

HL

HEINEN-LINDSTROM  
ASSOCIATES, INC.

MNG  
ITEM 84

ORE TESTING • RESEARCH • CONSULTING

39 PAGES

0120 0050

September 30, 1981

Mr. Peter Candy  
Welton, Candy & Associates  
P.O. Box 6186  
Long Beach, California 90806

Dear Mr. Candy:

Enclosed is our report regarding a cyanide leach amenability study conducted on a sample of high-grade silver ore. The leach data show that 92 percent of the total silver can be recovered by cyanidation treatment of minus 100-mesh ground ore compared with only 54 percent extraction from ore crushed to 3/8 inch in size. Obviously lower recovery can be expected from coarsely crushed ore, if it were heap leached.

Assay of the composited samples, representing the ore stacked on the leach pad, indicated that the extraction of gold has essentially been completed.

We wish to thank you for the opportunity to do this feasibility study for you. If you have any questions about the test results, or if we can assist you in further metallurgical studies, please give us a call.

Sincerely,

*Harold Heinen*  
Harold Heinen  
Metallurgist

cc: J. McLaren Forbes  
2275 Mueller Dr.  
Reno, Nevada 89509



HEINEN-LINDSTROM  
ASSOCIATES, INC.

ORE TESTING • RESEARCH • CONSULTING

REPORT

on

CYANIDE LEACH TESTS CONDUCTED ON A SILVER ORE  
(Job No. HLA-80)

for

Peter Candy  
Welton, Candy & Associates  
P.O. Box 6186  
Long Beach, California 90806

SUMMARY

Three samples of ore from the Lakeview Claims near Hawthorne, Nevada were submitted for evaluation. Two samples, representing ore on the stockpile and on the leached pad were fire-assayed. The stockpiled ore contained 0.042 ounce of gold and no silver per ton. The heap leached ore sample assayed 0.004 ounce of gold and 0.10 ounce of silver per ton.

Cyanide leach tests were conducted on a high-grade ore carrying 85 ounces of silver and 0.026 ounce of gold per ton to evaluate the response of the ore to conventional cyanidation leaching practice. Extractions were 92.6 percent of the total silver from finely ground ore, and only 54 percent from 3/8-inch feed. Gold dissolution was negligible.

SAMPLE PREPARATIONS

Three samples of ore were submitted for evaluation. One sample, representing the ore stockpiled on the ~~Lakeview~~ <sup>Palmico</sup> Claims near Hawthorne, Nevada, consisted of eight bags of ore averaging 50 pounds each. The submitted sample was a nominal 3/4-inch crushed material. A 1/8 split was taken from each of the 8 bags using a Jones riffle-type ore splitter. The 1/8 splits were composited, crushed to about 1/4-inch in size, and mixed. Then a 2 pound sample was split out of the crushed material, and pulverized to minus 100-mesh. The pulverized material served as the head sample for assay.

The other bulk sample, representing the ore being heap leached at the ~~Palmico~~ <sup>Lakeview</sup> Claims, consisted of 17 wet samples averaging 40 pounds each. Each bag was an individual sample representing a

specific section of the ore heap. Mr. Forbes, your consulting geologist, requested that we keep each sample intact for possible future sampling for assay. Therefore each bag of material was handled as an individual sample. The wet samples were partially air dried, to allow the material to be split down using the Jones sample splitter. Each sample was riffled down to produce a 1/16 split, which were composited to form the head sample. The head sample was dried, crushed to about 1/4-inch in size, and processed in the same manner as the ore sample above to produce a head sample for assay.

The four samples of high-grade silver ore from the Lakeview Claims were the rejects from samples submitted for fire-assay. The four rejects were composited to form the feed material for the cyanide leach tests. One leach test was conducted on 3/8 inch feed and the other on pulverized material.

#### ASSAY OF HEAD SAMPLES

Gold and silver contents of each sample were determined by the conventional fire assay-fusion method. Assays were:

	<u>Sample Designation</u>	<u>Oz of Gold/Ton</u>	<u>Oz of Silver/Ton</u>
Pamlico	Stockpiled Ore	0.042	nil
Pamlico	Heap Leached Ore	0.004	0.10
Lake View	High-Grade Ore	0.026	84.95

#### CYANIDE LEACH TESTS

*Lake View*

Cyanide leach tests were conducted only on the high-grade silver ore sample. Sizes of feed leached were minus 3/8-inch and 100-mesh. Objective was to determine if the silver and gold values are recoverable by straight cyanidation treatment. Test procedure was as follows: A 400-gram charge of ore sample was pulped with 600 grams of water to produce a pulp with 40 percent solids. Lime was added to adjust the pH of the pulp to 11. Then, cyanide was introduced to produce a starting leach solution containing 10.0 pounds of sodium cyanide per ton. (A stronger cyanide solution than normal was employed because the ore contained a larger amount of silver than that generally encountered in cyanidation practice.) The bottle with the pulp was agitated by rolling on the laboratory rolls for 72 hours. At the end of each 24-hour period, the agitation was suspended briefly to permit the solids to settle and produce a pregnant solution for sampling. The solution removed was replaced with make-up water and cyanide to restore the leach liquor to its initial NaCN concentration.

Upon completion of the leach period, a liquid-solids separation was made by filtering the pulp. Both products were assayed for silver and gold. Metallurgical results are shown in Table 1.

TABLE 1

SILVER AND GOLD RECOVERIES BY CYANIDATION

Results	Size of Feed	
	-3/8 inch	-100 mesh
Extraction		
Percent of Total Silver	54.0	92.6
Percent of Total Gold	nil	50.0
Extraction, Expressed in		
Ounce of Silver/Ton of Ore	41.59	71.37
Ounce of Gold/Ton of Ore	nil	0.012
Assay of Leached Residue		
Ounce of Silver per Ton	35.47	5.78
Ounce of Gold per Ton	0.006	0.012
Calculated Heads		
Ounce of Silver per Ton	77.06	77.05
Ounce of Gold per Ton	0.006	0.024

The above data indicate that the silver mineralization in the high-grade ore is readily extracted by cyanidation provided the ore is finely ground. Solution assays indicated that the dissolution of silver was essentially completed after 48 hours of agitation. A cyanide leach was conducted on the ore crushed to about 3/8 inch to determine if this ore was amenable to heap leach cyanidation. Although 41 ounces of silver per ton of ore was extracted from the 3/8 inch material, heap leaching would not be good metallurgy because it would leave as much as 35 ounces of silver in the tailings.

A screen analysis was conducted on the 3/8 inch leached residue to determine particle size and residual silver distributions. The residue was sized on 5 screens using the wet screening procedure. Results are shown in Table 2.

The results of the screen analysis show that the 3/8 inch feed consists of 37 weight-percent minus 200-mesh slimes or clayey constituents. The plus +10 mesh sand fraction contains 93 percent of the total undissolved silver values, which must occur as locked grains of a silver species that is readily leachable if exposed to the cyanide solution. The distribution of the undissolved silver values suggests two potential methods for silver recovery. One is

that the silver can be recovered by cyanidation treatment of an all slime pulp. This conclusion is substantiated by the 92.6 percent extraction obtained leaching minus 100 mesh ground ore. The other treatment sequence consists of crushing the ore and washing out the clays to upgrade the ore for shipment to a smelter. This conclusion is based on the fact that the plus 1/4 inch fraction of the leached residue assays higher silver than the whole ore or heads.

TABLE 2

SCREEN ANALYSIS OF MINUS 3/8 INCH CYANIDE TAILS

Product Size	Weight Percent	Silver		Gold
		Assay Oz/Ton	Percent Distribution	Assay Oz/Ton
+1/4 inch	17.9	98.82	49.9	0.001
-1/4" +10 mesh	34.5	44.99	43.8	0.006
-10 +20	7.4	22.40	4.7	0.008
-20 mesh Sands	3.0	15.90	1.3	0.016
-200 mesh Slimes	37.2	0.30	0.3	0.008
Composite	100.0	35.47	100.0	0.006

CONCLUSIONS

Cyanidation extracted 92.6 percent of the total silver from an ore, carrying 77 ounces of silver (calculated head assay), that was ground to minus 100 mesh. Extraction from 3/8 inch crushed feed was significantly lower, 54 percent of the total silver.

RECOMMENDATIONS

An extensive mineralogical study should be made to identify the silver occurrence in this ore, and to characterize the gangue constituents. This information as well as a screen analysis of the ore crushed to 1 or 1/2 inch size would be most useful in deciding how to process this high grade ore. Custom cyanidation leaching of a very clayey pulp may produce some severe milling problems such as high soluble silver losses in the tailings and poor clarification of the pregnant solution which would interfere with the zinc precipitation and cause the production of a dirty zinc precipitates. If custom cyanidation is planned, it is recommended that tests be conducted to optimize the cyanide leach conditions.

*Harold Heinen*  
Harold Heinen  
Metallurgist

Thursday  
morning

# Hawthorne Leach Pads

7675, 001.05

## Summary of Mat. Quantities : Preliminary

<u>Site</u>	<u>Vol. Mat., yds.<sup>3</sup></u>	<u>Avg Dry Density</u>	<u>Quantity, tons</u>
✓ PALMICO Pad	Weighted \$42.80/t \$64.00/Ton Arithmetical 0.061 g/Tm 24.40 to 73600 2253	0.1020/T — 14307 Ton by Dennis	3600 2830 6438 <u>3219</u>
✓ Stockpile	2083	121.8	$\approx$ 3700 tons
P?B	0.035 Au 0.138 Ag	121	$\approx$ 3400 tons <u>1500</u>
✓ LAKE VIEW	Comp — 0.042 Au 0.110 Ag 0.006	121 90% = 105 60% =	$\approx$ 4740 tons <u>3982</u>
✓ RAWHIDE	6041	106	$\approx$ 8650 tons
✓ DEAD HORSE	2594	131	$\approx$ 4590 tons
Sunnyside all 0.150 Au 1.638 Ag			
✓ CORY MILL	2578	105	$\approx$ 3650 tons
✓ Stockpile	736	105	$\approx$ 1040 tons

November 12, 1981

Mr. Peter Candy  
Welton, Candy & Associates  
2179 Pacific Avenue  
Long Beach, California 90806

Dear Sir:

Enclosed are rough drafts of my heap leach reserves calculations for the Empire Project, in the Hawthorne, Nevada area.

Sheet #1: Empire Leach Heap Reserves gives tonnages based upon the testing done by Harding-Lawson Associates. The gold and silver values are based upon assyes of samples composited, for each heap or stockpile, from material obtained by Harding-Lawson for their tonnage determinations. Values obtained by me were also used for Lake View and P Pamlico leach pads as well as Pamlico stockpile.

Sheet #2: Palmico Pre Leach Reserves were based upon ma material furnished by Empire Metals, with the exception of my Randon Samples for Pamlico leach and stockpile.

Yours truly,

J. McLaren Forbes

TO: HUNTER MINING LABORATORY, INC.

994 GLENDALE AVENUE • SPARKS, NEVADA 89431 • TELEPHONE: (702) 358-6227

## LABORATORY ORDER

SAMPLES FROM:

Welton, Candy Associates		Laboratory Number <i>OCT 30 81 012217</i>
		Date Received:
		Customer Order No.:
Attention:	Telephone:	Date Shipped: Via:

SAMPLE MARK	FORM	ANALYZE FOR	SAMPLE MARK	FORM	ANALYZE FOR	SAMPLE MARK	FORM	ANALYZE FOR
2551		.046 .21	Deadhorse	L P-	Leach	Pac1		
2552	.012	<i>Aw, Ag</i> <sup>4.29</sup> <i>Roughed up</i>	<i>Raw</i>	<i>assay</i>	-			
2553	.004	1.80	L.V -	LP		Drive pipes		
2554	.012	1.17	Cory Mill	LP -	D.P. & SC			
2555	.016	.88	Cory Mill	Stockpile	SC			
2556	.006	.05	Pamlico	L.P.	DP-SC			
2557	.026	-0.02	Pamlico	Stockpile	DP-SC			
2558	.004	-0.02	Deadhorse	Sand cone	=SC			
2559	.002	.56	Ramahide	LP SC				
2560	-0.002	.74	L.V	LP SC				
2561	.016	1.22	Cory Mill			Results by Tuesday		
			Stockpile					
						SC = Sand Cone		
						DP = Drive Pipe		

REMARKS:

*Cc. Mr. Farber*

NO. OF SAMPLES:

11

TRACE

ASSAY

FIRE ASSAY

PULPS:  Discard,  Return.

REJECTS:  Discard,  Return.

PULPS held for 90 days. REJECTS held on request but not over 30 days. Arrangements may be made to store rejects @ \$1.00/cwt/month. Minimum charge for storage will be \$5.00/month.

SUBMITTED BY:

*JMC Daren Farber*

Date: 10-30-81

TO: **HUNTER MINING LABORATORY, INC.**  
 994 GLENDALE AVENUE • SPARKS, NEVADA 89431 • TELEPHONE: (702) 358-6227

## LABORATORY ORDER

SAMPLES FROM:

Welton, Candy & Associates P.O. Box 6186 Long Beach, CA 90806	Laboratory Number: <b>OCT 23 81 012136</b>
	Date Received:
	Customer Order No.:
Attention: Peter Candy Telephone: 702-331-3600	Date Shipped: Via:

SAMPLE MARK	FORM	ANALYZE FOR	SAMPLE MARK	FORM	ANALYZE FOR	SAMPLE MARK	FORM	ANALYZE FOR
A214291 PANNICO w/p per Stockpile 92 93	Rx	.026 .020 .060	91			91		Ag 100.00 1.922
		An, Hg	92			92		= 0.35 Au = 0.173 Ag
		.020	93			93		Ag 1.56 15.56
A214299		.004	-0.002			100		= 14.00 9
95		-0.002	.02			50		1.575 920
Bullhead 96		.048	.71			50/1		1.69 19.10
Bullhead 97		-0.002	.32			60/2		21.00 20
Waste #1 98		.044	1.38		OTC #1 LL			34.6 24.46
Lug 99		-0.002	.22					

REMARKS:	J. McLaren Forbes 2275 Mueller Dr Reno, NV 89502	826-1545
----------	--	----------

NO. OF SAMPLES:

9

TRACE  
 ASSAY  
 FIRE ASSAY

PULPS:  Discard,  Return.

REJECTS:  Discard,  Return.

PULPS held for 90 days. REJECTS held on request but not over 30 days. Arrangements may be made to store rejects @ \$1.00/cwt/month. Minimum charge for storage will be \$5.00/month.

SUBMITTED BY:

*J. McLaren Forbes*

Date: \_\_\_\_\_

Weighted  
Tonnage

? where

2000  
5000,  
5000

600-16

South side

Large Dumps

12,000 Tons

0.13	Au	\$ 78.00	85	66.30
0.65	Ag	10.40	63	6.55

Recd.

Best

~~\$ 88.40~~ ~~\$ 72.85~~

$12,000 \text{ Tons} = \$ 271,200$

$12,000 \text{ Tons} = \$ 72,85$

Note: on Top-side 2000 Tons See now Ag none

S side all

13,014 Tons

Recovery

Au	0.13	Au	=	\$ 78.00	P 85%	\$ 66.30
Ag	0.65	Ag	=	10.40	C 63%	6.55

~~\$ 88.40~~

Per ton at Long's recovery  
for 13,014 Tons = \$ 948069.90

North Side

Tons 1065

Au	0.07	=	\$ 42.00	P 85% =	35.70
Ag	0.81	=	12.96	C 63%	8.16

~~\$ 43.86~~

1065 Tons = 46,710.90

All:

Au = 0.13

Ag = 0.66

(13,014  
1065)

$\times \$ 72.85$

$\times \$ 43.86$

Tons x \$

948069.90

46710.90

at 80% Au

63% Ag

14,079 Tons

$\frac{1116.71}{58.55}$

$\frac{994,780.80}{14,079}$

All

$\frac{\$ 450 \text{ Au}}{5.82}$   
 $\frac{\$ 64.44}{\$ 58.50}$

$994,780.80 \div 14,079 = \$ 70.66$

S side

$\frac{962.83}{15} = \$ 64.19$

N side

$\frac{637.75}{14} = \$ 45.55$

1600.58

$29 = \$ 55.19$  authantic  
less always bolt sales

Weighted  
Tonnage

? ? when

Large Dumps

2000  
5000,  
5000

South side

12,000 Tons

(Recd.)

0.13  
0.65

Au  
Ag

# \$ 78.00  
10.40

85  
63

66.30  
6.55

# 88.40

# 72.85

Best

12000 Tons = @ 88.40 \$ 1,060,800

12,000 Tons = @ 72.85 = \$ 874,200

Note: on Top side 2000 Tons See now Ag none

South side all

13,014 Tons

Recovery

Au	0.13	Au	=	# 78.00	@ 85%	\$ 66.30
Ag	0.65	Ag	=	10.40	@ 63%	<u>6.55</u>

Per ton at long recovery \$ 72.85  
for 13,014 Tons = \$ 948,69.90

North Side

Tons 1065

Au	0.07	=	# 42.00	@ 85% =	36.70
Ag	0.81	=	12.96	@ 63%	<u>8.16</u>

1065 Tons = 46,710.90  
\$ 43.86

All:

$$(13,014 \times \$ 72.85) = 948,69.90$$

$$1065 \times \$ 43.86 = 46,710.90$$

$$\frac{13,014}{1065} \times \frac{\$ 72.85}{\$ 43.86} = \frac{948,69.90}{46,710.90}$$

$$14,079 \text{ Tons } \boxed{1116.71} \quad \boxed{58.75} \quad \# 994,780.80$$

$$\frac{1116.71}{58.75} = \frac{994,780.80}{\$ 43.86} = \frac{994,780.80}{\$ 43.86} = 22,700$$

$$994,780.80 \div 14,079 = \$ 70.66$$

S side  
N side

of Values

962.83

632.75

1600.58

Arithmetical

\$ 64.19

\$ 45.55

\$ 55.19

arithmetical  
average both sides

red = ± 500 Au 11% Ag  
green = ± 1% " "

85 + 63

### Comparisons

Dump	Tons	Au	Ag	\$ Au	\$ Ag	\$ Total
Dump 1 by Stringer				\$600	\$16.00	
PA 47A 2963	100	0.074	0.679	44.90	10.86	\$ 55.26
Forbes		0.072	0.780	43.20	15.68	58.88
						46.60
						53.89
PA 46A 2962	80	0.092	0.682	55.20	11.07	* 66.27
Filts		0.01	0.19	6.00	3.04	9.04
						3.94
						17.42
PA 45A 2964	40	0.029	0.261	17.40	4.18	* 21.58
Forbes		0.02	0.28	12.00	7.48	16.48
						13.02
						41.05
PA 25 2695 2696	150	0.078	0.126	46.80	2.02	* 48.82
	835	0.1127	0.10 } 0.089	67.20	1.60 } 68.80	51.36
		0.056 } 0.02 } 0.02		33.60	0.32 } 33.92 } 38.76	43.45
						37.02
PA 29	5000	0.067	0.283	90.20	7.53	97.73
	6709					
✓ PA-21	2000	.214	1.006	128.40	16.10	* 144.50
F PA-21	1250	0.036	0.42	21.60	6.72	28.32
						22.59
						85.56
✓ PA-22	5000	0.151	0.848	90.60	13.57	* 104.17
F PA-22		0.02	0.01	12.00	0.16	12.16
						10.30
						24.30
PA-30	500	0.163	1.216	97.80	19.46	* 117.26
F PA-30		0.090	0.84	54.00	13.44	67.44
						57.38
						456.63 ÷ 7 65.23
						493.65 ÷ 8 61.91
						557.86 ÷ 7 = 79.69
						243.68 ÷ 7 = 34.81
						27.82
Arithmetical		Long	5000			
		Forbes				
Au						
A. Average	0.047	0.389				
@ 6.00	28.20	16.00	6.12	= \$ 34.42 ←		
@ 4.00	18.80	9.00	3.50	22.30 ←		



## Western Testing Laboratories

1080 Linda Way, No. 3  
Sparks, Nevada 89431  
Telephone: (702) 331-3600

### Report of Analysis

Submitted by: Welton, Candy, Associates  
P.O. Box 6186  
Long Beach, CA 90806  
Attn: J. McLaren Forbes

Date: August 13, 1980

Laboratory number: 226-1

*Rush*  
Analytical method: Fire Assay

Your order number:

Report on: Au, Ag

Invoice number: B634

Sample	Au (Oz/Ton)	Ag (Oz/Ton)
FP-21	0.036	0.42
FP-22	0.020	0.01
FP-30	0.090	0.84

Charles Gustofson  
Laboratory Manager

**ppm** = Parts per million  
**Percent** = Parts per hundred  
**1 oz/ton** = 34.286 ppm  
**1.0%** = 20 pounds/ton

**Oz/ton** = Troy ounces per ton of 2000 pounds avoirdupois  
**Fineness** = Parts per thousand  
**1 ppm** = 0.0001% 1 ppm = 0.029167 oz/ton  
Read + as "greater than." Read - as "less than."



# Western Testing Laboratories

1080 Linda Way, No. 3  
Sparks, Nevada 89431  
Telephone: (702) 331-3600

## Report of Analysis

Submitted by: Welton, Candy, Associates  
P.O. Box 6186  
Long Beach, CA 90806  
Attn: J. McLaren Forbes

Date: August 13, 1980

Laboratory number: 226-1

Analytical method: Fire Assay

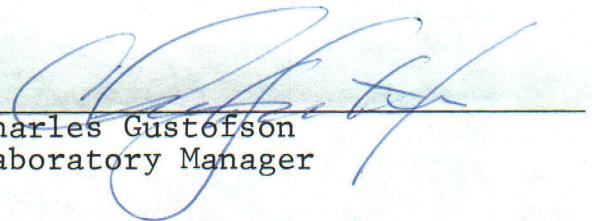
Your order number:

Report on: Au, Ag

Invoice number: B634

---

Sample	Au (Oz/Ton)	Ag (Oz/Ton)
FP-21	0.036	0.42
FP-22	0.020	0.01
FP-30	0.090	0.84



Charles Gustofson  
Laboratory Manager

---

**ppm** = Parts per million  
**Percent** = Parts per hundred  
**1 oz/ton** = 34.286 ppm  
**1.0%** = 20 pounds/ton

**Oz/ton** = Troy ounces per ton of 2000 pounds avoirdupois  
**Fineness** = Parts per thousand  
**1 ppm** = 0.0001% 1 ppm = 0.029167 oz/ton  
Read + as "greater than." Read - as "less than."



# **Western Testing Laboratories**

1080 Linda Way Sparks, Nevada 89431 (702) 331-3600

## **Statement**

Welton, Candy, Associates  
P.O. Box 6186  
Long Beach, CA 90806  
cc: J. McLaren Forbes

Date August 13, 1980

<i>Date</i>	<i>Description</i>	<i>Charges</i>	<i>Credits</i>	<i>Balance</i>
8-13-80	Lab No. 226-1, Invoice B634 Prep & Fire Assay 3 Samples on RUSH BASIS for Au, Ag @ \$35.00 each	\$105.00		\$105.00
	Balance Due \$105.00			

Arithmetical  
Average

		*
	0.295	+
	0.163	+
	0.074	+
	0.008	+
	0.049	+
	0.000	+
	0.102	+
Pawlico	0.010	+
EMPIRE	0.068	+
PA 89A	0.075	+
	0.097	+
	0.004	+
TANU	0.000	+
PA 50A	0.006	+
	0.041	+
Third Series	0.036	+
	0.029	+
	0.092	+
	0.074	+
	0.056	+
	0.018	+
	0.037	+
0.22	• • • • • • •	◊
	1.334	◊
	1.334	÷
	22.	=
	0.061	*
	0.061	×
	400.	=
	24.400	*
	450.	=
	27.450	*
	500.	=
	30.500	*
	550.	=
	33.550	*
	600.	=
	36.600	*
	0.	*

THE FOLLOWING 6 DOCUMENTS ARE COPIES  
OF A RECEIPT OR ADDING MACHINE TAPE THAT WAS  
TOO LARGE TO BE SCANNED.

DUE TO THE POOR PRINT QUALITY ON THE TAPE, SOME  
DOCUMENTS MAY NOT BE FULLY LEGIBLE.

JJ

10-APP-21

Palmero

3rd Series

17.500 M \*

PA 29 A 17.500 + x

Weighted by 0.295 =

Tons 5.163 \* M

5.163 +

5.163 ◊

Three

PA BOA

500.000 M

500.000 +

0.163 x

0.163 =

0.163 \*

0.163 +

0.163 ◊

M

0.163 +

0.000 x

0.074 =

0.220 \*

0.220 +

0.793 ◊

M

0.163 +

0.163 x

0.163 =

0.430 \*

0.430 +

0.430 ◊

M

0.163 +

0.000 x

0.000 =

0.430 \*

0.430 +

92.793 ◊

M

200.000 +

200.000 x

0. =

0.000 \*

0.000 +

92.793 ◊

M

75.000 +

75.000 x

0.102 =

7.650 \*

7.650 +

100.443 ◊

M

35.000 +

35.000 x

0.010 =

0.350 \*

0.350 +

100.793 ◊

M

90.000 +

90•000	x
0•063	=
6•120	*
6•120	+
106•913	◊
	M
15•000	+
15•000	x
0•075	=
1•125	*
1•125	+
108•038	◊
	M
150•000	+
150•000	x
0•097	=
14•550	*
14•550	+
122•533	◊
	M
35•000	+
35•000	x
0•004	=
0•140	*
0•140	+
122•728	◊
	M
0•000	+
0•000	x
0•	=
0•000	*
0•000	+
122•728	◊
	M
5•000	+
5•000	x
0•006	=
0•030	*
0•030	+
122•753	◊
	M
10•000	+
10•000	x
0•041	=
0•410	*
0•410	+
123•168	◊
	M
5•000	+
5•000	x
0•036	=
0•130	*
0•130	+
123•341	◊
	M
40•000	+
40•000	x
0•029	=
1•160	*
1•160	+
124•503	◊
	M
80•000	+
80•000	x

0•092 =  
7•360 \*  
7•360 +  
131•268 ◊  
M  
100•000 +  
100•000 x  
0•074 =  
7•400 \*  
7•400 +  
139•268 ◊  
M  
45•000 +  
45•000 x  
0•056 =  
2•520 \*  
2•520 +  
141•708 ◊  
M  
50•000 +  
50•000 x  
0•018 =  
0•900 \*  
0•900 +  
142•618 ◊  
M  
300•000 +  
300•000 x  
0•037 =  
11•100 \*  
11•100 +  
153•738 ◊

PA<sup>50A</sup>

σZX Tare → 153•738 ÷

To Tare → 1912•500 ◊  
in KJ 1912•500 =  
21 Tare 0•080 \*

---

M  
1912•500 T

0 • \*

153•738 ÷  
1912• =  
0•080 \*

M  
1912•500 +

PL2234  
 +0452-  
 \* M  
 + M  
 - M  
 → 1912•500  
 { 5000•000 +  
 5000•000 X  
 0•151 =  
 755•00 \*  
 755•000 +  
 755•000 ◊  
 M  
 PA214 { 2000•000 +  
 2000•000 X  
 0•214 =  
 428•000 \*  
 428•000 +  
 1183•000 ◊  
 M  
 25•000 +  
 25•000 X  
 0• =  
 0•100 \*  
 0•100 +  
 1183•100 ◊ M  
 2•000 +  
 2•010 X  
 0•031 =  
 0•102 \*  
 0•102 +  
 1183•102 ◊ M  
 12•000 +  
 12•000 X  
 0• =  
 0•100 \*  
 0•100 +  
 1183•102 ◊ M  
 13•000 +  
 13•000 X  
 0•030 =  
 0•400 \*  
 0•400 +  
 1183•030 ◊ M  
 2•000 +  
 2•000 X  
 0•040 =  
 0•080 \*  
 0•020 +  
 1183•032 ◊ M  
 5•000 +  
 5•000 X  
 0•024 =  
 0•120 \*  
 0•120 +  
 1183•032 ◊ M  
 15•100 +  
 15•100 X

15-000  
 15-000  
     00  
     0-000  
     0-000  
 183-0732

P412A

Telul	—	9 17 • 500
Fest		9337 • 500
02 X Tork		11 03 • 847
(m. 3)		0 • 000
		9337 • 500

$$\begin{array}{r} 1153 \cdot 347 \\ 9307 \cdot 530 \\ \hline \end{array}$$

$$\text{for } g_{\text{soft}} \rightarrow 0.131$$

9/107.5 Tons  
@ 0.131 cu ft

# 13  
0-131  
450 •  
52 • 400  
450 •  
50 • 950  
0 •  
0 •  
100 •  
# 0 •  
700 •

9 67 • 500

1103 • 347

15. • 30.0

P14 23 A

$15 \cdot 20$

100

13

100

3-2-2022

PA.24A  $\int s^{\frac{1}{2}} \cdot \dots$



Operational / mont  
Per Month

Management + Retainers	5000
Wreckmen 7 x 750 =	5200
General Sup.	3000
Assays	2000
Accountant	2000
Supplies	5000
	<hr/>
	\$ 22,200
at \$25,000	"

	Per Month
Management & Retainers	<u>5000 00</u>
Watchmen 7X	<u>5250 00</u>
	<u>\$1750 = 1</u>
Hospital	2000 00
away	1500 00
account	1000 00
	<u>25 00</u>
Supplies	<u>5000 00</u>

Curtain 19.750  
1 25

Say 20 too far out

$\div 7 = 3000$  / pay  
per month

I am  
Date 15/8

PALMICO

EMPIRE FIGURES

	Grade Weighted	by Ton-oz	Ton-oz	Ton-oz	Ton-oz
DUMPS					
Total Pandemic	Tons	02 Au	Au	02 Ag	Ag
PAIBA-PASOA	14,383	0.13	1869	0.64	9218
REMAINING					
Dumps on PA23A	5375	0.065	349	0.27	1440
PA28A					
DUMPS					
Moved to PALMICO					
LEACH	9008				
PRE LEACH	use → 9000	0.169	1520	0.864	7778

Grade by Arithmetical Average

PAIBA-PASOA 14383	0.057	0.0900	0.49	0.0000
Dumps remaining				
PA23A - PA28A 5375	0.054	0.0900	0.145	0.0000
9008..				
Dumps moved to palmico use → 9000	0.058	0.0900	0.55	0.0000
Leach ↑				
PALMICO PRE LEACH				0.808

0 • \*  
Ag

7778•054      ÷  
9026•50      ×  
0•862      \*  
0 • \*  
Au

1337•045      ÷  
9026•50      ×  
0•148      \*  
0 • \*

Palmica Dumps Remaining (not removed)  
and  
EMPIRE DATA

Dumps	Au	Ag	Tons	Tons x Oz
Not removed from hill				Au Ag
- PA 23A	now	mono	15.0	0.0 0
? - PA 24A	0.067	.283	5000	335.0 1415.
? - PA 25A	0.078	.126	150	11.7 18.90
- PA 26A	0.011	.162	55	0.06 0.81
- PA 27A	.156	.177	10	1.56 1.77
- PA 28A	.013	.060	6.0	0.78 3.60
Dumps Remaining Tons	53.75		349.10	1440.08
			$349.10 \div 5375 =$	$0.065$
Dumps Remained				Au
				$= 0.268$
				OK

Au Total Dumps before mining	Tons Oz = 1686.635	Tons Oz = 1440.50
Au Dumps remaining	Tons Oz = 349.590	Tons Oz = 5375.00
Au Dumps	Tons Oz = 1337.045	Tons Oz = 19026.50
Moved Au 1337.045 $\div$ 9026.50 = 0.148 oz / Ton	(should have been)	(on leach pad)

Ag Total Dumps before mining	Tons Oz = 9218.134	Tons Oz = 14401.50
Ag Dumps Remaining	Tons Oz = 1440.08	Tons Oz = 5375.00
Au, Tons Oz = 7778.054		Tons Oz = 19026.50

Ag Dumps Moved 7778.054  $\div$  9026.50 = 0.862 oz / Ton Ag  
(should have been)  
(on leach pad)

$$\begin{array}{r} 14401.5 \\ 5375.0 \\ \hline 9575 \end{array}$$

①  
© HJ = 1/6<sup>4</sup>  
SIL 1/600<sup>3</sup>

120000 11 = 132

# 34.31 #5933

### THIRD Series

PA

Less Top = 1,4,540 Ton

A 4206

A 611, 552

Dump Size  
Tonage

	Sample No	g/Ton Gold	g/Ton Silver		
PA3	PA1A	Trace	1.487	26.99	350
	PA2A	Trace	.383	6.13	15
	PA3A	Trace	.153	2.45	10
	PA4A	None	.085	1.36	30
	PA5A	None	Trace		7
P-3	PA7A	Trace	.623	9.97	60
	PA8A	Trace	.061	0.98	40
	PA9A	None	None	2000	27.54
	PA10A	None	Trace		7
PA10 - P-5	PA11A	Trace	.049	0.78	10
	PA12A	.014	3.151	58.82	225
	PA13A	.005	.092	4.47	19 → 19
	PA14A	None	Trace		15
	PA144	PA15A	.024	.832	27.71
	PA41	PA16A	.040	.694	35.10
	PA4C	PA17A	.030	.343	23.49
	PA45	PA18A	None	Trace	15
	PA42	PA19A	.051	1.369	52.50
	PA46	PA20A	None	.182	2.91
28.32	PA21A	.036	.314	.042	1.006
18.72	PA30	PA22A	.020	.151	.090
	PA39	PA23A	??	None	None
vTop	PA24A	0.084	??	.067	.283
0.10	PA25A	0.06	??	.078	.126
L Side	PA26A	Not taken	Not taken	.011	.162
0.02	PA27A	Not taken	Not taken	.156	.177
	PA28A	Not taken	Not taken	.013	.060
PA24 P-14	PA29A	.295	.295	.976	192.62
67.44	PA30A	.090	.163	.084	1.216
	PA31A	.074	.074	.464	51.82
	PA32A	.008	.008	.030	5.28

P - FIRST Series Sample  
PA - SECOND Series Sample  
PA#A THIRD Series Sample

ALL DUMPS ARE STAKED  
WITH PA#A Series \$100

172.94 Ton

S + N 1598.12 ÷ 33. = 478.43  
shacks 1598.12 ÷ = 43.19

PA30A

2

2

PA

Sample No	oz/Ton Gold	oz/Ton Silver	Dump Size Tons
PA33A	.049	.257	33.51 70
used PA34A	None	Trace	0.00 200
PA35A	.102	.049	61.98 75 ← 95 ← on top PA36A
PA37A	.010	.604	15.66 35 ← complete
PA38A	.068	.420	63.18 90
PA39A	.075	.853	58.65 15
PA40A	.097	2.04	90.84 150
used PA41A	.004	.049	3.18 35
PA42A	None	Trace	—
PA43A	.006	.077	4.83 5
PA44A	.041	.202	27.83 10
PA45A	.036	.465	29.04 5
PA46A	.029	used .261	21.58 40
PA47A	.092	.692 → .692	66.11 80
PA48A	.074	.679	55.26 100
PA49A	.056	1.804	62.46 45
PA50A	.018	.420	17.52 50
PA6A	.037	.744	34.14 300
TO BE RE RUN, Sample Decipher			10
27,302 Low Est.			↓


**Western Testing Laboratories**

1275 Kleppe Lane, #5 • Sparks, Nevada 89431 • (702) 331-3600

**Laboratory Order**

Received:

Laboratory Number:

Report to:

Western Candy &amp; Glass

Attention:

Address:

Telephone:

Additional Instructions:

Pamlico Stockpits

Lake View Leach Pads

9-30-81

9-29-81

Invoice Number:

11641

Your order number:

Sample Mark	Form	Analyze for	Sample Mark	Form	Analyze for	Sample Mark	Form	Analyze for
P1B		As Ag .052 .04	LV 1		.004 .19			
P2B		.042 Nil	LV 2		.002 .29			
P3B		.042 .13	LV 3		.002 .66			
P4B		.036 Nil	LV 4		.Ta 6.6			
P5B		.032 .09	LV 5		.010 1.54			
P6B		.022 .16	LV 6		.010 1.98			
P7B		.012 .09	LV 7		.008 .39			
P8B		.040 .60	LV 8		.004 .77			
P9B		.018 .28	LV 9		.004 .25			
P10B		.056 .13	LV 10		.010 .60			
P11B		.032 Nil	LV 11		.008 .39			
P12B	(A130)	.066 .15	LV 12		.004 Nil			

A130  
 P1B-P12B  
 2035

0.138  
 A130  
 P1B-P12B  
 120

10-1-81  
 1.102  
 0.006  
 (A2.40)  
 \$9.918

NO. OF SAMPLES

12

#1,151

 for  Trace,  Assay,  Fire Assay.

 PULPS:  Discard,  Return.

 REJECTS:  Discard,  Return.

**NOTE:** When a client wishes to have the PULPS and/or REJECTS returned, the client must pick up the pulps and rejects within 60 days after the Laboratory work has been completed. If the client requests WTL to return the pulps and/or rejects, they will be returned COD — unless the client makes special arrangements with WTL.

SUBMITTED BY:

Jim Racer Forbes

Date: 10-1-81

White copy: For your records.

Yellow copy: Send to Lab.

Pink copy: Enclose with samples.

0 • \*  
0 • 15 ×  
425 • =  
63 • 750 \*

\*  
0 • 004 +  
0 • 002 +  
0 • 002 +  
0 • 000 +  
0 • 010 +  
0 • 010 +  
0 • 008 +  
0 • 004 +  
0 • 004 +  
0 • 010 +  
0 • 008 +  
0 • 004 +  
0 • 052 +  
0 • 052 -  
0 • 066 ◊  
0 • 066 ÷  
12 • ÷  
12 • =  
0 • 000 \*



# Western Testing Laboratories

1275 Kleppe Lane, #5  
Sparks, Nevada 89431  
Telephone: (702) 331-3600

## Report of Analysis

(Page 1 of 2)

*Submitted by:* Welton, Candy & Associates  
P.O. Box 6186  
Long Beach, CA 90806  
*Attn:* Peter Candy  
*cc:* J. McLaren Forbes

*Date:* October 6, 1981

*Laboratory number:* 274-6

*Analytical method:* Fire Assay

*Your order number:*

*Report on:* Au, Ag

*Invoice number:* C1641

<u>Sample</u>	<u>Au (Oz/Ton)</u>	<u>Ag (Oz/Ton)</u>
LV-1	0.004	0.19
LV-2	0.002	0.29
LV-3	0.002	0.66
LV-4	Trace	6.16
LV-5	0.010	1.54
LV-6	0.010	1.98
LV-7	0.008	0.39
LV-8	0.004	0.77
LV-9	0.004	0.25
LV-10	0.010	0.60
LV-11	0.008	0.39
LV-12	0.004	Nil
P1B	0.052	0.04
P2B	0.042	Nil
P3B	0.042	0.13
P4B	0.036	Nil
P5B	0.032	0.09
P6B	0.022	0.16
P7B	0.012	0.09
P8B	0.040	0.60

*Hakeview  
Leach Pad*

*Pamlico  
Stockpile*

(Continued)

**ppm** = Parts per million

**Percent** = Parts per hundred

**1 oz/ton** = 34.286 ppm

**Oz/ton** = Troy ounces per ton of 2000 pounds avoirdupois

**Fineness** = Parts per thousand

**1 ppm** = 0.0001% **1 ppm** = 0.029167 oz/ton



## Western Testing Laboratories

1275 Kleppe Lane, #5  
Sparks, Nevada 89431  
Telephone: (702) 331-3600

### Report of Analysis

(Page 2 of 2)

Submitted by: Welton, Candy & Associates  
P.O. Box 6186  
Long Beach, CA 90806  
Attn: Peter Candy  
cc: J. McLaren Forbes

Date: October 6, 1981

Laboratory number: 274-6

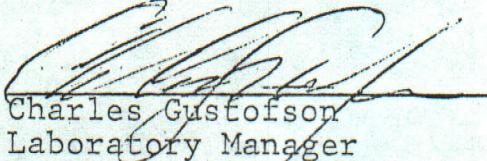
Analytical method: Fire Assay

Your order number:

Report on: Au, Ag

Invoice number: C1641

Sample	Au (Oz/Ton)	Ag (Oz/Ton)
P9B	0.018	0.28
P10B	0.056	0.13
P11B	0.032 <i>Ave = 0.035</i> \$15.75	Nil <i>Ave = 0.138</i> \$1.24 <i>= \$16.99</i>
P12B	0.066 <i>\$29.70</i>	0.15 <i>\$1.35</i> = <i>\$31.05 Total</i>



Charles Gustofson  
Laboratory Manager

Au

$$\begin{array}{r} .0363 \\ 13 \overline{)472} \\ \underline{-39} \\ 182 \\ \underline{-78} \\ 40 \\ \underline{-39} \\ 1 \end{array}$$

$$\begin{array}{l} \textcircled{1} \\ \textcircled{2} \end{array} \left\{ \begin{array}{l} 0.326 \\ 0.176 \end{array} \right.$$

$$3 - \frac{0.472}{\div 13} = 0.036 \text{ Au}$$

Ag

$$1.996$$

$$\begin{array}{r} \textcircled{A} \\ \textcircled{B} \\ \textcircled{C} \end{array} \rightarrow \frac{1.270}{\underline{3.266}}$$

$$3.266 \div 13 = 0.251 \text{ Ag}$$

$$\begin{array}{r} .251 \\ 13 \overline{)3266} \\ \underline{-26} \\ 66 \\ \underline{-65} \\ 1 \end{array}$$

Forbes Pamlico grab

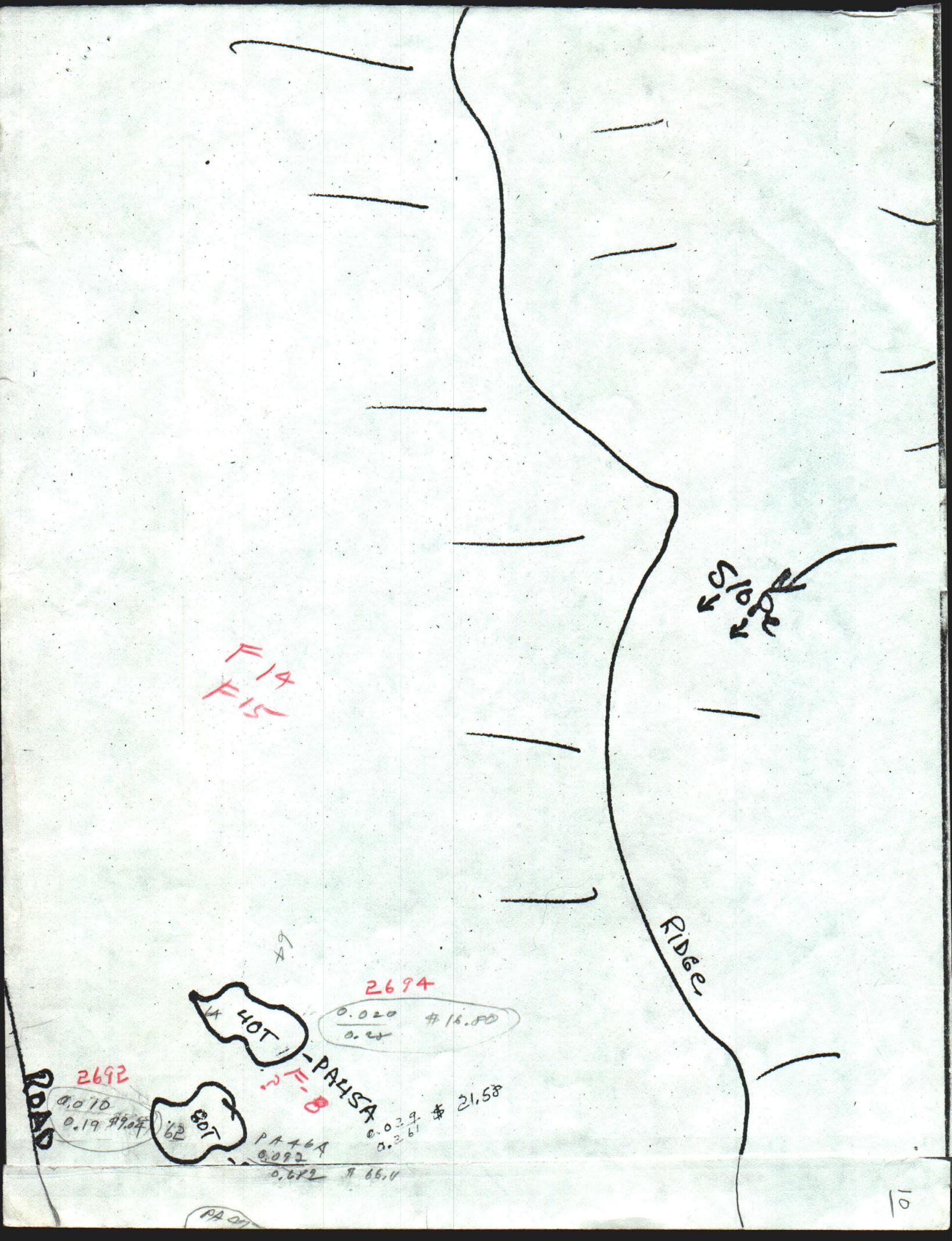
0.036 Au

0.251 Ag

Pambleco Pre-heads  
 EMPIRE Tms Forbes Assays  
 Selection Dumps

✓	2692 =	PA 46A =	80T	or P 10
✓	2693 =	PA 47A =	100T	or P-12
✓	2694 =	PA 45A =	40T	or P-11
Top Side	2695 =	part of 1 - PA 24A probable + =	80T	or P-14
	2696 =			or P-14
		PA 23A		

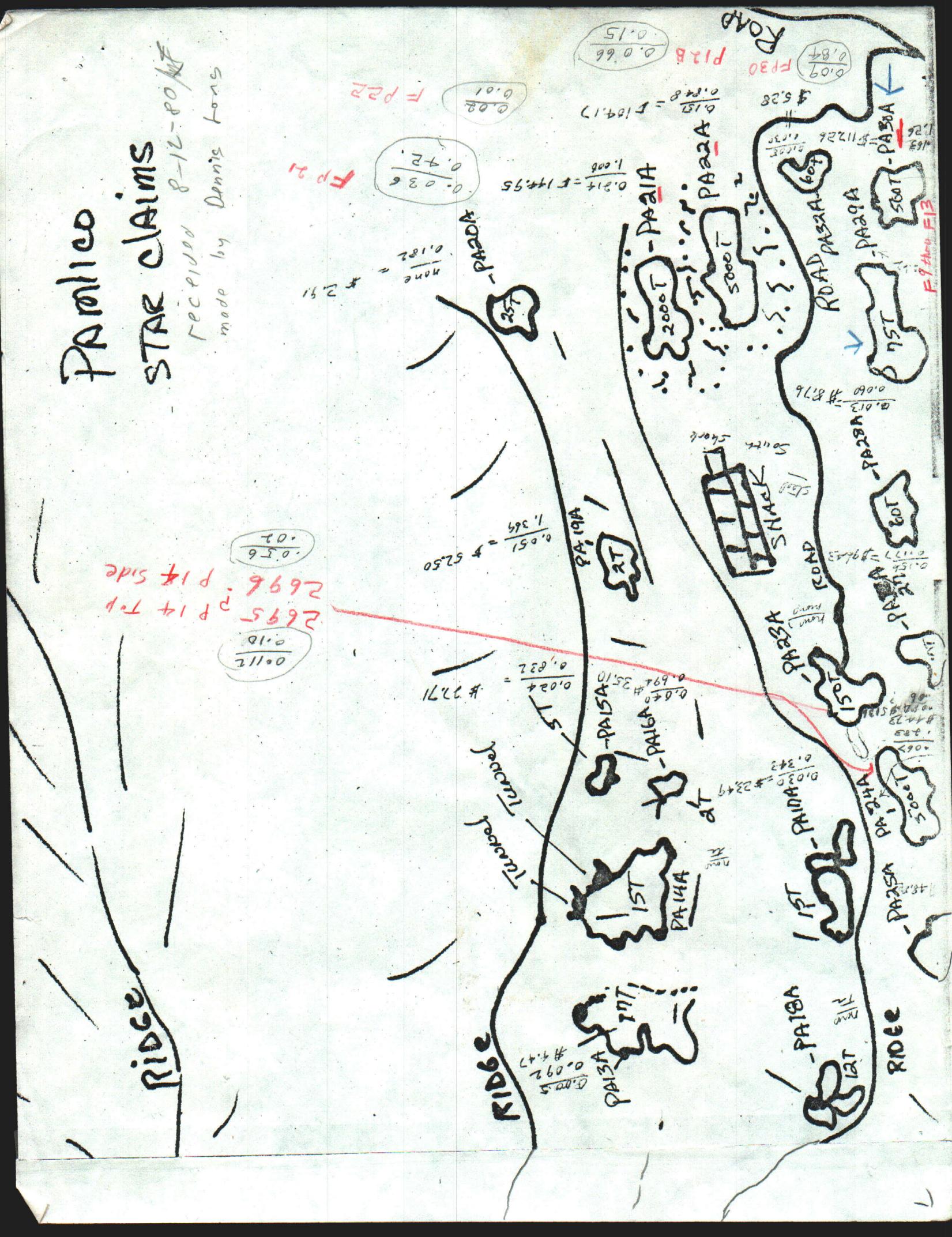
Most likely  
 OTC }  $F_1$   
 $F_2$   
 $F_3$   
 $F_4$   
 $F_5$   
 X P  
 F

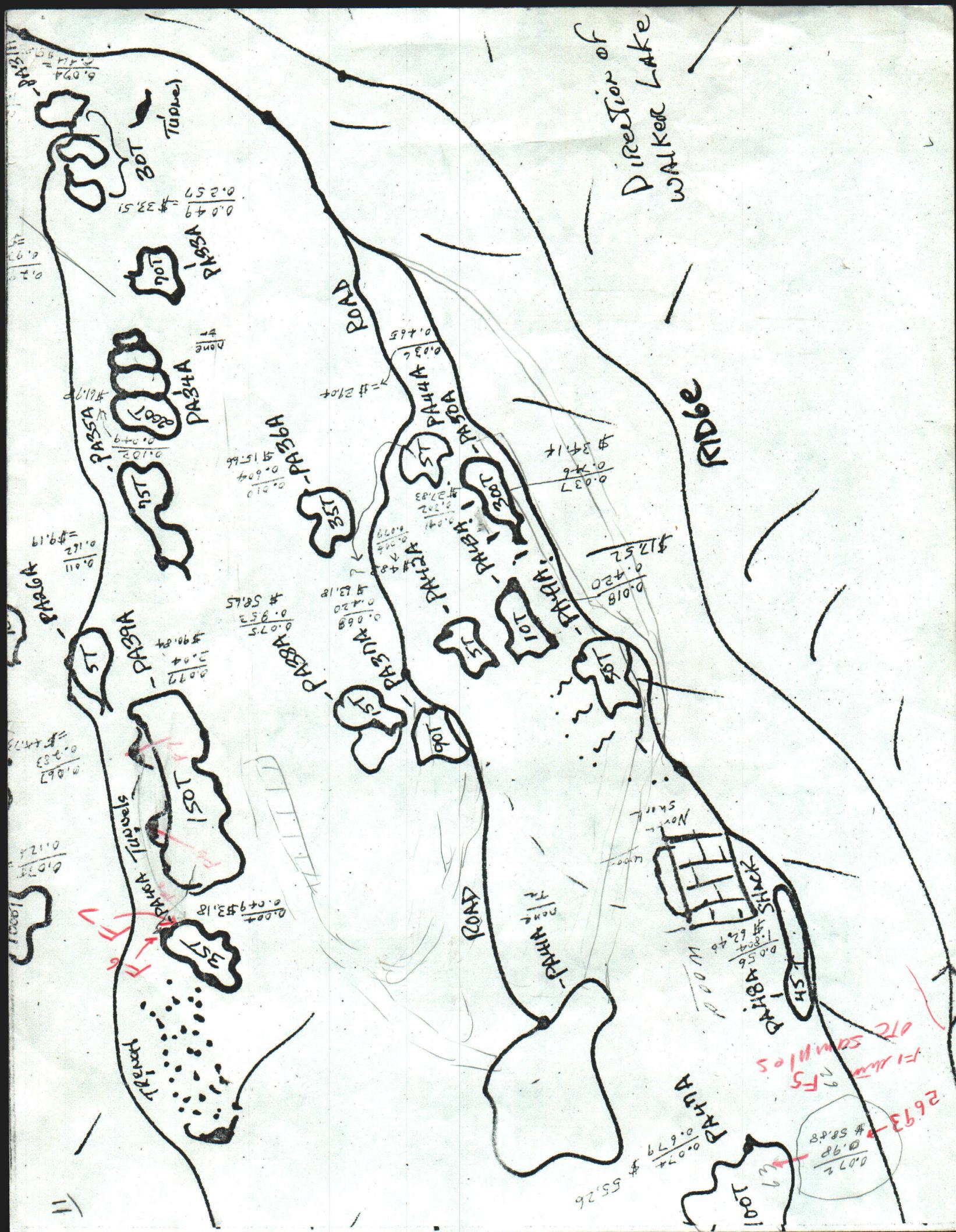


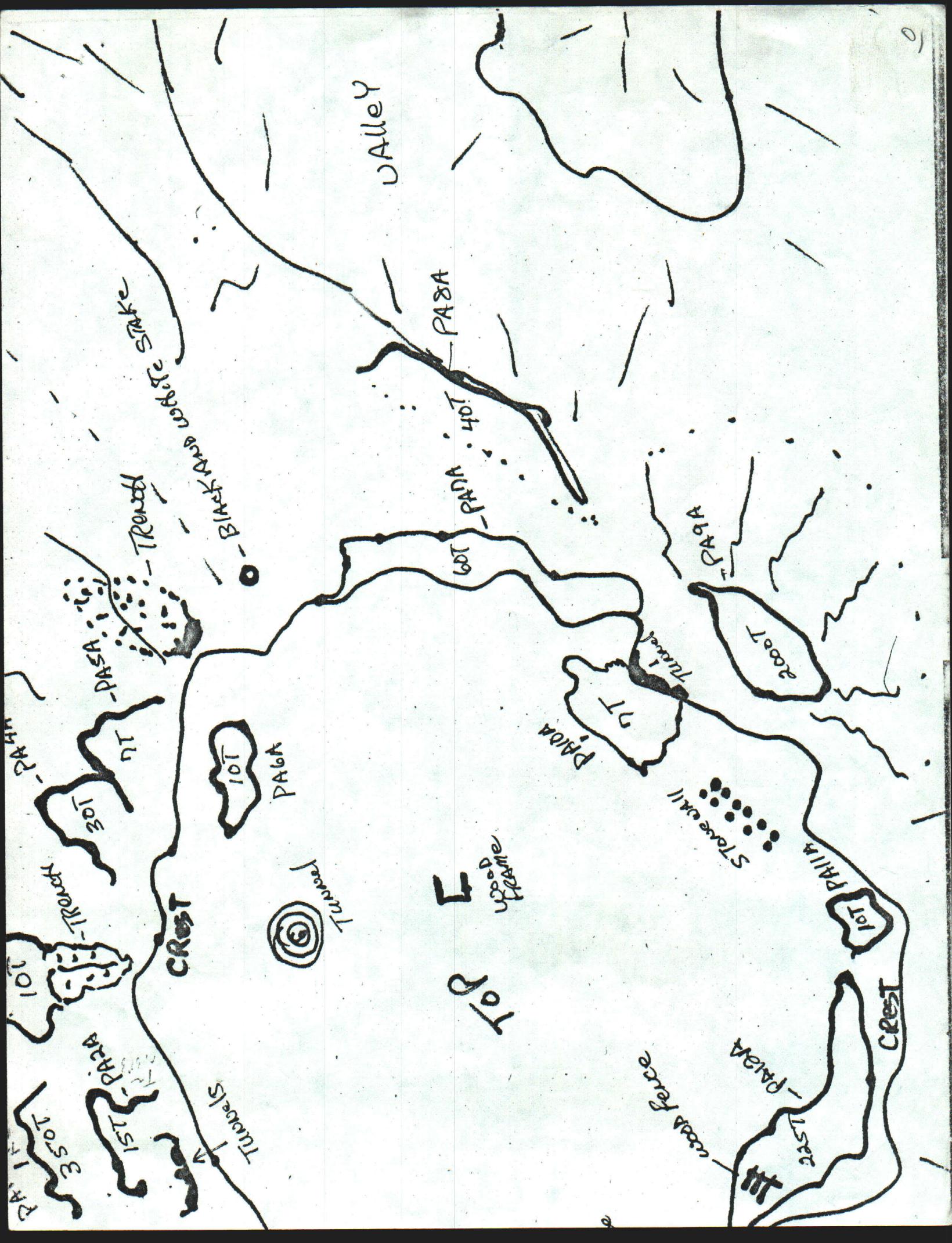
Pamlico

STAR claims  
8-12-80 AF

Received 6-1-27  
made by Dennis Long







WALKER LAKE MINERAL, INC.  
 P. O. BOX 2246  
 HAWTHORNE, NEVADA 89415

BULLHIDE PROPERTY  
 1-19-82

	LOCATION	DORE'	Au	Ag
1	BH1	.452	.012	.440
2	BH2	.331	.018	.313
3	BH 3	.289	.008	.281
4	BH 4A	.144	.021	.123
5	BH 4B	.135	.010	.125
6	BH 5 High Grade	5.109	.564	4.545
7	BH 6	.569	.016	.553
8	BH 7	.126	.009	.117
9	BH8	.042	.001	.041
10	BH 9	.021	Trace	.021
11	BH 10	.057	.006	.051
12	BH 11	.113	Trace	.113
13	BH12	Trace	Trace	Trace
14	BH 13	.252	.011	.241
15	BH 14A	.004	.004	Trace
16	BH 14C Rock	8.194	.357	7.837
17	BH 15	.669	.130	.539
18	BH 16 Rock	4.957	.378	4.579
19	BH 17	.221	.008	.213

Considered as talcous  
 Palmico Tonnage = 3300  
 Palmico oz = 17 Au and 248 Ag

Grade	oz/t	% t	Calculated		Grade	Check	
			oz	Au		Grade	oz in Heads
of	1m f	3300			1m		
heads	tails	60	1m	02 Au	+	x	
Pd	0.5	Tails	Heads	per ton	tails	% to	
0.005	3300	0	17	0.005	17	tails	
0.005	17	10	170	0.052	17.16	17.16	
0.005	17	20	85	0.026	85.8	17.16	
0.075	17	248	30	827	0.25	825	247.5
0.075	17	248	50	496	0.15	495	247.5

Calculated for E1104A5 Mound Africa Sample

9000 Tons 15.21 % Au 72.42% Ag

H =

For 100% Recovery

$$\text{Oz in tails} = 17 \\ \text{no. oz. of heads} = 17 \quad \frac{17}{3300} = 0.005$$

At any % recovery

$$\text{Oz in heads} = \frac{\text{Oz in tails}}{\% \text{ of heads in tails (loss)}}$$

Example 1000 oz in heads @ 10% loss to tails  
100 oz in tails = 10% of heads (loss)

$$\text{Oz in heads} = \frac{100}{.10} = 1000$$

Example 1000 oz in heads @ 50% loss to tails  
500 oz in tails = .50% of heads (loss)

$$\text{Oz in heads} = \frac{500}{.50} = 1000 \text{ oz}$$

For Pamlico Beach Pad: assuming 90% recovery or 10% loss in the tails. Since we do not know the head assay we can consider the present. A 25 ton tailings containing 1702 lbs

$$\text{Oz Au in heads} = \frac{217}{.10} = 170 \text{ oz Au in heads}$$

There are 3300 Tons in the Pamlico Pad

$$\therefore \text{the grade is } \frac{170 \text{ oz}}{3300 \text{ tons}} = 0.052 \text{ oz/t ton}$$

For Ag at 70% recovery (30% in tails)

$$\text{Oz Ag in heads} = \frac{248}{.30} = 826.7 \text{ oz Ag in heads}$$

∴ the

$$\frac{826.67}{3300 \text{ tons}} = 0.25 \text{ oz Ag per ton Ag in heads}$$

For Au at 80% Recovery a 20% loss in tails

$$\text{Oz Au in heads} = \frac{17}{.20} = 85 \text{ oz in heads}$$

$$\frac{85 \text{ oz}}{3300 \text{ tons}} = 0.026 \text{ oz/t ton grade of heads}$$

For Ag at 50% Recovery a 50% loss in tails

$$\text{Oz Ag in heads} = \frac{218}{.50} = 496 \text{ oz Ag in heads}$$

$$\frac{496 \text{ oz}}{3300 \text{ tons}} = 0.15 \text{ oz Ag per ton}$$

# Rawbund

.007 oz/ton

$$\text{Heads} = .007 \times 8700 = 60.9 \text{ oz}$$

$$\text{T@ } 90\% \text{ recovery} = \underline{54.81 \text{ oz}} \quad \text{a } 10\% \text{ loss}$$

$$\text{Tails} = \underline{.09 \text{ oz}}$$

$$6.09 = 10\% H$$

$$H = \frac{6.09}{.10} = 60.9$$

$$\text{Oz in Heads} = \frac{\text{Oz in Tails}}{\% \text{ in Tails}}$$

$$H = \text{Oz in Heads} = .007 \times 8700 = 60.9$$

$$@ 90\% \text{ recovery} = 54.81$$

$$\text{Oz in Tails} = 6.09$$

$$H = \frac{\text{Oz in Tails}}{\% \text{ of Oz in tails}}$$

$$10\% \text{ in Heads} = 3300 \times 0.005 = 16.50 \text{ oz}$$

$$H = \text{Oz in Tails} \quad \frac{16.50}{.10} = 165 \text{ oz in heads}$$

Pamlico beach - of least  $\rightarrow$  complete

$$165 \div 3300 = 0.05 \text{ heads grade}$$

100% Recovery

PAMLICO LEACH + STOCKPILE

	EMPIRE	FORBES
Au \$400 <sup>ec</sup>	Au \$400 <sup>ec</sup>	Au - \$19.00
Arithmetic	Weighted	
LEACH + STOCKPILE	\$ 253,000	678,000
LESS STOCKPILE	\$ 50,000	50,000
PAMLICO LEACH	\$ 203,000	628,000
LESS TAILS (present) (PAMLICO LEACH)	9.000	9.000
Theoretical Production	194,000	619,000
Au \$ 450 <sup>ec</sup> Au 9.20	Au = \$450 <sup>ec</sup>	Au = \$9.20 <sup>ec</sup>
LEACH + STOCKPILE	\$ 280,000	756,000
LESS STOCKPILE	56,000	56,000
PAMLICO LEACH	224,000	710,000
LESS TAILS (present) (PAMLICO LEACH)	19,000	10,000
Theoretical Production	214,000	699,000
Au 500 <sup>ec</sup> Au 9.50 <sup>ec</sup>	Au = \$500 <sup>ec</sup>	Au = \$9.50 <sup>ec</sup>
LEACH + STOCKPILE	308,000	834,000
LESS STOCKPILE	62,000	62,000
PAMLICO LEACH	246,000	772,000
Less TAILS (present) (PAMLICO LEACH)	14,000	14,000
Theoretical Production	232,000	758,000
Au 600 <sup>ec</sup> Au 20 <sup>ec</sup>	Au = \$600 <sup>ec</sup>	Au = \$20 <sup>ec</sup>
LEACH + STOCKPILE	412,000	1,067,000
LESS STOCKPILE	77,000	75,000
PAMLICO LEACH	335,000	990,000
Less TAILS (present) (PAMLICO LEACH)	15,000	15,000
Theoretical Production	320,000	975,000

EMPIRE LEACH HEAP RESERVES for  
Partially Leached Hoop - Rawhile, Dearhorse, Lakeview, Pamilco

Stock piles - Cory Mill, Pamilco

	Tonnage by	Ounces per ton from Average composite sample by	Average ounces per ton	Gold 3 \$400/oz Silver @ \$9/oz	Gold @ \$450/oz Silver @ \$9.20	Gold 6 \$500/oz Silver 3 \$950	Gold 1 \$910 \$3600
	Harding-Lawson unless marked by**	Forbes Harding	per ton	100% Au 90% Au 80% Au	100% Au 90% Au 80% Au	100% Au 90% Au 80% Au	100% Au 90% Au 80% Au
	unless marked by**			100% Ag 70% Ag	100% Ag 70% Ag	100% Ag 70% Ag	100% Ag 70% Ag
1	4.27	RAWHILE LEACH	Au=	0.007	0.007	2.52	3.15
2	6.74	8670 tons	Ag=	2.52	2.24	2.84	2.52
3	5.22	\$ per ton Au+Ag		2.515	2.515	3.50	3.15
4	3	\$ for 8700 tons { \$ to thousands to hundreds)		25.44	25.44	22.60	21.60
5	4	\$ for 8700 tons { \$ to thousands to hundreds)	Assumed gain @ leach of \$	221.000	160.000	229.000	166.000
6	6.21	DEAD HORSE LEACH	Au=	0.024	0.024	9.60	8.64
7	6.56	4370 tons	Ag=	0.385	0.385	3.47	3.47
8	0.77	\$ per ton Au+Ag		13.07	11.07	11.37	11.37
9	8	\$ for 410 tons	=	1694.02	1694.02	1356	1356
10	9	Assumed gain @ leach of \$		580000	440000	420000	410000
11	1.80	LAKE VIEW LEACH	Au=	0.010	0.008	320	288
12	1.22	4830 tons	Ag=	1.102	1.102	256	242
13	3.02	\$ per ton Au +Ag		1.306	1.306	11.75	11.75
14	4	\$ for 400 tons	=	1475	1111	841	841
15	5	Assumed gain		71000	53000	41000	39000
16	6	CORY MILL LEACH	Au=	0.012	0.012	3.60	3.24
17	7	3400 tons	Ag=	0.012	0.012	4.80	4.32
18	8	\$ per ton Au +Ag		10.53	7.37	527	476
19	9	\$ for 3400 tons	=	15.23	11.69	9.11	8.09
20	10	Assumed gain (16ss) @ leach of \$	/ton = \$	52000	40000	31000	29000
21	11	L122 CORY MILL STOCKPILE Au=	Dust=	0.116	0.016	6.40	4.86
22	12	930 tons	Au=	1.05	1.050	5.76	5.76
23	13	\$ per ton Au +Ag		15.85	12.35	9.45	6.59
24	14	\$ for 900 tons	=	9.85	16.86	473	473
25	15	Assumed gain		15000	12000	9000	7200
26	16	RANLICO LEACH	Au=	0.004	0.005	2.00	1.80
27	17	3340 tons	Ag=	0.10	0.05	1.68	1.68
28	18	\$ per ton Au +Ag		1.34	1.275	1.69	1.48
29	19	\$ for 3300 tons	=	1.34	1.275	1.26	1.19
30	20	Assumed gain		9000	7000	6000	5000
31	21	PAMlico STOCKPILE Au=	Dust=	0.035	0.026	1.36	1.24
32	22	3450 tons	Ag=	0.123	0.102	1.068	1.030
33	23	\$ per ton Au +Ag		1.19	1.02	0.25	0.25
34	24	\$ for 3500 tons	=	1.19	1.02	1.277	1.277
35	25	Assumed gain		50000	45000	39000	34000
36	26	Total O2 Au		397.02	352.26	0.034	0.034
37	27	2 month assumed operating cost	=	476,600	361,000	206,000	504,000
38	28	TOTAL ASSUMED gain	=	42,600	31,100	23,600	45,400
39	29	ASSUMPTION: Gold costs for total losses (99) REMAINING		42,600	31,100	23,600	45,400
40	30	\$ 2,000 source to produce 1,397,022 cost of \$79,000 GHN = 439,200 - 282,000		425,000	309,000	223,000	460,000

PAMlico - "PRE" LEACH RESERVES

EMPIRE'S Third Series Samples

PA13A thru PA50A  
for grade and tonnage  
for PAMlico samples

11-9-101

(Before Mining Begins)

	Tonnage by EMPIRE	Ounces per ton from Average EMPIRE Samples unless marked by EMPIRE	Average ounces per ton	Gold 3 \$400/oz 100% Au 90% Au 80% Au 100% Ag 70% Ag 50% Ag	Silver @ \$9/oz Gold @ \$450/oz Silver @ \$9.20 100% Au 90% Au 80% Au 100% Ag 70% Ag 50% Ag	Gold @ \$500/oz Silver @ \$950 100% Au 90% Au 80% Au 100% Ag 70% Ag 50% Ag	Silver @ \$620 100% Au 90% Au 80% Au 100% Ag					
411	PAMLICO DUMPS	Au= Arithmetical average	6.057	22.60	24.52	19.24	25.65	25.65	22.80	34.20		
		14383 tons	Au= 14383	4.41	2.09	2.21	4.51	4.66	3.24	2.33		
		\$ per ton Au+Ag	Au= 14383	27.21	E= 61	3.16	2.24	2.24	2.33	9.60		
		\$ for 14000 tons { \$ to thousands } ==	Au= 14383	30.00	286000	422000	366000	3119000	405000	44.00		
		Assumed gains @ leach of \$ ==	Au= 14383	391000	331000	286000	422000	366000	352000	616000		
		\$ for 14000 tons ==	Au= 14383	52.00	4.60	4.60	58.50	65.00	58.50	70.00		
		\$ per ton Au+Ag	Au= 14383	57.76	E= 33	44.43	56.77	6.66	52.00	6.66		
		\$ for 14000 tons ==	Au= 14383	807000	712000	623000	901000	695000	879000	905000		
		Assumed gain @ leach of \$ ==	Au= 14383	795000	696000	696000	901000	879000	771000	1271000		
		\$ for 14000 tons ==	Au= 14383	216.0	1.944	1.728	24.30	27.00	32.40	11		
		DUMPS 5375 tons	Au= 5375	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ per ton Au+Ag	Au= 5375	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ for 5000 tons ==	Au= 5375	114000	102000	90000	129000	100000	142000	135200		
		Assumed gain	Au= 5375	114000	102000	90000	129000	100000	111000	1176000		
		REMAINING PAMLICO	Au= Weighted average	0.065	26.00	23.40	29.25	23.40	32.50	32.00		
		DUMPS 5375 tons	Au= 5375	0.25	0.27	0.25	0.25	0.25	0.25	0.25		
		\$ per ton Au+Ag	Au= 5375	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ for 5000 tons ==	Au= 5375	142000	126000	110000	159000	140000	175000	155000		
		Assumed gain	Au= 5375	142000	126000	110000	159000	140000	175000	155000		
		REMAINING PAMLICO	Au= Weighted average	0.065	26.00	23.40	29.25	23.40	32.50	32.00		
		DUMPS 5375 tons	Au= 5375	0.25	0.27	0.25	0.25	0.25	0.25	0.25		
		\$ per ton Au+Ag	Au= 5375	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ for 5000 tons ==	Au= 5375	159000	140000	123000	175000	155000	175000	155000		
		Assumed gain	Au= 5375	159000	140000	123000	175000	155000	175000	155000		
		MOVED PAMLICO	Au= Arithmetical average	0.058	26.00	23.40	29.25	23.40	32.50	32.00		
		DUMPS 9000 tons	Au= 9000	0.25	0.27	0.25	0.25	0.25	0.25	0.25		
		\$ per ton Au+Ag	Au= 9000	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ for 9000 tons ==	Au= 9000	253000	219000	189000	289000	243000	300000	260000		
		Assumed gain	Au= 9000	253000	219000	189000	289000	243000	300000	260000		
		MOVED PAMLICO	Au= Weighted average	0.069	26.00	23.40	29.25	23.40	32.50	32.00		
		DUMPS 9000 tons	Au= 9000	0.25	0.27	0.25	0.25	0.25	0.25	0.25		
		\$ per ton Au+Ag	Au= 9000	1.26	1.53	1.26	1.26	1.35	1.67	2.60		
		\$ for 9000 tons ==	Au= 9000	253000	219000	189000	289000	243000	300000	260000		
		Assumed gain	Au= 9000	253000	219000	189000	289000	243000	300000	260000		
		FORBES RANDOM	Au= 0.047 Arithmetical	0.047	18.80	16.92	15.04	21.15	19.04	23.50	21.15	28.22
		SAMPLES 50 tons	Au= 0.35 Average	0.35	3.15	2.21	1.59	2.25	1.61	3.32	2.32	3.22
		\$ per 9000 tons ==	Au= 9000	198000	172000	150000	219000	192000	167000	241000	211000	234000
		Assumed gain	Au= 9000	198000	172000	150000	219000	192000	167000	241000	211000	234000
		WEIGHTED EMPIRE assays	Au= 33000 ton-leach pad at 157534/40	0.047	21.15	19.04	16.92	23.50	19.04	24.00	21.15	28.22
		PAMLICO LEACH new Tonnage and assays (remaining total)	Au= 9000	21000	10000	9000	17000	15000	8000	15000	15000	37
		INDICATED RECOVERY	Au= 198000	189000	170000	236000	204000	296000	261000	321000	376000	38
		Weighted EMPIRE assays	Au= 9000 ton-leach pad 25 tons/30	0.047	21.15	19.04	16.92	23.50	19.04	24.00	21.15	28.22
		Assumed 9000 tons with PAMLICO remaining assays 2.00554	Au= 9000	19000	1662	2437	2129	1853	2682	2347	2046	3522
		ASSUMED RECOVERY 9000 tons PAMLICO LEACH-EMPIRE DATA	Au= 634000	577000	513000	43150	421000	104000	104000	317000	1026000	407000
		ASSUMPTION: cost \$200/ton to produce 1521000 cu ft 304,000 cu ft = 500,000 cu ft	Au= 634000	577000	513000	43150	421000	104000	104000	317000	1026000	407000

CASSUMPTION: cost \$200/ton to produce 1521000 cu ft 304,000 cu ft = 500,000 cu ft

	Tonnage by Harding-Lawson unless marked by**	Ounces per ton from composite sample by Forbes Harding	Average ounces per ton	Gold @ \$400/oz Silver @ \$9/oz Gold @ \$450/62 Silver @ \$9.20 Gold @ \$500/oz Silver @ \$950 100% Au 90% Au 80% Au 100% Au 90% Au 80% Au 100% Ag 70% Ag 50% Ag 100% Ag 70% Ag 50% Ag 100% Ag 70% Ag 50% Ag
1	RAWHIDE LEACH	Au=		
2	tons	Ag=		
3	\$ per ton Au+Ag	====	====	
4	\$ for tons (\$ to thousands) (tons to hundreds)	====	====	
5	Assumed gain	@ leach of \$	ton=\$	
6	DEAD HORSE LEACH	Au=		
7	tons	Ag=		
8	\$ per ton Au+Ag	====	====	
9	\$ for (loss) gain	====	====	
10	Assumed gain	@ leach of \$	/ton = \$	
11	LAKE VIEW LEACH	Au=		
12	tons	Ag=		
13	\$ per ton Au +Ag	====	====	
14	\$ for (loss) gain	====	====	
15	Assumed gain	@ leach of \$	/ton = \$	
16	CORY MILL LEACH	Au=		
17	tons	Ag=		
18	\$ per ton Au +Ag	====	====	
19	\$ for tons==	====	====	
20	Assumed (loss) gain	@ leach of \$	/ton = \$	
21	CORY MILL STOCKPILE Au=			
22	tons	Ag=		
23	\$ per ton Au +Ag	====	====	
24	\$ for (loss) gain	====	====	
25	Assumed gain	@ leach of \$	/ton = \$	
26	PAMLICO LEACH	Au=		
27	tons	Ag=		
28	\$ per ton Au +Ag	====	====	
29	\$ for tons ==	====	====	
30	Assumed gain	gain	====	
31	PAMLICO STOCKPILE			
32	tons	Au=		
33	\$ (loss) gain	Ag=	====	
34	Assumed gain	gain	====	
35				
36				
37				
38				
39				
40				

11-9-81

**EMPIRE LEACH HEAPS PRESERVES**

Partially leached heaps - Rawhide, Deadhorse, Lake View, Pamilco  
Pre leaching heap - Cory Mill, Pamilco

Stock piles - Cory Mill, Pamilco

Tonnage by Harding-Lawson unless marked by**		Ounces per ton from Average composite sample by Forbes Harding		Gold @ \$400/oz Silver @ \$9/oz Gold @ \$450/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20		Gold @ \$400/oz Silver @ \$9/oz Gold @ \$450/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20		Gold @ \$500/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20 Gold @ \$500/oz Silver @ \$9.20				
				100% Au	90% Au	100% Au	90% Au	100% Au	90% Au	100% Au	90% Au	
				70% Ag	50% Ag	70% Ag	50% Ag	70% Ag	50% Ag	70% Ag	50% Ag	
RAWHIDE LEACH	Au=	Tons	Ounces	Total	0.007	0.007	2.80	2.52	2.24	3.15	2.84	2.52
4.29	8670 tons	Au=	Ag=	2.515	2.515	2.515	2.515	2.515	2.515	2.515	2.515	
5.02	\$ per ton Au+Ag	====	====	====	====	====	====	====	====	====	====	
4	\$ for 8700 tons { \$ to thousands } =	====	====	160000	118000	160000	118000	160000	118000	160000	118000	
5	Assumed (loss) @ leach of \$ =	====	/ton = \$	1694.02	1694.02	1694.02	1694.02	1694.02	1694.02	1694.02	1694.02	
10	LAKE VIEW LEACH	Au=	Ag=	0.006	0.010	0.008	320	288	256	360	324	288
11	1.80	4830 tons	Ag=	1.02	1.516	1.506	1.75	2.23	2.08	400	360	400
12	1.22	\$ per ton Au +Ag	Au=	39.02	1475	1111	8.41	6.01	12.41	8.69	6.21	12.41
13	3.02	\$ for 4800 tons =	Ag=	6269.02	53000	41000	1165	809	1641	1229	941	3092
14	Assumed gain @ leach of \$ =	====	/ton = \$	71000.0	53000.0	41000.0	56000.0	39000.0	79000.0	59000.0	45000.0	149000.0
15	CORY MILL LEACH	Au=	Ag=	0.012	0.012	480	384	342	186	132	540	480
16	3400 tons	Au=	S. conc.	1.170	1.170	10.53	527	1076	753	538	1112	720
17	\$ per ton Au +Ag	Ag=	41.02	15.33	11.69	1616	1239	970	1712	1318	1036	3060
18	\$ for 3400 tons ==	Ag=	3978.02	52000	40000	31000	55000	42000	33000	50000	35000	104000
19	Assumed gain @ leach of \$ =	====	/ton = \$	52000.0	40000.0	31000.0	55000.0	42000.0	33000.0	50000.0	35000.0	104000.0
20	0.28	CORY MILL STOCKPILE Au=	Ag=	0.016	0.016	610	576	512	720	640	720	640
21	1.22	930 tons	Au=	1.05	1.05	1.05	945	659	473	966	699	479
22	\$ per ton Au +Ag	Ag=	1.40	1.40	1.40	15.95	12.35	9.85	16.86	13.24	10.59	14.19
23	\$ for 930 tons ==	Ag=	945.02	15000.0	12000.0	9000	16000.0	12000.0	10000	17000	13000	11000
24	Assumed gain @ leach of \$ =	====	/ton = \$	15000.0	12000.0	9000	16000.0	12000.0	10000	17000	13000	11000
25	PAMILICO LEACH	Au=	0.004	0.006	2.00	1.68	1.60	2.25	1.80	2.50	2.25	2.00
26	\$ per ton Au +Ag	Ag=	0.10	0.05	0.05	68	48	34	48	35	50	36
27	\$ for 3340 tons ==	Ag=	248.02	9000	7000	6000	10000	8000	7000	14000	9000	15000
28	Assumed gain @ leach of \$ =	====	====	9000.0	7000.0	6000	10000	8000	7000	14000	9000	15000
29	PAMILICO STOCKPILE Au=	Ag=	0.035	0.026	0.034	13.60	12.24	10.68	15.30	13.77	12.24	17.00
30	3450 tons	Ag=	0.123	0.02	0.035	0.75	0.53	0.38	0.75	0.53	0.38	0.75
31	\$ per ton Au +Ag	Au=	1.19	1.19	1.19	1935	1277	1126	1430	1262	1739	1585
32	\$ for 3450 tons ==	Au=	291.02	50000.0	45000.0	39000.0	56000.0	50000.0	44000.0	62000	56000	49000
33	Assumed gain @ leach of \$ =	====	====	50000.0	45000.0	39000.0	56000.0	50000.0	44000.0	62000	56000	49000
34	Assumed gain @ leach of \$ =	====	====	50000.0	45000.0	39000.0	56000.0	50000.0	44000.0	62000	56000	49000
35	Total Oz Au=	Ag=	391.02	282000	282000	282000	282000	282000	282000	282000	282000	282000
36	TOTAL \$ Total Oz Au=	Ag=	352.26	476000	361600	286000	504000	387000	302000	539000	403000	326000
37	2 month assumed operating cost =	Ag=	150000	50000	50000	50000	50000	50000	50000	50000	50000	50000
38	TOTAL ASSUMED \$ gain =	Ag=	113.02	126000	11060	736000	454000	337000	252000	489000	359000	276000
39	ASSUMPTION: Gold costs for total losses(39) REMAINING	Ag=	113.02	126000	11060	736000	454000	337000	252000	489000	359000	276000
40	Total \$ required to produce .: 372000 oz \$ 79,000 GAIN =	Ag=	113.02	282000	282000	282000	282000	282000	282000	282000	282000	282000

P  
D  
H  
I  
C - PAE LEACH RESERVESONIM

## (Before Mining Began.)

EMPIRE'S Third Series Samples SP413A thru PA50A

SP4134 thru PA50A  
for grade and tonnage  
except Forbes' samples  
for PANICO RANDOM

~~108~~ -6-11

Tonnage by EMPIRE		Ounces per ton from samples by		Average ounces per ton		Gold @ \$400/oz		Silver @ \$9/oz		Gold @ \$450/oz		Silver @ \$9.20		Gold @ \$500/oz		Silver @ \$9.20	
Technic Series	also cassays & samples by					100% Au	90% Au	80% Au	100% Au	90% Au	80% Au	100% Au	90% Au	80% Au	100% Au	90% Au	80% Au
unless marked by**	b4	EMPIRE	tonnage			100% Ag	70% Ag	50% Ag	100% Ag	70% Ag	50% Ag	100% Ag	70% Ag	50% Ag	100% Ag	70% Ag	50% Ag
411	PAMLICO DUMPS	Au=	Arithmetical average	0.057		22,80	2052	1824	2565	2309	2052	22,50	25,65	2309	2052	22,50	25,65
412	14383 tons	Ag=	Arithmetical average	0.49		4.41	309	221	4.51	316	226	4.66	324	233	226	233	226
413	\$ per ton Au+Ag	Tons	14,383 tons	14 - 6860	14 - 6860	4.41	309	221	4.51	316	226	4.66	324	233	226	233	226
414	\$ for 14000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	4.41	309	221	4.51	316	226	4.66	324	233	226	233	226
415	Assumed gain		/ ton = \$	14000	14000	4.41	309	221	4.51	316	226	4.66	324	233	226	233	226
416	REMAINING PAMLICO	Au=	Weighted average	0.13		46.00	46.00	41.60	58.50	52.65	46.80	65.00	58.50	52.00	70.00	52.00	70.00
417	DUMPS	Ag=	Arithmetical average	0.64		5.76	403	5.76	5.00	412	294	6.00	4.26	3.04	12.80	12.80	12.80
418	\$ per ton Au+Ag		14,383 tons	14 - 8960	14 - 8960	57.76	5083	4448	56.77	49.74	7108	6276	5504	9086	9086	9086	9086
419	\$ for 14000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	57.76	5083	4448	56.77	49.74	7108	6276	5504	9086	9086	9086	9086
420	Assumed gain		/ ton = \$	14000	14000	57.76	5083	4448	56.77	49.74	7108	6276	5504	9086	9086	9086	9086
421	REMAINING PAMLICO	Au=	Weighted average	0.054		21400	21400	1726	2187	1944	27100	24130	2160	3240	3240	2160	3240
422	DUMPS	Ag=	Arithmetical average	0.14		1.26	1.26	1.00	1.26	1.24	1.33	1.29	1.67	1.29	1.29	1.67	1.29
423	\$ per ton Au+Ag		14,383 tons	14 - 2700	14 - 2700	22.86	2032	1791	22.86	2008	2033	22.87	22.87	35.20	35.20	35.20	35.20
424	\$ for 5000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	22.86	2032	1791	22.86	2008	2033	22.87	22.87	35.20	35.20	35.20	35.20
425	Assumed gain		/ ton = \$	14000	14000	22.86	2032	1791	22.86	2008	2033	22.87	22.87	35.20	35.20	35.20	35.20
426	REMAINING PAMLICO	Au=	Weighted average	0.065		2600	2600	2340	2925	2633	2340	3250	2925	3240	3240	3240	3240
427	DUMPS	Ag=	Arithmetical average	0.27		2.43	2.43	1.70	2.43	1.74	1.24	2.57	1.80	1.29	5.40	5.40	5.40
428	\$ per ton Au+Ag		14,383 tons	14 - 325	14 - 325	2843	2516	2202	2843	2807	2464	3507	3105	2729	4440	4440	4440
429	\$ for 5000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	2843	2516	2202	2843	2807	2464	3507	3105	2729	4440	4440	4440
430	Assumed gain		/ ton = \$	14000	14000	2843	2516	2202	2843	2807	2464	3507	3105	2729	4440	4440	4440
431	MOVING PAMLICO	Au=	Arithmetical average	0.058		2320	2320	2080	2956	2610	2349	2080	2956	2610	37.00	37.00	37.00
432	DUMPS	Ag=	Arithmetical average	0.55		4.95	347	4.95	5.06	3.54	253	5.23	3.66	2.62	11.00	11.00	11.00
433	\$ per ton Au+Ag		14,383 tons	14 - 4950	14 - 4950	2435	2104	3116	2435	2341	3423	2976	2582	4580	4580	4580	4580
434	\$ for 5000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	2435	2104	3116	2435	2341	3423	2976	2582	4580	4580	4580	4580
435	Assumed gain		/ ton = \$	14000	14000	2435	2104	3116	2435	2341	3423	2976	2582	4580	4580	4580	4580
436	MOVED PAMLICO	Au=	Weighted average	0.169		18.60	18.60	16.64	20.84	26.10	23.49	20.88	29.00	26.10	37.00	37.00	37.00
437	DUMPS	Ag=	Arithmetical average	0.86		7.74	7.74	5.42	5.54	3.91	3.91	5.17	5.17	5.17	4.09	4.09	4.09
438	\$ per ton Au+Ag		14,383 tons	14 - 4950	14 - 4950	2845	2516	2202	2845	2807	2464	3507	3105	2729	4440	4440	
439	\$ for 5000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	2845	2516	2202	2845	2807	2464	3507	3105	2729	4440	4440	
440	Assumed gain		/ ton = \$	14000	14000	2845	2516	2202	2845	2807	2464	3507	3105	2729	4440	4440	
441	FORBES RANDOM	Au=	Arithmetical average	0.047		15.04	21.15	19.04	16.92	23.50	21.15	18.80	20.22	17.20	17.20	17.20	17.20
442	SAMPLES	Ag=	Arithmetical average	0.35		158	322	158	158	332	232	161	161	166	166	166	166
443	\$ per ton Au+Ag		14,383 tons	14 - 4950	14 - 4950	198	198	1662	2437	2129	1853	2682	2347	2046	3522	3522	
444	\$ for 5000 tons	{ \$ to thousands)	(\$ loss) @ leach of \$	14000	14000	198	198	1662	2437	2129	1853	2682	2347	2046	3522	3522	
445	Assumed gain		/ ton = \$	14000	14000	198	198	1662	2437	2129	1853	2682	2347	2046	3522	3522	
446	\$ 65 weighted EMPIRE assays		3300 ton leach pad	157534/16	= 249600	219100	195000	297000	244000	307000	270000	270000	3391000	3391000	3391000	3391000	
447	\$ 64 PAMLICO LEACH new tonnage and assays (remaining balance)		9000	6000	10000	9000	8000	7000	10000	9000	8000	7000	15000	15000	15000	15000	
448	\$ INDICATED RECOVERY		198000	189000	267000	236000	204000	296000	210000	261000	282000	262000	376000	376000	376000	376000	
449	\$ 63 weighted EMPIRE assays		9000 ton leach pad (25 tons/30)	6.005	5.21	5.91	5.91	5.91	5.91	5.91	5.91	5.91	7.25	7.25	7.25	7.25	
450	\$ by Assumed 9000 tons with PAMLICO remaining assays 0.0625		10000	27000	23000	167000	192000	167000	192000	167000	192000	167000	25000	47000	47000	47000	
451	ASSUMED RECOVERY 9000 tons PAMLICO LEACH-EMPIRE PAD		154000	577200	513000	729000	643000	564000	805000	771000	771000	771000	1096000	1096000	1096000	1096000	
452	ASSUMPTION: Gold costs \$200/ton to produce: 152102 costs \$304,000-\$100,000					3093000	273000	209000	425000	332000	403000	419000	129000	129000	129000	129000	