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Item 2

GEOLOGICAL REPORT ON THE "SUNLIGHT MINE"

prepared by,

JACK J. JUTZY, GEOLOGIST

JACK J. JUTZY
CONSULTING GEOLOGIST • ENGINEER
RETIRED
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GRASS VALLEY, CA. 95945
TELEPHONE 273-3621

September 25, 1978

Mr. Eric Andersen
Pacific Exploration
1143 Mariposa Street
San Francisco, CA

Dear Mr. Andersen:

I am hereby submitting my geological report concerning the Development - Phase I of the "Sunlight" mining property located near Fallon, Nevada.

SCOPE OF EXAMINATION

This examination was conducted during the period July 10 - Sept. 15, 1978. A drilling program was cunducted, under my direct supervision a small pilot plant was built, and extensive metallurgical, laboratory and assay work was done to determine both the values present and the economic viability of potential mining operations. A field trip was made to Salt Lake City to interview various metallugists and chemists for the purpose of obtaining more definitive answers to some of the problems connected with this unusual ore.

The express purpose of this report is to determine if the property merits further development and the likelihood of it becoming a profitable mining operation.

STATUS OF CLAIMS

The property described consists of 5 unpatented Placer Claims comprising 160 acres each. The claims were located by John Peterson of Fallon, Nevada and are presently held by Eric Andersen under a lease - purchase contract.

PROOF OF LABOR

The affidavits of Proof of Labor have been filed annually by John Peterson. The Proof of Labor for 1978 has already been filed and in my opinion is not defective in any way. All the requirements under both State and Federal Statutes have been met or exceeded by the work done under my direct supervision.

Development - Phase I "Sunlight Mine"
Eric Andersen, Pacific Exploration

ACCESS & POWER

The subject property is located 28 miles North of Fallon on U.S. Highway 95, approximately a 30 minute drive. The NE corner of Section 8 is located approximately 200 yards from Highway 95 and is reached by the old Lovelock Highway cut-off, a public road, so access is thereby assured.

The Southern Pacific Railroad has tracks accompanied by power lines which run parallel to Highway 96, approximately 400-500 yards from the property, so both a rail road spur and power should be readily available.

WATER

There is more than adequate water for processing purposes located on the property, inasmuch as the water table is located from 12-15' from the surface. The wateris not potable, but Duffer Fairbanks, a local drilling contractor familiar with the area, reports that there is a good chance potable water could be found on the edge of the Mopoung Hills near the edge of the property.

GEOLOGY

This property is located in what is known as the Carson Sink area, and is a lakebed dating from the late Pleistocene era. It has been estimated by other that this particular area was inundated 3-5,000 years ago.

The entire area is underlain by alluvial deposits of material eroded from the higher mountain ranges of tertiary times. The overburden varies in depth from 2-20' and consists of a tough, semi-concreted conglomerate. On the ancient lake-bed proper, the water table is located from 5-14' from the surface.

The historical geology of this area will be developed more fully at some future date, but is not within the scope of this examination, since it has no bearing on the economics of the situation.

DRILLING PROGRAM

The drilling itself was accomplished by a scow-type rig devised by John Peterson. It functioned extremely well in this soft clay ore. (See accompanying photographs).

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DRILLING PROGRAM

Grid patterns were laid out on the N ½ of Section 8 and on the SW¼ of Section 4, (See accompanying maps and profiles), in such a manner as to give a rough approximation of the size of the ore body. Previous work indicated the potential ore body to be so large that there would be no problem in supplying even a very large mill. It was of greater interest to determine the mining characterictics of this ore and whether or not previously reported values would carry throughout the ore body.

It was also our objective to take samples from the bottom of the lakebed near the bedrock as previous work had indicated that the highest values were to be found near bedrock. We were only partially successful in reaching bedrock because with our equipment we were unable to drill deeper than 80' due to cave-ins. At some time in the future it would be very helpful to case a few holes and drill all the way to bedrock. However, it is my opinion that at this stage of development any additional drilling, although helpful and of great scientific interest would not yield any economic benefits.

ORE BODY

It is my conclusion that we have a proven ore body of approximately 40 million tons with a probably additional reserve of another 20 million tons.

The tonnage was computed in the following manner:

(Volume of ore body) 40,300,000 c.y. X
(assuring a Specific Gravity of 1.25) 1.03 tons /c.y.
= 41,509,000 tons gross.

This figure was then rounded off to 40,000,000 tons. It should be noted that this ore consists of 40% water by weight, but since the ore will be processed as a slurry it is correct to assume the wet weight in calculating reserves. Also, assaying was done using the wet weight as a base, for the sake of consistency.

LIFE EXPECTANCY

Assuming a through put of 2000 tons per day, 330 days per year would mean annual throughput of 660,000 tons/year. At this rate there is enough ore on hand to last for 60.6 years.

Development - Phase I "Sunlight Mine"
Eric Andersen, Pacific Exploraton

MINERALOGY

There has been a great expenditure of funds and investigative energy in this area with good results.

It was my opinion several months ago that not enough was known about the manner in which the gold was occurring and that this had a direct bearing on the somewhat elusive manner in which this material behaves. I now new feel that the work done by Mr. Rodney Beyer of Ford, Bacon & Davis, Utah, and Mr. J. Henderson of Provo, Utah, has clarified the situation in an eminently satisfactory manner.

It is of great significance that R. Beyer and J. Henderson, working completely independently and unknown to each other, arrived at essentially the same conclusions and nearly identical results.

The mineralogy and metallurgy of this ore is gone into in great depth by R. Beyer in a separate report. A brief paraphrase from this report succinctly stating the nature of occurrence follows:

> "The gold is believed to occur 'encapsulated' as it were by alkaline metal salts such as potassium and sodium. The extraction or detection of gold occurring in this manner is extremely difficult by conventional methods such as fire assaying, cyanidization, AtmoicAbsorbtion, Etc."

The subject is quite complex and the reader is urged to study R. Beyers report for more details.

VALUES

There are three sets or ranges of assays reported on this property.

1. The first set relates to the values obtained by a modified cyanidation process first attempted by John Peterson and then improved upon by J. Lower. In the light of subsequent knowledge it is apparent that this process, though quite viable economically, does not even begin to recover the values present.

   The average value of assays done previously by others, of 15 reports equals .546 oz gold/ton and commercial quantities of silver.

VALUES (Cont'd)

The average value for our own work = .370 ounces gold/ton, silver and Platinum not measured, 8 samples considered. It should be noted that the samples considered did not span a large number of locations in the ore body and should therefore be considered only as indicators, as there is insufficient data to draw any conclusions. This particular approach was abandoned because other avenues seemed more fruitful.

2. The second set of samples were delivered to R. Beyer and J. Henderson in Salt Lake City. Four samples were taken from the same test hole from two different depths. The samples were then split and four samples then sent to each lab. The purpose of this series of tests was to determine whether the testing procedures were reliable and consistent. Work done by E. Andersen and J. Peterson indicated that values were distributed in a reasonably homogenous manner throughout all four samples. Also, a "hot-spot" was deliberately chosen to give the lab every opportunity to pick up the values.

The "hot-spot" turned out to be quite hot indeed. As per enclosed reports, both direct and indirect average values reported by R. Beyer and Rogers Research utilizing a pre-treatment process and subsequent analysis by X-Ray Diffraction were 6.17 ounces gold/ton 9.91 ounces silver per ton of ore. A subsequent report by Rogers Research dated 9-7-78 also indicated .075 ounces Platinum/ton which may or may not be recoverable.

J. Henderson performed a physical extraction on the splits of that material and recovered from a composite sample 7.65 ounces gold and 35 ounces silver per ton of ore. This initial test was what J. Henderson called his "quickie" test.

To confirm this initial test Mr. Henderson then performed a far more exhaustive test on another composite sample and recovered 11.553 oz Au and 55.765 Ag/ton of ore.

It is not known at this time why J. Henderson can extract more silver from this ore than is indicated by X-Ray diffraction. It is of great interest to note that Mr. Henderson has actually built a mill based on his methods, and that this mill is operating most profitably and extracting precious metals from ores that assayed erratically.

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VALUES (Cont'd·)

3. The third set of assays were concerned with determining the over-all value of the ore body and the possible values that could be expected in an actual mining situation.

Our sampling procedure was as follows: from each of the mill feed ponds constructed near each drill hole a core was taken from the approximate center of each pond. The weight of each sample was approximately 10 pounds. The ore in each of the ponds was well mixed and during the sampling great care was taken to get representative samples. I am confident that the samples were correct and give a good approximation of the overall values present.

The averages of the 13 tests are: 4.12 oz gold, 4.17 oz silver, and .052 oz platinum per ton of ore.

These results were reported by Rogers Research using X-Ray diffraction quantitative analysis, dated 9-11-78.

Four composite samples were sent to J. Henderson for analysis. He employed the same direct chemical extraction methods used in his previous tests. The average results from his report dated 9-21-78 were: 4.35 oz gold and 4.35 oz silver per ton of ore.

To actually determine the recoverable precious metals in this ore by these methods one would have to run extensive large scale pilot tests. I feel that at this point it is safe and conservative to say that it would be reasonable to expect a recovery in the range of 2-3 ounces per ton. It could quite easily be more, but it is better to make a mistake on the side of being too conservative.

It would be fatuous to compute gross values for this ore body. The potential ore reserve is so great that attempting to extrapolate values into the next century is meaningless.

A more realistic appraoch would be to approximate possible revenues over the next 20 years. It does not seem unreasonable to assume a strong gold market for the next 20 years, but to attempt to make any projections beyond that would require the assistance of a crystal ball.

Assuming a conservative production rate of 500 tons a day, and assuming an admittedly high production cost of $45/ton (including amortization of plant and equipment), and values of 2 oz of gold and 2 oz of silver per ton of ore which would be the equivalent of $410 gross value per ton.

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Using the aforementioned parameters, profit potential would be:

Yearly Throughput
500 tons/day x 330 working days = 165,000 tons/year

Yearly Gross
165,000 tons x $410 gross value/ton = $67,650,000 per year

Yearly Expense
165,000 tons per year x $45/ton = - $ 7,425,000

ANNUAL NET PROFIT $60,225,000

SAFETY FACTORS

Many things can go wrong in a mining operation. Two common problems other than mismanagement, are fluctuation in price of product, and variation in metal content of the ore. For this reason it is important to consider the breakeven point in terms of the price of gold and how much gold is in the ore. Assuming the parameters in the last paragraph the breakeven points would be:

Price of Gold
Other factors being equal, the price of gold could drop to $22.50/ounce before the project would lose money.

Ore Values
Other factors being equal, the gold content could drop to 0.20 oz Au/ton before the project would lose money. The silver content was not even considered.

MINING

It is safe to say that this ore body is ideally suited for cheap and efficient mining.

Power, roads, water and railroad are all convenient and pose no problems.

Labor, materials and supplies can all be easily had at Fallon, which is the local mining center and only a 30 minute drive from the property. It will not be necessary to build quarters for employees and feed them, thus reducing the costs considerably. Employees can live at home with their families which is also an advantage.

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MINING (Cont'd)

The ore can be handled as a slurry and pumped from the flats to the millsite and used directly as millfeed. No crushing or sorting is necessary. These advantages should save as much as 30% of capital expenditure and production costs over a conventional mine.

Our tests indicated that the rate of flow on return in an evacuated test hole approximately 50' in depth to be approximately 7 feet per minute. At this rate it would not be difficult to maintain the 112 gpm flow necessary to feed a 1,000 ton/day mill.

R. Beyer has indicated that it might be of some advantage to install a ball mill after the thermal reaction stage and before the cyanidization to enhance recovery, but this would not add to production costs appreciably.

MARKET

The products of this mine are gold, silver and possibly platinum. At present market prices the mill would quickly amortize itself, and it seems safe to assume that there will be a strong market for precious metals for at least the next 5-10 years.

RECOMMENDATIONS

1. Build a one ton a day pilot mill utilizing the Beyer Process and operate it for at least one month to accurately determine production parameters and thus costs.

2. Drill one or two cased holes in the SW¼ of Sec 4 that will reach bedrock. There may be some very high values in the deeper strata.

3. Do additional sampling and assaying to determine distribution of values as a function of depth. This would make it possible to pinpoint the highest values and maximize profits in both the pilot plant stage and early production scale operation, where cash is most sorely needed.

Development - Phase I
Eric Andersen, Pacific Exploration

CONCLUSIONS

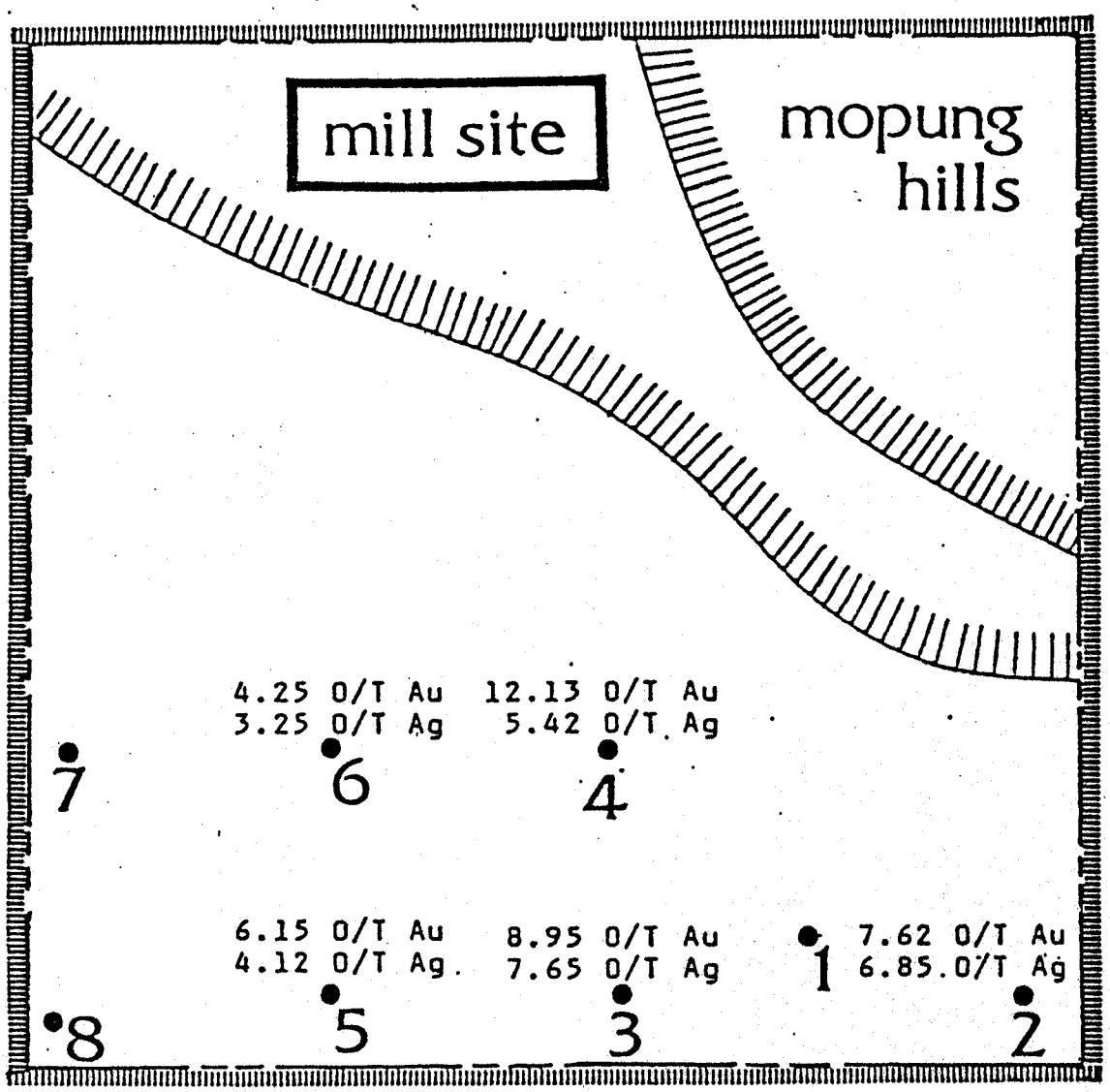
It is my firm opinion that if this property is properly and professionally developed it has the clear potential of being one of the largest and most profitable gold producers in the United States.

Respectfully submitted,

Jack J. Jutzy
Geological Engineer

25 September 1978

Section 8



SCALE- 1" = 1000'

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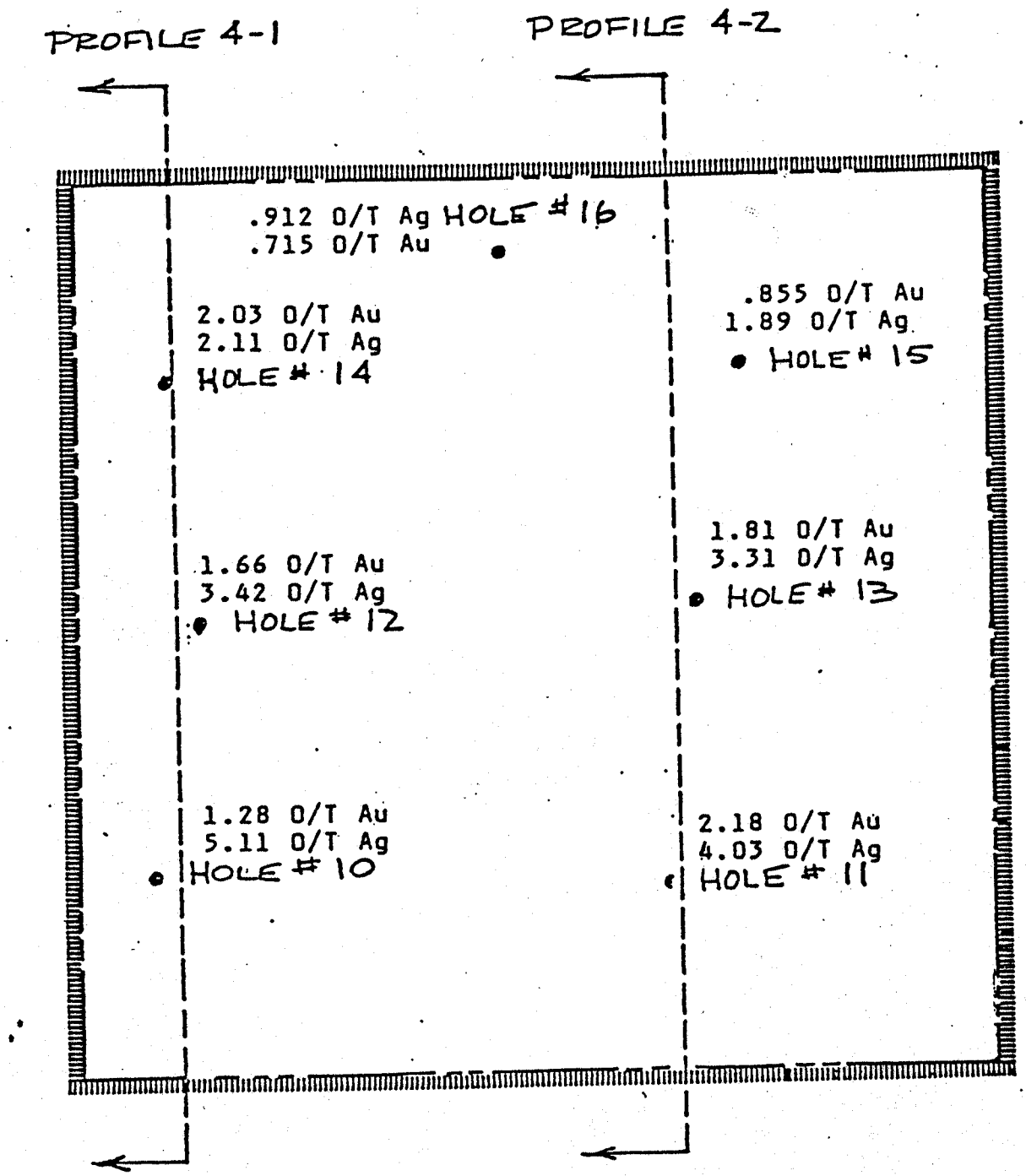
SW 1/4 Section 4

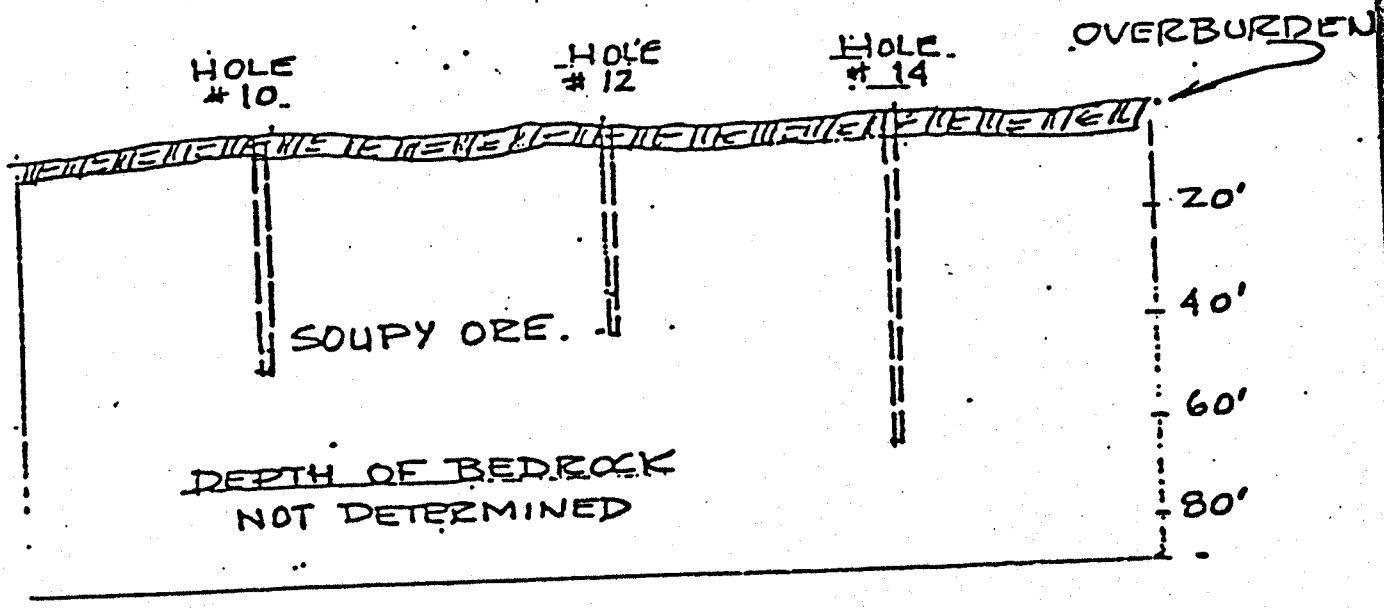


SCALE - 1" = 500'

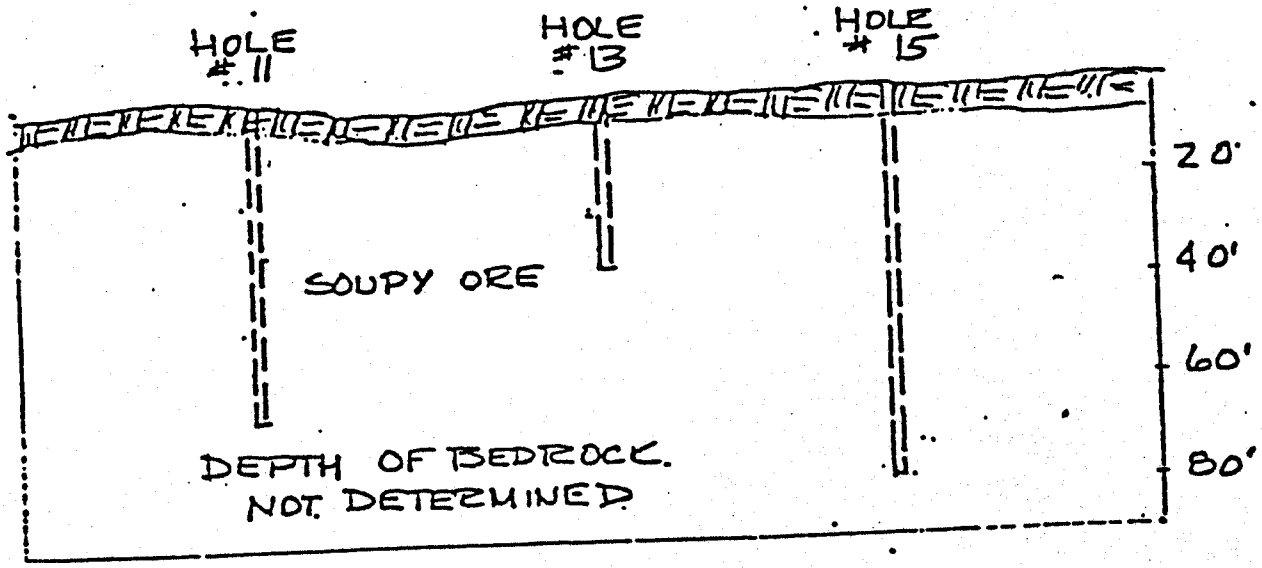
DRAWN BY: E.A.

Profiles

Profile 4-1



Profile 4-2



VERTICAL SCALE 1"=40'
HORIZ. SCALE 1"= 500'
DRAWN BY - E.A.

Ford, Bacon & Davis Utah Inc.

ENGINEERS — CONSTRUCTORS

A SUBSIDIARY OF

Ford, Bacon & Davis

375 Chipeta Way
P. O. Box 8009
Salt Lake City, Utah 84108
801-583-3773

Sept. 11, 1978

To. Jack Jutzey
From: R. B. Beyer
Subject: Assay Results- Samples from Sunlight Mine

Enclosed is the assay report from Rogers Research for the last camples I received from you.

The pretreatment on the ore was carried out for various lengths of time to help ascertain the optimum residence time. The results suggest that there is a pronounced reduction on conversion for exposure times less than 1 hr 40 min. The results of the "low temperature" samples and samples treated for less than 1 hr 40 min appear to be close to the "untreated" samples.

Treatment is effective for all samples assayed to date when the temperature is above 500° C and the residence time exceeds 2 hrs. Higher assays result as the temperature is increased to a maximum of 2100°F (ca 1200° C).

R B Beyer

Chemical Engineer

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TO Mr. Rod Byer
C/O Ford Bacon & Davis
Salt Lake City, Utah.

ROGERS RESEARCH & ANALYSIS
68 SOUTH MAIN STREET - ROOM 811
SALT LAKE CITY, UTAH 84101
Phones (801) 521-8244

SUBJECT: Quantitative Analyses RRA#9978-1-13 DATE September 11.

FOLD	Customers Identification:	Gold	Silver	Platinum
1.	C#2 1-Hr.50 min	7.62 O/T	6.85 O/T	.097 O/T
2.	C#3 1 Hr. 50 Min	8.95 O/T	7.65 O/T	.105 O/T
3.	C34 1 Hr. 50 Min	12.13 O/T	5.42 O/T	.125 O/T
4.	C#5 1 Hr. 50 Min	6.15 O/T	4.12 O/T	.095 O/T
5.	C#6 1 Hr. 45 Min	4.25 O/T	3.25 O/T	.084 O/T
6.	C#9 1 Hr. 40 Min	5.12 O/T	6.14 O/T	.065 O/T
7.	C#10 1 Hr 35 Min	1.28 O/T	5.11 O/T	.021 O/T
8.	C#11 1 Hr 30 Min	2.18 O/T	4.03 O/T	.030 O/T
9.	C#12 1 Hr. 20 Min	1.66 O/T	3.42 O/T	.022 O/T
10.	C#13 1 Hr. 20 Min	1.81 O/T	3.31 O/T	.024 O/T
11.	C#14 2 Hr. 15 Min Lo Heat 300-400F	2.03 O/T	2.11 O/T	.025 O/T
12	C#15 2 Hr. 15 Min " "	.855 O/T	1.89 O/T	.010 O/T
13.	C#16 1 Hr. 15 Min " "	.715 O/T	.912 O/T	.009 O/T

SIGNED

LOT #

ROGERS RESEARCH & ANALYSIS
68 SOUTH MAIN STREET - ROOM 811
SALT LAKE CITY, UTAH 84101
Phones (801) 521-8244

TO Mr. Rod Byer
C/O Ford Bacon & Davis
Salt Lake City, Utah.

SUBJECT: Quantitative Analyses RRA#82178-1-17 Pt. DATE September 7, 19

FOLD

Customers Identification:	Platinum
Sunlite #5 Supertreated R #1	.108 O/T
" #5 Treated R #1	.058 O/T
" # 4 Treated R #5	.112 O/T
" # 1 Treated R #4	.023 O/T
Jadite #3 Treated R #3	.026 O/T
" #2A Treated R #2	.109 O/T

SIGNED R Rogers

LOT # 877

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PEMCO
Premium Equipment and Mining Co.
651 Columbia Lane - Provo, Utah 84601 - 375-6960
P.O. Box 361 - American Fork, Utah 84003

September 21, 1978

Pacific Exploration
1143 Mariposa
San Francisco, CA 94107

SUBJECT: Ore Samples Nos. 2, 3, 4, & 5
Millfeed Delivered by R. B. Beyer

Assay results as follows:

Fire Assay	Ag.	Au.
#2 Millfeed	0.20	Trace
#3 Millfeed	Trace	Nil
#4 Millfeed	0.05	Trace
#5 Millfeed	0.15	Trace

Same samples run fire assay with silver inquart of two (2) grams:

(Gold only) AU	
#2 Millfeed	2.20 oz./ton
#3 Millfeed	2.10 oz./ton
#4 Millfeed	2.03/oz./ton
#5 Millfeed	2.15 oz./ton

Four (4) 30-gram samples run with 3-to-1 aqua regis for 24 hours. Filtered and washed. Dilute solution to 1000 ml. to Ph 1.00 to 2.50. Run through selective resin for 30 minutes. Dried resin and burned in assay furnace.

Results:

(Gold only) Au.	
#2 Millfeed	1.65 oz./ton
#3 Millfeed	1.80 oz./ton
#4 Millfeed	6.50 oz./ton
#5 Millfeed	7.45 oz./ton.

Tails and filtrate of this series were dried and assayed. Results total metal:

	Ag.	Au.
Tails	4.35 oz./ton	Trace
Filtrate	2.70 oz./ton	0.08 oz./ton

Fee - $400.00.

Jerry C. Henderson
Research Chemist

cc: Mr. R. B. Beyer (hand delivered)

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PEMCO
Premium Equipment and Mining Co.
651 Columbia Lane - Provo, Utah 84601 - 375-6960
P.O. Box 361 - American Fork, Utah 84003

August 30, 1978

Pacific Exploration
1143 Mariposa
San Francisco, CA 94107

SUBJECT: Ore Sample From Sunlight Mine - Sec. 8, Hole #1
Millfeed 35' to 40'

Assay Results of One-Pound Test: (Total metals recovery after in-quart taken out)

Silver (Ag) - 55.765 oz. per ton
Gold (Au) - 11.553 oz. per ton

(ACTUAL METAL BUTTONS)

Smelting at 2100°F. for 40 minutes reducing atmosphere. Lead was used as a collector.

Slag ground and leached.

Re-smelted at 2100°F. with lead as collector. Inquart 2 grams silver.

1st and 2nd smelt of lead collector remelted, poured into bar.

Electrolytic process was used for breaking down lead bar.

Anode and cathode, plus solution, was re-worked through electrolytic three (3) times.

Total metals recovery after inquart was taken out shown above in "Assay Results".

Jerry C. Henderson
Research Chemist

NOTE: Silver and gold recovered in this test is enclosed.

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PEMCO
Premium Equipment and Mining Co.

651 Columbia Lane - Provo, Utah 84601 - 375-6960
P.O. Box 361 - American Fork, Utah 84003

Pacific Exploration
1143 Mariposa
San Francisco Ca. 94107

att. Eric Anderson

sample #1 = code # 8-1-40 Sunlight Mi

Two (2) assay tons of ore fused - Hi caustic.
Leached with acid & filtered. - Solution & filtrate
were rerun and assayed.
Total wt. of metal. 15.30 mg. or 7.65 g/ton

Sample #2
30 gms ore leach with aqua regis for 24 hr
Filtered and solution evaporated to 60 ml.
H2O added to 400 ml. Warmed & run through
special resin. Resin dried - burned & residue
assayed.
Total Metal 35.00 mg. or 35 g/ton.

Have one more test would like to run but
Do not have the time right now. Will try to
run it next week. Test takes 5 days.

Jerry C. Henderson

2131 CURTIS STREET

TELEPHONE 623-1952

CHARLES O. PARKER & CO.

CHEMISTS • ASSAYERS • ENGINEERS

DENVER, COLORADO 80205

Folio 927

Date September 16, 1978

Pacific Exploration
1143 Mariposa
San Francisco, CA 94107
ATTN: Eric Andersen

We hereby Certify, that the samples assayed for you gave the following results:

DESCRIPTION	GOLD OUNCES PER TON	SILVER OUNCES PER TON	COPPER PER CENT (WET)	LEAD PER CENT (WET)	ZINC PER CENT	IRON PER CENT	INSOLUBLE PER CENT	VALUE PER TON
		Amalgamation						
# 8-1-40	6.14	1.20						
# 4-15	0.17	34.05						

NOTE- THE DORE BEADS OBTAINED FROM J. HENDERSONS TEST DATED AUGUST 10,1978 WERE SUBMITTED TO C.O.PARKER FOR ANALYSIS AND VERIFICATION OF PRECIOUS METAL CONTENT....THE RESULTS APPEAR ABOVE AND AGREE WITH J. HENDERSONS RESULTS

Gold at _____ per ounce Copper at _____ per unit

Silver at _____ per ounce Zinc at _____ per unit **Charge $**

Lead at _____ per unit _____

CHARLES O. PARKER & CO.
CHEMISTS, ASSAYERS and ENGINEERS

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