



## **CONTACT INFORMATION**

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

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PRINTED: 12/17/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: CALIZONA PLACER CHANNEL

ALTERNATE NAMES:

MOHAVE COUNTY MILS NUMBER: 707

LOCATION: TOWNSHIP 14 N RANGE 19 W SECTION 20 QUARTER C  
LATITUDE: N 34DEG 32MIN 20SEC LONGITUDE: W 114DEG 16MIN 20SEC  
TOPO MAP NAME: LAKE HAVASU CITY N - 7.5 MIN

CURRENT STATUS: UNKNOWN

COMMODITY:  
GOLD PLACER

BIBLIOGRAPHY:  
ADMMR CALIZONA PLACER CHANNEL FILE  
ALSO IN SEC. 29

Arizona Department of Mines and Mineral Resources  
INFORMATION FROM MINE CARDS IN MUSEUM

ARIZONA

MOHAVE COUNTY

MM #L995 Gold- Placer, Native

Red Hills Dist.

Calizona Placer Mine

MILS # 707

O- AKA's

Calizona Placer Channel (file)

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Mineral Building, Fairgrounds

Phoenix, Arizona

- 1. Information from: Bill Poe, President, Rampo Incorporated  
Address: 3658 Tarpon Drive, Lake Havasu City, AZ. 86403
- 2. Mine: Calizona Placer Channel 3. No. of Claims - Patented 420 Acres  
Unpatented 6+ State Permits
- 4. Location: \_\_\_\_\_
- 5. Sec. 20 & 29 Tp. T14N Range R19W 6. Mining District Havasus Lake Dist.  
Mohave County
- 7. Owner: Bill Poe
- 8. Address: 3658 Tarpon Drive, Lake Havasu City, Arizona 86403
- 9. Operating Co.: (Planned) Panagold Placers Limited, Vancouver, B.C.
- 10. Address: \_\_\_\_\_
- 11. President: \_\_\_\_\_ 12. Gen. Mgr.: \_\_\_\_\_
- 13. Principal Metals: Gold 14. No. Employed: \_\_\_\_\_
- 15. Mill, Type & Capacity: (Planned) Wet gravity 2000-3000 yards per day
- 16. Present Operations: (a) Down  (b) Assessment work  (c) Exploration   
(d) Production  (e) Rate \_\_\_\_\_ tpd.
- 17. New Work Planned: Development

18. Misc. Notes: Mr. Poe explained that he leased the property to Zycon Development of Vancouver B.C. Panagold is to be the operator. The initial water source is to be Lake Havasu City waste water treatment plant effluent for a 2,000-3,000 yard per day initial processing plant. Additional water if needed is to come from wells and a pipeline. Mr. Poe has leased out the property and receives a rental fee and a royalty.

Date: Dec. 7, 1983

Ken A. Phillips  
(Signature)

*Ken A. Phillips*  
(Field Engineer)

**RAMPO, INC.**  
: P. O. BOX 2498  
: WICKENBURG, AZ 85358

THE CALIZONA PLACER CHANNEL

Chemehuevis Mountains

Mohave County, Arizona

(SEC 20&29, T14N 19W)

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**The Calizona Placers, Arizona.**

BY EDW. HEDBURG.

The Calizona placer ground is situated 17 miles south of Mellen, a station on the Santa Fe railroad, on the Colorado river, Arizona side, and is about 30 miles from the town of Needles in California, the nearest shipping point. The river is navigable at all times of the year, making it convenient for transportation of supplies.

It is not an ordinary gravel placer, but rather brecciated bed of auriferous conglomerate, where fragments are coated, and where the interstices are filled with a cementing line, easily disintegrated by the use of water. This conglomerate occupies a channel one mile wide, and three to five miles in length, by 10 to 30 ft. in depth. The bedrock appears to be a porphyritic lava, and comparatively smooth on its surface. The conglomerate consists largely of free gold quartz, porphyritic debris and volcanic material. There are very few boulders weighing more than 50 lbs. In addition to the free gold carried in the quartz, placer gold

instance two miners took out \$13,000 in one day."

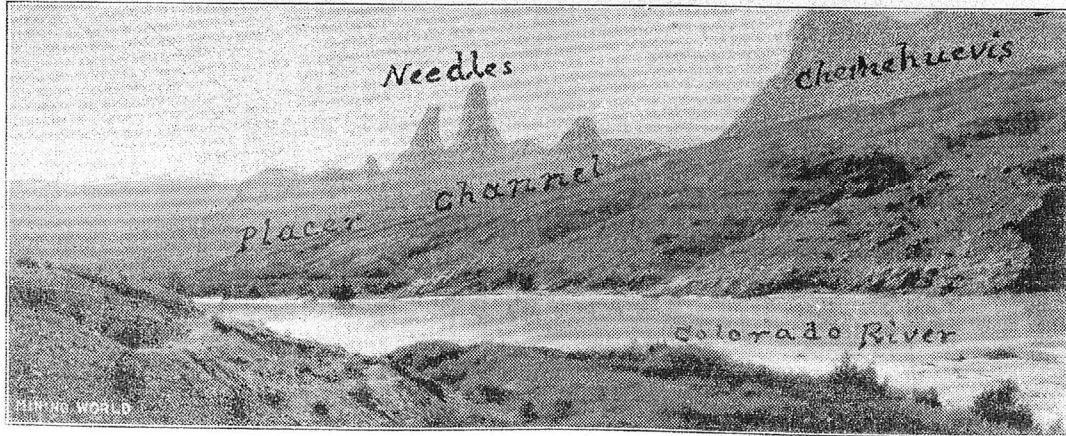
The 10 shafts were sampled and 120 assays made, going from \$1.60 to \$30. In a mill test the returns were \$3.20 for the coarse and \$4.60 for the fine. The gold is flat and shows little erosion. In this deposit the largest individual piece of gold weighed \$20. To check this sampling and assays the writer was employed to resample and endeavor to arrive at an average value as near as possible, with the result that \$2 per cu. yd. was the working average.

The deposit will yield to the ordinary hydraulic process and abundance of water can be had at the river, necessitating pumping about 5 miles.

**Trade With Japan.**

In iron and steel manufactures Great Britain, Germany and Belgium are active competitors of the United States, and in many cases supply greater quantities than does this country. Under the general head of "pigs, ingots, slabs,

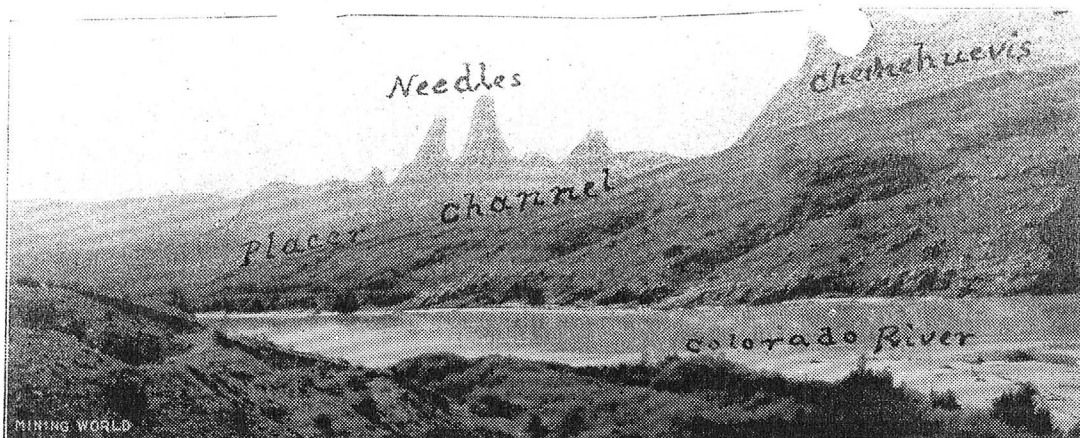
CONTINUED



The Calizona Placer Ground.

MENT JING

2



The Calizona Placer Ground.

abounds in the gravel, and in the lime as well. The placer channel has its source in the Chemehuevis mountain, in a crescent shaped basin, among a number of low porphyry hills, containing many narrow stringers of gold veins, which is no doubt the source from whence the gold came to the placers below. These hills are capped in most instances with a covering of cemented gravel of from 5 to 10 ft. thick, covering the red porphyry, the latter assaying \$1.60 per ton in gold. The theory of the existence of gold-bearing gravel on top of these hills is simple. From all appearances the hills raised up through the former level cement bed, and thus shattered the same from the hillsides, leaving remaining portions on top of the flat ridges. This broken mass of cement, together with masses of eroded material from the hills of the Chemehuevis and Needles mountains (see illustration) have flowed down in a channel approximately one mile wide and six miles down to the river.

It is in this channel that a mining company has sunk 10 shafts, each 20 ft. deep, to test the gravel bed. In the early '60s the ground was worked extensively by dry washing, and an old miner, when approached on this subject, said: "There were scores of miners working upon this ground at intervals; the output of gold at times reached \$500 per day; and in one

and blooms," Great Britain in 1908 supplied 2,115,261 yen in value; Sweden, 512,774 yen; Germany, 259,344; China, 861,104; and the United States but 66,530 yen in value. In bars and rods, wire, tin plates, galvanized sheets, hoops, bands, and angle iron the United States also supplies but a small proportion of the total imports. In steel rails, however, the United States supplied, in 1908, 2,407,884 yen in value, against 2,193,132 yen in value from Germany and 384,793 yen from Great Britain. In iron and steel pipes the quantity from the United States also exceeded that from any other country. In iron nails the principal sources of supply were Germany and the United States, though the quantity from Germany was more than three times as great as from the United States. In locomotives nearly the entire importations were from the United States, the total value of locomotives imported in 1908 being 1,722,983 yen, of which 1,355,043 were from the United States. Of railway cars imported in 1908 about 750,000 yen in value were from the United States, and of electric machinery two-thirds of the total came from the United States, as was true of sewing machines and paper-making machinery.

The production of silver in Rhodesia for April amounted to 21,495 oz.

## THE CALIZONA PLACER CHANNEL

### Background and General Information

Mohave County, Arizona, has long been one of the leading gold producing counties in Arizona. The San Francisco Peaks area, in fact, has produced more lode gold than any other mining district in the entire state. Placer gold has been produced from more than thirty districts in the county.

The Calizona Placer Channel is situated on the southwest flank of the Chemehuevis Mountains, some six miles north east of Lake Havasu City. The placer district covers approximately six square miles, and was first discovered in 1857 and production has continued intermittantly to the present date. The U. S. Geological Survey estimates that total production approximates one-half million dollars, all done by primitive hand operated drywashing methods.

U. S. Geological Survey Bulletin 1355 entitled "Placer Gold Deposits of Arizona" gives some detail on the area. (Copy attached) Please note that on page 27, regarding the Calizona Channel, mention is made of a working average of \$3.40 per cubic yard on tests made in 1909. This is in reference to Hedburg's work. At that time gold was valued at \$20.67 per ounce. In terms of a gold value of \$500.00 per ounce, this would read \$81.60 per cubic yard.

Reference is made in the bibliography of the above mentioned U. S. G. S. Bulletin 1355 to Hedburg's report appearing in Mining World engineering magazine, Vol. 31, page 138, July 1909. After considerable difficulty, a copy of this report was obtained and there follow some excerpts from this report:

(P.138) "This is not the ordinary gravel placer, but rather a brecciated bed of auriferous conglomerate, where the fragments are coated, and where the interstices are filled with an adhering lime, easily disintegrated by the use of water. This conglomerate occupies a channel one mile wide, and three to five miles in length, by ten to thirty feet deep. The bedrock appears to be a porphyritic lava, and comparatively smooth on its surface. The conglomerate consists largely of free-gold quartz, porphyritic debris and volcanic material. There are very few boulders weighing more than fifty lbs. In addition to the free gold carried in the quartz, placer gold abounds in the gravel, and in the lime as well."

"The placer channel has its source in the Chemehuevis mountains, in a crescent shaped basin, among a number of low porphyry hills, containing many narrow stringers



of gold veins, which is no doubt the source from whence the gold came to the placers below. These hills are capped in most instances with a covering of cemented gravel of from five to ten feet thick, covering the red porphyry, the latter assaying \$1.60 per ton in gold. The theory of the existence of gold bearing gravel on top of these hills is simple. From all appearances the hills raised up through the formerly level cement bed, and thus shattered same from the hillsides, leaving remaining portions on top of the flat ridges. This broken mass of cement, together with masses of eroded material from the Chemehuevis Mountains, have flowed down toward the Colorado River in a channel approximately one mile wide and six miles long."

"It is in this channel that a mining company has sunk ten shafts, each twenty feet deep, to test the gravel bed. The ten shafts were sampled and one hundred twenty assays made, going from \$1.60 per cubic yard to \$30 per cubic yard. In a mill test the returns were \$3.40 for the coarse gold and \$4.60 for the fine gold. In this deposit the largest individual piece of gold weighed \$20.00." (Please note that all of the above valuations were based on a gold value of \$20.67 per oz. - BJH).

"To check this sampling and assays the writer was employed to resample and endeavor to arrive at an average value for the entire deposit as near as possible, with the result that \$2.00 per cubic yard was the working average." (Note - This would be \$48.00 per cubic yard based on a gold value of \$500.00 per oz. - BJH)

"This deposit will yield to the ordinary hydraulic process and an abundance of water can be had at the Colorado river, necessitating pumping about six miles".

Hedburg and seven associates staked seventeen 160 acre claims in the area. His original, handwritten location notices are on file in the archives section of the Mohave County courthouse, where they were located after a long, diligent search by the writer.

Bear in mind that at this time in Arizona it was no small matter to stake and record these claims. Arizona was a territory and Lake Havasu City did not exist. The only habitation in the area was at a landing near Pittsburg Point known as Hall's Ranch. The only means of access to the area was to first get to Needles, Calif., by means of railroad or stagecoach, and then to raft twenty miles down the river to Hall's Ranch, and then go inland by foot or on horseback for six miles.

## THE CALIZONA PLACER CHANNEL

### Abstract

The Calizona Placer Channel is situated six miles in a North-easterly direction from the center of the city of Lake Havasu, Arizona, in Mohave County. The city of Kingman, sixty miles north, is the county seat of Mohave County. Airline service to Lake Havasu is provided by Havasu Airlines, with daily service to Las Vegas and Phoenix.

The Colorado River flows through Lake Havasu City. Parker Dam, twenty miles below Lake Havasu City, backs up water for sixty miles, forming the lake for which the city is named.

The Calizona Placer Channel was first investigated and named in 1909 by Edward Hedburg, a mining engineer of excellent reputation in the early 1900's. Hedburg undertook extensive sampling, and subsequently staked, 17 one hundred sixty acre claims covering the area. A report by Hedburg pertaining to the deposit and the area appears in the July 1909 issue of Mining World engineering magazine.

In July, 1980, the writer, in collaboration with Mr. Vernon H. Perry, of Perry Mining, Wickenburg, Arizona, initiated an examination of the property, and began efforts to ascertain the mineral status.

At the time of Hedburg's work in the area (1909), Arizona was still a territory, and the land was all public domain. In the intervening years, however, the land and mineral status have changed, and mineral ownership is currently divided unequally between public domain (BLM), the State of Arizona, and the Santa Fe Railroad.

Mineral acquisition efforts by the writer and Mr. Perry commenced in December, 1980. The BLM portion was staked and recorded in compliance with existing statutes. Mineral exploration and mining permits were requested from the Arizona State Land Dept., and mineral lease negotiations were commenced with the Santa Fe Railroad.

The exact location of Hedburg's Calizona Channel was initially in doubt, because the location given in the U. S. G. S. Survey Bulletin 1355, page 26, (copy attached) being "probably located in or near secs. 26-28, T15N, R20W," is incorrect; the actual location is approximately five miles southeast of the location given.

At the time of Hedburg's work in the area, the county was unsurveyed, and as was the custom in such cases, in locating his claims, he tied the claims to the nearest prominent and well-known landmark, which was the above mentioned Hall's Ranch. Thus, after his location notices were found in the archives section of the Mohave County courthouse it was noted that his claims were located "six miles northeasterly from the Hall's Ranch on the Colorado River". Following these directions enabled us to locate the area. We have since found many of his stone monuments, as well as four of the original ten shafts mentioned in his report. The other six were probably obliterated by a major flood occurring in 1939. (1)

As mentioned in his report, it was probably Hedburg's intention to mine the deposit by hydraulic methods, which is a very efficient mode of recovery, however, hydraulic mining is now prohibited anywhere in the U. S.

It is apparent that his project never materialized, as no evidence of old workings, hydraulic or otherwise, exist in the channel. Perhaps the location was too isolated to attract capital at that time; also the valuation of \$2.00 per cubic yard was not considered extraordinary in that day and time.

In any event, it is evident that Hedburg was, for whatever reasons, unable to follow through on the project, and the Calizona Channel Placer has lain forgotten and neglected for more than seventy years.

\* \* \* \* \*

- (1) The original site of the Hall's Ranch no longer exists, and is not shown on any current maps. We are indebted to Mr. Roman Malach, Mohave County Historian, for his aid in establishing the location of the former site, and thus enabling us to get oriented.

## PROPOSED OPERATIONAL PLANS

The City of Lake Havasu has drilled several wells in the general area, the nearest one to the claims being 1/2 mile distant and 1300 feet in depth. Therefore, it is likely that a well could be drilled on the premises and water sufficient for mining purposes could be obtained. Tests and sampling have demonstrated, however, that the placer material is amenable to dry separation, with 90 - 95% recovery potential. It is proposed, therefore, that in order to avoid the costly and time-consuming process of drilling for water, that the following circuit be utilized:

- 1) The raw placer material can be loaded with a conventional front-end loader without the necessity of loosening or blasting. It should be first put through a grizzly to eliminate the larger rocks.
- 2) The material will then proceed through a three-deck sand screen, and reduced to the optimum mesh for dry tables.
- 3) The material is then passed over a bank of dry tables (Sutton, Steele & Steele or equivalent), eliminating the balance of fine detrital material and leaving a residue of concentrate containing black sand and gold.
- 4) The concentrates are then trucked periodically to a leased site on the Colorado River and treated with a table or water spiral, eliminating the black sand. Trucking distance is six miles, five of which are paved. Experimentation has indicated that it would be practical to achieve a 100 to 1 concentration ratio using dry methods in the field. Thus, 2000 lbs. of raw material would yield 20 lbs. of concentrate.

\* \* \* \* \*

No explosives, caustic or corrosive chemicals, or mercury is necessary to be used in any phase of the proposed operation.

## LAND AND MINERAL STATUS

Lake Havasu City is the newest city in Arizona. Prior to 1964, the city did not exist as such. It was founded by Mr. Robert P. McCulloch as a planned industrial and resort complex, and is the site of the McCulloch Corporation chain saw division. It is now a modern city of 15,000 residents.

As previously stated, the land and mineral ownership is divided between federal, state, Santa Fe Railroad, and private interests. Much of Hedburg's original Calizona Channel is lost to mining purposes forever because of its proximity to the city, and in the lower reaches of the channel the land has been withdrawn from mineral entry by state and federal agencies.

The attached map depicts the site of the Calizona Channel, and the lands under claim by Perry Mining.

### RESERVES

An estimate has been made of the reserves of raw placer material on lands held by Perry Mining. The estimate is placed conservatively at 25 million cubic yards. This estimate does not include reserves on the Santa Fe Railroad lands, as this lease is still pending. Execution of this lease will add an additional 5 million cubic yards to the total.

### TAXES

No taxes are paid upon unpatented mining claims held upon public domain in the State of Arizona. The same is true for mineral permits issued by the Arizona State Land Department.

### ENVIRONMENTAL IMPACT

None of the lands held by Perry Mining are in areas classified as environmental impact zones, or wilderness areas. The prevailing winds will carry any dust caused by the operation away from the city. As before stated, a Plan of Operations has been filed with and approved by the governing agencies.

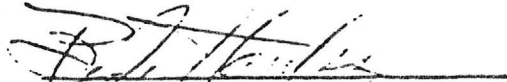
### ROAD CONSTRUCTION

No roads need to be constructed for access to the area, as existing roads are sufficient and adequate for mining purposes. Permission to use these roads has been granted by the governing agencies.

A Plan of Operations upon both BLM land and State land is mandatory, consequently a Plan was filed with both agencies, and has subsequently been approved by both agencies.

A tentative agreement on a mineral lease has been reached with Santa Fe Railroad, however as of this date the lease has not been formally executed.

At a hearing before the Arizona State Land Commissioner on April 1, 1981, the State of Arizona formally agreed to issue the requested permits, and these are now in the process of preparation.



B. J. Hanks, Geo. Consultant  
P. O. Box 1078

Lake Havasu City, Arizona 86403

April 7, 1981

PILOT PLANT

It is proposed that a pilot plant with the capacity of processing 100 cubic yards per 8 hour working day be installed, in order to demonstrate the feasibility and practicality of mining this deposit.

~~BEST ESTIMATES~~

Currently on hand:

- 1973-977 Cat track loader
- 75 KW 220V. diesel generator
- 1-4WD Scout 2 International
- 2- 1/2ton pickups
- 2- self-contained travel trailers for field office and living quarters.

Needed:

	Estimated cost
1 - 3 deck sand screen w/grizzly . . . . .	\$28,000.00
4 - Dry concentrating tables @ 3M. each . . . . .	12,000.00
1 - 5 yard dump truck . . . . .	6,000.00
5 - conveyor belts . . . . .	10,000.00
1 - Water spiral . . . . .	3,000.00
1 - Water tank truck (for field needs) . . . . .	8,500.00
Misc. hook-up materials . . . . .	1,500.00
Labor - two assistants for 6 months . . . . .	15,000.00
Contingency factor . . . . .	<u>10,000.00</u>
Total . . . . .	<u>\$94,000.00</u>

The above are estimates on serviceable used equipment, most of which is available in Phoenix.

X The above listed equipment and financing would enable a 100 cubic yard per day plant to operate for six months on an expense paid basis. Mr. Perry and Mr. Hanks would draw no salary for this period. The labor figure is based on 2 assistants at \$10.00 per hour for the period.

ANTICIPATED RETURNS

from above plant

Tests and sampling indicate an average value for the material to be processed will range from a low of \$40.00 per cubic yard to a high of \$60.00 per cubic yard. ( based on a gold price of \$500 per oz.)

Utilizing the low figure:

100 cubic yards per day @ \$40.00 per cu. yd. . . . .	\$4,000.00 gross
The gold is 900 fine or 90% pure, therefore 10% must be deducted for impurities . . . (\$400) . . . .	<u>400.00</u>
	Subtotal - \$3,600.00

ANTICIPATED RETURNS continued . . .

X

<del>Salary for two assistants (\$10.00 per hr. for 8 hrs.)</del>	<del>\$3,600.00</del>	<del>Subtotal</del>
<del>\$160.00 per day . . . . .</del>	<del>160.00</del>	
	<del>Subtotal - \$3,440.00</del>	
<del>Cost of diesel and gasoline \$200 per day . . . . .</del>	<del>200.00</del>	
	<del>Subtotal - \$3,240.00</del>	
<del>Allow \$240 per day for unforeseen expenditures . . . . .</del>	<del>240.00</del>	
	<del>Total . . . \$3,000.00 Net</del>	

As may be seen from the above, operating costs will approximate \$10.00 per cubic yard, leaving a profit of \$30.00 per cubic yard.

We would strive to operate initially on a 6 day per week basis, however if we allow for equipment breakdowns and unforeseen contingencies would probably average closer to 5 days per week. On a five day per week basis, the return would be \$15,000.00 net per week. Therefore, the investment should amortize in less than seven weeks after full start-up.

ROYALTIES

No royalties are paid upon claims worked upon the public domain (BLM). A royalty of 5% of the net proceeds (Net being defined as proceeds after all costs of mining, processing, and sale have been deducted) is due and payable to the State of Arizona when mining state lands. A royalty of 10% of the net proceeds will be due and payable to Santa Fe Railroad when mining upon railroad lands.

PROPOSAL TO INVESTOR

In return for required financing in the amount of \$94,000.00, we propose the following arrangement:

Title to all purchased equipment shall be held by investor until the investment is repaid in full, at which time ownership of equipment shall revert to 50/50 ownership between Perry Mining and investor.

Investor shall receive 60% of the net proceeds until the investment is paid in full, after which time 60% of the net proceeds will be paid to Perry Mining, and 40% to investor. This arrangement shall continue in effect so long as the properties continue to be mined, unless changed or discontinued by mutual consent. In the event of the sale or lease of these properties to a third party, 60% of the net proceeds derived therefrom shall be paid to Perry Mining, and 40% to the investor.

At such time that the operation has shown itself to be profitable and feasible, such time not to exceed six months, the investor shall provide capital to increase production capacity to a minimum of 1000 cubic yards per day.



CONCLUSION OF REPORT

The mineral rights on the described properties are owned exclusively by Mr. Vernon H. Perry, owner of Perry Mining, Wickenburg, Arizona. Mr. Perry has been successfully placer mining in Yavapai County, Arizona, near the Rich Hill area, for more than three years.

Assistant in charge of operations is Mr. B. J. Hanks, formerly of Wickenburg, Arizona, now a resident of Lake Havasu City. Mr. Hanks is retired from 22 years of service with the Corps of Engineers, has a degree in geological engineering, and does consulting work for various mining companies.

We would welcome an investigation of these properties by a qualified, competent placer mining engineer, should the investor so desire. Transportation and equipment would be placed at his disposal.

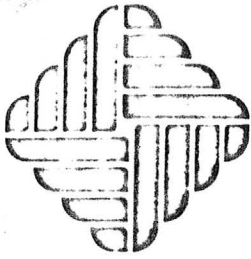
Bank references are available upon request.

Submitted by:

PERRY MINING

Main Office: P. O. Box 2339  
Wickenburg, AZ 85358

~~Field Office: P. O. Box 1078  
Lake Havasu City, AZ  
86403~~



Job No. 2373

A Division of Mountain States Mineral Enterprises, Inc.

June 3, 1981

*copy to  
C. L. Lane  
Rec'd 6/9/81*Tipton Corporation  
Post Office Box 157  
Hays, Kansas 67601

Attention: Mr. Al Tipton, President

Dear Mr. Tipton:

This letter report contains the metallurgical results obtained on a 400-pound placer concentrate sample received from Tipton Corporation.

The sample was run through a magnetic separator, giving magnetic and non-magnetic products. The magnetic product was then passed through the magnetic separator a second time. The magnetic portion was then dried, riffle mixed and two 1,000-gram assay samples were split out. These samples were then pulverized and rolled 100 times and sent as duplicate samples to the fire assay lab for gold and silver analysis.

The two non-magnetic products were combined and passed over a wiffley shaker table. The table tail was dried, riffle mixed and two 1,000-gram assay samples were split out. The samples were then pulverized and rolled 100 times and sent as duplicate samples to fire assay for gold and silver.

The table concentrate contained a large quantity of metallic copper. Metallic copper would have interfered with gold amalgamation, so it was acid leached for approximately 40 hours at 35% solids with 500 ml HNO<sub>3</sub>. The sample was then filtered and a pregnant volume of 1675 ml recorded. The filter cake was then washed with a pH 2.0 HNO<sub>3</sub> solution, followed by two 500 ml water washes. Since metallic copper was still visible in the filter cake, the sample was again leached under the same conditions as the first leach for 24 hours. The sample was filtered and washed, using the same method. The total preg. and wash solution from both leaches was 8385 ml. The preg. and wash solution was sampled and assayed for Cu and Ag.

The leached residue was placed in a Winchester Bottle at 50% solids, with 12.3 grams of sodium hydroxide to attain a pH of 10.2. The sample was then amalgamated with 208.93 grams of mercury for 20 minutes. The sample was then hand panned and 205.99 grams of mercury were recovered. The amalgam contained 541.24 mg of gold and 15.55 mg of silver.

The attached page gives the overall metallurgical results.

June 3, 1981

Page Two

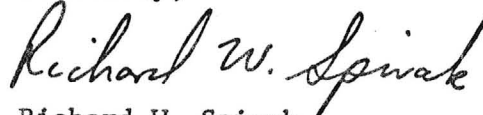
Test results indicate that 97.7% of the gold and 95.7% of the silver was recovered in the non-magnetic portion of the original concentrate that was sent to us. Only 38.5% of the gold and 61.3% of the silver was recovered in the acid leach plus amalgamation.

When these metallurgical results are calculated back to the ore feed, a recovery of 13.5% of the gold and 1.0% of the silver was realized from a material containing 0.007 oz/Ton gold and 0.02 oz/Ton silver.

This placer does not appear to be very promising and the presence of metallic copper in the concentrate should be seriously questioned. It is possible that the sample sent to Mountain States Research and Development was contaminated, but metallic copper does not normally occur in a placer deposit.

If you have any questions please do not hesitate to call us.

Sincerely,



Richard W. Spivak  
Acting Laboratory Supervisor

RWS/gfk  
Attachment

TEST PROGRAM METALLURGICAL RESULTS  
Project No. 2373

<u>Product</u>	<u>Volume ml or Weight g</u>	<u>Wt.%</u>	<u>Assay oz/Ton</u>		<u>Content oz/Ton</u>		<u>% Distribution</u>	
			<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>
Amalgam	--	--	541.24*	15.5*	0.0813	0.002	38.5	0.8
Amalgam Tail	1931.9 g	0.99	10.332	9.91	0.1023	0.098	48.5	38.7
HNO <sub>3</sub> Leach Solution**	8385 ml	4.32	--	0.34	--	0.015	--	5.9
Cleaner Table Tail	136624.3 g	70.33	0.032	0.18	0.0225	0.127	10.7	50.3
Magnetics	55717.0 g	28.68	0.017	0.04	0.0049	0.011	2.3	4.3
Calc. Head or Bulk Table Conc.	194273.2 g	100.00	0.211	0.25	0.2110	0.253	100.0	100.0
Cleaner Table Conc.	1931.9	0.99	18.545	11.62	0.1836	0.115	87.0	45.4
Non-Magnetics	138556.2	71.32	0.289	0.34	0.2061	0.242	97.7	95.7

\* Milligrams contained

\*\* 116.3 g copper leached from cleaner table concentrate

\*\*\* Wt. estimated by Jack Pierce

OVERALL METALLURGICAL RESULTS  
Project No. 2373

<u>Product</u>	<u>Volume ml or Weight g</u>	<u>Wt.%</u>	<u>Assays oz/Ton</u>		<u>Content oz/Ton</u>		<u>% Distribution</u>	
			<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>	<u>Au</u>	<u>Ag</u>
Amalgam	--	--	541.24*	15.5*	0.00098	0.0000	13.5	0.0
Amalgam Tail	1931.9	0.01	10.332	9.91	0.00103	0.0010	14.1	4.4
HNO <sub>3</sub> Leach Solution**	8385.0 ml	0.05	--	0.34	--	0.0002	--	0.9
Cleaner Table Tail	136624.3	0.84	0.032	0.18	0.00027	0.0015	3.7	6.6
Magnetics	55717.0	0.34	0.017	0.04	0.00006	0.0001	0.8	0.4
Bulk Table Tail***	16135326.8	98.81	0.005	0.02	0.00494	0.0198	67.9	87.7
Calc. Head on Ore Feed	16329600.0	100.00	0.007	0.02	0.00728	0.0226	100.0	100.0
Cleaner Table Conc.	1931.9	0.01	20.1	12.0	0.00201	0.0012	27.6	5.3
Non-Magnetics	138556.2	0.85	0.268	0.32	0.00228	0.0027	31.3	11.9
Bulk Table Conc.	194273.2	1.19	0.197	0.24	0.00234	0.0028	32.1	12.3

\*\* Miligrams contained

\*\* 116.3 g copper leached from cleaner table concentrate

\*\*\* Wt. estimated by Jack Pierce

### Calizona Placers, Arizona.

BY EDW. HEDBURG.

Calizona placer ground is situated south of Mellen, a station on the railroad, on the Colorado river, side, and is about 30 miles from Needles in California, the shipping point. The river is navigable all times of the year, making it fit for transportation of supplies. It is not an ordinary gravel placer, but a pebbled bed of auriferous conglomerate, where fragments are coated, and the interstices are filled with a fine sand, easily disintegrated by the water. This conglomerate occupies a channel one mile wide, and three miles in length, by 10 to 30 ft. in depth. The bedrock appears to be a volcanic lava, and comparatively smooth on its surface. The conglomerate consists largely of free gold quartz, with some debris and volcanic material. There are very few boulders weighing more than 50 lbs. In addition to the free gold in the quartz, placer gold

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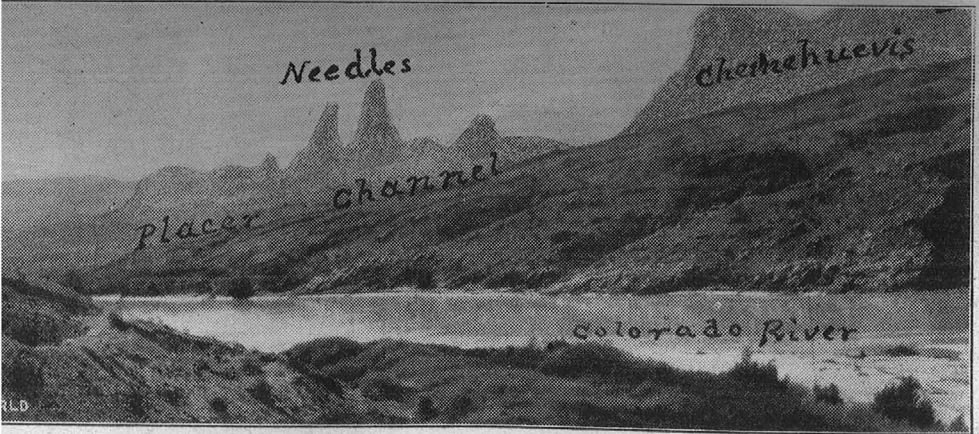
instance two miners took out \$13,000 in one day."

The 10 shafts were sampled and 120 assays made, going from \$1.60 to \$30. In a mill test the returns were \$3.20 for the coarse and \$4.60 for the fine. The gold is flat and shows little erosion. In this deposit the largest individual piece of gold weighed \$20. To check this sampling and assays the writer was employed to resample and endeavor to arrive at an average value as near as possible, with the result that \$2 per cu. yd. was the working average.

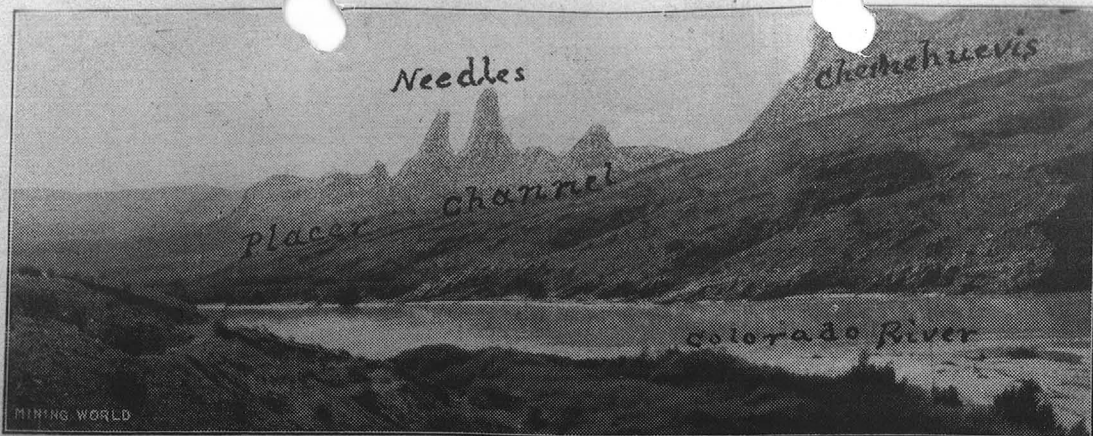
The deposit will yield to the ordinary hydraulic process and abundance of water can be had at the river, necessitating pumping about 5 miles.

### Trade With Japan.

In iron and steel manufactures Great Britain, Germany and Belgium are active competitors of the United States, and in many cases supply greater quantities than does this country. Under the general head of "pigs, ingots, slabs,



The Calizona Placer Ground.



The Calizona Placer Ground.

abounds in the gravel, and in the lime as well. The placer channel has its source in the Chemehuevis mountain, in a crescent shaped basin, among a number of low porphyry hills, containing many narrow stringers of gold veins, which is no doubt the source from whence the gold came to the placers below. These hills are capped in most instances with a covering of cemented gravel of from 5 to 10 ft. thick, covering the red porphyry, the latter assaying \$1.60 per ton in gold. The theory of the existence of gold-bearing gravel on top of these hills is simple. From all appearances the hills raised up through the former level cement bed, and thus shattered the same from the hillsides, leaving remaining portions on top of the flat ridges. This broken mass of cement, together with masses of eroded material from the hills of the Chemehuevis and Needles mountains (see illustration) have flowed down in a channel approximately one mile wide and six miles down to the river.

It is in this channel that a mining company has sunk 10 shafts, each 20 ft. deep, to test the gravel bed. In the early '60s the ground was worked extensively by dry washing, and an old miner, when approached on this subject, said: "There were scores of miners working upon this ground at intervals; the output of gold at times reached \$500 per day; and in one

and blooms," Great Britain in 1908 supplied 2,115,261 yen in value; Sweden, 512,774 yen; Germany, 259,344; China, 861,104; and the United States but 66,530 yen in value. In bars and rods, wire, tin plates, galvanized sheets, hoops, bands, and angle iron the United States also supplies but a small proportion of the total imports. In steel rails, however, the United States supplied, in 1908, 2,407,884 yen in value, against 2,193,132 yen in value from Germany and 384,793 from Great Britain. In iron and steel pipes the quantity from the United States also exceeded that from any other country. In iron nails the principal sources of supply were Germany and the United States, though the quantity from Germany was more than three times as great as from the United States. In locomotives nearly the entire importations were from the United States, the total value of locomotives imported in 1908 being 1,722,983 yen, of which 1,355,043 were from the United States. Of railway cars imported in 1908 about 750,000 yen in value were from the United States, and of electric machinery two-thirds of the total came from the United States, as was true of sewing machines and paper-making machinery.

The production of silver in Rhodesia for April amounted to 21,495 oz.