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Arizona Department of Mines and Mineral Resources Mining Collection

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09/23/85

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: PINKHAM

ALTERNATE NAMES:
GREAT SCOTT MINE

MOHAVE COUNTY MILS NUMBER: 122J

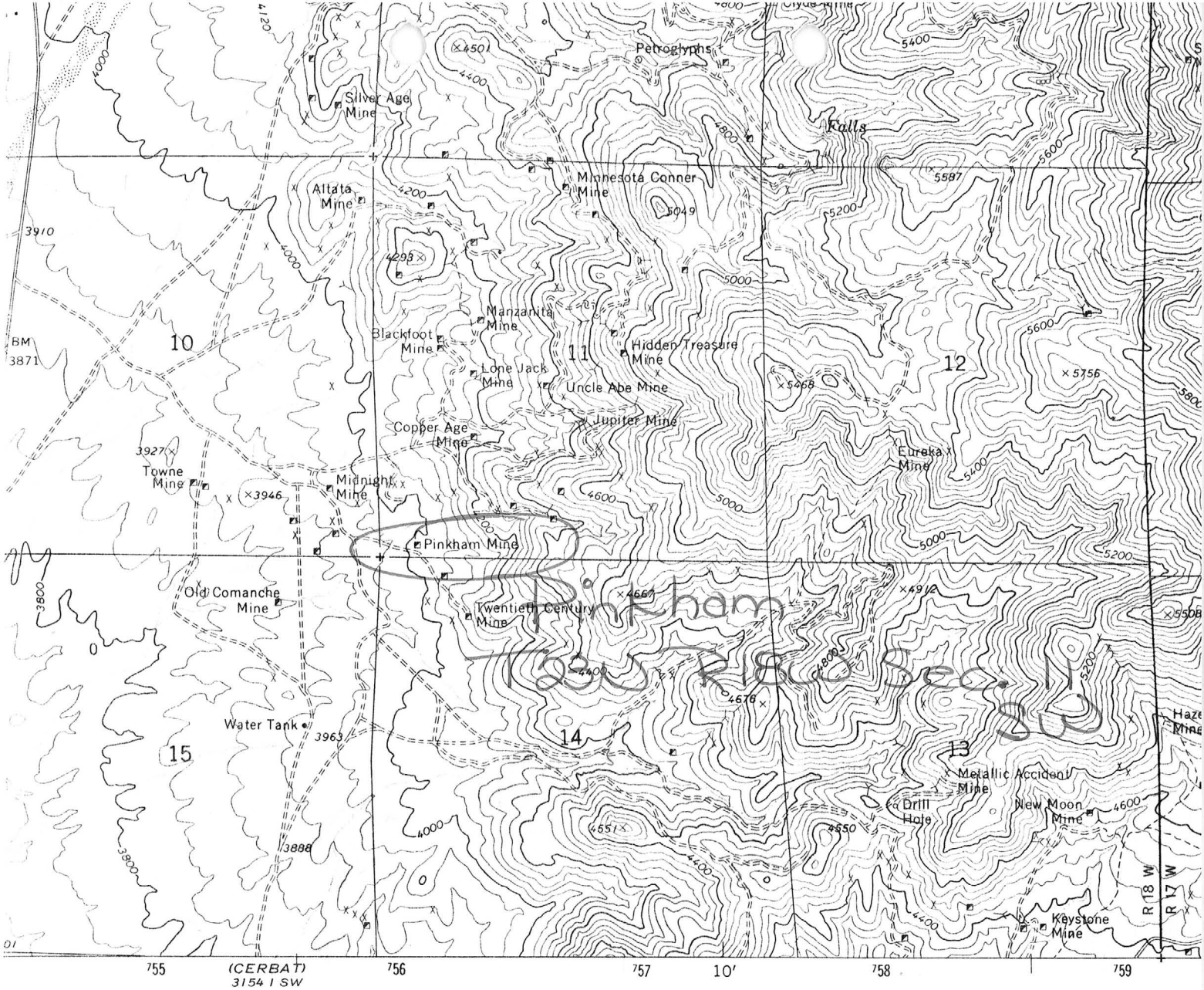
LOCATION: TOWNSHIP 23 N RANGE 18 W SECTION 11 QTR. SW
LATITUDE:N 35DEG 23MIN 27SEC LONGITUDE:W 114DEG 10MIN 49SEC
TOPO MAP NAME: CHLORIDE - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
COPPER-(M)SULFIDE-PRIMARY
SILVER-COPRODUCT
ZINC-BYPRODUCT
GOLD-BYPRODUCT
URANIUM-(M)U308 CONT.-BYPROD.
CALCIUM-(M)CALCITE-BYPRODUCT
LEAD-BYPRODUCT

BIBLIOGRAPHY:
ADMMR PINKHAM MINE FILE
ADMMR MOHAVE CUSTOM MILL PROJECT
ADMMR MOHAVE CARD FILE
SCHRADER, F.C. "MIN DEPSTS OF CRBT RNG, BLCK MTN, GRND WSH CLFS, AZ" USGS BULL 340, P. 64
SCHRADER, F.L. "MIN DEPSTS OF CRBT RNG, BLCK MTN, GRND WSH CLFS, AZ" USGS BULL 397, P. 74
AZ MINING JNL, AUG. 1920, P. 13
DINGS, M., "WALLAPAI MINING DIST, AZ" USGS BULL 978-E, P. 147; 1952
MALACH, R., "MOHAVE CO. MINES" P. 27, 1977
EVAL. OF MIN. RES. OF HUALAPI INDIANS, VOL. I 1964, P. 197-198

A



SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
ER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Chloride, AZ 7.5′

PINKHAM MINE

MOHAVE

I drove to the Pinkham mine which the Rothermals have also sub-leased to the Texas Mining and Development Co., 2118 Maxmillan, Houston, Texas, 77039. The dumps at the Pinkham contain mostly pyrite and are questionable quantity-quality in my opinion.
VBD WR 6/19/76

CJH/WR 12/14/79 - John Rothermel put a dozer slice on his Pinkham claim. He has asked for field inspection and advice. Probably in January.

August 26, 1974
18001 N. 41 Place
Phoenix, Arizona 85032

Mr. John B. Rothermel
3016 W. Mercer Lane
Phoenix, Arizona 85029

Dear Jack,

Results of the work performed on your Pinkham property on August 15 and 16 are as follows:

1) Geological mapping has shown that the principal vein strikes N40W with an 85° dip to the southwest. The vein is nearly vertical and locally dips to northeast. Vein thickness is greater in the northern portions of the claim where it is comprized of 3 to 4 feet of quartz with attendant 1 to 2 feet of bleached fault gouge. Pyrite occurs both in the quartz and the gouge. The vein dies to the south with thicknesses less than one foot. In this area the Cerbat complex of precambrian rocks has been intruded by veins, pegmatite dikes and granodiorite.

2) Sampling results consisting of channel vein samples, trenched dump samples and numerous shovel dug grab samples indicate that the northeast portions of the dump around the main workings exhibit the highest values. Highest values of the vein structure were also obtained near the old workings around the main shaft. (see map) Highest silver assays are found in the gouge zones of the vein. Gold assays were generally low but silver assays were locally very good especially when copper staining was observed.

Conclusions:

The Pinkham is principally a silver mine where high grade silver is associated with copper and weak amounts of gold. Deep maroon iron staining and copper oxides are good indicators of an increase in silver content. The vein averages 6 feet thick in the northern portions of the claim and is nearly vertical. (see map for metal content along the vein) Little or no copper staining can be observed on the dumps near the main workings and since originally the Pinkham was a copper mine with associated silver these dumps must have been primarily waste dumps while the mine operated in 1904 to 1907.

Recommendations:

Initial samplings indicates that approximately 8,000 tons of dump material near the main shaft contains .035 oz. gold, 4 to 8 oz. silver and unknown copper, a predictated average would be .035 oz. gold, 6.5 oz. silver and 0.80 % copper. Using a $9/ton milling cost and $10/ton shipping cost (f.o.b. Wickeup), $1/ton mining (front end loader), a profit of $23/ton could be expected. Additional costs of sampling, a guard, selective waste removal, etc., have be disregarded but these costs should not run over $5/ton. Auger or backhoe samples would have to be taken before any consideration could be given to shipping.

The vein itself could be mined from the surface using a D-9 cat with rippers. Values of 3 or 4 times the dump could be expected. Mining costs would have to be investigated further.

Sincerely,

Donald E. Ross
Geologist

PINKHAM MINE. MOHAVE

John Rothermel wanted to know buyers of silver ore from old Pinkham mine near Chloride. He said tailings will assay about 6 to 8 oz/ton. Suggested he contact ASARCO. FTJ WR 9/26/74

Fred Rothermel came in with a sample of a vein on the Pinkham mine south of Chloride, for mineral identification. Highly oxidized material, malachite, zinc oxide and native silver. They intend to set up a mill as there is a large dump of mill grade material and will develop mine at the same time. FTJ WR 1/7/75

PAY DIRT for November 24, 1974

PAY DIRT for February 24, 1975

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: Mike Peck

   Company: Amalgamated Metals

   Address: 4545 E. Shea #230

   Phoenix, AZ 85028

2. Phone: 996-2721

3. Mine: PINKHAM

4. ADMMR Mine File: Same

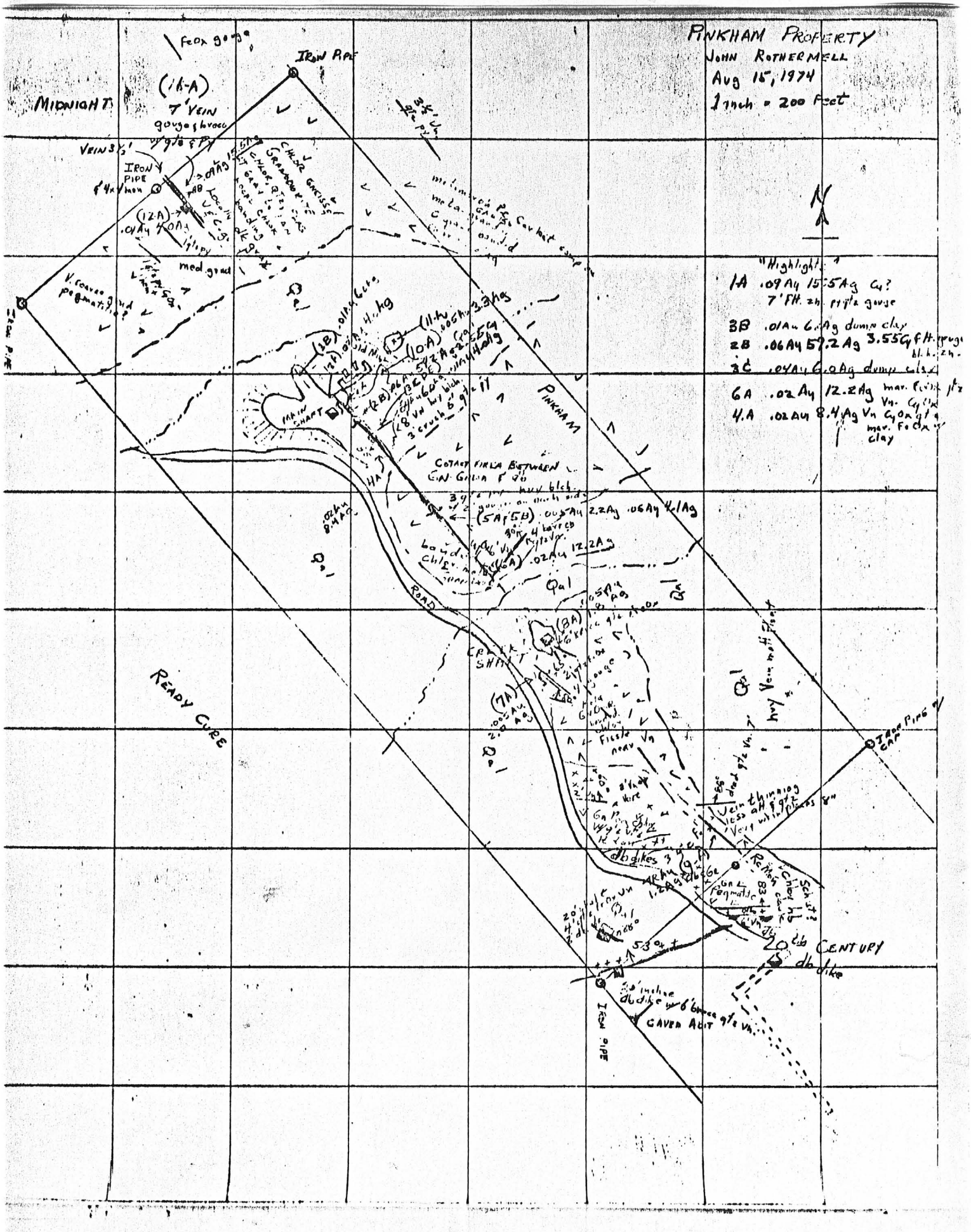
5. County: Mohave

6. Summary of information received, comments, etc.:

Mr. Peck representing Amalgamated Metals, a combination of limited partnerships, visited and reported they have been processing pilot lots of dump material from the Pinkham. He was provided with a list of metallurgical consultants, custom mills, and information on alternative leaching reagents to cyanide. He was especially interested in Bio-D-Leach of Bahamian Refining.

Date: September 23, 1988

Nyal J. Niemuth, Mining Engineer


PINKHAM PROPERTY
JOHN ROTHERMELL
Aug 15, 1974
1 inch = 200 Feet
"Highlights"
1A .09 Au 15.5 Ag Cu?
7' Flt. zn. pyrite gouge
3B .01 Au 6.0 Ag dump clay
2B .06 Au 57.2 Ag 3.55 Cu Flt. gouge
3C .04 Au 6.0 Ag dump clay
6A .02 Au 12.2 Ag
4.A .02 Au 8.4 Ag Vn Cu Ox
MIDNIGHT
IRON PIPE
7' VEIN
PINKHAM
MAIN SHAFT
ROAD
READY CURE
CENTURY
db dike
CAVED ADIT
Qal

PINKHAM (F)

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

February 15, 1985

Mr. John B. Rothermel, Jr.
5822 W. Michelle Drive
Glendale, AZ 85308

Dear Mr. Rothermel,

We realize that we are behind in our payments to you and Mr. Patterson on our claim payments. We have been anticipating some funding for quite some time now. But so far, it has not been transferred as yet.

We have had word this past week that the funds should arrive by the end of February. At that time, we will get in touch with you and Mr. Patterson and get these payments up to date.

We appreciate your cooperation.

Sincerely,

Les Peck

Leslie E. Peck
President
L. PECK ENTERPRISES, INC.
the General Partner for
ADVANCED MINING PARTNERSHIP

LP/vg

cc: H. E. Patterson

BIBLIOGRAPHY OF THE

WALLAPAI MINING DISTRICT

Mohave County, Arizona

BY

William Vanderwall
Geologist

29 April 1981

Compiled and annotated, with special attention given to the PINKHAM PROPERT (Chloride Area), and CHIEF ENGINEER PROPERTY (Stockton Hill Area).

High silver values in shallow oxidized zone noted throughout district especially in the Stockton Hill area and ascribed to secondary enrichment processes. Concludes primary sulfide deposits in veins are mesothermal base metal-silver deposits which may widen with depth.

SCHRADER, F.C., 1909. Mineral Deposits of the Cerbat Range, Black Mountains and Grand Wash Cliffs, Mohave County, Arizona: USGS Bulletin 397, 220p.

Considered the textbook for much of the geology, production and history of the Wallapai District. Detailed descriptions of selected mines both above and below ground. Shows Pinkham Mine as being developed to the 240 foot level, describes ore as oxidized in upper workings to 85 foot level then primary ore to total depth. Notes copper secondary enrichment products, chalcocite and bornite in upper two levels. Notes primary ore encountered in 140 foot level averaged 9% Cu and 60 ozs: Ag per ton. Map (pp.75) shows total depth 400 foot, 5 levels, totaling 1200 feet of progress and approximately one third of the inferred orebody mined out. Author suggest orebody located at junction of Pinkham and Midnight vein, suggests veins may horsetail at this junction and implies a continuation of Pinkham orebody both north and south from the present workings (Diagram pp. 76). See also Midnight Mine description pp. 76-77.

Schrader describes the Stockton Hill area, pp. 107-115, equally as well. The Little Chief Mine, pp. 112-113 (now the Chief Engineer property) is described as being developed to the 200 foot level with some 1000 feet of total progress. The Author likens the Little Chief Mine with the Banner Mine and the Treasure Hill Mine, observing that all are on the same (Banner) vein, all had the same surface expression and all produced the same type of ore. The Little Chief produced ore averaging 350 ozs. Ag and 14% to 30% Pb per ton.

SCHRADER, F.C., 1917. Geology and Ore Deposits of Mohave County, Arizona: AIME Trans., Vol. 56, pp. 197-236.

Similar to USGS Bulletin 397. Describes history, topology, geology and ore deposits. Describes selected mines both above and below ground.

THOMAS, B.E., 1949. Ore Deposits of the Wallapai District, Arizona: Economic Geology, Vol. 44, pp. 663-705.

Describes general geology and characteristic fissure veins with associated wall rock alteration and secondary enrichment. Emphasis on ore shoots; mineralogy, age, texture and genisis. Concludes mineralizing fluids followed pre-existing conduits and are subsequent to majority of dykes and veins. Suggests that veins may widen with depth and increase in lead-zinc relative to copper-silver-gold. Considers district has good potential for future base-metal production.

A

GEOLOGICAL REPORT

on the

PINKHAM PROPERTY

in the

Wallapai Mining District

Mohave County, Arizona

by

Wm. Vanderwall
Geologist
Scottsdale, Arizona

April 30, 1981

Geological Report
PINKHAM PROPERTY
Wallapai Mining District
Mohave County, Arizona

LOCATION:

The Pinkham Property consists of two mining claims (one patented) located approximately 20 miles northwest of Kingman, Arizona, and 2 miles southeast of Chloride, Arizona, on the western slope of the Cerbat Mountains. The property is situated in Sections 10, 11 and 14, Township 23 North, Range 18 West of the G & SRM, Mohave County, Arizona and is accessible via county and private roads.

SCOPE OF REPORT:

Time was the limiting factor of this very interesting investigation. Facts and opinions in this report are based on a cursory field examination of the property and on the authors specific knowledge of the area and general familiarity with the published literature concerning the Wallapai District.

HISTORY AND PRODUCTION:

The Pinkham Property lies in an area rich and colorful in Arizona Mining History. Bonanza type silver lode discoveries brought miners to the District in the early 1860's. Oxidized ores were mined extensively during the 1880-1890 period principally for silver and gold. The rapid decline in silver prices between 1885-1895, the recession of 1905 and the deeper leaner, sulfide ores caused the suspension of mining operations in the area.

Dings, 1951, (pp147) lists the early production from the Pinkham Mine as approximately 14,000 ounces of silver and 27.5 tons of copper with minor amounts of gold and lead.

Schrader, 1909, (pp 74-76) credits the Pinkham Mine as the most important copper mine in the region. Schrader's ore description tells of oxidized ore containing 18 ounces of silver per ton and 3% copper which indicates less than 1000 tons of ore was mined from the property.

In 1943, the Tennessee Mine, 2 miles north and mining in the same vein system as the Pinkham, was producing 150 tons of crude ore per day averaging 20 ounces of silver per ton. Total production from the Tennessee Mine is reported to be in excess of 500,000 tons (Dings, 1951, pp147).

The value of metals produced from the Wallapai District during the years 1904-1948, U.S. Bureau of Mines 1948 Annual Report was about 22.5 Million Dollars at 1948 prices (nearly a half of a Billion Dollars at today's prices). Values were principally in

lead and zinc, but with substantial amounts of copper, silver and gold.

Currently Penzoil-Duval Corporation, located 2 miles south of the Pinkham Property, is reportedly producing 18,000 to 20,000 tons per day of open pit ore averaging 0.5% copper and 0.045% molybdenum, plus other metals.

GEOLOGY AND ORE DEPOSITS:

The Cerbat Mountain constitute one of the many north-south trending, fault-block ranges of the Southwestern Desert. They consist primarily of metamorphosed pre-Cambrian igneous and sedimentary rocks, cut by later intrusions of Mesozoic(?) granite and monzonite porphyries, known locally as the Ithaca Peak Granite, and by Tertiary Volcanic dykes. Centering around the Ithaca Peak intrusive, mineralization is typically copper and molybdenum sulfides, now being mined by Duval. Surrounding the intrusive is a zone several miles wide of copper-lead-zinc-silver bearing veins in which the Pinkham Property lies.

The vein type ore deposits occur in clefts or cracks in the country rock in which the mineral material precipitated from aqueous solution (hydrothermal fissure veins). It is probable that these fissures formed from forces accompanying the implacement of the Ithaca Peak intrusive. With the intrusive acting as a heat engine, a convecting hydrothermal system developed that set up a hypogene enrichment process which deposited ore and gangue minerals near the top of the convecting cell and extracted metals and sulfur from sources at depth. Conceivably, as the solution approached the fissure level, it boiled, thereby distilling the acid forming constituants CO_2 and H_2S. Cooling and a slight pH rise of the residual liquids, due to loss of acid forming constituants, may be regarded as the mechanism of sulfide precipitation. Exposure of the viens to normal weathering processes oxidized the ore and, to a point, enriched it by the downward migration of slightly acidic rainwater carrying metals in solution.

Many veins, occuring in nearly vertical fault fissures, strike northwest and outcrop for considerable distances. The fault fissures are largely occupied by breccia with abundant shearing and some gouge. Ore lenses, or shoots, though not continuous are numerous and tend to have greater vertical rather than horizontal extent. Concentrations of extremely hi-grade ore appear to favor vein junctures. These concentrations are attributable to chemical and physical changes which enhanced mineral deposition at the fissure level of the convecting cell.

The main vein on the Pinkham Property is a prominant structural feature which extends from the main body of the Ithaca Peak intrusive northwesterly for a distance of over three miles. It cuts all lithologic units in the area and appears to intersect with at least three smaller veins in the vacinity of the Pinkham Mine. The veins are composed of brecciated and altered granite(?) wall rock and quartz. In outcrop they are heavily stained by iron and manganese. The main vein trends N.35°-45° W., and is nearly vertical

the property it is the Author's conclusion the Pinkham Property contains well developed structrues with moderate to strong copper-lead-silver mineralization.

It is also the Author's conclusion a well planned exploration program consisting of detailed geologic mapping and diamond drilling would justify initiating a mining venture.

Respectfully submitted,

(Wm. Vanderwall)ss

Wm. Vanderwall, Geologist
April 29, 1981

SUMMARY OF GEOLOGICAL REPORT

PINKHAM PROPERTY
Wallapai Mining District
Mohave County, Arizona

The Pinkham Property consists of two contiguous mining claims, one patented, located in Sections 11, 12, and 14, of Township 23 North, Range 18 West, G&SRB&M, Mohave County, Arizona.

Rich silver discoveries brought miners to the area in the early 1860's and in the early days the Pinkham Mine was known largely for copper and silver production. Production statistics indicate approximately 1000 tons of ore was removed containing between 8 and 60 ounces of silver per ton and 3% to 9% copper.

The Property is located in the central portion of the Cerbat Mountain Range, one of the many North-South trending, fault-block ranges of the Southwest Desert. Rocks exposed at the surface, on the Pinkham Property include pre-Cambrian metamorphic rocks cut by Mesozoic(?) intrusives and mineralized veins of an unknown (Tertiary?) age.

A known ore-body exists on the Property and if underground maps supplied to the Author are accurate, approximately 2000 tons of ore, carrying 8 to 60 ounces of silver per ton and 3% to 9% copper has been blocked out.

The most favorable loci for ore is at the junction of veins although it can be found randomly spaced along the veins in lenses, or shoots. The main vein on the Pinkham Property intersects with at least three smaller veins in a zone of highly altered and fractured country rock.

Results from field reconnaissance indicate the following:

A) Mineralized structures traverse the Property and ore is exposed on the surface; prospect pits, trenches, dumps, etc..

B) A major vein junction exists on the Property providing a favorable locus for prolonged ore deposition.

C) Past mining activity on the Property has produced considerable dump material. The possibility of milling and concentrating this material should not be overlooked.

Wm. Vanderwall, Geologist
April 30, 1981

Geological Report
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Wallapai Mining District
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with occasional reversal. Country rock is pre-Cambrian granite which has been intruded by later granite and diabase. A gouge zone of sericite and clay accompanies most of the veins.

Bordering the Pinkham Mine is a zone of vein intersection possibly 100 feet across composed of highly altered and fractured rock, impregnated with many short and irregular veinlets. The fractures appear to have no regular strike or dip and are filled with limonite and quartz. Several veins can be traced to an intersection at this zone, a relationship favorable to prolonged ore deposition.

The primary mineralization on the Pinkham Property is one of chalcopyrite, pyrite, galena, sphalerite and arsenopyrite, together with a variety of gange minerals. The oxidized and enriched portion of the veins contain chalcocite, bornite, cerargarite, copper carbonates, native silver and lesser concentrations of native gold.

ORE RESERVES:

The Pinkham Property contains base-metal silver veins, oxidized silver-gold veins and possibly a zone of enrichment in between. Data from past developments, publications and reports are insufficient, or unavailable, to completely delineate the orebody. However, there is ore exposed underground and in many places on the surface; prospect pits, trenches, dumps, etc..

Schrader, 1909, (pp 74-76) describes ore from the Pinkham Mine as carrying 18 ounces of silver per ton and 3% copper in the upper drifts and 60 ounces of silver with 9% copper in the lower drifts. Schrader"s map of the workings shows 1200 feet of total progress with a total depth of 400 feet. He shows approximately one-third of the known orebody mined out. Schrader's map is nearly identical to one produced in the 1940's(?) suggesting very little mining has been carried out on the property since Schrader's time.

If the lower drifts could be worked for 180 pounds of copper and 60 ounces of silver per ton and the maps are correct in showing two-thirds of the orebody in place, an estimated recovery in excess of 2000 tons of ore could be expected.

Considering the extent and mineralized nature of the zone of fractured rock around the old workings it may be possible to extend the limits of the know orebody.

Many veins traverse the Pinkham Property and some of these may contain separate orebodies which an adequate exploration program would reveal.

The mine dumps have been shown to carry mill grade values in gold and silver, and this asset should not be overlooked.

CONCLUSION:

On the basis of surface observations plus facts provided in the published literature and by talks with people familiar with

the property it is the Author's conclusion the Pinkham Property contains well developed structrues with moderate to strong copper-lead-silver mineralization.

It is also the Author's conclusion a well planned exploration program consisting of detailed geologic mapping and diamond drilling would justify initiating a mining venture.

Respectfully submitted,

(Wm. Vanderwall)ss

Wm. Vanderwall, Geologist
April 29, 1981

August 26, 1974
18001 N. 41 Place
Phoenix, Arizona 85032

Mr. John B. Rothermel
3016 W. Mercer Lane
Phoenix, Arizona 85029

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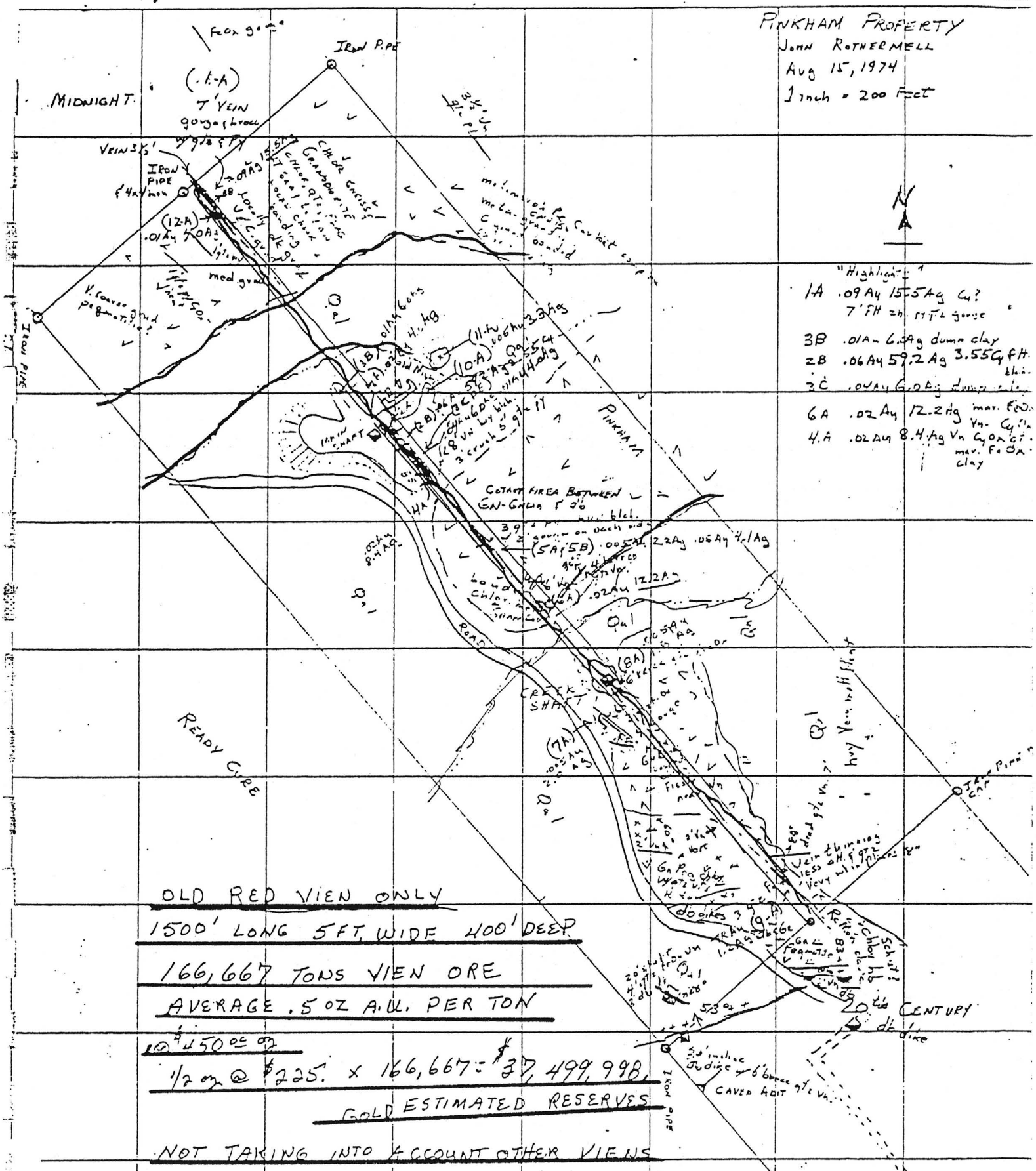
Recommendations:

Initial samplings indicates that approximately 8,000 tons of dump material near the main shaft contains .035 oz. gold, 4 to 8 oz. silver and unknown copper, a predictated average would be .035 oz. gold, 6.5 oz. silver and 0.80 % copper. Using a $9/ton milling cost and $10/ton shipping cost (f.o.b. Wickeup), $1/ton mining (front end loader), a profit of $23/ton could be expected. Additional costs of sampling, a guard, selective waste removal, etc., have be disregarded but these costs should not run over $5/ton. Auger or backhoe samples would have to be taken before any consideration could be given to shipping.

The vein itself could be mined from the surface using a D-9 cat with rippers. Values of 3 or 4 times the dump could be expected. Mining costs would have to be investigated further.

Sincerely,

Donald E. Ross
Geologist



OLD RED VIEN ONLY

1500' LONG 5 FT. WIDE 400' DEEP

166,667 TONS VIEN ORE

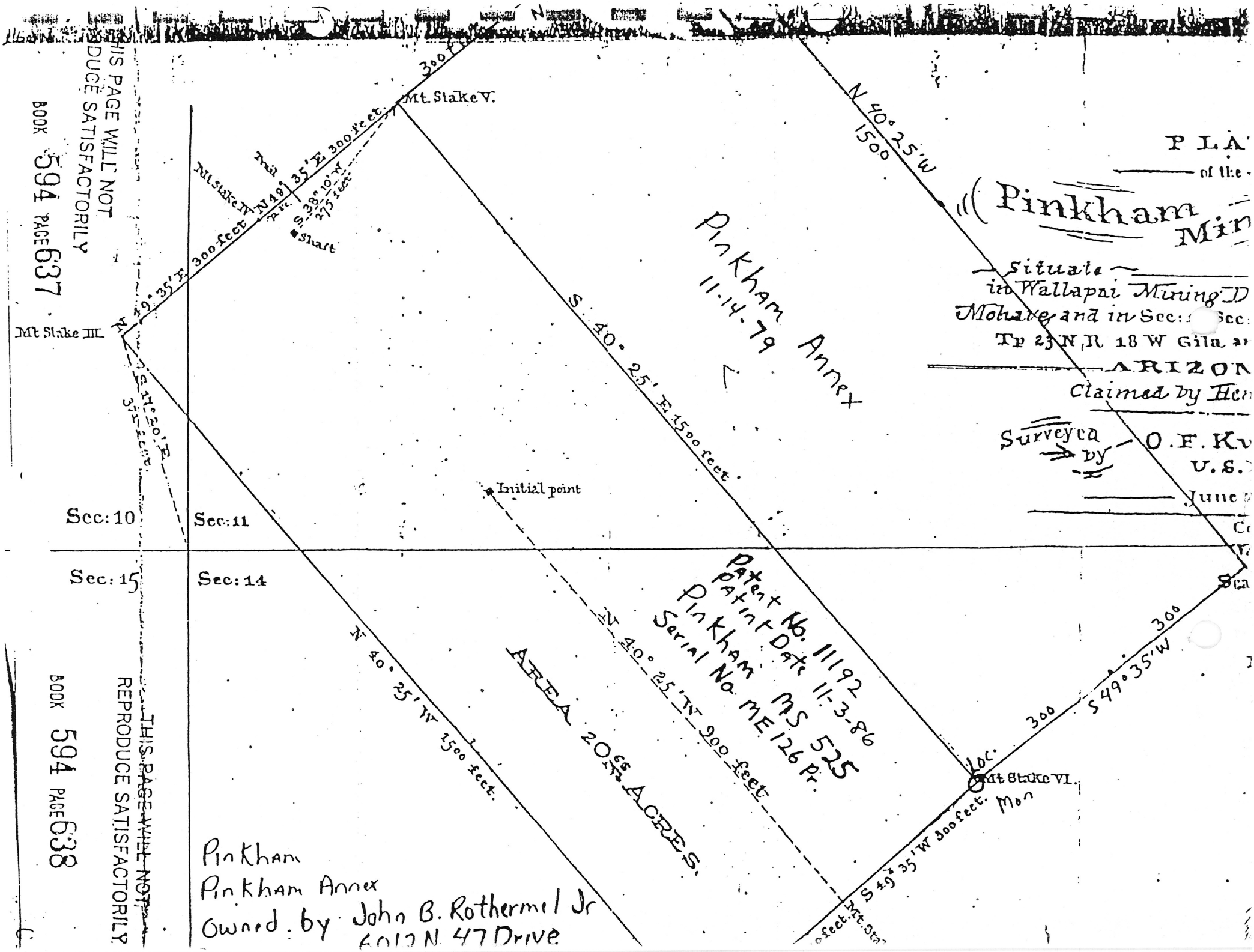
AVERAGE .5 OZ A.U. PER TON

@ $450.00 oz

1/2 oz @ $225. x 166,667 = $37,499,998.

GOLD ESTIMATED RESERVES

NOT TAKING INTO ACCOUNT OTHER VIENS



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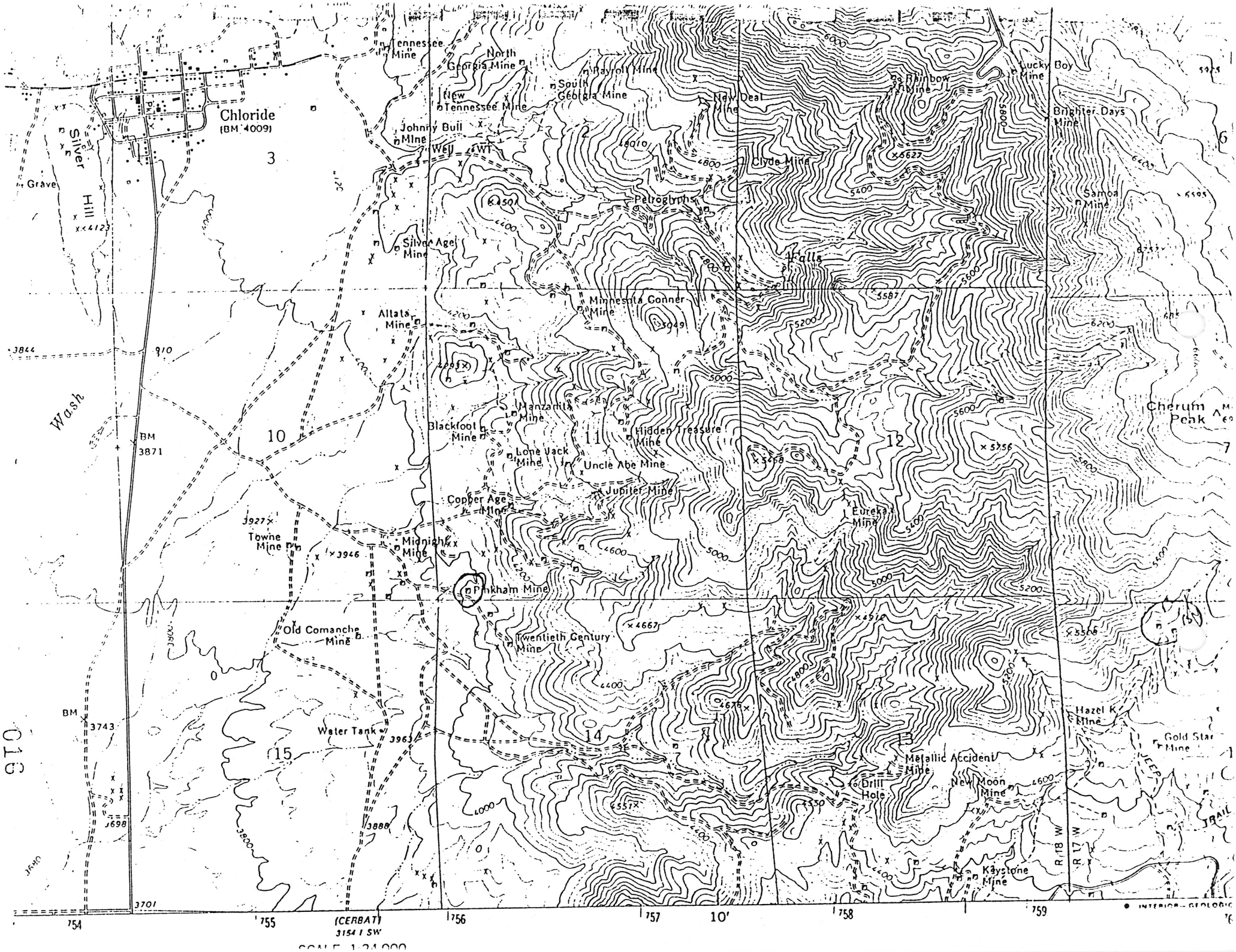

Chloride
(BM 4009)
Silver Hill
Grave
Wash
Tennessee Mine
North Georgia Mine
Rayroll Mine
South Georgia Mine
New Tennessee Mine
Johnny Bull Mine
Well
WT
New Deal Mine
Rainbow Mine
Lucky Boy Mine
Brighter Days Mine
Clyde Mine
Petroglyphs
Samoa Mine
Silver Age Mine
Falls
Minnesota Conner Mine
Altata Mine
Manzanita Mine
Blackfoot Mine
Hidden Treasure Mine
Lone Jack Mine
Uncle Abe Mine
Jupiter Mine
Copper Age Mine
Eureka Mine
Cherum Peak
Towne Mine
Midnight Mine
Pinkham Mine
Old Comanche Mine
Twentieth Century Mine
Water Tank
Hazel K Mine
Gold Star Mine
Metallic Accident Mine
Drill Hole
New Moon Mine
Keystone Mine
JEEP TRAIL
R 18 W
R 17 W
BM 3871
BM 3743
3844
3701
3698
3888
3963
3946
3927
3844
910
3
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11
12
13
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754
755
756
757
758
759
(CERBAT)
3154 I SW
10'
INTERIOR—GEOLOGIC
SCALE 1:24 000

016

BAHAMIA. REFINING SERVICES & MINING E. UIPMENT COMPANY
A Division of Bahamian Refining Corporation
9222 N. 14th AVE., PHOENIX, ARIZONA 85021 • TELEPHONE (602) 279-9702

DATE: September 29, 1988

SAMPLE NAME: Chloride

PINKHAM

Name: Leslie Peck
1660 S. Alma School, Suite 205
Mesa, AZ 85202

RE: Complete Basic Workup - BIO-D-Leachent

This report is to provide you with BIO-D-Leachent amenability data on your sample; and preparation, head analyses, and leach recovery results.

SAMPLE PREPARATION

The entire sample which we received from you was dried by slow evaporation to eliminate errors that could be caused by moisture content. It was then thoroughly mixed and put through a Jones' splitter to obtain an average sample and then ground up for the test. A control sample was also taken, and will be held in storage for 30 days to enable us to do additional testing should you request it.

HEAD ANALYSES

The head analyses reported below were derived from combining the results from actual recovery of both the tailing pulp and the pregnant leach solution. (See attached sheet for the individual results of each formula used.) The total values for the best formula(s) is reported as follows in oz./ton.

FORMULA	GOLD Au	SILVER Ag
Basic #3	.81	3.21
Acid #3	.77	2.62

16-A

As a mutual protection to clients, the public and this corporation, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from this corporation.

LEACH RECOVERY

The samples prepared for the leach tests for each formula were placed in appropriate sized containers, and the test was commenced. The following formulas were determined to be the best for this sample. (See attached sheet for all formulas used.)

BASIC FORMULA # 3		
	DI Water	100 ml
	Sodium Bromide	25 grams
	Sodium Hydroxide	.50 grams
	BIO-D-Leachent	.05 grams
ACID FORMULA # 3	DI Water	100 ml
	Sodium Bromide	25 grams
	Acid	0 grams
	BIO-D-Leachent	.05 grams

These tests were done as a soak leach amenability test on the samples and the leach time was 24 hours. No agitation was used and the temperature was ambient, varying from 75 degrees to 80 degrees. The oxidizing strength of the solution was maintained by monitoring with Potassium Iodide Starch Test Paper.

After 24 hours of leach time, the entire slurry for each test was filtered through a Whatman ashless No. 42 filter, and washed with 5 times the volume of the pregnant solution with deionized laboratory water to rinse out the dissolved precious metals from the pulp.

The tails pulp was dried. Then a total recovery by both hydrochemical and ferometallurgical methods was done to determine precious metals not yet dissolved by the leachent.

DI water was added to the entire volume of rinse water containing the pregnant leach solution up to a total of 1000 ml using a volumetric Erlenmeyer flask. The pregnant solution was analysed by atomic absorption spectrograph and represents the actual values recovered from the sample by this particular testing procedure. (See attached sheet for all results.)

The percentages of recoveries are as follows:

FORMULA #	GOLD (Au)	SILVER (Ag)
BASIC #3	100	81.6
ACID #3	100	89.7

COMMENTS

A 24 hour soak leach is a good method to determine the amenability of an ore to release its values using a certain formula, however, in practice this is not an efficient method and is not used. The amounts of precious metals recovered would be greatly increased in a far shorter time span if there were a liquid flow through the ore as is normally done in production.

Other factors that would increase the yield would be agitation, increasing the solution temperature, fine grinding, and adding an oxidizer to the solution. Any production method used would produce far greater results than the 24 hour soak leach method of testing will produce.

CONCLUSIONS & RECOMMENDATIONS

The chemical consumption was very low and this ore should be very economical to run.

The platinum values in this ore are greater than the gold values. I recommend that you have the solutions from Basic Formula #2 tested for platinum group sister metals.

The recovery of gold from this ore, using BIO-D-Leachent, was more than one half oz/ton on 6 of the 16 formulas, proving that "BIO-D" bromide chemistry is very amenable to this ore.

The chemistry is especially designed for Au and Pt metals, and if you want the Ag, we need to add a booster to your chemistry. The silver should pay all recovery costs.

I am available by phone between 2:00 and 8:00 p.m. daily to discuss this report and answer any questions you may have.

Fred Finell, Jr.
President

B. AMIAN REFINING SERVICES & . NING EQUIPMENT COMPANY
A Division of Bahamian Refining Corporation
9222 N. 14th AVE., PHOENIX, ARIZONA 85021 • TELEPHONE (602) 279-9702

Setpember 12, 1988

Mike Peck
4425 N 78th Street
Scottsdale, AZ 85251

Dear Mr. Peck:

This is a preliminary report showing the actual recovery of all 16 formulas in your sample "Chloride", using BIO-D-Leachent, reported in ozs. per ton. Formal report to follow.

BASIC	Au	Ag
Formula #1	.29	1.25
Formula #2	.72	2.11
Formula #3	.81	2.62
Formula #4	.10	.34
Formula #5	.77	.87
Formula #6	.46	1.68
Formula #7	.10	.47
Formula #8	.25	1.12
Formula #1	.21	1.41
Formula #2	.70	2.38
Formula #3	.77	2.35
Formula #4	.08	.26
Formula #5	.76	1.25
Formula #6	.47	1.87
Formula #7	.10	.37
Formula #8	.12	.76

Sincerely,

Fred Finell, Jr.
President

FF:bb

As a mutual protection to clients, the public and this corporation, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from this corporation.

m DRW 2070

ORE SETTLEMENT

PHELPS DODGE CORPORATION

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

Date MAR . 3 1980

OUGHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
DRESS P. O. Box [illegible] - Bisbee, Arizona 85603
TERIAL Silicious Ore SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H2O	Dry Lbs.
-10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment to				
	Bolt Weight		300		
			187,080	5.54	176,716

Smelter Lot No. 251
Shipper's Lot No. SCL 1
Date Sampled 3-10-80

E & M J Copper Quotation
Domestic fob Refinery 119.4274 ¢ per
Export fob Refinery ¢ per
Deduction 8.0000 ¢ per

Silver Price
Domestic 3471.0000 ¢ per
Foreign ¢ per
Deduction .1250 ¢ per
U. S. Gold Price 628.7000 $ per
Deduction .2500 $ per

	PER TON OF 2000 LBS. Assay	Deduct	PAYMENTS Pay For	AMOUNTS Per Ton	Total
Gold	.040 oz.	10 % or oz.	.036 oz. @ 628.4500 $ per oz.	22.62	
Silver	8.02 oz.	10 % or oz.	7.218 oz. @ 3470.8750 ¢ per oz.	250.53	
Copper	.73 %	14.60 Lbs.	— Lbs. @ 111.4274 ¢ per Lb.	—	273.1
Chlorine	%		Total Payments		273.1

	Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
Treatment Base		10%	Of $ 273.15		27.32	
Treatment increase a/c Conv. & Refg.						
202 Penalty	71.6 %	80.0 %	8.4 % @	60 ¢ per unit	5.04	
203 Penalty	5.3 %	4.0 %	1.3 % @	20 ¢ per unit	.26	
Penalty	%	%	% @	¢ per unit		
Penalty	%	%	% @	¢ per unit		
				Total Treatment	32.62	
				LESS CREDITS		
	%		% @	¢ per unit		
	%		% @	¢ per unit		
				Net Treatment		
				Net Price per Ton		32.[illegible]
				f.o.b. Douglas		240.[illegible]

Gross Proceeds 88.358 Dry Tons @ $ 240.53 per ton 21252
Less Freight From Kingman On 93.540 Gross Tons @ $ None per ton 10626.
Less Comm. 1062
$ 9564.

FINAL PAYMENT ASSIGNED TO:-
Valley National Bank
P. O. Box 311
Tucson, Arizona 85702

Attn:- Jack Croddy

	Returnable	Gross	
Gold	3.181	3.534	Oz.
Silver	637.77	708.63	Oz.
Copper		1290	Lb.

Balance Due Valley National Bank 21252

Correct [signature] Inv. Clerk
Checked [signature]
Approved Total Cost 212 ¢ Elim. [illegible]
Chief Account

017

NAME Linkhorn Mine

LAB. NO. 2-2-

ADDRESS Chloride

SAMPLE Main Vein, Red material

DATE RECEIVED 2-27-83

SUBMITTED BY Brewer Steele

Red vein material 20 lb sample

7x #4 (Pb 12 lb)

Pb bar weighed 4 lb 1 oz (refined 3 lb 10 oz)

Pb sample " : 60g

Cupelled : No Ag added

Bead Weight : 98 mg

oz per ton : 9.16 oz / Ton

Furnace #1 Pour # 4-2-27-83

LAB NO. 0077

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: HE Patterson

Date: 10-28-

Pinkham ~~[illegible]~~ Vien ore impacte

Cons 15-1 7 x #4

Received: Trevor Steele

Submitted by:

Completed by: [illegible]

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum
PD	30g	.0265g	✓	✓	
		26.5 oz/Ton			

LAB NO. 0091

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: PINKHAM VEIN ore impacted 1/8" — Date: 11-9-83
Cons. 40-1 Cut #1
Fired 7x#4
Cupelled 4 beads

Received: Trevor Steele

Submitted by: HE Pettersen Completed by: [illegible]

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum—Other
7x4 #2	1 lb	.17925g 43.79oz Tom		✓	✓

LAB NO. 0093

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: PINKHAM VEIN ore Impacted 1/8" –
Cons 13-1 Cut #2
Fired Fx #4
Cupelled 3 beads

Date: 11-9-83

Received: Frever Steele

Submitted by: HE Patterson

Completed by: ✓

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum
#4	1/2 lb	.046g	✓	✓	
		5.93 oz/Ton			

LAB NO. 0101

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: Economic Operations
Vein ore, impacted 1/8"-, Table cons at #1
Working with ore/Flux ratio's
Fx #4, mixed for 30g of ore

Date: 11-16-8

Received: Trever Steele

Submitted by: HE Patterson

Completed by: ✓

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinu
#6	30g	.028g 28 oz/Ton		✓	✓
#7	60g	.03625g 36 1/4 oz/Ton		✓	✓
#8	90g	.093 1/2 31.15 oz/Ton		✓	✓

LAB NO. 0101

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: Economic Operations Sunshine
Vein ore, impacted 1/8", Table cons cut #1
Working with ore/Flux Ratio's
Fx #3, Mixed for 30g of ore

Date: 11-16-8

Received: Trevor Steele

Submitted by: HE Patterson

Completed by: [illegible]

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinu
#9	60g	.059g 29 1/2 oz/Ton	? ✓	✓	✓
#10	90g	.098g 32 2/3 oz/Ton	✓	✓	✓

LAB NO. 0102

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

PINKHAM

For: Variations of ore Concentrate
Vein ore, impacted 1/8", Table cons Cut #1 & #2
Mixing Cut #1 w/T Cut #2 (#1 cut / #2 cut)
Fx #4 (#1 cut 40-1) (#2 cut 13-1)

Date: 11-17-83

Received: Trevor Steele

Submitted by: HE Patterson

Completed by: [illegible]

REPORT OF LABORATORY TESTS

	Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum—C
#1	#1-16.5g / #2-13.5g	30g	.02025g ~~.02025~~ 20 1/4 oz/Ton		✓	✓
#2	#1-15g / #2-15g	30g	.02025g 20 1/4 oz/Ton	✓	✓	✓

LAB NO. 010

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

PINKHAM VIEW

For: Variations of ore concentrate Date: 11-12-8

Vein ore impacted 1/8" - Table cons #1 & #2 cuts

Mixing #1 cut 2/1 #2 cut (#1 cut / #2 cut)

7x#3 #1 cut = 40-1 #2 cut = 13-1

Received: Trevor Steele

Submitted by: HE Patterson Completed by: ✓

REPORT OF LABORATORY TESTS

	Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinu
#3	#1 cut 16.5g / #2 cut 13.5g	30g	.0225g 22 1/2 oz / Tom		✓	✓
#4	#1 cut 15g / #2 cut 15g	30g	.0155g 15 1/2 oz / Tom		✓	✓

LAB NO. 0229

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: Pinkham Vien

Date: 12 23- 84

Sample taken from exsposed Vien
at west end of the building about 100 foot
North. Serfice sample.

Received: Sample Crushed under water.

Submitted by:

Completed by: M. Peck

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum—Other
Head Ore	100gr.	11.2mg.	+	+ 3.4oz ton	

LAB NO. 0215

ADVANCED MINING

900 E. KAREN • SUITE H-216
LAS VEGAS, NEVADA 89109
(702) 733-0610

For: PINKHAM WATER

Date: 8-Sept 84

Tested after Electrolises

This is the finished product of Electrolises

Received:

Submitted by: Sharp------ Edmonds

Completed by: M. Peck

REPORT OF LABORATORY TESTS

Sample Marked	Sample Weight	Bead Weight	Gold	Silver	Platinum—Other
Test #1	240ml.	4ml.	=1.6% Precious Metals		

Trated with Hydrozine & Zink Solids were Fluxed and furniced.

#2	250 ml.	0	0 Lost treated same way.
#3	1.5 Gal.	5 mg. Pres. Metals	

Plastic Tank 38gr. 10 mg. Pres. Metals. 17 Sept. 84

This material was brushed off of the filter.

Objective: to see if the Gold and Platnium coud be caught in the filter. Previous tests showed only Silver. by observing through the micrascope appears to be 80% Gold and Platnium

6-14-84

PINKHAM COUNTRY ROCK : Sample taken 80 ft. north of building at west end. 30ft. away from the Vien.

Object was to test the water that was used to wash the ore after crushed, nothing further was done to the rocks.

Percipitated 30 gr. 7 mgs. Precious Metals = 7 oz per per ton

TEST NO. 0203-----8-13-84

Water taken from the Pinkham Shaft, 5- Gallons water Iron was removed first

Water treated and filtered and dried furniced.

Dried material 10oz. 10mg. Prec. Metals.

PINKHAM MINE MOHAVE

I drove to the Pinkham mine which the Rothermals have also sub-leased to the Texas Mining and Development Co., 2118 Maxmillan, Houston, Texas, 77039. The dumps at the Pinkham contain mostly pyrite and are questionable quantity-quality in my opinion.
VBD WR 6/19/76

CJH/WR 12/14/79 - John Rothermel put a dozer slice on his Pinkham claim. He has asked for field inspection and advice. Probably in January.

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES

VERBAL INFORMATION SUMMARY

1. Information from: Mike Peck

   Company: Amalgamated Metals

   Address: 4545 E. Shea #230

   Phoenix, AZ 85028

2. Phone: 996-2721

3. Mine: PINKHAM

4. ADMMR Mine File: Same

5. County: Mohave

6. Summary of information received, comments, etc.:

Mr. Peck representing Amalgamated Metals, a combination of limited partnerships, visited and reported they have been processing pilot lots of dump material from the Pinkham. He was provided with a list of metallurgical consultants, custom mills, and information on alternative leaching reagents to cyanide. He was especially interested in Bio-D-Leach of Bahamian Refining.

Date: September 23, 1988

Nyal J. Niemuth, Mining Engineer

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Shipments To Douglas Reduction Works (P.D. Smelter)
By John Rothermel

In a telephone conversation with John Rothermel on July 18, 1980, he discussed his shipments of ore from his Pinkham Mine to Phelp Dodge's Douglas Reduction Works. The negotiations prior to shipping were also discussed.

On or prior to March 10, 1980, J.B. (John) Rothermel shipped six truck loads of siliceous silver-gold-copper ore to the Phelps Dodge Smelter at Douglas. The shipment totaled 187,780 wet pounds (93.89 short tons). It was sampled at Douglas on March 10, 1980. A.J. Gilbert Construction Co. represented Rothermel at the time of sampling and weighing. A provisional settlement was made at that time. Net smelter value (at time of provisional settlement) was 88.358 short tons-dry @ $240.53/ton, a total of $21,252.75. An advance payment of 50% or $10,626.38 was made by the smelter.

Final ore settlement on the shipment was made twelve weeks later, June 13, 1980. By that time the price of silver (silver was the major pay metal in the ore) had dropped more than 50% from its value on March 10 (from 3471¢/troy ounce to 1534.6¢). The price of gold also dropped somewhat. Net smelter value at the time of final settlement was $116.51 per ton, a total of $10,294.59. The final settlement was less than 50% of the provisional settlement and less than the advance payment.

The advance payment was in reality a note issued against final payment. The note was issued at essentially prime rate (17.5% annual interest). The total interest on the advance was $470.42 for the 95 day period, March 10, 1980, through June 13, 1980. At the time of final settlement the shipper was faced with owing the difference between the note (advance) based on the provisional settlement and the final settlement - $431.41 plus the interest - $470.42 - a total of $801.83. An over payment of commission amounting to $33.00, reduced the amount due from John Rothermel to $768.83.

The methods of determining the value of shipments, provisional settlements, interest charges on provisional settlement payments, the length of time between provisional and final settlements, and a commission to an agent appear to be accepted practice. HOWEVER, Mr. Rothermel explained that these details were not made clear to him. Upon his initial contact to the Phelps Dodge Smelter, he was referred to A.J. Gilbert Construction Co. and told that any and all arrangements to ship small lots of custom ore to Douglas must be made through them. They charged 10% of the net final settlement to supervise the deliveries and sampling of the ore upon its arrival at Douglas. The smelter payment was made to Gilbert and they issued the check to Rothermel.

In the end, the tabulation below summarizes the shipment:

Shipments To Douglas Reduction Works (P.D. Smelter)
By John Rothermel

88.358 Dry Tons @ $116.51/Ton	=		$10,294.59
Less Freight on 93.540 Wet Tons @ $ 45/Ton	=	$4,209.30	
Less Commission @ 10% of Net Smelter	=	$1,029.46	
Less Interest On Note	=	$ 470.42	
Total F.O.B. Mine Site	=		$ 4,585.41
Total F.O.B. Mine Site/Ton	=		$ 49.02/Ton

PHELPS DODGE CORPORATION

DATE: June 13, 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

OF A. J. Gilbert Construction Co. (J. B. Rothermel)
PO Box 5288 - Bisbee, Arizona 85603

L Siliceous Ore

SHIPPED FROM Kingman, Arizona

ate eived	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H_2O	Dry Lbs.
10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To Belt Weight		300		
			187,080	5.54	176,716

Smelter Lot No.		251
Shipper's Lot No.	SCL	1
Date Sampled		3-10-80
E & M J Copper Quotation		
Domestic fob Refinery	95.3820	¢ per lb.
Export fob Refinery		¢ per lb.
Deduction	8.0000	¢ per lb.
Silver Price		
Domestic	1534.6000	¢ per oz.
Foreign		¢ per oz.
Deduction	.1250	¢ per oz.
U. S. Gold Price	573.4500	$ per oz.
Deduction	.2500	$ per oz.

PER TON OF 2000 LBS. — PAYMENTS — AMOUNTS

	Assay	Deduct	Pay For	Per Ton	Total
GOLD	.040 oz.	10 % or oz.	.036 oz. @ 573.2000 $ per oz.	20.64	
SILVER	8.02 oz.	10 % or oz.	7.218 oz. @ 1534.4750 ¢ per oz.	110.76	
COPPER	.73 %	10.00 Lbs.	4.560 Lbs. @ 87.3820 ¢ per Lb.	3.98	135.38
Chlorine	.001 %	.04	Total Payments		135.38

Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
	10%	Of $135.38	Treatment Base	13.54	
SiO_2 Penalty 71.6%	80.0%	8.4 % @	60 ¢ per unit	5.04	
Al_2O_3 Penalty 5.3%	4.0%	1.3 % @	20 ¢ per unit	.26	
Pb Penalty .35%	.30%	.05 % @	30 ¢ per unit	.02	
Zn, Sb, Bi Penalty .104%	.100%	.004 % @	300 ¢ per unit	.01	
			Total Treatment	18.87	
			LESS CREDITS		
%		% @	¢ per unit		
%		% @	¢ per unit		
			Net Treatment		18.87
			Net Price per Ton		116.51
			f.o.b. Douglas		10,294.59

; Proceeds 88.358 Dry Tons @ $ 116.51 per ton
Freight From Kingman On 93.540 Gross Tons @ $ None per ton

Note	10,626.00
Interest	470.42
Comm. overpaid	33.00
	768.83
Due from Shipper	801.83
	10,294.59

FINAL PAYMENT ASSIGNED TO:
Valley National Bank
PO Box 311
Tucson, Arizona 85702

Attn: Jack Croddy

nce Due Valley National Bank

ect

Checked JTH

Approved

WJA
Inv. Clerk

Chief Accountant

50 Hanna

DRW 2070

PROVISIONAL SETTLEMENT
ORE SETTLEMENT

PHELPS DODGE CORPORATION

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

Date MAR 13 1980

GHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
RESS P. O. Box 5233 - Bisbee, Arizona 85603
ERIAL Silicious Ore SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H2O	Dry Lbs.
10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	35,720		
		204	33,180		
		244	31,400		
			176,780		
	plus Adjustment to				
	Daily Volume		300		
			187,080	5.54	176,716

Smelter Lot No. 251
Shipper's Lot No. SGL 1
Date Sampled 3-10-80

E & M J Copper Quotation
Domestic fob Refinery 119.4274 ¢ per lb.
Export fob Refinery ¢ per lb.
Deduction 8.0000 ¢ per lb.

Silver Price
Domestic 3471.0000 ¢ per oz.
Foreign ¢ per oz.
Deduction .1250 ¢ per oz.
U. S. Gold Price 628.7000 $ per oz.
Deduction .2500 $ per oz.

PER TON OF 2000 LBS.

	Assay	Deduct	Pay For	PAYMENTS	AMOUNTS Per Ton	Total
Gold	.0110 oz.	10 % or oz.	.036 oz. @ 628.11500 $ per oz.		22.62	
Silver	8.04 oz.	10 % or oz.	7.218 oz. @ 3470.8750 ¢ per oz.		250.53	
Copper	.73 %	14.60 Lbs.	— Lbs. @ 111.4274 ¢ per Lb.		—	273.15
Clorine	%		Total Payments			273.15

	Analysis	Deduct	Charge For	CHARGES	
Treatment Base		10%	Of $ 273.15		27.32
Treatment increase a/c Conv. & Refg.					
Pen Penalty	71.6 %	80.0 %	8.4 % @	60 ¢ per unit	5.04
Pen Penalty	5.3 %	4.0 %	1.3 % @	20 ¢ per unit	.26
Penalty	%	%	% @	¢ per unit	
Penalty	%	%	% @	¢ per unit	
				Total Treatment	32.62
				LESS CREDITS	
	%		% @	¢ per unit	
	%		% @	¢ per unit	
				Net Treatment	
				Net Price per Ton	32.62
				f.o.b. Douglas	240.53

Gross Proceeds	88.353	Dry Tons	@ $ 240.53 per ton		21252.79
Less Freight From Kingman On	93.540	Gross Tons	@ $ None per ton		10626.31
Less				Comm.	1062.0
				$	9564.0

FINAL PAYMENT ASSIGNED TO:-
Valley National Bank
P. O. Box 311
Tucson, Arizona 85702

Attn:- Jack Croddy

	Returnable	Gross	
Gold	3.181	3.534	Oz.
Silver	637.77	708.63	Oz.
Copper		1270	Lb.

Balance Due Valley National Bank

21,252.79

Correct Checked Approved

Bal Cost & Elim. 21252 (.2

Inv. Clerk Chief Accountan

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Interest Charges On Smelter Shipment Advance Payments

The following information was obtained from a discussion with A. J. Kroha, Ore Buyer, Western Ore Buying Office, ASARCO, Tucson, Arizona.

1. Settlement for lead shipments (ores and concentrates) to ASARCO's El Paso Lead Smelter is determined using the average monthly price of the pay metals for the second (2nd) full month after the month in which the shipment is received. The average monthly price for any given month is typically published on the Monday of the first full week following the month in question.

2. Settlement for copper shipments (ores and concentrates) to ASARCO's Copper Smelters is determined using the average monthly price of the pay metals for the third (3rd) full month after the month in which the shipment is received.

3. Advance payments (actually a note issued against final settlement) may be made in hardship cases. Interest is charged on the advance at slightly above the prime rate. The charging of interest became necessary about ten years ago when interest rates became a significant cost on the value of of material tied up in the process stream.

4. Due to the possibility of an industry strike, ASARCO is not accepting any shipments at the present time.

5. The ASARCO Copper Smelter at Hayden, Arizona (Hayden Reduction Works) is not accepting custom ores. They do not have crushing or sampling facilities for ore.

6. Siliceous gold and/or silver ores are treated as lead ores and settlements are made in the same manner as lead ores.

KAP:mw

cc: DMR Tucson

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Interest Charges On Smelter Shipment Advance Payments

The following information was obtained from a discussion with A. J. Kroha, Ore Buyer, Western Ore Buying Office, ASARCO, Tucson, Arizona.

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KAP:mw

cc: DMR Tucson

A. J. GILBERT, JR.
PRESIDENT

PHONE 432-3946

A. J. Gilbert Construction Co.

GENERAL CONTRACTING

Excavation -:- Paving -:- Concrete Work

P. O. BOX 5288, BISBEE, ARIZONA 85603

5973

Pinkham Mine file

June 18, 1980

Mr. John Rothermel
6012 N. 47th Drive
Glendale, AZ. 85301

Statement of Final Settlement

P.D. Lot #251	Shipper's Lot #SCL-1				
	Total Value	10294	59		
	Note			10626	00
	Interest			470	42
	Credit on overpayment (Commission)	33	00		
	Due A.J. Gilbert from Shipper			768	83

LBERT. JR.
SIDENT

PHONE 432-3946

A. J. Gilbert Construction Co.

GENERAL CONTRACTING

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	Credit on overpayment (Commission)	33.00	
	Due A.J. Gilbert from Shipper		768.83

2070

ORE SETTLEMENT

PHELPS DODGE CORPORATION

DATE: June 13, 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

OF A. J. Gilbert Construction Co. (J. B. Rothermel)
PO Box 5288 - Bisbee, Arizona 85603

AL Siliceous Ore

SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H_2O	Dry Lbs.
3-10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To Belt Weight		300		
			187,080	5.54	176,716

Smelter Lot No.		251
Shipper's Lot No.	SCL	1
Date Sampled		3-10-80
E & M J Copper Quotation		
Domestic fob Refinery	95.3820	¢ per lb.
Export fob Refinery		¢ per lb.
Deduction	8.0000	¢ per lb.
Silver Price		
Domestic	1534.6000	¢ per oz.
Foreign		¢ per oz.
Deduction	.1250	¢ per oz.
U. S. Gold Price	573.4500	$ per oz.
Deduction	.2500	$ per oz.

PER TON OF 2000 LBS.

	Assay	Deduct	PAYMENTS Pay For	AMOUNTS Per Ton	Total
old	.040 oz.	10 % or oz.	.036 oz. @ 573.2000$ per oz.	20.64	
ver	8.02 oz.	10 % or oz.	7.218 oz. @ 1534.4750¢ per oz.	110.76	
per	.73 %	10.00 Lbs.	4.560 Lbs. @ 87.3820¢ per Lb.	3.98	135.38
orine	.001 %	.04	Total Payments		135.38

	Analysis	Deduct	Charge For	CHARGES		
		10%	Of $135.38	Treatment Base	13.54	
2	Penalty 71.6%	80.0%	8.4 % @	60 ¢ per unit	5.04	
03	Penalty 5.3%	4.0%	1.3 % @	20 ¢ per unit	.26	
	Penalty .35%	.30%	.05 % @	30 ¢ per unit	.02	
Sb,Bi			@	300 ¢ per unit	.01	
	Penalty .104%	.100%	.004 %	Total Treatment	18.87	
				LESS CREDITS		
	%		% @	¢ per unit		
	%		% @	¢ per unit		
				Net Treatment		
				Net Price per Ton		18.87
				f.o.b. Douglas		116.51

ss Proceeds		88.358	Dry Tons	@ $ 116.51 per ton		10,294.59
s Freight From	Kingman On	93.540	Gross Tons	@ $ None per ton	Note	10,626.00
s					Interest	470.42
					Comm. overpaid	3300
					Due from Shipper	768.83
ance Due	Valley National Bank					10,294.59

FINAL PAYMENT ASSIGNED TO:
Valley National Bank
PO Box 311
Tucson, Arizona 85702

Attn: Jack Croddy

rect — WJA — Inv. Clerk

Checked — JTH

Approved — Chief Accountant

3-2-80 Pinkham [illegible]

PROVISIONAL SETTLEMENT

(5 copies)

Form DRW 2070

ORE SETTLEMENT

PHELPS DODGE CORPORATION

Date MAR 13 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

BOUGHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
ADDRESS P. O. Box 5288 - Bisbee, Arizona 85603
MATERIAL Silicious Ore SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	WEIGHT % H2O	WEIGHT Dry Lbs.
3-10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To Bell Weight		300		
			187,080	5.54	176,716

Smelter Lot No. 251
Shipper's Lot No. SCL 1
Date Sampled 3-10-80

E & M J Copper Quotation
Domestic fob Refinery 119.4274 ¢ per lb.
Export fob Refinery ¢ per lb.
Deduction 8.0000 ¢ per lb.

Silver Price
Domestic 3471.0000 ¢ per oz.
Foreign ¢ per oz.
Deduction .1250 ¢ per oz.
U. S. Gold Price 628.7000 $ per oz.
Deduction .2500 $ per oz.

PER TON OF 2000 LBS. — PAYMENTS — AMOUNTS

	Assay	Deduct	Pay For	Per Ton	Total
Gold	.040 oz.	10 % or oz.	.036 oz. @ 628.4500 $ per oz.	22.62	
Silver	8.02 oz.	10 % or oz.	7.218 oz. @ 3470.8750 ¢ per oz.	250.53	
Copper	.73 %	14.60 Lbs.	— Lbs. @ 111.4274 ¢ per Lb.	—	273.15
Chlorine	%		Total Payments		273.15

	Analysis	Deduct	Charge For	CHARGES	Per Ton
Treatment Base		10%	Of $ 273.15		27.32
Treatment increase a/c Conv. & Refg.					
SiO2 Penalty	71.6 %	80.0 %	8.4 % @	60 ¢ per unit	5.04
Al2O3 Penalty	5.3 %	4.0 %	1.3 % @	20 ¢ per unit	.26
Penalty	%	%	% @	¢ per unit	
Penalty	%	%	% @	¢ per unit	
				Total Treatment	32.62
				LESS CREDITS	
	%		% @	¢ per unit	
	%		% @	¢ per unit	
				Net Treatment	32.62
				Net Price per Ton	
				f.o.b. Douglas	240.53

Gross Proceeds 88.358 Dry Tons @ $ 240.53 per ton 21,252.75
Less Freight From Kingman On 93.540 Gross Tons @ $ None per ton 10626.38
Less Comm. 1062.00
$ 9564.00

FINAL PAYMENT ASSIGNED TO:-
Valley National Bank
P. O. Box 311
Tucson, Arizona 85702

Attn:- Jack Croddy

	Returnable	Gross	
Gold	3.181	3.534	Oz.
Silver	637.77	708.63	Oz.
Copper		1290	Lb.

Balance Due Valley National Bank 21,252.75

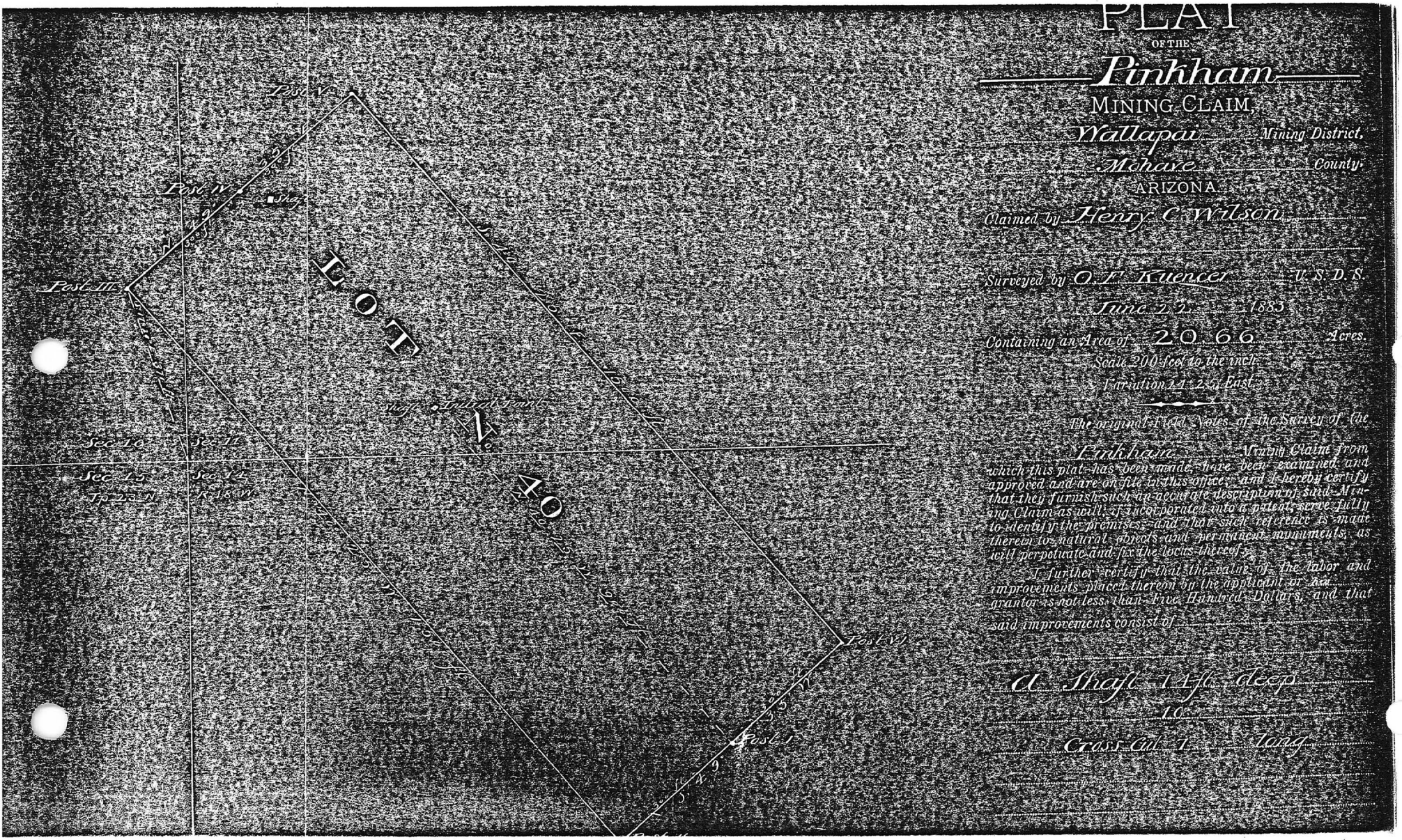
Correct [signature] Inv. Clerk

Checked [signature]

Approved

Total Cost 21,252
¢ Elim. <.25

Chief Accountant



PLAT

OF THE

Pinkham

MINING CLAIM,

Wallapai Mining District,

Mohave County,

ARIZONA

Claimed by Henry C. Wilson

Surveyed by O. F. Kuenzer U. S. D. S.

June 22 1883

Containing an Area of 20.66 Acres.

Scale 200 feet to the inch

Variation 21° 25' East

The original Field Notes of the Survey of the Pinkham Mining Claim from which this plat has been made, have been examined and approved and are on file in this office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects and permanent monuments as will perpetuate and fix the locus thereof.

I further certify that the value of the labor and improvements placed thereon by the applicant or his grantor is not less than five Hundred Dollars, and that said improvements consist of

A Shaft 14 ft. deep

10

Cross Cut 1 long

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

DEPT. MINERAL RESOURCES
RECEIVED
NOV 14 1946
PHOENIX, ARIZONA

Date Nov. 12. 1946

1. Mine: Pinkham
2. Location: Sec. SW SW 11 Twp. 23 N Range 18 W Nearest Town Chloride
   Distance 2 miles Direction South Road Condition Very good
3. Mining District & County: Wallapai Mining District, Mohave Co.
4. Former Name of Mine:
5. Owner: W. L. Babcock
   Address Box 644, Kingman, Arizona
6. Operator:
   Address:
7. Principal Minerals: Gold, silver, copper, zinc.
8. Number of Claims: one Lode yes Placer
   Patented yes Unpatented
9. Type of Surrounding Terrain: It is located in the open border of Sacramento Valley, at the foot of the range.

10. Geology & Mineralization: The country rock is the pre-Cambrian complex, and it is intruded by microcline granite and diabase dikes near by

11. Dimension & Value of Ore Body: The ore occurs in lenses and elongated bodies and chimneys.
The principal source of ore mined was of a width 14' and sampled $24.00 per ton estimated at value of forty years ago. Much of the ore ran $100.00.
For every per cent of copper the ore carries 10 oz of silver.

12. Ore "Blocked Out" or "In Sight": Mine is full of water

Ore Probable: I don't know

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts	2	240 400	probably good
Raises		None	
Tunnels		No.	
Crosscuts		Very little	
Stopes		Several	

14. Water Supply: Water stands to 35' of surface

15. Brief History: Has been worked years ago for its high grade copper & silver content. Smelter returns are not available just now as I loaned them to a promoter whom I can't locate.

16. Signature: W. S. Babcock

17. If Property for Sale, List Approximate Price and Terms: $10,000.00 and three years to pay.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date November 12, 1946

1. Mine Pinkham
2. Location 2 mi. south of Chloride SW 1/4 SW 1/4 Sec 11, T 23N, R18W
3. Mining District & County Wallapai Mining Dist., Mohave Co.
4. Former name
5. Owner W. C. Babcock,
6. Address (Owner) Box 644, Kingman, Ariz.
7. Operator
8. Address (Operator)
9. President, Owning Co.
9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals Gold, silver, copper, zinc.
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill: Type & Cap.
13. Men Employed
17. Power: Amt. & Type
18. Operations: Present

19. Operations: Planned

20. Number Claims, Title, etc. One patented lode claim.

21. Description: Topography & Geography It is located in the open border of Sacramento Valley, at the foot of the range.

22. Mine Workings: Amt. & Condition 2 shafts 240' & 400' - probably good condition
Several stopes

(over)

23. Geology & Mineralization — The country rock is the pre-Cambrian complex, and it is intruded by mic[illegible]line granite and diabase dikes [illegible]rby.

24. Ore: Positive & Probable, Ore Dumps, Tailings — Mine is full of water.

24A. Dimensions and Value of Ore body — The ore occurs in lenses and elongated kidneys and chimneys. The principal source of ore mined was of a width 14' and sampled $24.00 per ton estimated at values of forty years ago. Much of the ore ran $100.00. For every percent of copper the ore carries 10 ozs. of silver.

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route — Very good.

27. Water Supply — Water stands to 35' of surface.

28. Brief History — Has been worked years ago for its high grade copper and silver content. Smelter returns are not available just now as I loaned them to a promoter whom I can't locate.

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate. — $10,000.00 and three years to pay.

32. Signature W. C. Babcock

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date November 12, 1946

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(over)

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The country rock is the pre-Cambrian complex, and it is intruded by mic[illegible]ine granite and diabase dikes [illegible]rby.

24. Ore: Positive & Probable, Ore Dumps, Tailings

Mine is full of water.

24A. Dimensions and Value of Ore body

The ore occurs in lenses and elongated kidneys and chimneys. The principal source of ore mined was of a width 14' and sampled $24.00 per ton estimated at values of forty years ago. Much of the ore ran $100.00. For every percent of copper the ore carries 10 ozs. of silver.

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route

Very good.

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STATE OF ARIZONA

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21. Description: Topography & Geography It is located in the open border of Sacramento Valley, at the foot of the range.

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Several stopes

(over)

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The country rock is the pre-Cambrian complex, and it is intruded by microline granite and diabase dikes nearby.

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26. Road Conditions, Route

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Has been worked years ago for its high grade copper and silver content. Smelter returns are not available just now as I loaned them to a promoter whom I can't locate.

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30. Remarks

31. If property for sale: Price, terms and address to negotiate.

$10,000.00 and three years to pay.

32. Signature W. C. Babcock

33. Use additional sheets if necessary.

A

GEOLOGICAL REPORT

on the

PINKHAM PROPERTY

in the

Wallapai Mining District

Mohave County, Arizona

by

Wm. Vanderwall
Geologist
Scottsdale, Arizona

April 30, 1981

SUMMARY OF GEOLOGICAL REPORT

PINKHAM PROPERTY
Wallapai Mining District
Mohave County, Arizona

file

The Pinkham Property consists of two contiguous mining claims, one patented, located in Sections 11, 12, and 14, of Township 23 North, Range 18 West, G&SRB&M, Mohave County, Arizona.

Rich silver discoveries brought miners to the area in the early 1860's and in the early days the Pinkham Mine was known largely for copper and silver production. Production statistics indicate approximately 1000 tons of ore was removed containing between 8 and 60 ounces of silver per ton and 3% to 9% copper.

The Property is located in the central portion of the Cerbat Mountain Range, one of the many North-South trending, fault-block ranges of the Southwest Desert. Rocks exposed at the surface, on the Pinkham Property include pre-Cambrian metamorphic rocks cut by Mesozoic(?) intrusives and mineralized veins of an unknown (Tertiary?) age.

A known ore-body exists on the Property and if underground maps supplied to the Author are accurate, approximately 2000 tons of ore, carrying 8 to 60 ounces of silver per ton and 3% to 9% copper has been blocked out.

The most favorable loci for ore is at the junction of veins although it can be found randomly spaced along the veins in lenses, or shoots. The main vein on the Pinkham Property intersects with at least three smaller veins in a zone of highly altered and fractured country rock.

Results from field reconnaissance indicate the following:

A) Mineralized structures traverse the Property and ore is exposed on the surface; prospect pits, trenches, dumps, etc..

B) A major vein junction exists on the Property providing a favorable locus for prolonged ore deposition.

C) Past mining activity on the Property has produced considerable dump material. The possibility of milling and concentrating this material should not be overlooked.

Wm. Vanderwall, Geologist
April 30, 1981

with occasional reversal. Country rock is pre-Cambrian granite which has been intruded by later granite and diabase. A gouge zone of sericite and clay accompanies most of the veins.

Bordering the Pinkham Mine is a zone of vein intersection possibly 100 feet across composed of highly altered and fractured rock, impregnated with many short and irregular veinlets. The fractures appear to have no regular strike or dip and are filled with limonite and quartz. Several veins can be traced to an intersection at this zone, a relationship favorable to prolonged ore deposition.

The primary mineralization on the Pinkham Property is one of chalcopyrite, pyrite, galena, sphalerite and arsenopyrite, together with a variety of gange minerals. The oxidized and enriched portion of the veins contain chalcocite, bornite, cerargarite, copper carbonates, native silver and lesser concentrations of native gold.

ORE RESERVES:

The Pinkham Property contains base-metal silver veins, oxidized silver-gold veins and possibly a zone of enrichment in between. Data from past developments, publications and reports are insufficient, or unavailable, to completely delineate the orebody. However, there is ore exposed underground and in many places on the surface; prospect pits, trenches, dumps, etc..

Schrader, 1909, (pp 74-76) describes ore from the Pinkham Mine as carrying 18 ounces of silver per ton and 3% copper in the upper drifts and 60 ounces of silver with 9% copper in the lower drifts. Schrader"s map of the workings shows 1200 feet of total progress with a total depth of 400 feet. He shows approximately one-third of the known orebody mined out. Schrader's map is nearly identical to one produced in the 1940's(?) suggesting very little mining has been carried out on the property since Schrader's time.

If the lower drifts could be worked for 180 pounds of copper and 60 ounces of silver per ton and the maps are correct in showing two-thirds of the orebody in place, an estimated recovery in excess of 2000 tons of ore could be expected.

Considering the extent and mineralized nature of the zone of fractured rock around the old workings it may be possible to extend the limits of the know orebody.

Many veins traverse the Pinkham Property and some of these may contain separate orebodies which an adequate exploration program would reveal.

The mine dumps have been shown to carry mill grade values in gold and silver, and this asset should not be overlooked.

CONCLUSION:

On the basis of surface observations plus facts provided in the published literature and by talks with people familiar with

BIBLIOGRAPHY OF THE

WALLAPAI MINING DISTRICT

Mohave County, Arizona

BY

William Vanderwall
Geologist

29 April 1981

Compiled and annotated, with special attention given to the PINKHAM PROPERTY (Chloride Area), and CHIEF ENGINEER PROPERTY (Stockton Hill Area).

BASTIN, E.S., 1924. Origin of Certain Rich Silver Ores Near Cloride and Kingman, Arizona: United States Geological Survey (U.S.G.S.) Bulletin 750, pp. 17-39.

Includes general features of area, detailed descriptions of major mines with petrographic examination results of surface and subsurface ores. Concludes proustite (Ag_3AsS_3), galena (PbS), sphalerite (ZnS), chalcopyrite ($CuFeS_2$), are primary (hypogene) ore minerals in the Chloride (pp. 24-33) and Stockton Hill (pp. 33-35) areas. Thus silver, copper, lead and zinc values should persist throughout the primary ore zone. Oxidation products giving rich silver values near the surface are cerargyrite (AgCl) and native metal, which were caused by secondary enrichment. Concludes primary silver ores warrant further explorations and development.

DINGS, M.G., 1950. Wallapai Mining District, Mohave County, Arizona: Arizona Bureau of Mines (ABM) Bulletin 156, pt. 1, pp. 138-142.

Brief and sketchy description of geology and mines in the district. Mentions Pinkham Mine on page 142.

DINGS, M.G., 1951. The Wallapai Mining District, Cerbat Mountains, Mohave County, Arizona: USGS Bulletin 798, pp. 162.

Detailed description of geology, structures, ore deposits, mines and prospects. Production records from selected mines. Pinkham production given as over 14,000 ounces of silver, 27.5 tons of copper plus lesser quantities of gold and lead. Concludes future economic importance of district lies chiefly in base-metal sulfides. Author states that discovery of large orebodies of massive sulfide veins and/or disseminated porphyry type deposits by proper exploration very probable.

ELSING, M.J. and HEINEMAN, E.S., 1936. Arizona Metal Production: ABM Bulletin 140, pp. 73.

Establishes Wallapai District production from 1908-1933 as just over half a million tons producing $1,037,468 in gold; 1,913,345 ozs. AG; 966,235 lbs. Cu: 35,990,504 lbs. Pb: 95,587,344 lbs. Zn.

Revised United States Bureau of Mines figures 1908-1948 give totals as just over one and a quarter million tons producing 124,491 ozs. Au: 4,813,757 ozs. Ag: 5,712,992 lbs. Cu: 71,473,292 lbs. Pb: 169,520,515 lbs. Zn.

NOTE: Niether of these reports take into account early production from the rich oxidized veins before the turn of the century. That production estimated to be greater than 1,000,000 ounces of silver came, for the most part, from the mines of the Stockton Hill area. Nor do these reports conside the production of copper and molybdenum from the Penzoil-Duval open pit mine at Mineral Park 1962-present). Mineral Park is located midway between the Pinkham and Chief Engineer properties.

HAURY, P.S., 1947. Examination of lead-zinc mines in the Wallapai Mining District, Mohave County, Arizona: United States Bureau of Mines (USBM) Report On Investigation, Number 4101, 43p.

Brief description of geology, history and ore deposits. Detailed description of selected mine workings. Notable among these are the Lone Jack, page 18-19 (near the Pinkham property and comparable) and the Jim Kane and DeLa Fontaine mines pages 32-35 (near the Chief Engineer property and comparable). Mine descriptions include above and below ground geology, USBM ore and wall rock assay results, mine history, ownership and development. Maps of mine workings with sample locations included in the report. Concludes Wallapai District has substantial primary silver-lead-zinc-copper reserves with considerable enrichment of silver, copper and gold in the shallow, oxidized zone.

HERNON, R.M., 1938. Cerbat Mountains: In Some Arizona Ore Deposits, ABM Bulletin 145, pp. 110-117.

Brief description of topology, geology, history, etc., followed by adequate description of Tennesse Mine developed to a depth of 1600 feet and still in ore. The Tennesse produced silver lead zinc ore from veins in the chloride area until the close of World War II. The author elaborates on ore character, alteration and secondary enrichment in the chloride area.

MC KNIGHT, E.T.. Mesothermal Silver-Lead-Zinc Deposits; In Ore Deposits of the Western States (Lingren Volume), pp.592-93, American Institute of Mining and Metallurgical Engineering.

Brief geological overview; character and genisis of ore deposits, total production, regional geology and history.

High silver values in shallow oxidized zone noted throughout district especially in the Stockton Hill area and ascribed to secondary enrichment processes. Concludes primary sulfide deposits in veins are mesothermal base metal-silver deposits which may widen with depth.

SCHRADER, F.C., 1909. Mineral Deposits of the Cerbat Range, Black Mountains and Grand Wash Cliffs, Mohave County, Arizona: USGS Bulletin 397, 220p.

Considered the textbook for much of the geology, production and history of the Wallapai District. Detailed descriptions of selected mines both above and below ground. Shows Pinkham Mine as being developed to the 240 foot level, describes ore as oxidized in upper workings to 85 foot level then primary ore to total depth. Notes copper secondary enrichment products, chalcocite and bornite in upper two levels. Notes primary ore encountered in 140 foot level averaged 9% Cu and 60 ozs: Ag per ton. Map (pp.75) shows total depth 400 foot, 5 levels, totaling 1200 feet of progress and approximately one third of the inferred orebody mined out. Author suggest orebody located at junction of Pinkham and Midnight vein, suggests veins may horsetail at this junction and implies a continuation of Pinkham orebody both north and south from the present workings (Diagram pp. 76). See also Midnight Mine description pp. 76-77.

Schrader describes the Stockton Hill area, pp. 107-115, equally as well. The Little Chief Mine, pp. 112-113 (now the Chief Engineer property) is described as being developed to the 200 foot level with some 1000 feet of total progress. The Author likens the Little Chief Mine with the Banner Mine and the Treasure Hill Mine, observing that all are on the same (Banner) vein, all had the same surface expression and all produced the same type of ore. The Little Chief produced ore averaging 350 ozs. Ag and 14% to 30% Pb per ton.

SCHRADER, F.C., 1917. Geology and Ore Deposits of Mohave County, Arizona: AIME Trans., Vol. 56, pp. 197-236.

Similar to USGS Bulletin 397. Describes history, topology, geology and ore deposits. Describes selected mines both above and below ground.

THOMAS, B.E., 1949. Ore Deposits of the Wallapai District, Arizona: Economic Geology, Vol. 44, pp. 663-705.

Describes general geology and characteristic fissure veins with associated wall rock alteration and secondary enrichment. Emphasis on ore shoots; mineralogy, age, texture and genisis. Concludes mineralizing fluids followed pre-existing conduits and are subsequent to majority of dykes and veins. Suggests that veins may widen with depth and increase in lead-zinc relative to copper-silver-gold. Considers district has good potential for future base-metal production.

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Shipments To Douglas Reduction Works (P.D. Smelter)
By John Rothermel

In a telephone conversation with John Rothermel on July 18, 1980, he discussed his shipments of ore from his Pinkham Mine to Phelp Dodge's Douglas Reduction Works. The negotiations prior to shipping were also discussed.

On or prior to March 10, 1980, J.B. (John) Rothermel shipped six truck loads of siliceous silver-gold-copper ore to the Phelps Dodge Smelter at Douglas. The shipment totaled 187,780 wet pounds (93.89 short tons). It was sampled at Douglas on March 10, 1980. A.J. Gilbert Construction Co. represented Rothermel at the time of sampling and weighing. A provisional settlement was made at that time. Net smelter value (at time of provisional settlement) was 88.358 short tons-dry @ $240.53/ton, a total of $21,252.75. An advance payment of 50% or $10,626.38 was made by the smelter.

Final ore settlement on the shipment was made twelve weeks later, June 13, 1980. By that time the price of silver (silver was the major pay metal in the ore) had dropped more than 50% from its value on March 10 (from 3471¢/troy ounce to 1534.6¢). The price of gold also dropped somewhat. Net smelter value at the time of final settlement was $116.51 per ton, a total of $10,294.59. The final settlement was less than 50% of the provisional settlement and less than the advance payment.

The advance payment was in reality a note issued against final payment. The note was issued at essentially prime rate (17.5% annual interest). The total interest on the advance was $470.42 for the 95 day period, March 10, 1980, through June 13, 1980. At the time of final settlement the shipper was faced with owing the difference between the note (advance) based on the provisional settlement and the final settlement - $431.41 plus the interest - $470.42 - a total of $801.83. An over payment of commission amounting to $33.00, reduced the amount due from John Rothermel to $768.83.

The methods of determining the value of shipments, provisional settlements, interest charges on provisional settlement payments, the length of time between provisional and final settlements, and a commission to an agent appear to be accepted practice. HOWEVER, Mr. Rothermel explained that these details were not made clear to him. Upon his initial contact to the Phelps Dodge Smelter, he was referred to A.J. Gilbert Construction Co. and told that any and all arrangements to ship small lots of custom ore to Douglas must be made through them. They charged 10% of the net final settlement to supervise the deliveries and sampling of the ore upon its arrival at Douglas. The smelter payment was made to Gilbert and they issued the check to Rothermel.

In the end, the tabulation below summarizes the shipment:

Shipments To Douglas Reduction Works (P.D. Smelter)
By John Rothermel

88.358 Dry Tons @ $116.51/Ton	=		$10,294.59
Less Freight on 93.540 Wet Tons @ $ 45/Ton	=	$4,209.30	
Less Commission @ 10% of Net Smelter	=	$1,029.46	
Less Interest On Note	=	$ 470.42	
Total F.O.B. Mine Site	=		$ 4,585.41
Total F.O.B. Mine Site/Ton	=		$ 49.02/Ton

ORE SETTLEMENT

PHELPS DODGE CORPORATION

DATE: June 13, 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

OF A. J. Gilbert Construction Co. (J. B. Rothermel)
PO Box 5288 - Bisbee, Arizona 85603

L Siliceous Ore

SHIPPED FROM Kingman, Arizona

ate eived	CAR Initial	CAR Number	WEIGHT Wet Lbs.	WEIGHT % H_2O	WEIGHT Dry Lbs.
10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To Belt Weight		300		
			187,080	5.54	176,716

Smelter Lot No.		251
Shipper's Lot No.	SCL	1
Date Sampled		3-10-80
E & M J Copper Quotation		
Domestic fob Refinery	95.3820	¢ per lb.
Export fob Refinery		¢ per lb.
Deduction	8.0000	¢ per lb.
Silver Price		
Domestic	1534.6000	¢ per oz.
Foreign		¢ per oz.
Deduction	.1250	¢ per oz.
U. S. Gold Price	573.4500	$ per oz.
Deduction	.2500	$ per oz.

PER TON OF 2000 LBS. — PAYMENTS — AMOUNTS

	Assay	Deduct	Pay For	Per Ton	Total
GOLD	.040 oz.	10 % or oz.	.036 oz. @ 573.2000 $ per oz.	20.64	
SILVER	8.02 oz.	10 % or oz.	7.218 oz. @ 1534.4750 ¢ per oz.	110.76	
COPPER	.73 %	10.00 Lbs.	4.560 Lbs. @ 87.3820 ¢ per Lb.	3.98	135.38
CHLORine	.001 %	.04	Total Payments		135.38

	Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
		10%	Of $135.38	Treatment Base	13.54	
SiO_2	Penalty 71.6%	80.0%	8.4 % @	60 ¢ per unit	5.04	
Al_2O_3	Penalty 5.3%	4.0%	1.3 % @	20 ¢ per unit	.26	
Pb	Penalty .35%	.30%	.05 % @	30 ¢ per unit	.02	
As, Sb, Bi			@	300 ¢ per unit	.01	
	Penalty .104%	.100%	.004 %	Total Treatment	18.87	
				LESS CREDITS		
	%		% @	¢ per unit		
	%		% @	¢ per unit		
				Net Treatment		18.87
				Net Price per Ton		
				f.o.b. Douglas		116.51

Proceeds	88.358	Dry Tons	@ $ 116.51 per ton		10,294.59
Freight From Kingman On	93.540	Gross Tons	@ $ None per ton	Note	10,626.00
				Interest	470.42
				Comm. overpaid	33.00
				Due	768.83
				from shipper	801.83
					10,294.59

FINAL PAYMENT ASSIGNED TO:
Valley National Bank
PO Box 311
Tucson, Arizona 85702

Attn: Jack Croddy

nce Due Valley National Bank

ect — Checked — Approved

WJA — JTH

Inv. Clerk — Chief Accountant

50 Pinkham Mine

(5 copies)

DRW 2070

PROVISIONAL SETTLEMENT

ORE SETTLEMENT

PHELPS DODGE CORPORATION

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

Date MAR 13 1980

GHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
RESS P. O. Box 5233 - Bisbee, Arizona 85603
ERIAL Silicious Ore SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H2O	Dry Lbs.
10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To				
	Bolt Weight		300		
			187,080	5.54	176,716

Smelter Lot No. 251
Shipper's Lot No. SCL 1
Date Sampled 3-10-80

E & M J Copper Quotation
Domestic fob Refinery 119.4274 ¢ per lb.
Export fob Refinery ¢ per lb.
Deduction 8.0000 ¢ per lb

Silver Price
Domestic 3471.0000 ¢ per oz
Foreign ¢ per oz
Deduction .1250 ¢ per oz
U. S. Gold Price 628.7000 $ per oz
Deduction .2500 $ per oz

	PER TON OF 2000 LBS. Assay	Deduct	PAYMENTS Pay For	AMOUNTS Per Ton	Total
Gold	.040 oz.	10 % or oz.	.036 oz. @ 628.4500 $ per oz.	22.62	
Silver	8.02 oz.	10 % or oz.	7.218 oz. @ 3470.8750 ¢ per oz.	250.53	
Copper	.73 %	14.60 Lbs.	— Lbs. @ 111.4274 ¢ per Lb.	—	273.15
Clorine	%		Total Payments		273.15

	Analysis	Deduct	Charge For	CHARGES	Per Ton
Treatment Base		10%	Of $ 273.15		27.32
Treatment increase a/c Conv. & Refg.					
02 Penalty	71.6 %	80.0 %	8.4 % @	60 ¢ per unit	5.04
03 Penalty	5.3 %	4.0 %	1.3 % @	20 ¢ per unit	.26
Penalty	%	%	% @	¢ per unit	
Penalty	%	%	% @	¢ per unit	
				Total Treatment	32.62
				LESS CREDITS	
	%		% @	¢ per unit	
	%		% @	¢ per unit	
				Net Treatment	
				Net Price per Ton	32.62
				f.o.b. Douglas	240.5

Gross Proceeds 88.358 Dry Tons @ $ 240.53 per ton 21,252.7
Less Freight From Kingman On 93.540 Gross Tons @ $ None per ton 10626.3
Less Comm. 1062.0
$ 9564.0

FINAL PAYMENT ASSIGNED TO:-
Valley National Bank
P. O. Box 311
Tucson, Arizona 85702

Attn:- Jack Croddy

	Returnable	Gross	
Gold	3.181	3.534	Oz.
Silver	637.77	708.63	Oz.
Copper		1290	Lb.

Balance Due Valley National Bank 21,252.7

Correct Checked Approved Total Cost 2125 ¢ Elim. <.2

Inv. Clerk Chief Accountant

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Interest Charges On Smelter Shipment Advance Payments

The following information was obtained from a discussion with A. J. Kroha, Ore Buyer, Western Ore Buying Office, ASARCO, Tucson, Arizona.

1. Settlement for lead shipments (ores and concentrates) to ASARCO's El Paso Lead Smelter is determined using the average monthly price of the pay metals for the second (2nd) full month after the month in which the shipment is received. The average monthly price for any given month is typically published on the Monday of the first full week following the month in question.

2. Settlement for copper shipments (ores and concentrates) to ASARCO's Copper Smelters is determined using the average monthly price of the pay metals for the third (3rd) full month after the month in which the shipment is received.

3. Advance payments (actually a note issued against final settlement) may be made in hardship cases. Interest is charged on the advance at slightly above the prime rate. The charging of interest became necessary about ten years ago when interest rates became a significant cost on the value of of material tied up in the process stream.

4. Due to the possibility of an industry strike, ASARCO is not accepting any shipments at the present time.

5. The ASARCO Copper Smelter at Hayden, Arizona (Hayden Reduction Works) is not accepting custom ores. They do not have crushing or sampling facilities for ore.

6. Siliceous gold and/or silver ores are treated as lead ores and settlements are made in the same manner as lead ores.

KAP:mw

cc: DMR Tucson

MEMORANDUM

To: John H. Jett, Director

From: Ken A. Phillips, Mineral Resources Engineer

Subject: Interest Charges On Smelter Shipment Advance Payments

The following information was obtained from a discussion with A. J. Kroha, Ore Buyer, Western Ore Buying Office, ASARCO, Tucson, Arizona.

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2. Settlement for copper shipments (ores and concentrates) to ASARCO's Copper Smelters is determined using the average monthly price of the pay metals for the third (3rd) full month after the month in which the shipment is received.

3. Advance payments (actually a note issued against final settlement) may be made in hardship cases. Interest is charged on the advance at slightly above the prime rate. The charging of interest became necessary about ten years ago when interest rates became a significant cost on the value of of material tied up in the process stream.

4. Due to the possibility of an industry strike, ASARCO is not accepting any shipments at the present time.

5. The ASARCO Copper Smelter at Hayden, Arizona (Hayden Reduction Works) is not accepting custom ores. They do not have crushing or sampling facilities for ore.

6. Siliceous gold and/or silver ores are treated as lead ores and settlements are made in the same manner as lead ores.

KAP:mw

cc: DMR Tucson

A. J. GILBERT, JR.
PRESIDENT

PHONE 432-3946

A. J. Gilbert Construction Co.

GENERAL CONTRACTING

Excavation -:- Paving -:- Concrete Work

P. O. BOX 5288, BISBEE, ARIZONA 85603

5973

Pinkham Mine file

June 18, 1980

Mr. John Rothermel
6012 N. 47th Drive
Glendale, AZ. 85301

Statement of Final Settlement

P.D. Lot #251	Shipper's Lot #SCL-1			
	Total Value	10294.59		
	Note		10626.00	
	Interest		470.42	
	Credit on overpayment (Commission)	33.00		
	Due A.J. Gilbert from Shipper		768.83	

A. J. GILBERT, JR.
PRESIDENT

PHONE 432-3946

A. J. Gilbert Construction Co.

GENERAL CONTRACTING

Excavation -:- Paving -:- Concrete Work

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	Interest		470.42	
	Credit on overpayment (Commission)	33.00		
	Due A.J. Gilbert from Shipper		768.83	

n DRW 2070

ORE SETTLEMENT

PHELPS DODGE CORPORATION

DATE: June 13, 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

IGHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
DRESS PO Box 5288 - Bisbee, Arizona 85603
TERIAL Siliceous Ore

SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H_2O	Dry Lbs.
3-10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To Belt Weight		300		
			187,080	5.54	176,716

Smelter Lot No.		251
Shipper's Lot No.	SCL	1
Date Sampled		3-10-80
E & M J Copper Quotation		
Domestic fob Refinery	95.3820	¢ per lb.
Export fob Refinery		¢ per lb.
Deduction	8.0000	¢ per lb.
Silver Price		
Domestic	1534.6000	¢ per oz.
Foreign		¢ per oz.
Deduction	.1250	¢ per oz.
U. S. Gold Price	573.4500	$ per oz.
Deduction	.2500	$ per oz.

PER TON OF 2000 LBS.

	Assay	Deduct	Pay For		AMOUNTS Per Ton	AMOUNTS Total
Gold	.040 oz.	10 % or oz.	.036 oz. @ 573.2000 $ per oz.		20.64	
Silver	8.02 oz.	10 % or oz.	7.218 oz. @ 1534.4750 ¢ per oz.		110.76	
Copper	.73 %	10.00 Lbs.	4.560 Lbs. @ 87.3820 ¢ per Lb.		3.98	135.38
Chlorine	.001 %	.04	Total Payments			135.38
	Analysis	**Deduct**	**Charge For**	**CHARGES**		
		10%	Of $135.38	Treatment Base	13.54	
SiO_2	Penalty 71.6%	80.0%	8.4 % @	60 ¢ per unit	5.04	
Al_2O_3	Penalty 5.3%	4.0%	1.3 % @	20 ¢ per unit	.26	
P	Penalty .35%	.30%	.05 % @	30 ¢ per unit	.02	
As,Sb,Bi			@	300 ¢ per unit	.01	
	Penalty .104%	.100%	.004 %	Total Treatment	18.87	
				LESS CREDITS		
	%		% @	¢ per unit		
	%		% @	¢ per unit		
				Net Treatment		18.87
				Net Price per Ton		
				f.o.b. Douglas		116.51

Gross Proceeds		88.358	Dry Tons	@ $ 116.51 per ton		10,294.59
Less Freight From	Kingman On	93.540	Gross Tons	@ $ None per ton	Note	10,626.00
Less					Interest	470.42
					Loan overpaid	33.00
					Due from Shipper	768.83

FINAL PAYMENT ASSIGNED TO:
Valley National Bank
PO Box 311
Tucson, Arizona 85702

Attn: Jack Croddy

Balance Due Valley National Bank 10,294.59

Correct WJA — Inv. Clerk

Checked JTH

Approved — Chief Accountant

6-2-80 Pinkham Mine

PROVISIONAL SETTLEMENT

(5 copies)

Form DRW 2070

ORE SETTLEMENT

PHELPS DODGE CORPORATION

Date MAR 13 1980

DOUGLAS REDUCTION WORKS
Drawer E, Douglas, Arizona 85607

BOUGHT OF A. J. Gilbert Construction Co. (J. B. Rothermel)
ADDRESS P. O. Box 5238 - Bisbee, Arizona 85603
MATERIAL Silicious Ore SHIPPED FROM Kingman, Arizona

Date Received	CAR Initial	CAR Number	WEIGHT Wet Lbs.	% H2O	Dry Lbs.
3-10-80	Truck JB	265	35,040		
		261	31,200		
		201	25,240		
		203	30,720		
		202	33,180		
		264	31,400		
			186,780		
	Plus Adjustment To				
	Bolt Weight		300		
			187,080	5.54	176,716

Smelter Lot No. 251
Shipper's Lot No. SCL 1
Date Sampled 3-10-80

E & M J Copper Quotation
Domestic fob Refinery 119.4274 ¢ per lb.
Export fob Refinery ¢ per lb.
Deduction 8.0000 ¢ per lb.

Silver Price
Domestic 3471.0000 ¢ per oz.
Foreign ¢ per oz.
Deduction .1250 ¢ per oz.
U. S. Gold Price 628.7000 $ per oz.
Deduction .2500 $ per oz.

	PER TON OF 2000 LBS. Assay	Deduct	PAYMENTS Pay For	AMOUNTS Per Ton	Total
Gold	.040 oz.	10 % or oz.	.036 oz. @ 628.4500 $ per oz.	22.62	
Silver	8.02 oz.	10 % or oz.	7.218 oz. @ 3470.8750 ¢ per oz.	250.53	
Copper	.73 %	14.60 Lbs.	— Lbs. @ 111.4274 ¢ per Lb.	—	273.15
Chlorine	%		Total Payments		273.15

	Analysis	Deduct	Charge For	CHARGES	Per Ton	Total
Treatment Base		10%	Of $ 273.15		27.32	
Treatment increase a/c Conv. & Refg.						
S102 Penalty	71.6 %	80.0 %	8.4 % @	60 ¢ per unit	5.04	
Al203 Penalty	5.3 %	4.0 %	1.3 % @	20 ¢ per unit	.26	
Penalty	%	%	% @	¢ per unit		
Penalty	%	%	% @	¢ per unit		
				Total Treatment	32.62	
				LESS CREDITS		
	%		% @	¢ per unit		
	%		% @	¢ per unit		
				Net Treatment		32.62
				Net Price per Ton		
				f.o.b. Douglas		240.53

Gross Proceeds 88.358 Dry Tons @ $ 240.53 per ton 21,252.75
Less Freight From Kingman On 93.540 Gross Tons @ $ None per ton 10626.32
Less Comm. 1062.0
$ 9564.0

FINAL PAYMENT ASSIGNED TO:-
Valley National Bank
P. O. Box 311
Tucson, Arizona 85702

Attn:- Jack Croddy

	Returnable	Gross	
Gold	3.181	3.534	Oz.
Silver	637.77	708.63	Oz.
Copper		1290	Lb.

Balance Due Valley National Bank 21,252.7

Correct [signature] Inv. Clerk

Checked [signature]

Approved

Total Cost 2125
¢ Elim. <.25

Chief Accountant

new

DEPARTMENT OF MINERAL RESOURCES
State of Arizona
MINE OWNER'S REPORT

DEPT. MINERAL RESOURCES
RECEIVED
NOV 14 1946
ARIZONA
PHOENIX,

Date Nov. 12. 1946

1. Mine: Pinkham
2. Location: Sec. SW, SW 11 Twp. 23 N Range 18 W Nearest Town Chloride
   Distance 2 miles Direction South Road Condition Very good
3. Mining District & County: Wallapai Mining District, Mohave Co.
4. Former Name of Mine:
5. Owner: W. S. Babcock
   Address Box 644, Kingman, Arizona
6. Operator:
   Address:
7. Principal Minerals: Gold, silver, copper, zinc.
8. Number of Claims: one Lode yes Placer
   Patented yes Unpatented
9. Type of Surrounding Terrain: It is located in the open border of Sacramento Valley, at the foot of the range
10. Geology & Mineralization: The country rock is the pre-Cambrian complex, and it is intruded by microcline granite and diabase dikes near by
11. Dimension & Value of Ore Body: The ore occurs in lenses and elongated kidneys and chimneys.
    The principal source of ore mined was of a width 14' and sampled $24.00 per ton estimated at values of forty years ago. Much of the ore ran $100.00.
    For every per cent of copper the ore carries 10 oz of silver.

12. Ore "Blocked Out" or "In Sight": Mine is full of water

Ore Probable: Don't know

13. Mine Workings—Amount and Condition:

	No.	Feet	Condition
Shafts	2	240 400	probably good.
Raises		None	
Tunnels		No.	
Crosscuts		Very little	
Stopes		Several	

14. Water Supply: Water stands to 35' of surface

15. Brief History: Has been worked years ago for its high grade copper & silver content. Smelter returns are not available just now as I loaned them to a promoter whom I can't locate.

16. Signature: W. L. Babcock

17. If Property for Sale, List Approximate Price and Terms: $10,000.00 and three years to pay.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date November 12, 1946

1. Mine Pinkham
2. Location 2 mi. south of Chloride
   SW 1/4 SW 1/4 Sec 11, T 23N, R18W
3. Mining District & County Wallapai Mining Dist., Mohave Co.
4. Former name
5. Owner W. C. Babcock,
6. Address (Owner) Box 644, Kingman, Ariz.
7. Operator
8. Address (Operator)
9. President, Owning Co.
9A. President, Operating Co.
10. Gen. Mgr.
14. Principal Minerals Gold, silver, copper, zinc.
11. Mine Supt.
15. Production Rate
12. Mill Supt.
16. Mill: Type & Cap.
13. Men Employed
17. Power: Amt. & Type
18. Operations: Present
19. Operations: Planned
20. Number Claims, Title, etc. One patented lode claim.
21. Description: Topography & Geography It is located in the open border of Sacramento Valley, at the foot of the range.
22. Mine Workings: Amt. & Condition 2 shafts 240' & 400' - probably good condition
    Several stopes

(over)

3. Geology & Mineralization — The country rock is the pre-Cambrian complex, and it is intruded by mic line granite and diabase dikes arby.

24. Ore: Positive & Probable, Ore Dumps, Tailings — Mine is full of water.

24A. Dimensions and Value of Ore body — The ore occurs in lenses and elongated kidneys and chimneys. The principal source of ore mined was of a width 14' and sampled $24.00 per ton estimated at values of forty years ago. Much of the ore ran $100.00. For every percent of copper the ore carries 10 ozs. of silver.

25. Mine, Mill Equipment & Flow-Sheet

26. Road Conditions, Route — Very good.

27. Water Supply — Water stands to 35' of surface.

28. Brief History — Has been worked years ago for its high grade copper and silver content. Smelter returns are not available just now as I loaned them to a promoter whom I can't locate.

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate. — $10,000.00 and three years to pay.

32. Signature W. C. Babcock

33. Use additional sheets if necessary.

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
MINE OWNER'S REPORT

Date November 12, 1946

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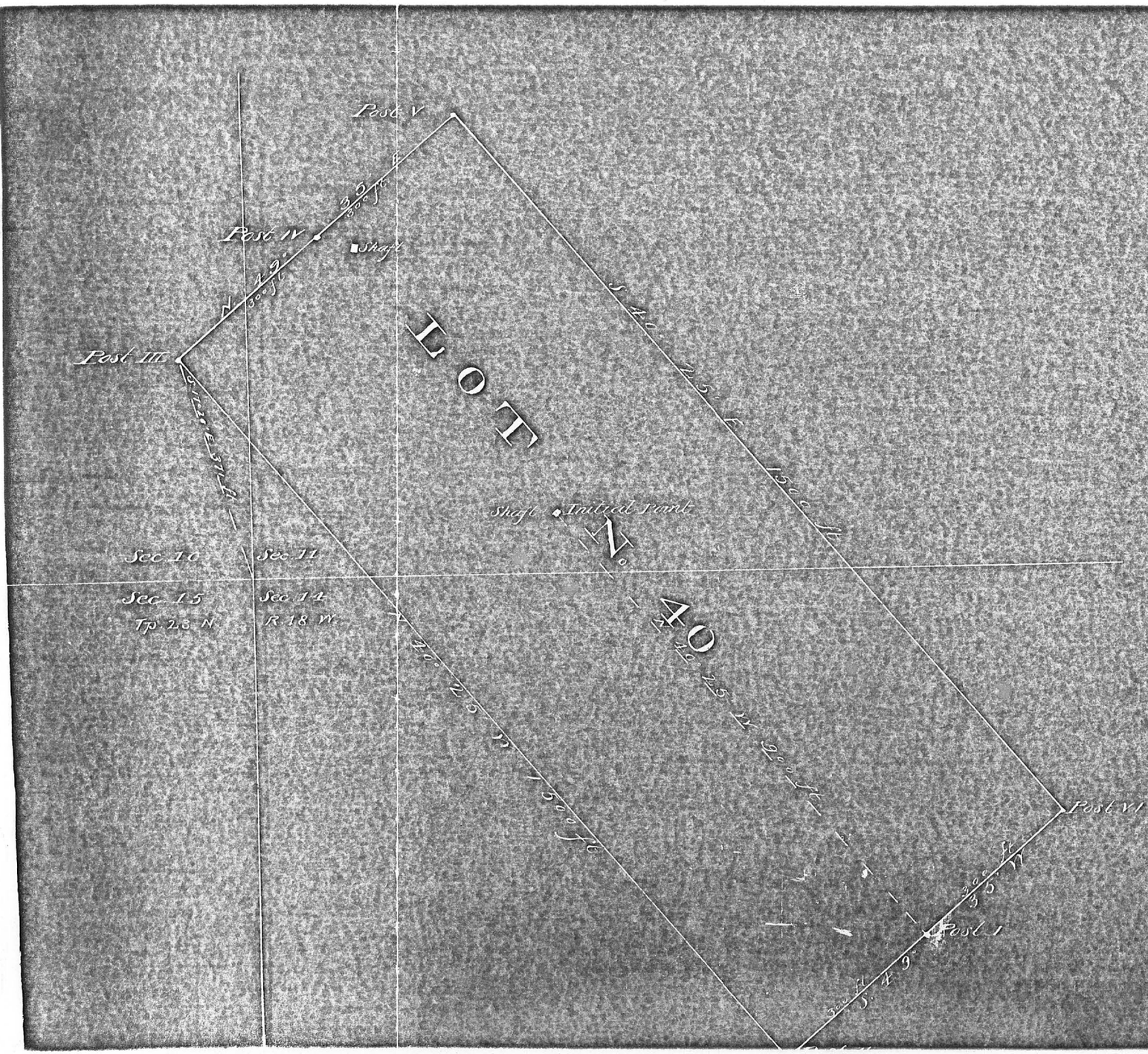


PLAT

OF THE

Pinkham

MINING CLAIM,

Wallapai Mining District,

Mohave County,

ARIZONA.

Claimed by Henry C. Wilson

Surveyed by O. F. Kuencer U. S. D. S.

June 22 1883

Containing an Area of 20.66 Acres.

Scale 200 feet to the inch.

Variation 14° 22' East.

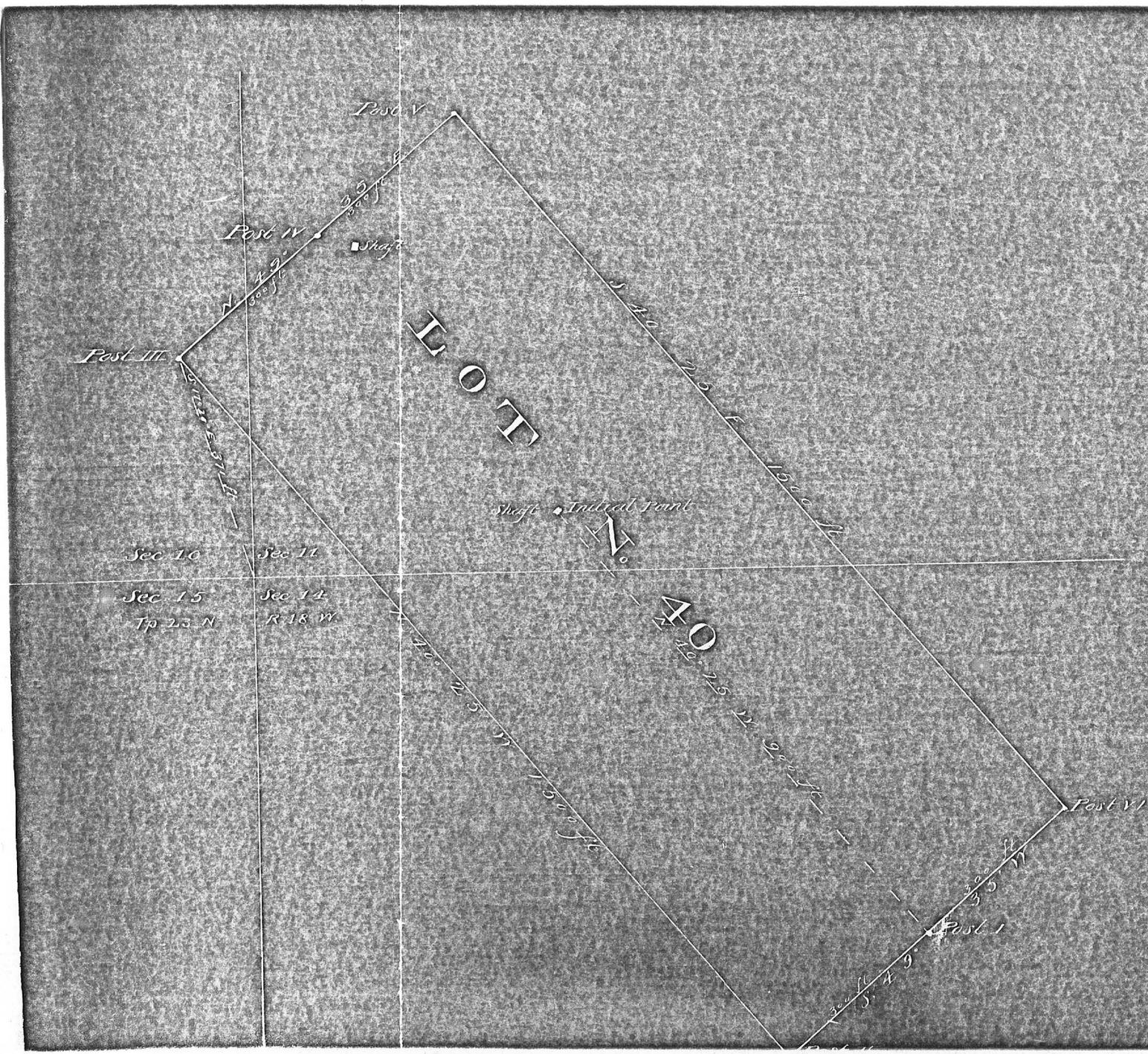
The original Field Notes of the Survey of the Pinkham Mining Claim from which this plat has been made, have been examined and approved and are on file in this office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises; and that such reference is made therein to natural objects and permanent monuments, as will perpetuate and fix the locus thereof.

I further certify that the value of the labor and improvements placed thereon by the applicant or his grantor is not less than Five Hundred Dollars, and that said improvements consist of

A Shaft 14 ft deep

" 10 "

" Cross Cut 7 long



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OF THE

Pinkham

MINING CLAIM,

Wallapai Mining District,

Mohave County,

ARIZONA.

Claimed by Henry C. Wilson

Surveyed by O. F. Kuenzer U. S. D. S.

June 22 1883

Containing an Area of 20.66 Acres.

Scale 200 feet to the inch.

Variation 14° 25' East.

The original Field Notes of the Survey of the Pinkham Mining Claim from which this plat has been made, have been examined and approved and are on file in this office; and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises; and that such reference is made therein to natural objects and permanent monuments, as will perpetuate and fix the locus thereof.

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