fraud, Mr. Beemer

broke the option agreement but sustained a loss of some quarter of a million dollars. The stamp mill foundations may be seen at present.

The Hendrix property, owned and worked by two brothers at the present time, lies north and slightly west of La Cholla Placers and covers some of the gold bearing talus slope as well as a quartzite hill with numerous north-west striking veins which have been worked extensively for thirty years for pockets of gold. One of the brothers has made a living at pocket hunting and dry washing over this period of time. In the course of following the placer gold eastward toward La Posa plain, he found that the gold bearing gravel became too deeply buried beneath caliche to work from the surface. He sunk a shaft 40 feet deep which cut the same gravel dipping to the east and is thus credited with discovery of the so-called deep placers.

The Wilson shaft was sunk by a man well known in the vicinity as "Dry Wash" Wilson, who sold his claims to Helcion Mines Inc., which in turn leased the ground to La Posa Development Company. This company reportedly mined 18,000 to 20,000 yards of gravel in a little less than two years. Gross mint returns are reported at \$129,000. We have a cost statement for six months of operation, which shows 7806 cubic yards mined with a recovered value of \$34,644.53 or \$4.44 per yard. A recapitulation for a twelve month period shown 14,292.5 cubic yards mined at \$4.26 per yard. The lowest monthly recovery shown on the cost statement is \$3.05 per cubic yard and the highest is \$7.05 per cubic yard. A field report of the Arizona Department of Mineral Resources dated June 16, 1939 for La Posa Development Company, lists a 75 cubic yard per eight-hour day production at \$4.05 per yard and a tailing loss of  $17\frac{1}{2}\%$ .

A reported 5,000 cubic yards of gravel was worked from the Happy Days shaft by McMillan and Hendrix and Tom Young, who purchased this property in 1934. This yardage averaged \$5.00 according to Mr. Young.



The Yum-Yum mine, situated on a hill of quartzite and inter-bedded blue shale, about 1500 feet southeast of the Wilson shaft, is very similar to the Hendrix vein system. This was worked intermittently over a period of forty years by one man and his pocket hunting activities afforded him a living.

American Smelting & Refining Company drilled some portion of the area about 1922. The number of holes drilled and the location of the holes is not known, but a plan of the drilling has been seen by Mr. Young and he reports that the bottom six feet of the gold-bearing gravel drilled by A. S. & R. averaged \$4.37 per cubic yard, calculated at \$20.67 gold. Mr. Young contacted the American Smelting & Refining Company office in Tucson and after a diligent search, no record of the exploration could be found. The disappearance of these data could not be explained.

United States Smelting & Refining Company drilled nine holes 80 feet deep in the vicinity of the Anderson shaft. The reason for these holes not being continued to bed rock is not known, but the depth of auriferous gravel at the Anderson shaft is known to be 100 to 110 feet below the surface.

The Yuba Dredging Company tested an area south and east of the Yum-Yum mine, south of La Cholla Placers. The results were not sufficiently encouraging to consider an operation - the deep placer gravel was not encountered in this area.

Mr. Young presented La Cholla Placers to Homestake Mining Company. He reports that the deal was assured, but a director of Homestake who was also an official of Yuba Dredging Company, was instrumental in turning the property down because of the negative results of the drilling program to the south.

DESCRIPTION:

The brief examination made on March 30th and 31st covered the surface in the vicinity of La Cholla Placers and those underground workings available. No sampling was done other than character samples from each of the workings for comparison.

Four shafts have been sunk to intersect the deep placer gravel; these are the Plummer, 105 feet deep; Happy Days, 100 feet deep; Wilson, 110 feet deep; and Anderson, 160 feet deep. Of these shafts, only the Wilson and Anderson are accessible and both shafts were visited. The position of these shafts as plotted on the accompanying plan, is not accurate. A rough check of position by Brunton triangulation indicates that the location of the shafts in relation to each other is roughly as indicated on a sketch of the claims furnished by Mr. Young, but the position relative to the topography does not agree. I suspect that the workings are in the claims designated by Mr. Young but the claims, having been laid out by eye, are not as represented on the sketch and on the accompanying plan.

The drifts and stoped area extend north from the Wilson shaft to connect with the Happy Days shaft, although this connection is caved at present. There is a reported 1000 feet of workings southeast of the Wilson shaft. In an easterly direction the stoped area extends about 100 feet from the Wilson shaft. The dip of the gravel on the bedrock is such that work in this direction was abandoned because of adverse grades for tramming. Considering the production from these two shafts at about 23,000 cubic yards, between 35% and 40% of an area 1500 by 100 by 10 feet thick would have been stoped to produce that yardage. The examination confirms this rough estimate.

The character of the gold-bearing gravel is quite uniform throughout the lateral extent of the workings visited. The gravel is loosely consolidated and unsorted angular to sub-angular fragments of blue-grey shale and quartzite, varying in size from sand to boulders as large as two feet in diameter. Probably 10% of the material is plus six inches in diameter and 2% or 3% is plus one foot in diameter. In some faces there is evidence of alignment of particles. The thickness of the gold-bearing gravel is ten to twelve feet and in the Wilson shaft workings the av. dip is about two degrees to the east. The hanging wall material is composed of smaller particles and a greater variety of types of rock.



Considerable chlorite schist is present. This material, cemented by lime, is a very competent rock. Mine openings with this caliche as a hanging wall have stood well for fourteen years or more and the Anderson shaft, untimbered, is in perfect condition. The Wilson shaft is timbered but with no lagging and the timber has taken no weight. The cave between the Wilson and Happy Days workings is apparently due to a narrow zone carrying a little water. The footwall or bedrock is thin bedded blue slate where observed. Mr. Young states that much of the footwall is quartzite, but no quartzite was seen. Quartz veins up to two or three feet in thickness cut the shale, but were unmineralized except for large pieces of siderite. These quartz veins do not carry an appreciable amount of gold. One sample of vein from the Anderson shaft assayed 0.01 ounces Au, Tr. AG. Mr. Young reports narrow mineralized veins occurring in the footwall, in the vicinity of which the gold content of the gravel is appreciably greater.

The gold recovered from the deep placers, both from specimens supplied by Mr. Young and Mr. Guy Hendrix and from samples I panned, is invariably rough, angular pieces. Octahedrons are not a rarity. The gold observed in panning was coarse and there was no fine or flour gold. From the half dozen samples panned, there were very few colors that were too small to be picked up with tweezers.

The Yum-Yum and Hendrix properties were visited briefly, but there was not sufficient time to make more than a cursory examination of either. The Yum-Yum mine consists of a series of narrow hematite stained veins striking north to N. 30 W., vertical to steep east dip. The gold, as mentioned in the history of the area occurs as pockets in these small veins. The outcrop of the Yum-Yum is interbedded shale and quartzite. Barren quartz veins, identical to those noted in the footwall of the deep placer were observed at the Yum-Yum and between the Yum-Yum and the Anderson shaft, a large barren quartz vein of similar character, known as the White Elephant, outcrops. The Hendrix property has a vein system

much the same as the Yum-Yum, striking northwest and containing pockets of gold. Lead and copper are more in evidence at the Hendrix property and the mineralized area and vein system appeared to be more complex.

The Yellow Dog, by description, has a vein system similar to the Hendrix. Gold-bearing gravel, dipping rather steeply to the east under the caliche cover, have been worked and were visited. The deepest workings are not more than fifty feet below the surface and while the character of the gravel is similar to the Wilson and Anderson areas, it is more tightly cemented.

The occurrence of gold in the deep placers of La Cholla group seems to be closely allied to the system of small gold-bearing veins of the district. It seems likely that a basin, the formation of which is due to a combination of erosion and faulting, extends eastward from La Cholla mountain and has been filled to a depth of ten or twelve feet with an angular, loosely consolidated conglomerate. This unsorted conglomerate, which is due to violent and short-lived flash floods characteristic of an arid region, has not been moved any appreciable distance. The gold contained therein probably originated in the intricate vein system within the basin. The remnants of this vein system are found at the Yum-Yum, Hendrix and Yellow Dog properties. The angular and crystalline character of the gold in the gravel is obvious evidence of little or no movement. A slight concentration of gold toward the bottom of the gravel is probable. Subsequent filling of the valley by Tyson Wash, which has a large drainage area, has covered the gold-bearing gravel to a depth in excess of 100 feet.

The problem of delimiting the area of gold-bearing gravel is difficult. There is evidence of an east-west, or northeast-southwest striking fault between the Yum-Yum mine and the Wilson shaft and between the White Elephant and the Anderson shaft. If such a fault exists, it could be a structural factor in the development of the basin and delimit the southern extension of the gravel.



Insofar as geological evidence is concerned, the gravel could extend northward from this hypothetical cutoff to the hills on the Hendrix property. The extent eastward from La Cholla mountain is known to the Anderson shaft. In the Anderson shaft a crosscut extends 40 feet northwest and 12 feet southeast of the shaft, with stub drifts northeast and southwest off the longer crosscut at a point 20 feet northwest of the shaft. In this limited exposure, the shale is dipping at two to five degrees to the southeast and the gravel lies unconformably on the shale, dipping at about five to six degrees to the northwest. This indicates that the Anderson shaft may be on the side of the basin and the gravel would be deeper in the direction of the Hendrix property. If the above theory is adhered to, the gravel could extend north or northeast of the Anderson shaft as far as the vein system, which is presumed to be the source of the gold, continued. The area east and north of the Hendrix property, at the lower end of Nugget Gulch, is difficult to evaluate. Additional investigation may point to ore possibilities in that area.

#### WATER POSSIBILITIES:

Any further investigation of La Cholla placers is pointless unless there is reasonable assurance of an adequate water supply.

Water for domestic purposes at Quartzsite is supplied by 50 to 60 foot wells near Tyson Wash. As far as I could gather by inquiry, the Beemer well shown on the accompanying plan, is the only serious attempt in the district to develop a large water supply.

A letter to Mr. Young from James B. Girand, consulting engineer of Phoenix, describes the Beemer well as follows: Water was encountered at 80 to 90 feet and they continued to drill through this stratum to around 130 to 140 feet where a bed of clay was found which was of such consistency as to impede drilling speed. This clay was drilled for several hundred feet without penetrating it.

A shaft was then sunk on the hole to the bottom of the water bearing gravel and drifts were driven across the valley fill. From these faces holes were drilled as far as possible until they developed water to satisfy the requirements of a proposed 100 stamp mill, steam boilers and domestic use. The capacity of their pumps was not stated, nor were any actual figures of a sustained pumping test quoted. The general tenor of his letter is of extreme optimism in regard to developing water.

A 50-ton flotation plant located near Quartzsite obtains their water supply from a shallow well and I understood that this well develops no more than enough for a one-shift operation.

Tyson Wash is the only major drainage in the vicinity and the only obvious water to be developed would have to come from this basin. The wells in Quartzsite and the Beemer Well are evidence that an underground supply exists. Discounting the optimistic description of the Beemer Well and assuming that the wells at Quartzsite have not been developed to their maximum capacity, there is still some justification for believing that a water supply could be developed.

The requirements for a washing plant, using reasonable care to recover and re-use water, is about 75 to 100 gallons of new water per cubic yard of gravel treated. This figure is based on a dredge operation in Arizona in 1933, treating 100 cubic yards of gravel per hour and requiring 85 gallons of new water per cubic yard treated.\* In Mr. Young's opinion, based on his operation at La Cholla, 75 gallons of new water per cubic yard treated, is sufficient.

/s/ H. J. Steele

\* Arizona Bureau of Mines Bull. No. 142 "Arizona Gold Placers and Placering"., Page 37.

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