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PRINTED: 08-19-2009

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: PLOMOSA PLACERS

ALTERNATE NAMES:

CHRYSTAL BUTTE
SAXE
CAMIOLA
JACK POT PLACERS
APLINGTON
NEW YORK-PLOMOSA PROPERTY

LA PAZ COUNTY MILS NUMBER: 191

LOCATION: TOWNSHIP 3 N RANGE 18 W SECTION 4 QUARTER NW
LATITUDE: N 33DEG 37MIN 59SEC LONGITUDE: W 114DEG 07MIN 18SEC
TOPO MAP NAME: QUARTZSITE - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

GOLD PLACER
LEAD

BIBLIOGRAPHY:

ADMMR PLOMOSA PLACERS FILE
JOHNSON, M.G., 1972, "PLACER GOLD DPSTS OF AZ"
USGS BULL. 1355, P 80; USGS BULL. 451, P.87
BUTLER, G.M., 1937, ARIZONA GOLD PLACERS AND
PLACERING, AZ BUR MINES BULL. 142, P 31
BUTLER, G.M., 1961, ARIZONA GOLD PLACERS AND
PLACERING, AZ BUR MINES BULL. 168, P 31
ADMMR "U" FILE AU 25

PLOMOSA DISTRICT-PLACERS

LA PAZ COUNTY
T3N R18W Sec 4

Plomosa Placers "U" file

ABM Bull. 142

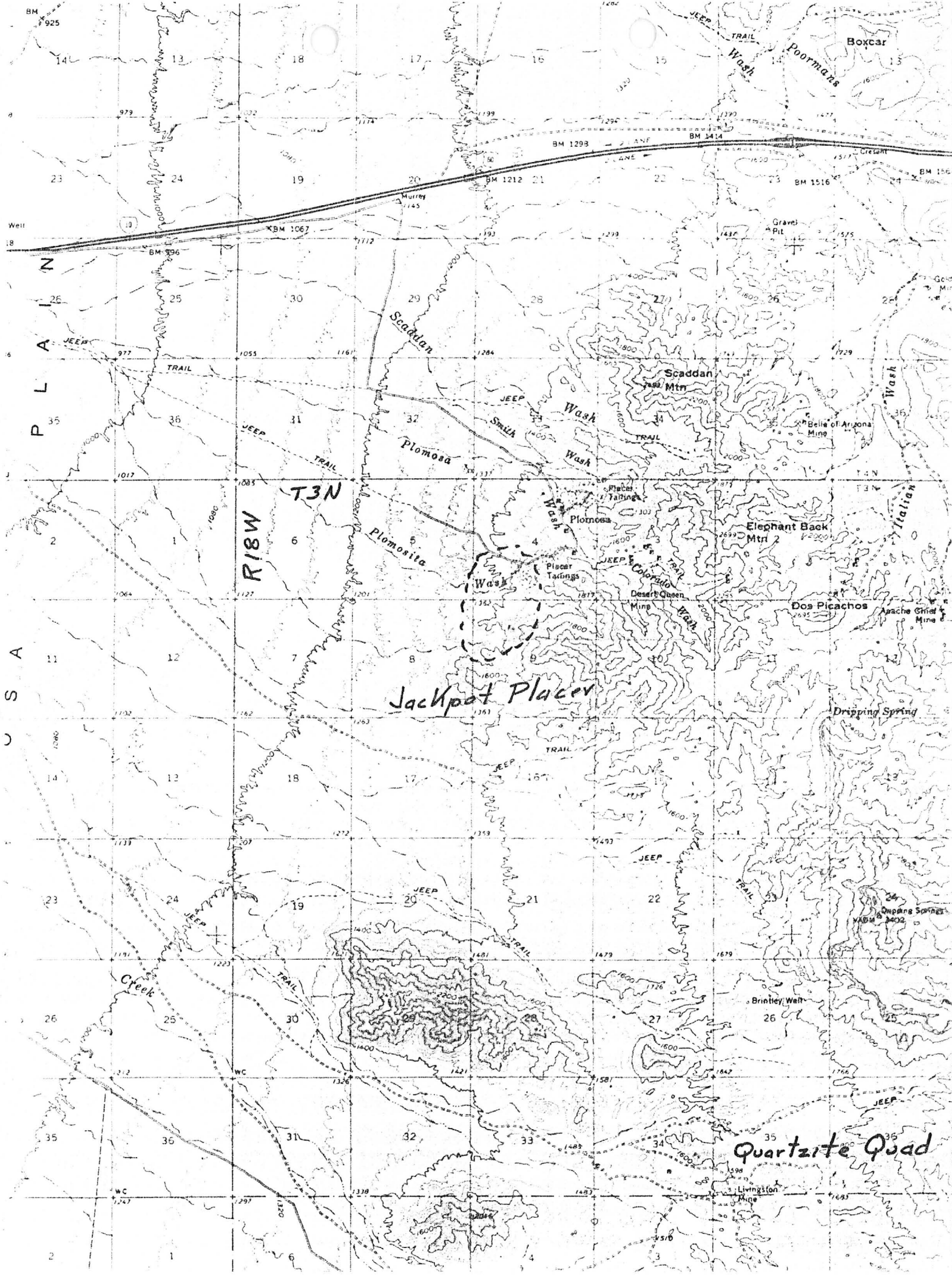
ABM Bull. 160

USGS MINERAL RESOURCES, U.S. page 259 - volume for 1912 part 1
OTHER MAJOR PLACER DISTRICTS IN THE SAME AREA:
La Cholla (file)

Oro Fino (file)

La Paz Placers (file)

Middle Camp Placers (file)



✓
PLOMOSA DISTRICT PLACERS

July 26, 1957

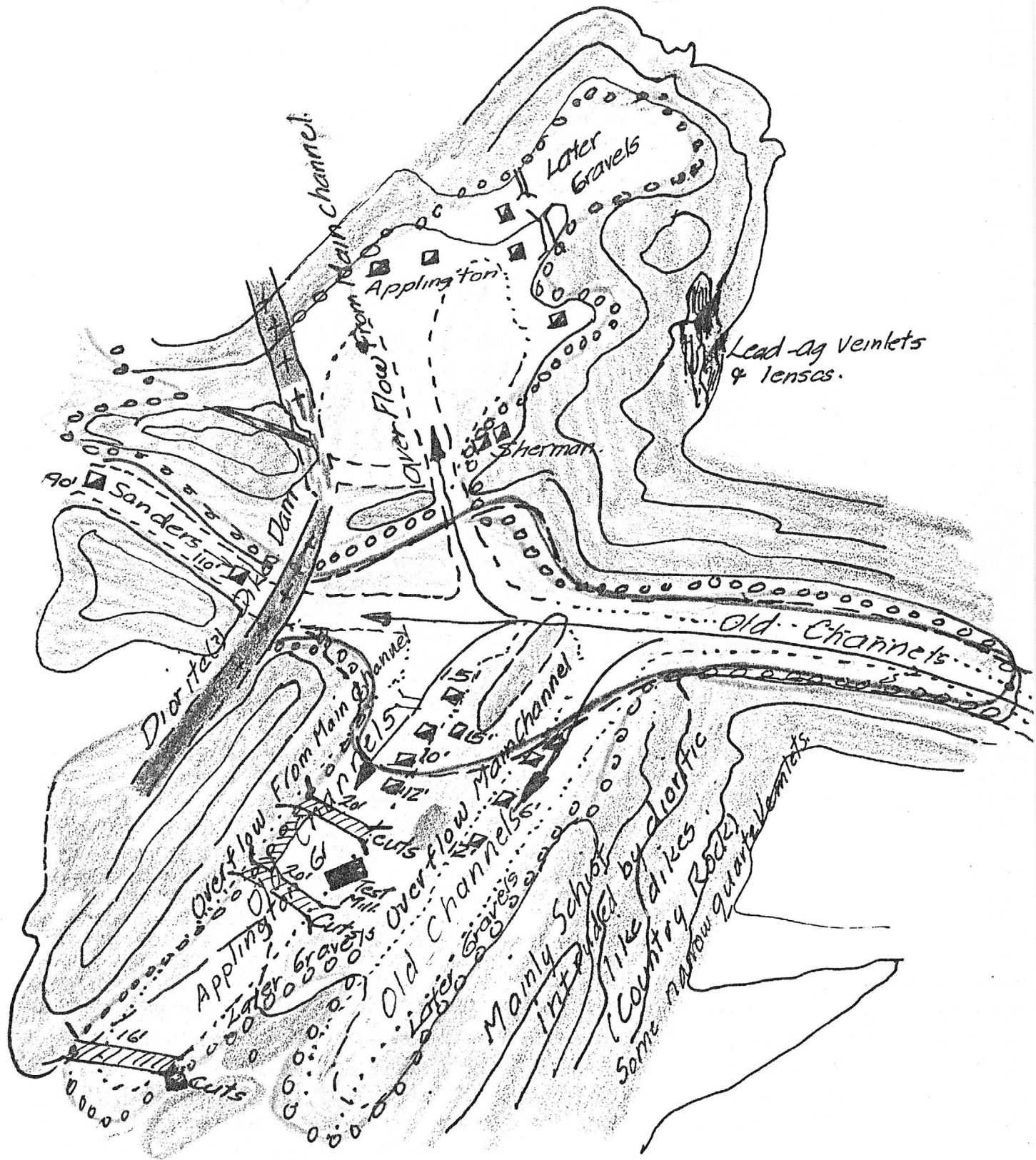
PLOMOSA DISTRICT, YUMA COUNTY

✓
GOLD

The Placers lie along the eastern and western margins LaPosa Plain. This plain, which separates the Plomosa Mountains on east from the Dome Rock Mountains on the west, is about 10 miles wide and 1000-1300 elevation, Sec. , T3N R18W. The plain is dissected, particularly in the marginal areas, by shallow arroyas that are tributary to its north-flowing axial channel, Tyson Wash. Practically all water comes from shallow wells at Quartszite.

✓
Heikes, V.C. Dry Placers in Arizona: U. S. Geol. Sur. Mineral Resources, for 1912, Part 1, p 259, states that surrounding the post office, at Quartszite, is area covering 7500 acres - is dry placer ground with values to an average depth of 15 feet, but varying from 5 - 50 ft. Gold content believed to be 10¢ to more than \$1 per yard. The most important fields include LaCholla, Oro Fino, and Middle Camp, which lie near the Dome Rock Mountains.

✓
Reference - Arizona Gold Placers & Placering- Arizona Bureau of Mines
M.T. Ser. No. 38, Bull. No. 142, pp 31-32 (1939) and
Bull. 160



JACKPOT PLACERS

Originals in photo file

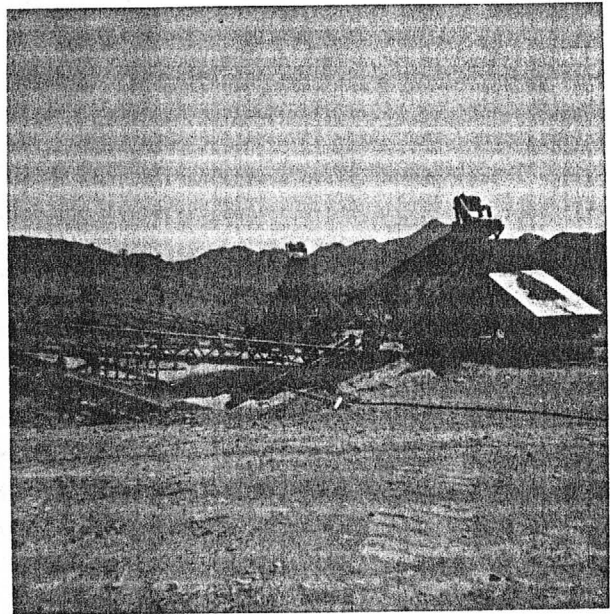


Jackpot Placer
Production Pit

5/5/83

Photographs by Richard R.
Beard, Az Dept. Mines

Jackpot Placer Production Pit



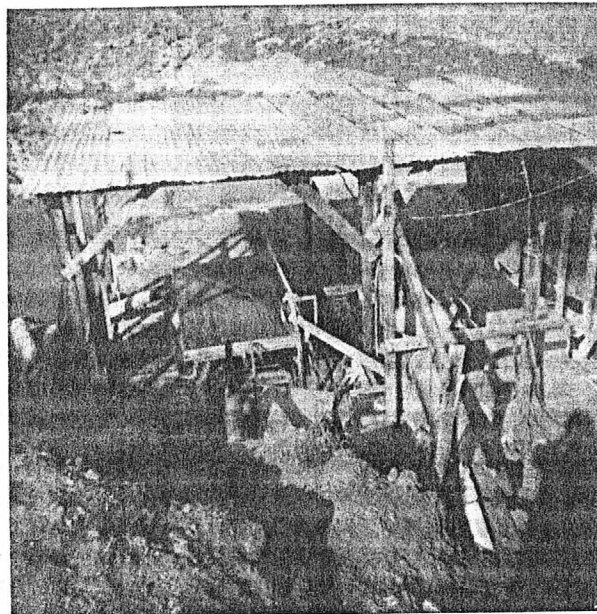
Dry Washer
Jackpot Placer

5/5/83

May 5, 1983

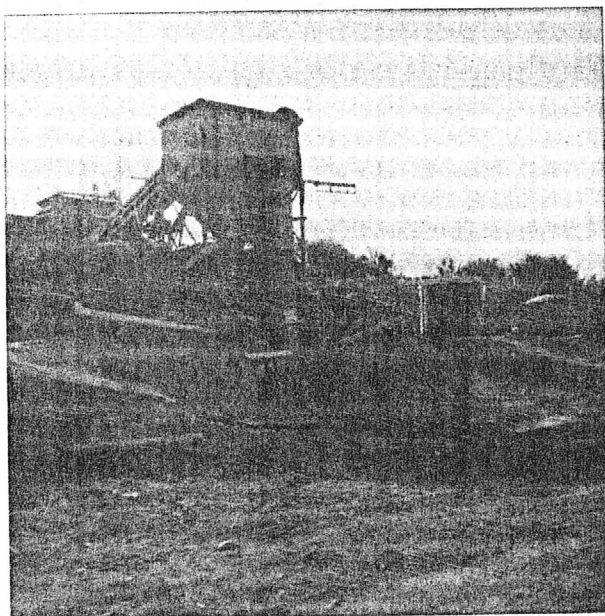
Jackpot Placer - Dry Washer

Originals in photo file



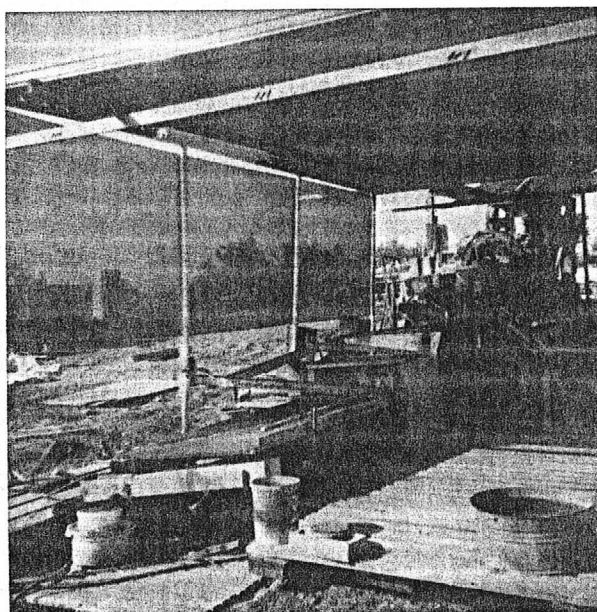
Apache Mining & Development
Goldfield, AZ.

2/10/84



Apache Mining & Development
Goldfield, AZ

2/10/84



Apache Mining & Development
Goldfield, AZ

2/10/84

Photographs by Richard R. Beard, AZ Dept. Mines

ARIZONA GOLD MINES



GOLD BELT (H) LA PAZ

9 K
file

And Other Minerals

DAN AND ANGIE PATCH
Owners
PHONE 602 ~~XXXXXX~~
483 8367

~~XXXXXX~~ 887
~~QUARTZSITE ARIZONA~~ 85346
6850 N. 86th St.
Scottsdale, Az 85253

January 10, 1990

Nyal Niemuth
Arizona Dept. of Mines
Mineral Bldg. Fairgrounds
Phoenix AZ 85004

Dear Nyal:

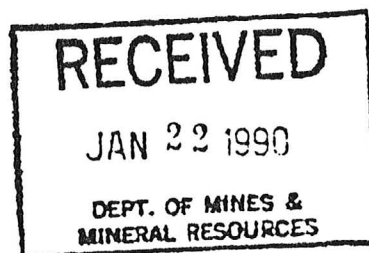
Here are two photos of a few nuggets from the Quartzsite area, the smaller gold in three of the bottles is from the Jackpot mine, the larger nuggets are from near and around the old Goodman Mine area in the La Paz District. The round one weights 1/4 lb. troy.

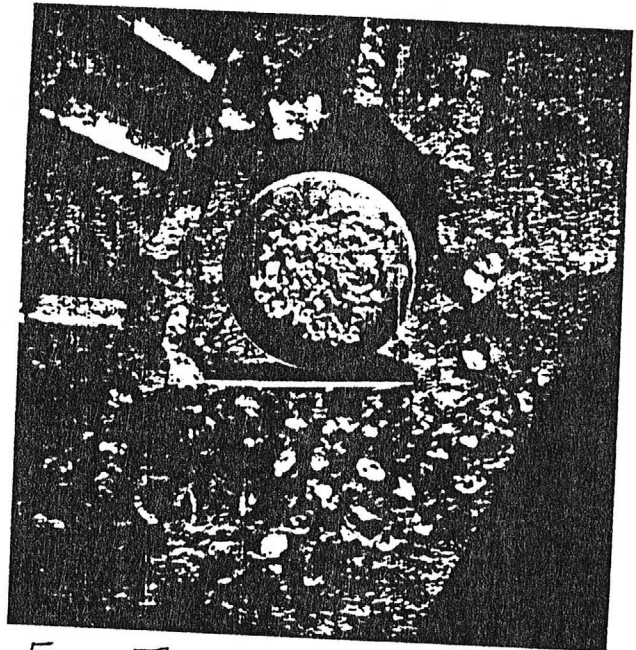
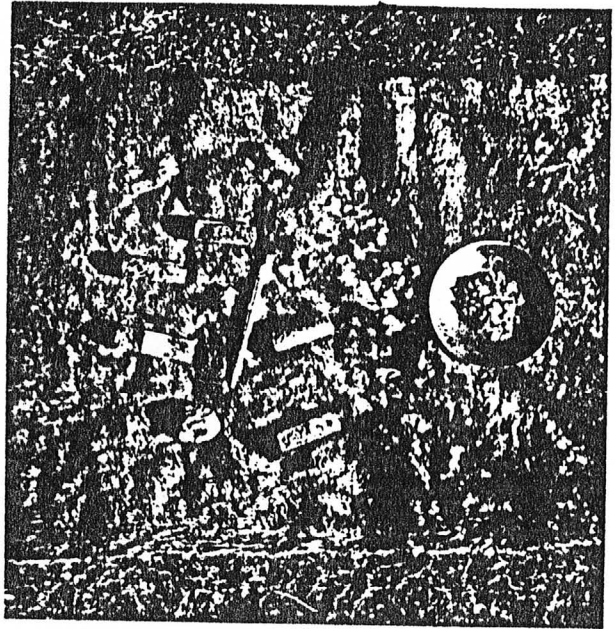
Ferguson Graham did call me thanks to you and I believe he is coming to see me soon.

I do have my holdings for sale due to age and health if anyone inquires.

Sincerely,

Dan Patch, President





From The Tachpat and Hila
Blomosa District and Larger nuggets
From near The Old Goodman Mine in
The La Paz District Run Path 1/10/80

Date Printed: 12/21/93

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

Information from: Don Wallace

Company:

Address: 11105 N. 115th Street, #1107
City, State ZIP: Scottsdale, Arizona 85259
Phone:

MINE: Jack Pot

ADMMR Mine File: Plomosa Placers
County: La Paz
AzMILS Number: 191

SUMMARY

Don Wallace called requesting information on evaluation of placer gold deposits for operation and investment. He has been approached to join with some associates in acquiring and developing the Jack Pot placer claim in Plomosa Placers. The Jack Pot is owned in part by Dan Patch.

He explained that he had extensive experience in the oil industry and knew enough about earth resources to know he knew too little to evaluate a placer without professional help. He went on to say the he has reviewed a lot of notes, comments, and reported bits and pieces about the Jack Pot placer, but none of it was organized or complete enough to make a decision.

I suggested he contact Larry Dietz regarding ownership and claim conflict questions and Fred Brost for help in evaluating the placer production potential of the deposit.

Ken A. Phillips, Chief Engineer

Date: December 21, 1993

~~Do Not Reproduce~~

Mr. S. J. Allen, 32222 West Marshall called and visited about a property he acquired in the Plomosa District southeast of Quartzsite. These are the Chrystal Butte, Saxe, Camiola and Camiola No. 2 patented claims. He brought in beautiful specimens of galena as well as many galena nuggets reportedly obtained from the claims. He had an assay sheet reporting 53.04 ounces silver, and 0164 ounces gold. Allen is a newcomer to mining and was after general information.

JHS WR 4-4-69

The Natural Resources Development Company, Bellevue, Washington leased the Jackpot placer ground about 8 miles southeast of Quartzsite and dozed several trenches to bed-rock and took a great many samples. However, they feel that although the values are satisfactory the yardage is lacking for the caliber of operation they had in mind; therefore they are searching for additional ground. GW AR 73-74

Ralph Campbell, Los Angeles, has a lease on the old Aplington placer, now held by George Mitchell. It is at the west foot of the Plomosa Mts. 7 miles east of Quartzsite. GW WR 10/1/75

About 2 miles east of Quartzsite, J.L. Foster, Walnut Ridge, Arkansas, is testing the old Aplington placer, now owned by Frank Mitchell. He has the logwasher and two Pan American jigs mounted on a trailer that was seen at Mr. Walker's Gold Nugget mine a couple of year ago. There is a 170' water well at the plant, but it furnishes only 15 gpm which is enough for 2 hrs. continuous run at 10 Cu. yds. hour.. GW WR 1/27/76

Visited briefly with Frank Mitchell who has a 20'X3' trommel operating on placer gravel about 1 mile east of Quartzsite. He is selling concrete aggregate for \$4/yd. from Au in the $\frac{1}{4}$ " material. Presently his water supply is inadequate for washing. GW WR 5/12/76

Went to Frank Mitchell's placer operation, but it was down so went on to his ranch about 7 miles east of Quartzsite where he said he had stopped the operation because of the hot weather but resume in September. He will drill another well as the present one doesn't furnish sufficient water to wash a profitable amount of gravel. GW WR 8/18/76


1179 M 1176

ARLINTON PLACERS

YUMA COUNTY

Do Not Reproduce

WR GW 10-11-77 - Joe Wilhelm, Frank Mitchell's son-in-law, of Quartzsite, came in for information on the Aplington placer which Mr. Mitchell owns. He was shown the file which doesn't include mention of a 125 ft.? shaft sunk by Mr. Aplington several years prior to 1960. It was suggested Mr. Wilhelm talk to Tony Darlin, Salome, who was in close contact with Mr. Aplington at the time the shaft was sunk. 10-18-77 bh

PLOMOSA PLACERS

La Paz
YUMA COUNTY

RRB WR 1/01/82: Dan Patch, P.O. Box 124, Quartzsite, AZ was suggested by Jack Pierce as a good contact for us in Quartzsite area. He owns the Plomosa Placers and numerous other properties in the Wenden, Quartzsite, house areas.

RRB WR 3/18/83: Dan Patch, P.O. Box 124, Quartzsite, AZ 85346, phone 927-6577 reports that he is leasing out the Jackpot claim in the NW $\frac{1}{4}$ of Section 9. The lessee's are operating it.

NJN WR 2/24/84: Dan Patch (c) reported that Clive Bailey a geologist from Colorado, is now at his Jackpot Placer (Plomosa Placer). Mr. Patch has installed a well capable of 35 gpm. Depth to water is 820 feet. It is hoped this will be enough to support a small wet placer operation.

NJN WR 2/22/85: Hal Perry (c) reported he visited the Dewitt Mine which is part of the Plomosa Placer (f) La Paz County. Mr. Perry has examined a report by Tom Riggs of Unity mining on this property. Apparently a company Mr. Perry represents has an option to buy the property which consists of the Cameola, Crystal Butte, and Sachs patented claims totaling 77.39 acres in T3N R18W Sec 3. The owners are Edward and Elizabeth Vojtech, RR 4. Box 107, Simon Road, Fifield, WI 54524 and John Skierra, Box 2400, Quartzsite 85346. Mr. Sikerra currently operates a small sluice box operation on the property.

NJN WR 6/24/88: Dan Patch (card) reported that the Plomosa Placers (file) La Paz County was acquired by U S Grant. They picked up the property after Magini had leased it but they are gone now. The property has 2 wells with 58 gallon a minute available and has pumps and generator on site. The property is available for lease.

LA PAZ

FOR OFFICE USE ONLY
START-UP NUMBER 98116117
STATE NUMBER 071133
DEPUTY NUMBER Joe
NEW MOVE

FORM 101-106 REV. 03/89

La Paz Co
STATE MINE INSPECTOR

OCT 29 1986

FOR OFFICE USE ONLY

START-UP NUMBER 68136169

STATE NUMBER _____

MSHA NUMBER _____

NOTICE TO ARIZONA STATE MINE INSPECTOR

In compliance with Arizona Revised Statute Section 27-303, we are submitting this written notice to the Arizona State Mine Inspector of our intent to start x stop _____ move _____ (please check one) a mining operation.

If this is a move, please show last location: _____

If you have not operated a mine previously in Arizona, please check here: _____ If you want the Education & Training Division to assist with your mine safety training, please check here: _____ If this operation will use

Cyanide for leaching, please check here: _____

COMPANY NAME: Jackpot Mines

DIVISION: _____

MINE OR PLANT NAME: _____ TELEPHONE: Phx office 242-7315

CHIEF OFFICER: Frank Magini

COMPANY ADDRESS: 4831 N. 42nd Avenue,

CITY: Phoenix, STATE: Arizona ZIP CODE: 85019

MINE OR PLANT LOCATION: (Include county and nearest town, as well as directions for locating property by vehicle) La Paz County, Quartzsite, Arizona,

SE 7 miles, mine inspector Joe Ramirez knows how to get there, he was there

October 27, 1986.

TYPE OF OPERATION: nonferrous metal mine PRINCIPAL PRODUCT: gold

STARTING DATE: 10/27/86 CLOSING DATE: _____ DURATION: _____

PERSON COMPLETING NOTICE: Melissa Magini TITLE: Secretary/Treasurer

DATE NOTICE MAILED TO STATE MINE INSPECTOR: 10/28/86

FORM 101-106 REV. 10/85

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Jackpot Placers

Date May 5, 1983

District La Paz County

Engineer Richard R. Beard

Subject: Property visit

Owner: Dan Patch, Quartzsite
Operator: Aztec Resources Inc.

I visited the property on this date as the guest of Mr. Patch and his wife. We talked to Mr. Dennis Long of Aztec Resources who is running the operation and Mr. Gordon Levine who designed and built the dry-washer units on the property. Mr. Long said that they got very poor recovery using the dry washers because of the caliche. They are now planning to set up a wet process and the dry washer was being moved to the Middle Camp Placers (for description of dry washers in operation see report of this date on Middle Camp Placers.)

There is an 800 ft. well at the property entrance and a pipeline has been run to the processing area. Mr. Long was not sure just how he was going to process the material or if the water supply would be adequate.

WR GW 9/23/77: Visited Messrs. York & Madden one mile east of Quartzsite where they are building a gold placering plant. Jack Pot placer ground is about 7 miles east of Quartzsite where they report the bedrock is 10-110 ft. deep. They have found lead-silver nuggets up to 10" in diameter and they claim their black sand contains 80 oz. silver per ton.

GI WR 9/27/79: Wayne Winters to report that the Jack Pot placers at Quartzsite were operating. Frank Mitchel, owner Leo & Lantz Burt, operators, 60 TPH dry con. up grade 2 to 300 times, then jigged and tabled at water supply. Final product runs 927 pz per ton. Recovery averages 85%.

Mine	Camiola Claims	Date	June, 1966
District	Plomosa - Yuma County	Engineer	Lewis A. Smith
Subject:	Conference with Mr. and Mrs. C. T. Griffin		

Owners: Mr. Frank J. and Mrs. Pearl Irene Mitchell (or the Black Mountain Trucking Co.) The claims were purchased from Mrs. Ida K. Griffin when she was Mrs. Ida K. Applington, widow of the late L. A. Applington who held the claims for many years.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

FILED
JUL 25 1966

Mine JACK POT PLACER

Date June, 1966

District PLOMOSA

Engineer Lewis A. Smith

Subject: 1 Claim, (160 acre assoc. type claim)

OWNERS: MRS. IDA K. AND MR. C. T. GRIFIN, Quartzsite
Former Owners: Mrs. Ida K. and L. A. Applington, Quartzsite

Location: $N\frac{1}{2}$ N.W. $\frac{1}{4}$ Sec. 9 and $S\frac{1}{2}$ S.W. $\frac{1}{4}$ Sec. 4, T. 3 N., R. 18 W. Docket 263, p. 417

APPLINGTON PLACERS

YUMA COUNTY
PLOMOSA DIST.

Al Applington has moved back to his mine and is again working his placers.

LEWIS A. SMITH - Quartzsite Conf. - 1-5-61

Albert and Emil Seidel, Box 126, Quartzsite had just returned from the Holidays and plan to reopen their gold mill at the Applington Placer. They were closed down for a time because of water difficulties which they said now appeared to be resolved. Their plant was reported to be satisfactory.

Conference with the Seidels at Quartzsite - 1-4-62 - LEWIS A. SMITH

Albert and Emil Seidel, Box 126, Quartzsite, who are operating under a lease option with Applington placer claims formerly owned by Al Applington of Quartzsite, plan to reopen their plant soon. They were shut down temporarily because of water difficulties. However, these seem to have been resolved.

Al Applington now lives in a trailer court in Quartzsite. He plans to reopen the part of the placer ground that he still holds. He stated that Sherman, who owns some placer ground adjacent to the Applington claims, is in the hospital and it is doubtful if he will ever work the claims again.

LEWIS A. SMITH - Quartzsite Conference - 1-4-62

Al Applington said that the Siedel brothers had left, so that his mine (Applington Placers was now idle.)

LEWIS A. SMITH - Quartzsite Meeting - 5-1962

L. A. Applington dec'd 1965

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine 'Applington Placer (file)

Date September 5, 1961

District Plomosa District, Yuma Co.

Engineer Lewis A. Smith

Subject: Mine Visit and interview with Albert Seidel.

The Applington placer was recently sold to Albert and Emil Seidel, formerly of Tucson (now Box 126, Quartzsite). They have purchased a Denver jig and table and a multiple screen assembly. They are working in the bulldozed cuts made last year by Silas Silverman and Andy Zinkl. (According to Silverman, some 5000-6000 yards of placer ground was exposed after removing 6-16 feet of overburden.) The Seidels plan to work this area first. Thus far the Denver jigs have required considerable adaptation to the local ground. However, the "bugs" are being removed rapidly. The estimated grade of the upper half of the placer ground is \$1.50 to \$2.00 per yard. It is anticipated that the bedrock portions will do considerably better.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ' Applington Placer

Date September 8, 1960

District Plomosa District, Yuma County

Engineer Lewis A. Smith

Subject: Interview with Al Applington in Quartzsite.

Mr. Applington has moved to Quartzsite from the mine. He stated that Silas Silverman's group had moved their equipment to Raymond Perry's place for storage.

He stated that he was not yet convinced that the Clint Machine (dry gold separator) was satisfactory. He thinks that by the use of a cyclone and a magnetic separator, the machine's efficiency could be improved materially. The dust and magnetite tended to clog the table and to carry gold with them. The machine does well on "flower" gold.

He plans to work the placer this fall after the weather moderates somewhat.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine APPLINGTON PLACER

Date June, 1960

District PLUMOSA DIST., YUMA CO.

Engineer Lewis A. Smith

Subject: Interview with Silas Silverman

Mr. Silverman reported that the test mill run on the Applington Placer gravels has been completed for the present. About 1000 yards were treated. The calculated head was \$1.75 per yard and the over all cost was figured at around \$1.50 per yard. Preliminary sampling checks this fairly well. The pit stripping ratio was found to be about 4:1. However, more than 6000 yards was stripped. The calculated cost of removing the stripped material was \$1.00 and the remaining 5000 yards could, therefore, be mined for 25-30 cents per yard. The \$1.00 cost includes the rental cost of the cat, rooter, fuel and labor. The milling cost for the 1000 yards was calculated at about 50 cents per yard, including all capital charges, amortization etc. This could be lessened, somewhat, by the following improvements;

(1) The addition of a cyclone would remove fine dust and dirt, from the screened concentrate, before it reaches the tables. The dust tends to clog the tables and decrease the rate of handling concentrates as well as causing some decrease in recovery of very fine gold, despite the evident fine recovery believed to have been attained.

(2) The enlargement of the mill storage feed bin to handle at least a half-days run would help. The grizzly should also be enlarged. The present small hopper caused a noticeable slow down in yardage handled.

(3) The table performance would also be benefited by a tighter seal box around the air fan. The air leakage was considered too high.

The feeders, trommel, belt conveyors, and shaking-multiple-screens all did a very satisfactory job. The partly closed trommel freed an estimated 95 percent of the fine material from the pebbles. Some further improvement could be made by somewhat slowing the rate of revolution of the trommel. Mr. Silverman felt that the experience gained in the test would benefit future operations. He stated also, that the 1000 yards, thus far treated, did not include the bottom. 2-6 feet of the channel material which is believed to be of much better grade than that milled. Mining failed to reach bedrock at any place and the stripping did not completely clear the better ground. 1½ feet of low grade placer (less than \$1.00 per yard) was thus included in the mill feed. He is now attempting to finance the mining of another large but lower grade placer in the Hassayampa area. This placer ground is looser than the Applington ground and is better situated for mining and milling. He believes, because of these advantages, that the cost at Hassayampa probably would be somewhat less than the 75 cents per yard figured at the Applington placer. The thickness of workable ground also is greater. Preliminary sampling indicates that the ground assays about \$1.00 per yard but the average gold grain size would probably be finer. The moisture, which at the Applington placer was under 2%, is anticipated to be higher and consequently a little more heat would be needed for the drying of the screen product.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ' Applington Placer

Date April 18, 1960

District Plomosa District, Yuma County

Engineer Lewis A. Smith

Subject: Progress report by Silas P. Silverman.

Mr. Silverman reported that Andy Zinkl would soon have the test plant on the Applington placers ready for operation. The plant will essentially be composed of a grizzly, cone crusher, trommel screen, smaller mesh series screens, followed by a new type of electrostatic dry separator. The grizzly will eliminate all material over 6 inches. The trommel will be enclosed for several feet so as to "throw" the crushed product against the sides. This is supposed to knock the caliche from those pebbles which may be coated by it and to loosen any other fine material from the pebbles. The discharge oversize will be discarded. The undersize will be run through a series of shaker screens to reduce the material to 1/4" mesh. The electrostatic dry machine will recover gold up to 1/16 inch in size. The discharge from this machine will be saved and tested for coarse gold which may have escaped the machine.

An area of relatively unworked placer ground has been stripped and is ready for mining. It is planned to run several thousand yards of gravel through the test mill. It was felt that this would provide a true sampling of the placer. Preliminary sampling indicated that the lower portion of the caliche zone and the underlying older placer would run from \$1.00 up to \$5.00 per yard, but would not average over \$2.25 to \$2.50. In the older placer area large areas had been stoped out around numerous pits sunk below the caliche layer. This was disclosed by recent stripping cuts. However, there is a large yardage in other parts of the area which is relatively undisturbed.

Mr. Silverman also stated that his company has a large yardage of low grade placer in the Hassayampa. Should the Applington tests and operation prove satisfactory, it is very probable that the plant would be moved to the Hassayampa area in the future, when the Applington ground is worked out.

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA

FIELD ENGINEERS REPORT

Applington Placers - (a) North Group (Camoleo
Mine 1 & 2, Sax and Cry Butte Group (also lodes) Date January 7, 1960

District Plomosa Mtn Dist., Yuma Co.

Engineer Lewis A. Smith

Subject: Mine Visit

Owner: Al Applington, Quartzsite, Arizona

Location: (a) North Group - Sec. 3 & 4, T. 3 N., R. 18 W.
(b) South Group - Sec. 4 & 9 T. 3 N., R. 18 W.

Work: Work on the North Group consists of several cuts and pits. The pits have underground stopes out along the gravel for short distances. Some of the work was done by open pits. The Camoleo Group was mined by open cuts and pits for gold in quartz in place. Similar work was done higher up on the Sax. The pockets were high grade. The placers in this group contain placer galena balls up to the size of an egg. These are not prevalent enough to work alone. The gravels consist of two divisions, the older of which underlies a caliche bed and the younger of which overlies the caliche. The older bed contains the best values and lies in channels which are somewhat transverse to the present drainage. The younger group is much leaner and follows the present drainage more closely. The gold in the lower group is associated with magnetite and hard limonite, both of which may be bed markers. The upper group is much looser and more wide spread. Mr. Applington believes that this was rapidly formed and that the gold was redistributed from the older placers, at least in part. His tests indicated that in both types the gold will free when the placers are screened through a 1/8" mesh screen. However, in the lower placers some fine gold is held to the pebbles by a thin caliche layer which must be cleared by attrition. Few large nuggets have been formed.

In the south placer, similar conditions exist except that the younger gravels are shallower in places running up 12-19 feet down to the caliche but tapering to the present stream channels.

The bedrock in the area consists of pre-Cambrian, more or less basic, schists intruded by diorite porphyry dikes and irregular masses. The dikes and masses are elongated in a northeast-southwest direction or, more or less, parallel to the schist trend. The overall trend is about N 30°E. The schist is coarse bedded and shattered.

In the south placer these dikes, or masses, apparently locally influenced the direction of the channels of the streams which deposited the older placers. Schist ridges crossing under the area are apparently at an angle to the present drainage. This structural condition has produced an old topographic surface which is somewhat irregular in elevation and which would tend to complicate stripping operations. This placer has been exposed by numerous pits (15-25 feet deep) and by three bulldozer cuts down to the schist bedrock.

Andy Zinkl is conducting a close sampling of these south placers, to differentiate the best mineable zones, or zone. Samples of 1 cubic foot volume are being taken along cuts from the top to the bottom by him and two assistants. These will be composited to a sample which may amount to 2 tons. Screen tests are also being conducted. He believes that a grade of \$2.50 per yard would pay. Some portions of the lower placer are reported by Applington to run around \$5.00 per yard. Many of the pits have been

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine ^{ton} Appling~~es~~ Placer

Date 5-6-60

District Plomosa District, Yuma County

Engineer Lewis A. Smith

Subject: Mine visit and conference with Andy Zinkl.

Owner: Al Applington, Quartzsite

Location: See report of January 7, 1960.

Lessee: Silas P. Silverman and Assoc., 129 W. Maryland Avenue, Phoenix.

Work: The Silverman group has hired Andy Zinkl to erect a dry separation plant for the gold placer deposit. The plant is nearly complete and consists of: -

1. A ramp and 5 yard hopper. The hopper is covered by a 5" grizzly. The top dimensions are about 7 x 7 ft.
2. The hopper product is discharged into a 3/4 inch trommel which discards all material over 3/4 inch. The upper end of the trommel is closed in for about 3 feet. This closed section throws the material against the sides dislodging caliche and dust from the pebbles. The trommel's over-all length is 8 feet and its diameter is about 2 feet. It has a relatively shallow slope.
3. The 3/4 inch undersize is fed onto a 2 ft. conveyer belt and the oversize is wasted. The belt slopes about 20 to 22 degrees. This is a portable unit.
4. The minus 3/4 inch material is fed through a hopper into a screening unit with 2 shaking screens. The upper screen discards all material larger than 3/8 inch, while the second screen reduces the material to minus 1/8 inch. The middling screen product will be saved and treated later for coarse gold.
5. The minus 1/8 inch material is delivered to a hopper which feeds through an ~~inferred~~ ^{infra-red} drying trough to the three controlled feeders to the electrostatic dry separation machine. This ~~machine~~ ^{dryer} consists of a table which is covered by a corded cloth on which are 20 or more 3/16 inch copper wires which are about 2 inches apart. This riffled surface is split into 3 divisions parallel to the line of flow. These divisions are constructed of 1/16 inch steel bands which are about 1/4 inch wide and on edge. The static electricity is introduced by electric wires into the transverse copper rods. A blower under the table agitates the waste while an eccentric causes the table to jig. The result is that the waste flows and "jumps" down the table. The gold is held against the copper ribs.
6. The waste discharge from the table is screened to ^{minus} 20 mesh and stored for retabbling on a different type of table. The tables and sides are removable. A brief rerun of this fine material indicates that the bulk, or a very high percentage of the gold is recovered during the first table run.

The rates of jiggling and force of air are regulated readily by gauges. The table and blower are suspended on a steel rack which has adjustable legs on the lower end. The muck flow through the feeders is controlled by damper-like gates (one to each of the 3 sections) which can be set at any rate of feed desired by a curved slot and a bolt. The machine is run by an electric motor. Electricity is furnished by a generator driven by an R.D. 9 caterpillar motor. This generator furnishes power for the entire

^{To} Applinger Placer (continued)

plant. The dry separation machine is said to be capable of treating 8 to 9 tons of screen concentrates per hour. The concentration ratio from gravel to minus 1/8 inch screenings varies greatly from 40 to 50 to 1. The gravels range in size from fine dirt to boulders of an eight inch diameter.

Some 5 thousand tons of gravel have been stockpiled in a new cut from one of the older gravel channels. The channel placers under the caliche layer are reddish, finer in size and the boulders are rounder than the material in the late gravels which overlie the intervening caliche. The later reseggregated gravels are very low grade (0.50 to \$0.75 per yard), whereas the older gravels from preliminary tests, appear to range from \$2.50 to \$10.00 per yard depending upon the proximity to bedrock. Zinkl has a powerful vacuum machine with which he will try to pull the fine placer material out from between the lumps of bedrock. This will be tried and the "plucked" material run. The top foot or two of bedrock will then be cut clear from the same area and tested to see how effective the vacuum machine is with regard to the coarser gold.

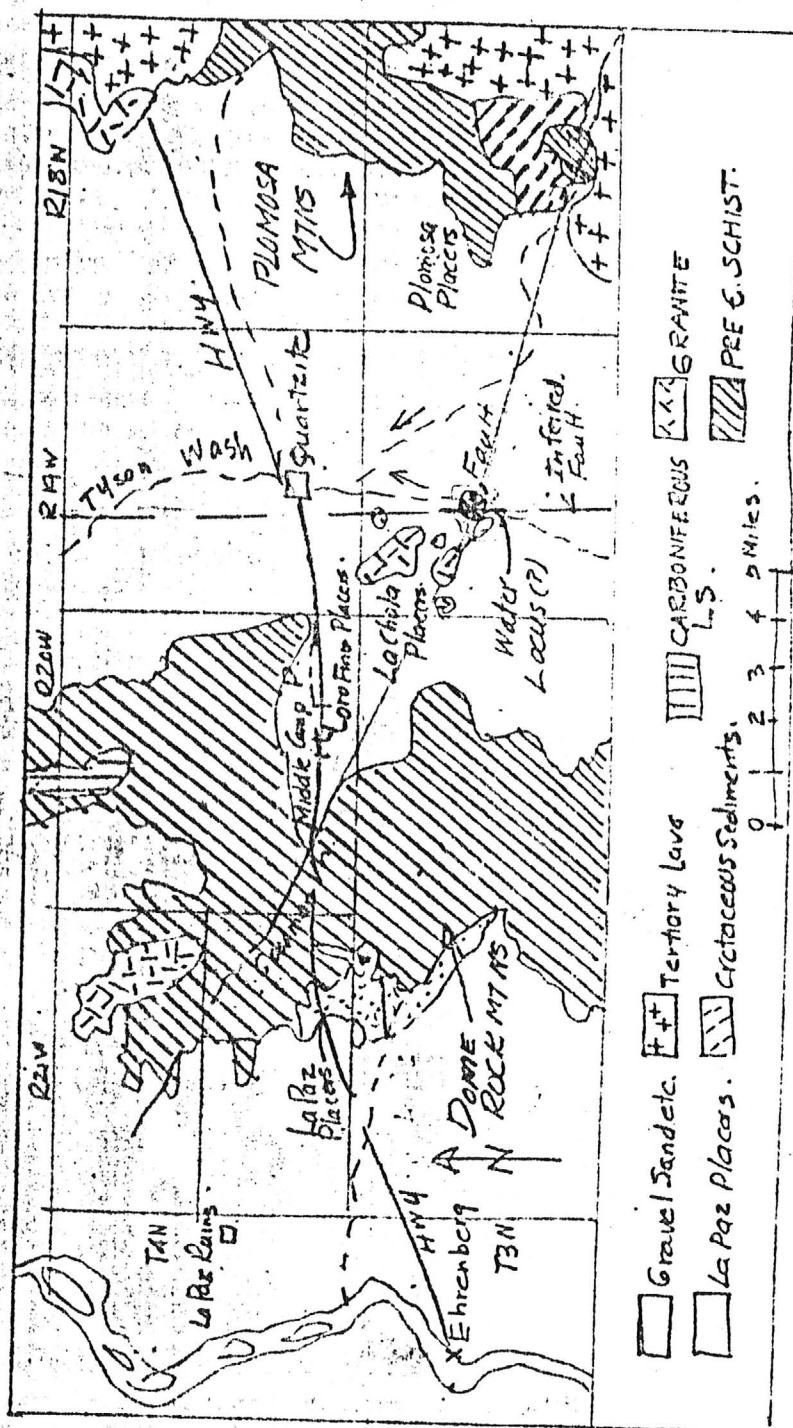
The accompanying hypothetical sketch diagram shows how the placers are segregated and the effect of a diorite dike^(a) on their distribution. Apparently the dike^(a) caused the main stream to overflow both to the right and the left into older somewhat transverse channels. This process was interrupted by a period of stability during which a 3 to 8 foot caliche layer was formed. Later the main channel broke through the dike, but not until many feet of post-caliche gravels were deposited on top of and overlapping the earlier gravels and caliche. At the Sanders placer nearly 100 feet of these later gravels overlie the earlier caliche whereas on the two sides only 10 to 20 feet of later gravels overlie the caliche. This indicates theoretically at least that the dike^(a) may have stood up prominently at one stage in the process. The blue line outlines an area probably created by the dike which is practically unexplored and which may be quite deep. However, the older placers could conceivably be thicker within this area particularly against the dike and in the eddy areas in the widest portions against the ridges. The Sanders placer is quite good in between the two shafts and is said to run up to \$15.00 per yard near bedrock but is relatively narrow. The later gravels contain lead nuggets ranging from BB size up to 2 inches in diameter. According to Al Applington most of these were recovered from the later gravel near the caliche. This, if true, would varify the conclusion, by some, that the lead-silver mineralization could have occurred at a later date than the gold-copper-pyrite mineralization in this particular area. Further over in the middle Plomosa (Coiner-Splicer claims) this also seems to be true.

Zinkl stated that if the present operation is successful, they will trench across the blue area, to bedrock and see what depth would be necessary to mine the older gravels in that place. If this theory of formation and control of the placers proves true, a considerably larger potential placer reserve could be present.

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Date 7-10-57

Engineer Lewis A Smith



Jackpot Placer Claims, La Paz County, Arizona

The property referred to as the Jackpot claims actually consists of three groups of placer claims: Jackpot and Jackpot Extension, Bonus and Ada K. These claims lie in portions of sections 4, 5 and 9, T. 3 N., R. 18 W. approximately 7 1/2 miles by county-maintained roads to the southeast of Quartzsite on the western flank of the Plumosa Mountains. (See attached sketch map of claims.)

The Jackpot claims are currently under lease for 15 years. However, the operator is not in production and, according to Dan Patch, is in some financial difficulty, so that Patch expects the lease to be forfeited within the near future.

Gravels on the claims are composed principally of greenschist with minor granite and volcanic rock fragments. These gravels are locally cemented by caliche. The source of the rock fragments, as well as, the gold is believed to be the greenschists to the east in the Plumosa Mountains. Thin, discontinuous quartz veins are locally abundant within the greenschists and the placer gold is believed to have been derived from these veins. Gold within the placer is coarser and more angular nearer the mountains and bedrock.

Recent drilling of the placer gravels has been inconclusive with respect to grade. This is probably due to the use of rotary drills rather than placer drills. Recovery of gold from bulk samples by gravity concentration at various times in the past indicates that much of the gravel contains from \$5.00 to 14.00 in gold (\$400 per ounce) per cubic yard. No accurate records of the gravel thickness as derived from drilling or sample shafts exists and so a figure for total yardage available at a known grade does not exist. The extent of the gold-bearing gravels over several hundred acres and thicknesses in excess of 10-15 feet as exposed in the walls of washes indicates that substantial amounts of gravel may be present. It seems reasonable that as much as 5 million cubic yards of gold-bearing gravel containing a minimum of 60,000 ounces of gold may exist on the Jackpot claims.

*This was compiled by
Richard Thomassen 1970
Geologist From
Carson City, NV.
C.H.P.*

THE JACKPOT GROUP

PROPERTY #1

ARIZONA GOLD MINES, INC.

ARIZONA GOLD MINES

And Other Minerals

La Paz County
(AZ MILS 191)

DAN AND ANGIE PATCH
Owners

~~XXXXXXXXXXXX~~

Phone/FAX# (602)483 8367

~~XXXXXXXXXXXX~~

~~XXXXXXXXXXXX ARIZONA 85246~~

6850 N. 86th St.
Scottsdale, Az 85250

ARIZONA GOLD MINES, INC.
an Arizona S Corporation

Arizona Gold Mines, Inc. owns the following assets in Arizona:

Property #1

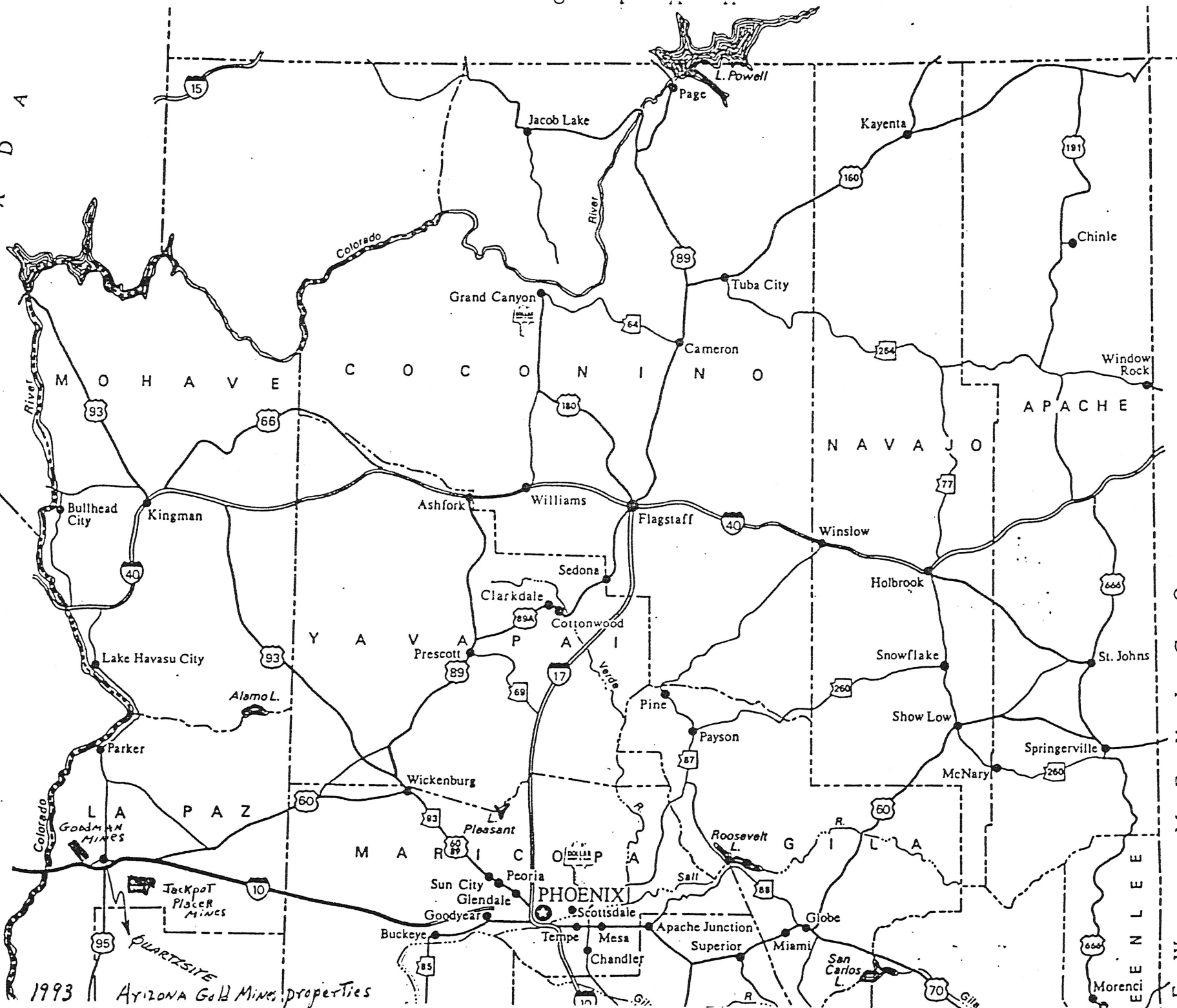
The Jackpot and Ada K. placer mining claims consist of 3 claims as follows: Jackpot 140 acre claim, Jackpot Extension 20 acres and the Ada K. 20 acres for a total of 180 acres. Arizona Bureau of Geology & Mineral Technology Bulletin #168 pages 29-32 describe these placer claims.

Water has been developed in 2 wells .8 of a mile from the center of these claims and is piped to 3 concrete steel reinforced, ground level holding ponds on the claims which hold approximately 150,000 gallons and are kept full at all times. A full time watchman is employed at the well sites. Diesel generators operate the wells and camp.

Gold exists over much of the claims and a well known geologist estimates that there may be as much as 60,000 ounces of gold on these claims which at \$370 per ounce comes to \$22,200,000. A good gravity separation placer plant run by knowledgeable people will produce gold at once from this property.

Access to this property is by a good year around road maintained by La Paz County and the property is 7 1/2 miles southeast of Quartzsite, Arizona a small town located on Interstate 10, 125 miles West of Phoenix, Arizona.

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NEW MEXICO

PLC SA PLACER (F) LA P42
ARISTA RESOURCES INC.

On NYSE
Trading Symbol: "ART:V"
↓
Mine Files

"IMPORTANT NEWS RELEASE"

Directors:

Fleming Robert J. Martin Richard T. Gutknecht Leroy H. Martin Walter C.

Date: March 11, 1995

Mr. Walter Martin reports:

Arizona Gold Mines Inc.

The Company has acquired, subject to regulatory approval, a one hundred percent (100%) interest in a privately owned Arizona corporation, **Arizona Gold Mines Inc.**, This corporation owns two (2) gold mining properties in the southwest corner of Arizona, located approximately 150 miles west of Phoenix, Arizona. In addition to the two (2) gold mining properties, the acquisition also includes physical assets such as; several generators, 5 operating water wells with submersible pumps, water storage tanks and connecting lines, Caterpillar D-9 bulldozer with barrel rippers, Caterpillar grader, etc.

The Goodman Gold Mine

The Goodman claim group consists of 24 gold mining claims for a total of 480 acres, in the La Paz Mining District, and in the central part of the Dome Rock Mountains north of Interstate Highway 10 and east of the Town of Quartzsite. The La Paz Mining District was the first district to be formed in the Territory of Arizona somewhere around 1862.

The topography consists of sharply incised, alluvium-filled valleys separated by steep-sloped ridges. The area is mostly made up of Middle Camp quartz monzonite with local areas of metavolcanics and metasediments. Mineralization of economic significance occurs in two modes. The development on this claim group occurs within the Goodman shear zone and in adjacent quartz veins and lenses containing limonite after pyrite with visible gold.

On Jodi Hill west of the Goodman Mine, a westerly-trending and northerly-dipping zone of fracturing and carbonate alteration within quartz monzonite host quartz veins which contain limonite pseudomorphs after pyrite with visible gold. This particular zone is 50 to 75 feet thick, and perhaps 1,000 feet long before it disappears under talus and colluvium.

In 1988, a geological engineer estimated by drilling and sampling, he had found 1,600,000 tons of gold bearing rock on part of the Goodman shear zone. Average production in La Paz County is estimated at .33 ounces per ton Au with most of it coming from the Goodman Mine. Visible gold is evident along a 2 mile shear zone and in several other places over a wide area on the Goodman claims.

History tells of considerable gold production from this area and the discovery of gold nuggets up to several ounces in size. The Goodman claim group is estimated to host greater than 80,000 ounces of gold.

Arizona Cold Mines has successfully drilled 3 water wells on the property and all are functional. A full time watchman is employed at the Goodman Mine for security purposes and to maintain the generators, wells and heavy duty equipment located at the site.

The Jackpot & Ada K Gold Mine

The Jackpot & Ada K Gold Mine consists of three (3) placer gold mineral claims totalling 180 acres, in the Plomosa Mining District, Yuma County and on the western flank of the Plomosa Mountains. The claims are composed principally of greenschist with minor granite and volcanic rock fragments. A reputable geologist estimates there are 5,000,000 cubic yards of gold bearing gravel containing a minimum of 60,000 ounces of gold on this property. Gold exists over much of the claims in many cases it is found in thicknesses in excess of 10-15 feet.

Access to this mining property, which is about 7 1/2 miles southeast of the Town of Quartzsite, Arizona on Interstate 10, is by a good year round road maintained by La Paz County.

Water is available from 2 wells located near the centre of the claims and it is pumped to ground level holding ponds, which hold approximately 150,000 gallons of water. A full time watchman is employed at the well site for security and equipment maintenance, diesel generators are used to operate the wells and camp.

ARISTA RESOURCES INC.



Walter C. Martin,
President/Director

The Vancouver Stock Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of the information set out herein.

ARISTA RESOURCES INC.

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RECONNAISSANCE REPORT
OF THE
PLOMOSA PLACER MINING DISTRICT

There is no real history of the original discovery of the Plomosa Placers, but we do have records of the La Paz Placers having been worked as early as 1862.

This report is primarily concerned with the numerous placer mines located in Scaddan Wash, Smith Canyon, Plomosa Canyon, Colorado Canyon and Plomisita Canyon, most of which is contained in Sections 28, 33 and 34; Township 4 North; Range 18 West and Sections 3, 4, 5, 8, and 9; Township 3 North, Range 18 West.

HISTORY OF MINING.

In January 1862 Captain Pauline Weaver found the Indians along the Colorado River had gold nuggets to trade and in numerous prospecting trips with the Indians found that the La Paz, Trigo and the Farrar Placers had been extensively worked by people the Indians would not discuss.

By 1866 the La Paz diggings had extended around the Dome Rock Mountains into Goodman Arroyo, Arroyo La Paz, Farrar Gulch and over the ridge into the Middle Camp and southward into the Oro Fino and La Cholla Placers.

In 1873 the Government extended the Colorado River Indian Resevation southward. Another extension south was granted

in 1876, which included most of the La Paz Placers. This greatly restricted mining and the La Paz Placers were practically deserted with most of the mining moving eastward to the Plomosa Mountains. Here again the placer miners found that an earlier people had mined these Plomosa Placers having worked most of the shallow ground where the bed rock was easily reached. By 1878 the Plomosa Placer, New York Placer (now called the Smith Wash) and the Plomosita Placers were being worked. These placers extend southward along the western slope of the Plomosa Mountains and west of Scaddan Peak and Elephant Back Peaks.

The gold was recovered entirely by dry washing in gold pans or wooden bowls called "bateas". Picks and shovels were used to break up and handle the gold bearing material, and then it was processed for dry washing by using steel bars 3 or 4 feet long as pestles beating the rock in mortars. With such crude methods the miners were only able to recover the coarser gold and they threw away all the lead and iron that contained fine gold, as this interfered with their dry washing. It is estimated that over three million dollars worth of gold was recovered in the years 1868 to 1908.

The gold nuggets recovered ranged in value from five cents to ten dollars and slugs of gold contained in the bed rock crevices were worth \$20.00 to \$40.00 and they were not uncommon. Juan Farrar found the largest piece or nugget

which was valued at over \$1100.00. With the introduction of the dry washing machine the average hard working miner was able to make over \$100.00 per day. (Gold being \$20.40 per ounce at that time.)

Since the introduction of the dry washer there have been many types constructed. None of them with an efficiency of over 60 to 70%. Some of them had a capacity of 7 to 8 yards per day, with the Bellows type offering the best recovery as the pulsation of the bellows tends to keep the placer material in an up and down flowing motion. The heavier particles dropped out of this undulation flow and was captured by the riffles. All of the fine gold is lost as the desert ground usually contains too much moisture to release it.

GEOGRAPHY.

The topography of southwestern Arizona is characterized by small detached, generally northward-trending mountain ranges separated by broad aggraded desert plains. Quartzsite lies in the broad basin of Tyson Wash at the northern end of La Posa plain, in southwestern Arizona, between the Plomosa Mountains on the east and the Dome Rock Mountains on the west, at an elevation of about 850 feet. The distance between the Plomosa and Dome Rock Mountains at the narrowest part of the plain is probably not less than 10 miles. Quartzsite is the west-central part of Yuma County

and is reached by a modern two lane freeway. A modern paved highway leads northward to Parker on the Colorado River and southward to Yuma, the County seat of Yuma County.

Most of the mountains in this region attain elevations not exceeding 2,000 feet above the surrounding desert. Farrar Peak, 2,900 feet high, is the highest elevation near Quartzsite. The two small outlying ridges north of Tyson Wash rise not more than 800 feet above the surrounding bench lands, but the average relief is less than 500 feet. Gravel and wash covered bench lands slope gently westward from Plomosa Mountains to Tyson Wash.

Many shallow Arroyos drain west to Tyson Wash on the west flank of the Plomosa Mountains, but none of them carry surface waters, Scaddan, Smith, Plomosa, Colorado, Plomosita Arroyos are the most prominent. Tyson Wash carries an underground flow at Quartzsite, but it is questionable that there is enough water here to supply the rapidly expanding townsite of Quartzsite. It is this writer's opinion that if water should be piped in from the east to the Plomosa Placer that would have sufficient water, another townsite could be started between Scaddan and Plosoma Washes.

The climate of this region is extremely arid. The mean annual precipitation being four to five inches. The mean annual temperature for a period of 12 years is reported to

have been 70.9° Fahrenheit. The summers are extremely hot and work in the open almost impossible, but the winters are delightful and attracts many visitors. Increasing numbers of these visitors are leaving their house trailers to return to in the winter months.

A carefully planned trailer park that would have the necessary water for trees, lawns, sewage etc. is needed in this area.

GEOLOGY.

The general geology of the Plomosa Mountains is igneous and sedimentary rocks in complex association, and they range from Cambrian schists and gneisses to tertiary or quaternary volcanic rocks. The placers specifically examined in the Plomosa Mountains here referred to are composed of intrusive igneous rock, some of which is schistose structure and others of holocrystalline granite texture. The age of these rocks are difficult to determine from the geologic evidence nearby, although the schist is believed to be of pre-cambrian age and the granite much younger, probably mesozoic age. The rocks of the sedimentary origin range from fine grain silver-white sericite schists to coarse grain biotite schist with interbedded thin marble beds. Granite gneisses, amphibolite schists, quartz-epidote schists, and the granite comprise the larger igneous masses in the lower ridges. The lava flows of tertiary quaternary age occur throughout the Plomosa

Mountain Range, a large part of which has been eroded away where large faults and canyons occur along the western slopes of the Plomosa Mountains.

There is a greenish-gray to black schistose porphyritic rock which comprises the country rock in the vicinity of the Plomosa Placers. The rock is composed of quartz, orthoclase, and altered feldspars, some of calcic composition, more or less enclosed in an aggregate of epidote, sericite, chlorite, hornblende and calcite. Locally quartz magnetite together with hematite and lead are an important constituent, and it is this writer's opinion they are the source of the placer gold found in the Plomosa Placers. Source rocks of the Plomosa Placers are quartz stringers, quartz monzonite, pegmatite, aplite, diorite, granodiorite, and metasedimentaries and also from the overlying tertiary-quaternary flows.

AREAS OF GOLD-BEARING GRAVEL.

In the Plomosa district the principal gulches or Arroyos containing iron, lead, gold and silver are the Plomosa, Colorado, and Plomosita with the Colorado and Plomosa being the main contributors of the lead which contain high grade gold. These three Arroyos contain the richest and most productive placers of the district. Much evidence is found of former work long buried by summer rainfall and flood. The thickness of the gold bearing gravels is variable ranging from a few feet along the mountain slopes and shallow washes to an unknown depth in Plomosa gulch. At the bottom or


relating to location, origin, and use of black sand minerals; this work has been part of a continuing program in both geology and metallurgy. Among the interested groups are the U.S. Geological Survey, U.S. Bureau of Mines, and several mining firms. Because the minerals commonly associated with gold placers are some of the heaviest elements known they are always recovered with the gold in any type of gravity separation, and the prospectors of the 1860's were continually aggravated by the black sand minerals which clogged his sluice boxes and made the extraction of gold dust very difficult. It was not until recent years that the recovery of the rare metals and minerals were possible from black sands. Not all these minerals are black but because they are predominately dark the name black sands has become common to such concentrates.

The black sands of the Plomosa Placers in the area where this writer has sampled have averaged from 45 to 90 pounds per ton of gravel screened and dry washed. Recently the writer prepared a sample as follows: Three cubic feet of bank run material was taken from nine separate places giving one cubic yard of sample. This cubic yard of material was screened through a 5/8 screen, the minus 5/8 material mixed and run through a dry washer giving a concentrate of 90 pounds. This concentrate was assayed by Silver State Minerals Testing Laboratory in Las Vegas and ran 43.2 ounces of

panned more free gold, lead and black sands than the samples run in the bottom of the washes with the dry washer. There will be over one hundred fifty million yards of workable gravel in Sections 32, 33, 34, 3, 4, 5, 8 and the north half of Section 9, (see enclosed map) if all of this ground can be staked or leased immediately.

With the present acquisition of the Mitchell 80, the south fork 60 acres and the claims available for immediate staking there will be approximately 12 million yards of placer material.

For the time being the placer materials should be screened to minus 5/8 and hauled to water where it should be run over a wet jig and tables. After sufficient yardage has been produced and run, establishing a good cash flow, then serious consideration should be given to the purchase of a large heavy media separator, jigs and tables and the installation of a pipe line bringing water from the lower Bouse Valley area.

by 
Ralph C. Campbell
2116 North Vermont Avenue
Los Angeles, California 90027

Tele No: 213 661 3334

MEMO

APPLINGTON PLACER

Quartzsite, Arizona

Sept. 1960

The Applington Placer ground (south area) has been trenched in several places by bulldozer and other cuts, and there are numerous pits around the bottom of which mining was done. One large cut was made last year (1960) to expose the lower placer. This was reported by the parties who did the work, to have uncovered about 6000 yards of placer ground of which 1000 yards was run through a test plant. Thus about 5000 yards can be considered to be stockpile.

The placer area, in vertical section shows three layers or zones. The lower or richer zone, occupies older drainage channels which are somewhat transverse to the more recent drainage pattern. This is capped by several feet of caliche impregnated ground. This contains some gold particularly in the lower portion. The caliche probably represents a static, or stable period in the erosion cycle. The upper or more recent gravels reported to contain from 50 cents to \$1.00 in gold, lie on top of the caliche. These cover the better placer ground to a depth of 10 to 18 feet.

The pilot plant consisted of a hopper capped by a 5 inch grizzly. The hopper material was then sent to a $3/4$ " trommel. The upper end part of the trommel is enclosed. The material was thrown against the walls so as to break any caliche or clay from the coarser material. The trommel concentrate was conveyed to a hopper. The trommel was 8 feet long and 2 feet in diameter.

The $3/4$ " material was passed through a shaking screen unit (composed of two screens). The upper screen discarded all material larger than $3/8$ of an inch, while the second screen discarded all material larger than $1/8$ of an inch. The latter discard was stockpiled for further working.

The minus $1/8$ inch material was delivered to a hopper which discharged to a screw-conveyor equipped with infrared drying machines. These removed most of the moisture which at the time was reported to be around 2 percent. The dried material was then routed to the dry concentrating feeder hopper for a Clint machine. The Clint machine consists of a table which is covered with porous corded cloth and is divided into rifle sections by $1/4$ inch copper wires. A blower is placed below the table and serves to blow or "bump" the concentrate upward. The riffles are separated by $1/16$ inch steel ribs into 3 equal divisions in the line

of flow. Like nearly all dry machines, static electricity is a factor. This may be introduced by machine or is generated by friction between the material particles. An eccentric causes a jig motion which propels the particles down the table. The pitch of the table can be varied by adjusters according to the muck character. The result is that the muck "jumps" down the table. Theoretically the gold should be extracted near the upper end of the table. The table top can be removed and replaced by other tops with different sized riffles or with different cloth covers. The rates of jigging and various forces of air are regulated by gauges. Damper-like gates regulate the rate of flow of the muck to the table, each division having a separate feeder. The machine is run by electric motor. A generator attached to an engine furnished the power for the plant.

The plant was believed to have a capacity of 8-9 tons per hour. The concentration ratio was reported to be around 40 to 50 to 1. The placer material varied from dirt up to 8 inches in size.

The operators claim that on a pilot scale test run the grade of the material fed to the machine after suffering some dilution from stripping operation, was \$1.75 per yd. They state further that preliminary sampling of the placer ground indicated about \$2.00 per yd. with bedrock values very much higher in places. Stripping ratio is estimated at 4:1 and the operators believe that costs on a large plant would be under 50¢ per yard exclusive of stripping cost.

The difficulties encountered included:

- (1) The fines (dust) tended to clutter up the table and should be removed first, either by differential screening or cyclones.
- (2) Magnetite (2%) should be removed prior to tabling since it tends to carry coarse gold along with it.
- (3) Leakage of air around the fan would easily be eliminated by a closely fitted box.
- (4) The trommel at first was rotated too rapidly, and was eventually slowed. The trommel did a good job of cleaning the pebbles of adhering material.

The bottom 2-5 feet, not mined, would be notably higher in grade but would be less in volume per section. The other pit mines in the same area near the bedrock portion of the placers are reported to run \$5.00 up to as much as \$15 in select places. With improvements in the milling and increased tonnage rates it was concluded that material as low as \$1.25 could be profitably handled. This area doubtless has other placer accumulations which are similar. A large area of untested ground lies between the 80 acre south holding and the north holding of Applington. Here a dike or hard rib evidently dammed the stream flow and piled it up. The channel depth to good placer here most likely would be considerably deeper. The area is large, however, and is egg-shaped. The eddy zones on both sides might be shallower. The placers on

both sides of this central pocket may have resulted from overflowing of the material through ridge saddles. This may have caused the direction divergence between the newer and older placer beds. Below the dike or hard rib the depth to bedrock is greater than in the two laterally developed placers. The main pocket is partly controlled by two or more parties.

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MINING AND ENGINEERING WORLD

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320 Market St.

No. 1. Vol. 45.

CHICAGO

July 1, 1916.



PANORAMIC VIEW OF THE PLOMOSA PLACER PROPERTIES, PLOMOSA, ARIZONA.

Successful Dry Placer Operations at Plomosa, Arizona

By WILLIAM L. PLUMMER.

Since 1865 the dry placer gold fields adjacent to Quartzsite, Yuma county, Arizona, have been worked with more or less profit, on a small scale, through the medium of native dry washer, pick, drill and "muck-stick." The highest values in this district are found in a natural cement which lies in blanket form, from 2 to 20 ft. in thickness, above the bedrock. From the grass roots to this cement the formation consists of a semi-cemented gravel rich in gold when treated on a large scale, but not of sufficient value to tempt the dry washer, who sinks direct to bedrock, and works only about 4 ft. of the richest cement. Half a yard of gravel a day mined, hoisted from the shaft, hammered by hand to liberate gold from cement, and run through the dry washer, is a high average for one man; and as earnings of from \$10 to \$20 a day were of common occurrence in former years, it is not difficult to realize the richness of these placers. Furthermore, the early workers could not mine with any degree of profit to a depth of more than 20 ft.; for this reason there are vast areas that have not given up any of their virgin value.

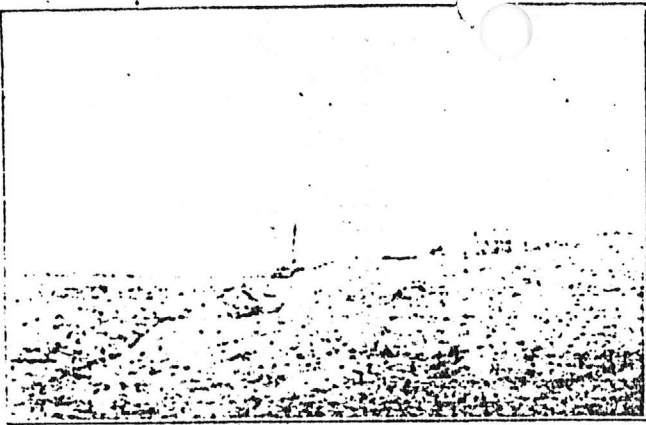
Chief among the fields of the Quartzsite district are the Plomosa, La Paz, Middle Camp, Ora Fino and La Cholla.

It is said that between 1865 and early in the seven-

ties over \$7,000,000 in gold passed through La Paz alone, then the Yuma county seat, supporting a population of 4000 placer miners. The old inhabitants say the Plomosa field sent out \$2,000,000. Fabulous sums were gleaned from the gravel by hand, and it was commonly known that great sums still remained in the ground. In spite of this fact no practical means of liberating the gold from gravel on a commercial scale had been discovered until within the last 2 years.

The two essentials to an efficient plan are—First: A mill to save the gold-bearing cement and gravel and reject the non-bearing country rock. Second: A system of dry concentration of great capacity.

A mill embodying the necessary principles was invented by Mitts Quenner, a blacksmith, and used with a battery of native dry-washers in placers at El Boluda, Mexico. Its essentials are a cylindrical drum made up of a series of iron bars and gratings, inside of which revolves a shaft, the same being hung with a number of chain hammers in spiral form. The shafting revolves at about 400 rpm. in one direction, while the drum travels at a much lower speed in the opposite direction. Cement and gravel, fed in at one end of the mill is quickly disintegrated, the fines dropping through the gratings to a bin beneath, while the rock and boulders are thrown out of the opposite end of

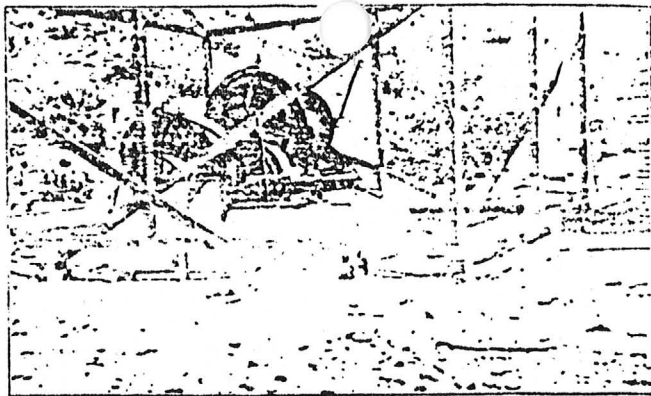


PLOMOSA MILL AND POWER PLANT.

the mill after having been thoroughly scoured by the action of the hammers.

The Stebbins Dry Concentrator.

The Stebbins dry concentrator has solved the problem of dry concentration. Its makers guarantee a saving of 95% of all free gold. These tables work on practically the same principle as the wet table; however, instead of using water to lift the gravel, and

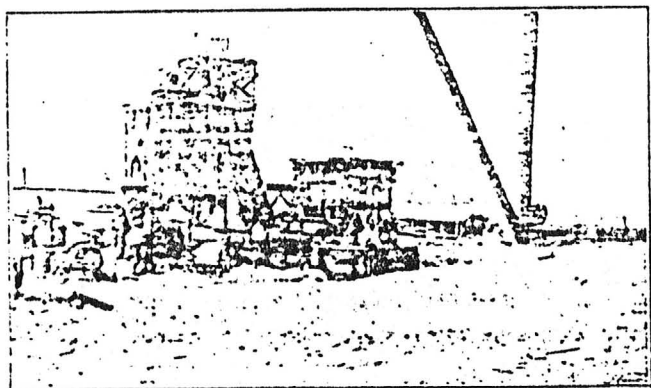


60-HP. LIDGERWOOD HOIST FOR SCRAPER LINE.

1 to 12 ft. long, with a capacity of 40 tons an hour, down to machines operated by hand, with a 2-ft. deck.

In the Plomosa district a small experimental plant composed of a Quenner mill and Stebbins concentrator was installed in the fall of 1915; and although this plant did not have the excavating and conveying equipment necessary to operate at a profit, it demonstrated the efficiency of both mill and concentrator.

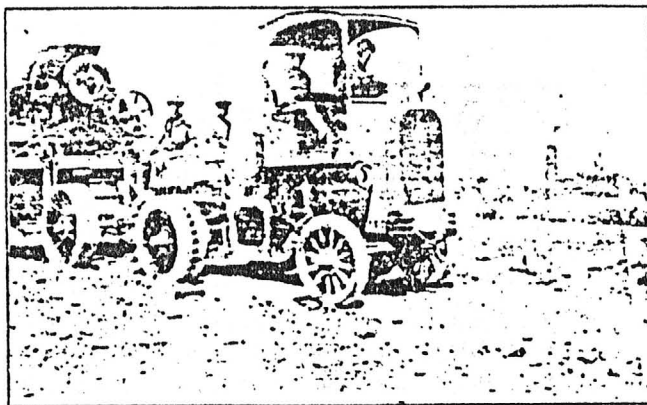
Plomosa is the scene of great activity at present.



ORIGINAL EXPERIMENTAL PLANT.

allow the gold to settle behind the riffles, air is used, it being introduced through small slits in the table deck. The gold and middlings travel along the top riffle to a receptacle, the tailings dropping off the lower side of the table.

Stebbins machines are made in sizes ranging from

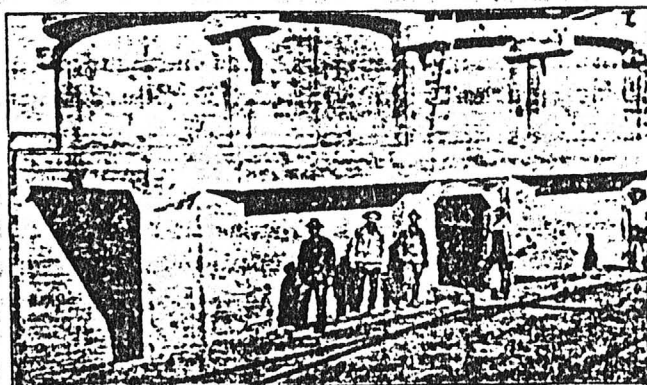


HAULING MILL EQUIPMENT BY TRACTOR.

Here the Yuma Con. Co. is installing a 2000 yd. plant and the Plomosa Placer Properties has nearly completed a plant with a capacity of 1000 yds. The Plomosa field averages 30 ft. from surface to bedrock, and, from prospect holes that have been sunk, engineers estimate the ground will average \$1 a yard in



125-HP. LIDGERWOOD HOIST BEING INSTALLED.



CORRUGATED IRO COOLING TANKS.