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Item 8

PRELIMINARY SURVEY OF  
BARREL SPRINGS PLACER PROSPECT  
PERSHING COUNTY, NEVADA



# pacific exploration

FALLON TEST FACILITY P. O. Box 1418 Fallon, Nevada 89406 (702) 423 6581

August 13, 1979

Mr. Hans Berger  
1068 Bonneville Drive  
Salt Lake City, Utah 84108

SUBJECT: Preliminary Survey of Barrel Springs Placer Prospect,  
Pershing County, Nevada.

This firm has recently sampled and reviewed data from the Barrel Springs Prospect in depth. In addition to this undertaking, we have been technically involved over the past three years with a placer prospect known as "Rabbit Hole", which is contiguous with the subject property. Our conclusions are that the auriferous gravel deposits of Barrel Springs have an extremely high profit potential in terms of the present-day value of gold. It is our opinion that the property can initially be put into production on a scale of 300-400 cu yds per day within 90 days and eventually support a 10,000 cu yd per day open-pit production operation in about one year. The bases for our conclusions are outlined below:

## HISTORY

The area has been a producing gold mining district since the 1930's. Mining techniques have ranged from hand diggings and tunnels to open-cast mining with heavy earth moving equipment.

## SITE OBSERVATIONS

This geologist has recently hand picked fine flecks of gold from the bed of a small gully at the prospect. In addition, fine free gold was observed in panned samples from the Thompson pit on the property. Samples panned from the adjacent property at Rabbit Hole several months ago also showed fine free gold.

### ASSAYS AND SAMPLING

Both historical and recent assays of samples from the property have consistently shown recoverable, near-surface gold to exist in bedded gravels. Gold values tend to increase with depth until "false bedrock" is encountered. This false bedrock is a homogenous consolidated clay thought to be a lake bed sequence, which repeats itself in depth down to at least several hundred feet. The highest gold content is usually found resting on top of each false bedrock stratum. The depth below ground surface of the first major false bedrock stratum varies from a few feet to tens of feet. The most economically favorable target areas for surface mining operations may, therefore, be where false bedrock is closest to ground level.

Attached to this report are assay reports from two independent laboratories giving metal contents of concentrates from the Thompson and Walz pits. The reports show an excellent profit potential for these two areas. Assay no. 116978, dated 10 August, by Nevada Assay Office, shows that grinding and Mercury amalgamation of the black sand concentrates increases gold recovery by a factor of about 1/3 or about \$2,000 in addition to the primary free-gold values of \$6,000 per ton, assuming the value of gold to be \$300 per oz.

We recommend that additional testing be done to confirm these secondary recovery values. Bulk sampling would be the most reliable method; and the larger the sample, the more accurate the results will be.

### ASSOCIATED PLACER MINERALS

Recent assays have shown a wide range of associated, potentially economic minerals to be present in the Barrel Springs placers, including Silver, Cinnabar, Chromite, Tungsten, Nickel-Cobalt, Cassiterite, Titaneum, and Platinum. Attached assay no. 252, dated 8 August, by Analytical Consulting Services shows economically interesting contents of Platinum and Ruthenium. The recoverability of these elements is not known at present, and extensive metallurgical testing will be necessary before the economics of recovery can be worked out.

### ENVIRONMENTAL LIABILITIES

We have investigated the status of the property with previous engineering consultants, the U.S. Bureau of Land Management, the Nevada Bureau of Mines, the Nevada State Engineers Office, the Pershing County Surveyor, and others and have found no major legal or environmental impediments to future surface mining activities.

There are no communities to speak of within a 40 mile radius of the site, a factor which will lessen the possible environmental restrictions imposed on a placer development. The State of Nevada is known for having the least amount of environmental requirements of any state in the U.S. A possible historic site, in the form of an old cabin, exists near Rabbit Hole springs; and care should be taken so as to preserve this site.

The property east of Rabbit Hole Road has been recently classified by the BLM as not qualifying as a wilderness area: an area which includes all of the placer properties discussed in this report. The local BLM representative has expressed dismay that the area has already extensive roadworks and diggings, but he added that he has no jurisdiction in these matters because the area is open mining claims subject to State regulations. Politically, it may be wise and prudent to build in a replanting program into the placer development. The only obvious vegetation to speak of is sagebrush, but to our knowledge there are no re-seeding requirements by authorities at this time.

### IMPROVEMENTS

The site has within its boundaries a well-graded and maintained 4300-foot dirt airstrip. The site is accessible by heavy earth-moving equipment and is criss-crossed with wide, well-graded dirt roads. Three water wells have been drilled, tested and reported on by an accredited engineering company. The reported yield of the largest well is on the order of 600 gals per min. Two substantial septic tanks and leach fields have been installed and inspected by the County Health Department. They

should be more than adequate to meet the needs of a 60 man permanent camp. An adequate supply of potable water exists near the campsite, and the wells have been inspected and approved by the County Health Department.

The camp suffered a great deal of vandalism from November 1978 to August 1979; and a good part of the plumbing and wiring has been ripped out of the ground and stolen, which is unfortunate. However, it is our opinion that the value of useable and necessary improvements, e.g., excavation, grading, foundations, roads, campsite, airfield, surveying, testing, engineering, well-drilling, etc., is on the order of \$500,000. The existing improvements were done in a competent manner and will greatly facilitate the construction of a future mill and campsite.

The topography of the site is suitable to surface mining, being low in relief and sparsely covered with desert sage. Winters are relatively mild with a few inches of snow possibly occurring during the height of the winter months. The nearest towns with populations of several thousand are within about 60 miles. The city of Reno with an international airport, major engineering facilities and support services is 100 miles away or about 45 minutes flying time.

The claims have been recently surveyed by a registered surveyor and the claims duly registered with the BLM and the County Recorder.

#### RESERVES

Based on previous exploration and mining of the Barrel Springs placers, it is our opinion that proven reserves are on the order of 50 million cu yds. According to Mr. G.R. Moore, Mining Engineer, there are 7.4 million cu yds of gravels for 40 feet of depth for each 100 acres. The areas known as the Walz, Thompson, and Nugget pits have been extensively drilled, sampled, and mined; and the total surface area of these sites is on the order of 662 acres. Using G.R. Moore's factor of 7.4 million cu yds per 100 acres, the results obtained are about 50 million cu yds of reserves.

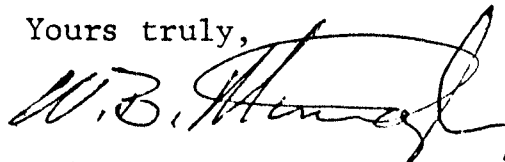
Using a gold price of \$250 per oz, these proven reserves have been shown to range in value from \$8 to \$50 per cu yd. Assuming the lower value of \$8 per cu yd, the total gross value of the proven reserves would be \$400 million. Using a mining and milling cost ranging from \$2.80 to \$3.20 per cu yd, the higher total cost for processing 50 million cu yds would be \$160 million resulting in a net profit before taxes of \$240 million.

Barrel Springs  
8 August, 1979

Mining at the rate of 10,000 cu yds per day, the expected life of a 50 million cu yd mine would be 14 years returning about \$17 million per annum before taxes.

Judging from the surface geology and the known test pits and digging surrounding the proven reserves, the inferred reserves could easily be three times as great as the proven 50 million cu yds.

Yours truly,



William B. Murdaugh  
Chief Geologist

WBM/cm

BARREL SPRINGS

Primary Recovery - 2 yd 12oz cons

Secondary Recovery - same cons

# NEVADA ASSAY OFFICE

5800 RENO HIGHWAY  
FALLON, NEVADA 89406

Telephone 867-3678

August 10, 1979

Pacific Exploration

Fallon, Nevada

Assay no: 116978

Barrel Springs Concentrates:

Concentration Ratio 95-1

Total wt. sample submitted----- 2 lbs. 12 oz.

Standard Mercury amalgamation: no grinding.

Rec: .88275 grams gold

= 20.62982 oz./ton of cons. X \$300.00 = \$6188.95

Mercury amalgamation plus grinding:

Rec: .34634 grams gold

= 8.04395 oz./ton cons. X \$300.00 = \$2413.19

Total gold recovered from both above: 1.22909 grams

Oz./ton gold contained in cons. 28.6738

Value at \$300.00 gold ( per ton of cons.) = \$ 8602.131

at concentration ration of 95-1

= .3018 oz./ton raw material

=\$90.55 per ton raw material

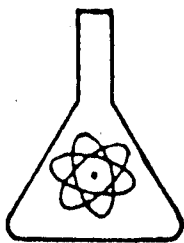
Tails after grinding:

Gold--- Trace

Silver 0

NEVADA ASSAY OFFICE

*William L. Cofley*  
WILLIAM L. COFLEY

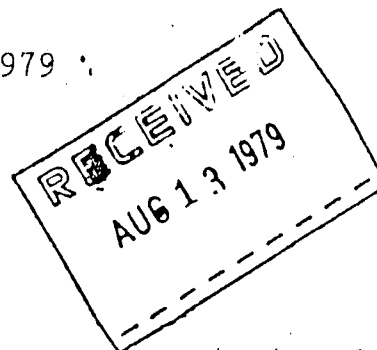


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## ANALYTICAL CONSULTING SERVICES

5805E Chimney Rock • Houston, Texas 77081 • 713/663-6692/  
6251 Corporate Dr. Houston, Tx. 77036 (713) 995-8080

August 8, 1979



Pacific Exploration  
Fallon Test Facility  
P.O. Box 1418  
Fallon, Nevada 89406

Subject: Quantitative analysis of four ore concentrates for seven precious metals and tin and qualitative analysis for major, minor and trace elements.

Ref: Lab No. 252

### Analytical Procedure:

The digestion for the platinum group metals and gold was an aqua regia digestion. Silver was analysed in a Nitric acid matrix and tin was analysed twice, once in Nitric acid and once in Hydrochloric acid.

### Analytical Results:

#### Quantitative Analysis:

Report on an as received dry weight basis. Precious metals are in oz/ton and tin in percent.

Sample ID	Ag	Au	Pt	Pd	Rh	Ru	Ir	Sn
Large Bag	1.32	1.07	0.74	0.19	0.31	2.98	2.71	0.05
Bucket	1.74	43.33	0.38	0.07	0.17	1.63	1.46	0.02
High Cons #2	1.19	41.35	0.89	0.24	0.36	3.58	3.25	0.05
Cons #3	-0-	14.95	1.03	0.26	0.41	4.27	3.80	0.05

Note: Bucket sample had to be dried. Moisture 14.75%.

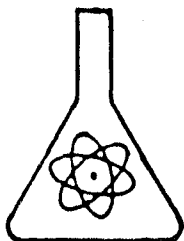
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## Qualitative Analysis:

Sample ID	Major >1%	Minor 1-0.1%	Trace <0.1%
Large Bag	Ba, Ca, K, Mg, Na, Si, Sr	Al, Be, Cr Mn, Ti	Sn, Ni, V, Pb, Os, Cu, Co, Gd, Cs, Ag, Au, Pt Pd, Rh, Ru, Ir
Bucket	Fe, Ca, Ba, Mg, Na, Si, Sr	Mn, Al, Gd Ni, V, T	Cr, Cu, Co, Bi, P, Pb, Yr Ag, Au, Pt, Pd Rh, Ru, Ir, Sn
High Cons #2	Si, Na, Sr, Ca, Mg, Fe	Ni, Ti, V, Al, Cr, Mn, Ba	Pb, P, Mo Ag, Au, Pt, Pd, Rh, Cd, Ru, Ir, Sn
Cons #3	Mg, Ca, Fe, Na, Si, Sr	Al, Mn, Ga, Ba, Ni, Ti, Pb	Cu, Cd, Cr, Mo, Zn, P, Yr, V, Sn, Ag, Au, Pt, Pd, Rh, Ru, Ir

Sincerely,

ANALYTICAL CONSULTING SERVICES

*J.D. Keyes*  
J. D. Keyes  
Lab Manager

JDK/gb

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