



CONTACT INFORMATION

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

The following file is part of the

Arizona Department of Mines and Mineral Resources Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.

PRINTED: 11/21/2002

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: ADJUST GROUP

ALTERNATE NAMES:

HOPE METALS
BLUE BIRD VEIN
SILVER CROSS CLAIMS
GOLD GULCH
LAURENCE
PAT. CLMS. 2179, 2180, 2182
BIG TREASURE
ODELL

PINAL COUNTY MILS NUMBER: 369

LOCATION: TOWNSHIP 4 S RANGE 16 E SECTION 34 QUARTER S2
LATITUDE: N 33DEG 01MIN 50SEC LONGITUDE: W 110DEG 41MIN 36SEC
TOPO MAP NAME: CHRISTMAS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER OXIDE
GOLD LODE
LEAD
ZINC
COPPER SULFIDE
COPPER OXIDE

BIBLIOGRAPHY:

ADMMR ADJUST GROUP FILE
ROSS, CLYDE P., ORE DEPTS. OF SADDLE MTN. AND
BANNER MINING DISTRICT, USGS BULL 771, P.41
BLM MINING DISTRICT SHEET 701
ADMMR LITTLE TREASURE FILE
ADMMR U FILE PINAL AG4
CLAIMS EXTEND INTO SEC. 35 & 36, & SEC. 1-4,
& 9 T5S-R16E
ADMMR ADJUST MINING CO COLVO FILE

03/20/90

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

PRIMARY NAME: ADJUST GROUP

ALTERNATE NAMES:

HOPE METALS
BLUE BIRD VEIN
SILVER CROSS CLAIMS
GOLD GULCH
LAURENCE
PAT. CLMS. 2179, 2180, 2182
BIG TREASURE
ODELL

PINAL COUNTY MILS NUMBER: 369

LOCATION: TOWNSHIP 4 S RANGE 16 E SECTION 34 QUARTER S2
LATITUDE: N 33DEG 01MIN 50SEC LONGITUDE: W 110DEG 41MIN 36SEC
TOPO MAP NAME: CHRISTMAS - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

SILVER OXIDE
GOLD LODE
LEAD
ZINC
COPPER

BIBLIOGRAPHY:

ADMMR ADJUST GROUP FILE
ROSS, CLYDE P., ORE DEPTS. OF SADDLE MTN. AND
BANNER MINING DISTRICT
AZ BLM MINING DISTRICT SHEET 701
ADMMR LITTLE TREASURE FILE
ADMMR U FILE PINAL AG4
CLAIMS EXTEND INTO SEC. 35 & 36, & SEC. 1-4,
& 9 T5S-R16E
ADMMR ADJUST MINING CO COLVO FILE
FLAGG D-SER. PHOTO

ADJUST GROUP

PINAL COUNTY
SADDLE MOUNTAIN DIST.
T4S R16E Sec. 34

Pinal County MILS index #369

AKA: Hope Metals, Blue Bird Vein, Silver Cross Claims, Gold Gulch, Laurence,
Big Treasure, Odell, Patented Claims M S 2179, 2180, 2182

BLM Mining Dist Sheet 701

See: Little Treasure File

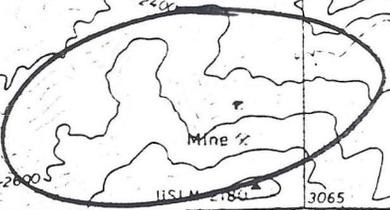
ADMR "U" File

Christmas 7.5' Quad (included in file)



Adjust Group
THIS RIDE SEC 34

Christmas 7.5'



Lee Mountain

RIVER

Deer Creek

Creek

Less Mine

Pooles Mine

Two Queens Mine

Old Mill (Ruins)

Creek

Spring

Spring

Corral

3786

2196

34

35

2790

2804

2384

2238

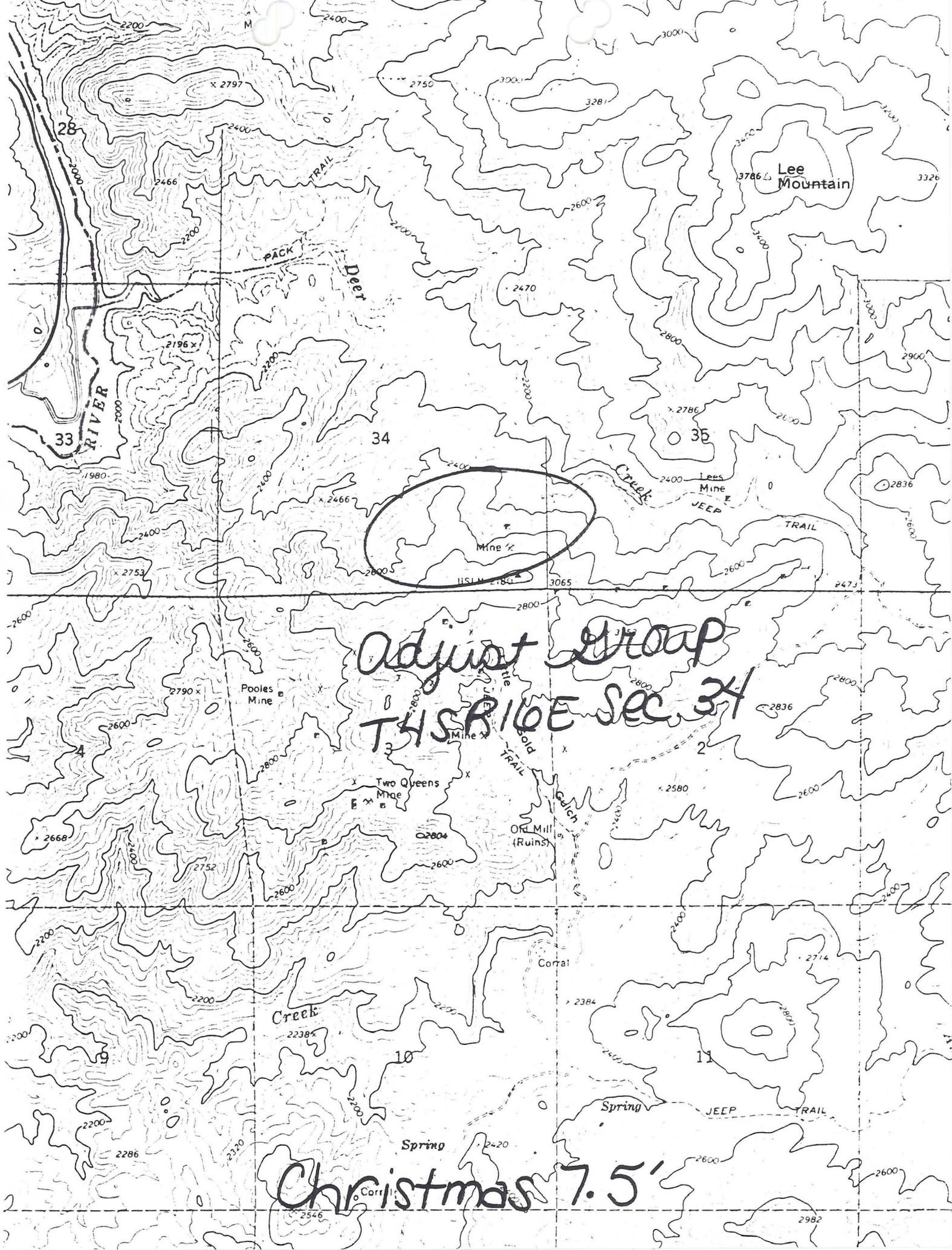
2774

2286

2420

2546

2982



Pay Dirt March 24, 1967

GROUP OF MAPS - Sec. 6 - Brown Map Cabinet

Little Treasure (file)

USGS Bull. 771 p. 41

USGS - 771 - P. 41 -- S34 & 35 T4s R16(ES - 8/1/75)

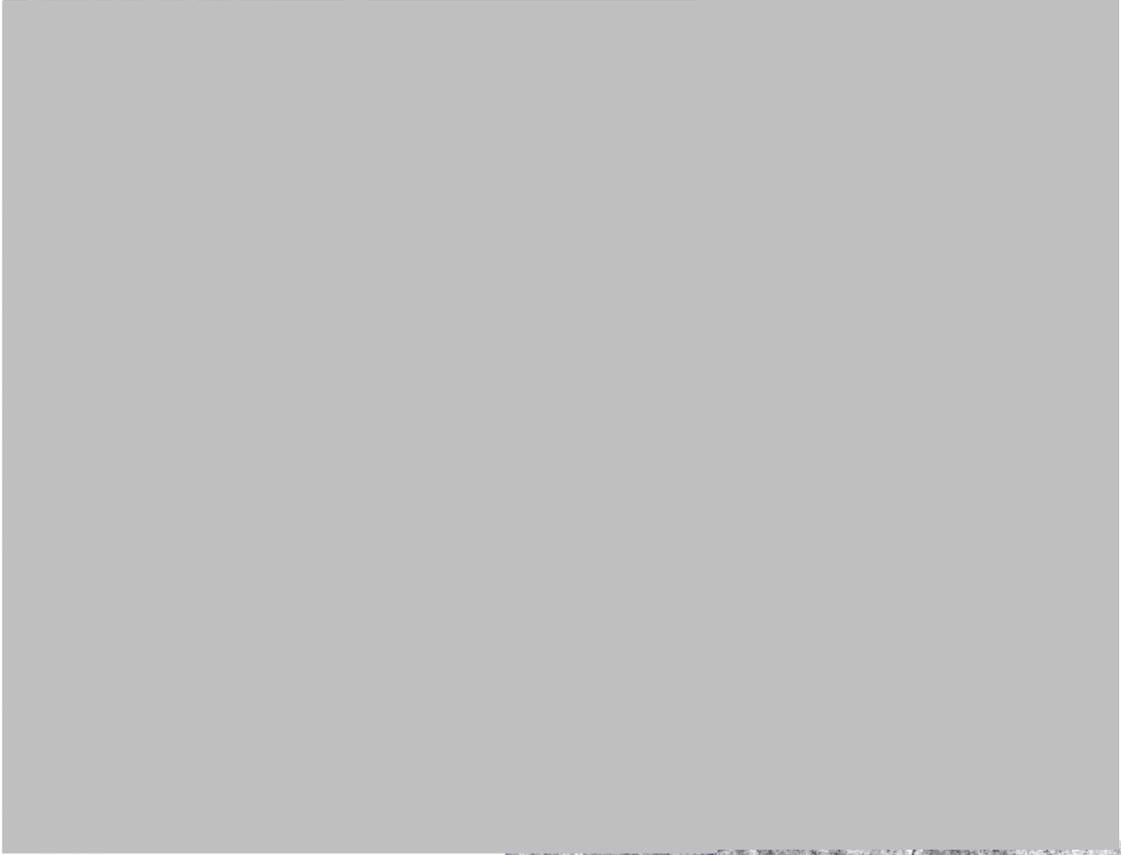


1. Adjust (Hope Metal) Mine
2. Pinal County, Arizona
3. Charles Farra
4. W. R. Jones
5. September 23, 1948
6. Lead-zinc
7. Considered worthless in Mr. Jones' opinion.
8. _____

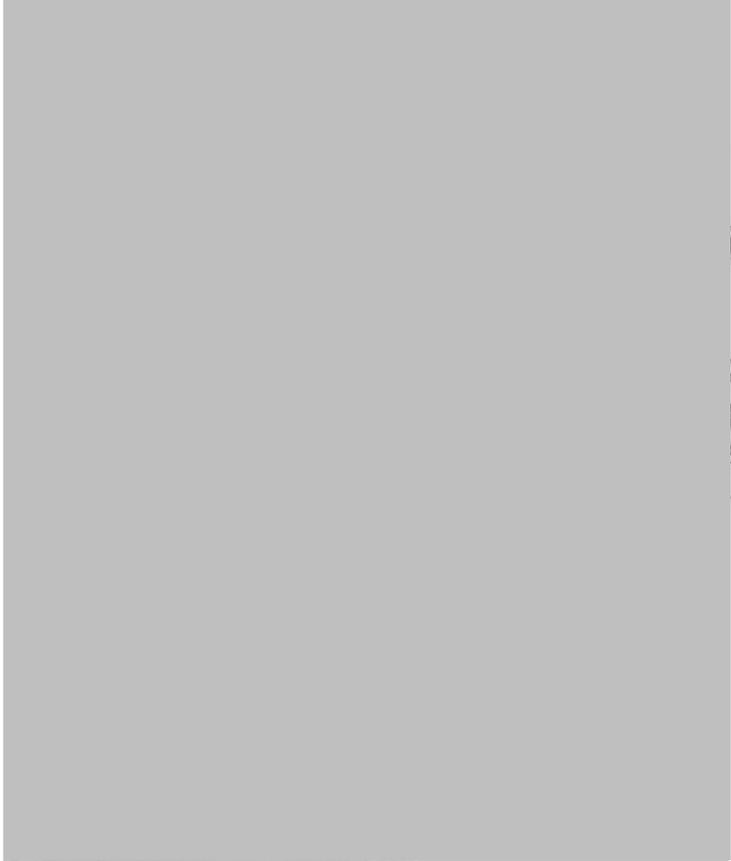
ADJUST GROUP

ARIZONA REPUBLIC
Phoenix

NOV 26 1966



November 26, 1966
Arizona Republic



See: Exam. of Vol. 168 p 136

BIG TREASURE

Mining and Development Company

ARIZONA OFFICE

P. O. Box 663 • Winkelman, Arizona

MAIN OFFICE

125 Sedgefield • San Ramon, California 94583
Phone (415) 828-4126

February 20, 1967

Mr. F. P. Johnson
Field Engineer, State of Arizona
Department of Mineral Resources
Mineral Building Fairgrounds
Phoenix, Arizona

Dear Mr. Johnson:

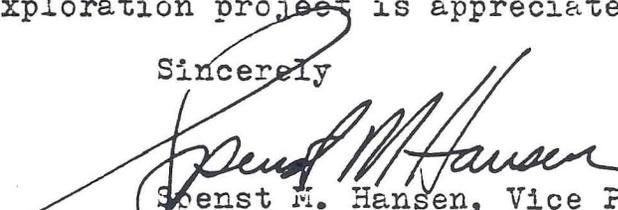
Recently I spoke with Mr. Joe Jameson of Winkelman, Arizona, who indicated that you had visited our property in the Saddle Mountain Mining District and had requested that I communicate with you. As you know, Mr. Jameson is the owner of a parcel of mining claims which we have under lease.

We are currently carrying out an exploration contract with financial assistance from the U.S. Office of Mineral Exploration. The total amount of this contract is \$112,000.00. This sum will be spent within the next five to seven months on our properties within the Saddle Mountain Mining District with the purpose in mind of developing reserves of silver ore sufficient to justify the opening of an underground mine. At the present time we have completed about 3,500 feet of diamond drilling with some moderate success. We anticipate about 7,500 feet of additional drilling. We hold properties which have formerly been known as the Adjust Mining Company, Lee's Mine, Little Treasure, and have some state lands under lease also.

We will be happy to cooperate with you in any way we can and will be happy to have you visit our property at any time. Our resident geologist, Mr. Ronald A. Janc is presently residing on the property in a trailer house. You can expect every cooperation from Mr. Janc in showing you about the premises.

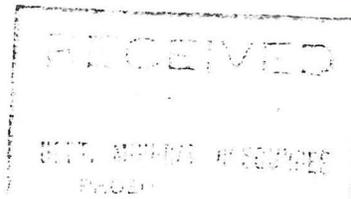
Your interest in our exploration project is appreciated.

Sincerely


Spenst M. Hansen, Vice President

SMH:s

cc: Mr. Ronald A. Janc
Mr. Joseph Jameson



ADJUST GROUP

PINAL COUNTY

Mr. C. L. Whitelock, 494 S. Main, Payson, Utah. Visited the office to check these files, Adjust Group, Standard Group, and Saddle Mountain Mine, all in Pinal County - says he has optioned them. 7-15-65 MS

The Geological Survey's office of Minerals Exploration has contracted to assist Big Treasure Mining and Development Co., a California corporation, to explore for silver at its Little Treasure-Adjust Group of claims in Pinal County, Arizona. The property is to be explored by surface drilling for silver-bearing ore deposits occurring along veins in volcanic and sedimentary rocks. The total cost of the work is estimated at 112,000 of which the government participation is 75% or \$84,000. Skillings Mining Review 12-3-66 p. 30

Big Treasure Mining & Development Co., Spent M. Hansen, V.P., 125 Sedgefield Court, Dublin, California. (Little Treasure) Taken from Department of Interior List 1966

Talked with James Jameson, Box 26, Winkelman. He is AS&R Timekeeper and with his father-in-law, Manuel Sosa, own the Adjust group of claims that are being drilled by Big Treasure Mining and Development Co., Boyles Bros. have contracted the drilling. Ron Janc(?) is geologist for Big Treasure. FTJ WR 1-27-67

Active Mine List April 1967 - Exploration

Visited Asarco office, also Joe Jameson who with his father-in-law own the Adjust claims. Under OME ten holes have been drilled - deepest 1850' and this hole may be deepened. Results of underground sampling and drilling reported satisfactory. Spent Hansen, President, in charge of the work for the company. FTJ WR 9-29-67

Active Mine List Oct. 1967 - Expl.

To Hayden; ASARCO time office visit with Jameson. He did not know the status of the Adjust claims. FTJ WR 3-31-71

ORE SETTLEMENT PHELPS DODGE CORPORATION

June 29, 1929.

COPPER QUEEN BRANCH
REDUCTION WORKS, DOUGLAS, ARIZONA

BOUGHT OF Hope Metals Company,
ADDRESS Winkelman, Arizona.

MATERIAL Lead Concentrates

SHIPPED FROM

Winkelman, Arizona.

Date Received	Initial	CAR Number	WEIGHT			Smelter Lot No.	Shipper's Lot No.	Date Sampled	E. & M. Journal Quotations
			Wet	Moisture	Dry				
June 21	SP	31508 Less 3 Boards	67760 <u>156</u> 67604	1.0	66928	567	1 (Lead)	6/25/29	Average for week ending 6/19/29
								N. Y. Silver 52.77	c per
								N. Y. Copper	c per
								Deduction	c per
								London Lead £	per L.
								London Lead	c per
								N. Y. Lead 7.00	c per
								Deduction 1.40	c per

PER TON OF 2000 LBS.

PAYMENTS

AMOUNTS

	Assay	Deduct	Pay For		Per Ton	Total
Gold	.54 oz.	% &	% =	oz. @ \$ 20.00 per oz.	10.80	
Silver	84.01 oz.	5 % &	% = 79.8095	oz. @ 52.77 c per oz.	42.12	
Copper	%	lbs. & % of balance	% =	lbs. @ c per lb.		
Lead	9.8 %	1.5 units & 10 % of balance	7.47 % =	lbs. }		
Deduct	lb. lead for each lb. of copper paid for =		lbs. = 149.4	lbs. @ 5.60 c per lb.	6.37	
				Total Payments		

	Analysis	Deduct	Charge For		Per Ton	Total
Insol	9.4 %			Treatment Base	4.50	
S	36.3 %	1.0	35.3 % @	Treatment increase tax.	1.50	
Zn	11.0 %			10 c per unit	.94	
Sb	0.5 %	.25	.25 % @	20 c per unit	1.50	
				c per unit		
				1.50 c per unit	.37	
				Total Treatment	8.81	
Fe.	26.6 %	16.5	10.1 % @	LESS CREDITS		
				6 c per unit	.61	
				c per unit		
				c per unit		
				Net Treatment		8.20
				Net Price per ton		
				f. o. b. Douglas		53.09

Gross Proceeds on	33.464	Dry Tons	@ \$ 53.09 per ton	1776.60
Less Freight From Winkelman	On 33.88	Gross Tons	@ \$ 4.00 per ton	135.52
Less				

Balance Due Hope Metals Company 1641.08

Correct Checked Approved

JTS:BP Inv. Clerk Manager

AMERICAN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Collins Pacific Company EL PASO, TEXAS, Aug. 7, 1934
 ADDRESS San Francisco, Calif. SHIPPING POINT Minneapolis, Minn. SMELTER LOT 1403
 CLASSIFICATION Concentrates SHIPPER'S LOT

CAR		WEIGHT IN AVOIRDUPOIS POUNDS					N. Y. METAL QUOTATIONS			
NO.	INITIAL	GROSS	SACKS		NET WEIGHT	Moisture %	DRY WEIGHT	Settlement Date	3-3-34	
			No.	Weight					Silver	Cts. per Oz
3912	SP				62040	6.7	57363			
		Gold Realized Price	34.9125						64125	Per 100 Lbs
		Mint	20.67							
		Excess	14.2425							
		90% "	18.81825							
		Schedule	19.50						8550	Cts. per Lb
		Net	32.51825							
		Settlement	- 8/ L		7-30-34					

PAYMENTS FOR METALS								VALUE	
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	NET PAID FOR	RATE	AMOUNT PER TON	AMOUNT TOTAL
GOLD	.31	oz.					32.31825	6.79	
SILVER	71.0	oz.			95	67.15	.62625	42.24	
LEAD		%							
COPPER	.23	%		4.6					

TOTAL PAYMENTS FOR METALS

49.03

DEDUCTIONS						DEBITS	CREDITS
Regular Lead Deduction	%		Basing Charge FOB El Paso			3.20	
% Copper Paid For			Handling Sacks				
Total Lead Deduction							
Copper Deficiency		8# - 4.6# = 3.4# = .0615				.21	

ANALYSIS	Deduction	NET	RATE
Insoluble	%		@ Cts.
Silica	%		@ Cts.
Alumina	%		@ Cts.
Zinc	%		@ Cts.
Sulphur	%		@ Cts.
As Sb	%		@ Cts.
Bi	%		@ Cts.
Iron	%		@ Cts.
Lime	%		@ Cts.

TOTAL DEDUCTIONS

3.41

3.4

NET VALUE PER TON

45.6

				DEBITS	CREDITS
Total Value on	29.9415	Dry Tons @	45.62		1360.3
Less Freight on	31.020	Wet Tons @	4.60	142.69	
Less Freight on Sacks Returned				2.25	
Less Demurrage		Switching		3.12	
Less Umplies				1100.00	
Less Duties and Brokage					
		Advance			
		BALANCE DUE SHIPPER		72.25	
				1320.31	1320.3

MADE BY _____ CHECKED _____ CORRECT _____ APPROVED _____

AMERICAN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

(COPY)

BOUGHT OF Collins Pacific Co. EL PASO, TEXAS, 9/13/34
 ADDRESS Winkelman, Ariz. SHIPPING POINT Hayden, Ariz SMELTER LOT 1627
 CLASSIFICATION Cts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS					N. Y. METAL QUOTATIONS			
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date <u>9/3/34</u>		
			No	Weight				B/L Date		
15449	SP				31480	4.5	30063	Silver	64125	Cts. per Oz.
	Gold realized price		34.9125					Foreign Silver	49525	
	Mint	11	20.67					Lead	\$	Per 100 Lbs.
	Excess	11	14.2425					E. & M. J.	8650	Cts. per Lb.
	90% "	11	12.81325					LONDON LEAD PER 2240 LBS.		
	Schedule	11	19.50					£ s d		
	Net	11	32.31325					Exchange N. Y.		
	B/L <u>8/27/34</u>									

PAYMENTS FOR METALS								VALUE		
ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For	Rate	Amount Per Ton	Amount Total
GOLD	.20	oz.						32.31325	6.46	
SILVER	74.7	oz.				95	70.965	.62625	44.44	
LEAD		%								
COPPER	.24	%			4.8					

TOTAL PAYMENTS FOR METALS

50.90

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$..... per ton						3.20	
.....% of \$..... excess over \$..... per ton							
Handling Sacks							
Copper Deficiency <u>8# - 4.8# = 3.2# @ .0615</u>						.20	
ANALYSIS			Deduction	Net	Rate		
Insoluble		%			@	Cts.	
Silica		%			@	Cts.	
Iron		%			@	Cts.	
Lime		%			@	Cts.	
Zinc		%			@	Cts.	
Sulphur		%			@	Cts.	
Alumina		%			@	Cts.	
As		%			@	Cts.	
Sb		%			@	Cts.	
Bi		%			@	Cts.	
TOTAL DEDUCTIONS						3.40	3.40
NET VALUE PER TON							47.50

				DEBITS	CREDITS
Total Value on	15.0315	Dry Tons @	47.50		714.00
Less Freight on	15.740	Min 30 Wet Tons @	4.60	138.00	
Less Freight on Sacks Returned		Hauling Charge			
Less Demurrage		Switching		2.25	
Less Umpires					
Less Duty and Brokerage					
Amount withheld pending receipt of Silver Affidavit				155.75	
Royalty					
BALANCE DUE SHIPPER				418.02	
				714.00	714.00

COMMODITY INFORMATION

COMMODITIES PRESENT C10 <C.H. MAG. H.P.R. / ORE MINERALS C30 <GALENA, SPH RITE, PYRITE, BORNITE, CH. OPYRITE / COMMODITY SUBTYPES C41 / GEN. ANALYTICAL DATA C43 / COM. INFO. COMMENTS C60

* SIGNIFICANCE

MAJOR PRODUCTS MAJOR <P.S. / MINOR PRODUCTS MINOR <C.H. / POTENTIAL PRODUCTS POTEN < / OCCURRENCES OCCUR < / NON-PRODUCER MAIN COMMODITIES PRESENT C11 / MINOR COMMODITIES PRESENT C12

* PRODUCTION

PRODUCTION YES (circle) / PRODUCTION SIZE SMALL MED LGE (circle one) / NON-PRODUCER PRODUCTION UND 900 (circle one)

* STATUS

EXPLORATION OR DEVELOPMENT

PRODUCER STATUS AND ACTIVITY A30 <4 / NON-PRODUCER STATUS AND ACTIVITY A30 <

DISCOVERER L20 <ADJUST MINING CO. / YEAR OF DISCOVERY L10 / NATURE OF DISCOVERY L30 <B / YEAR OF FIRST PRODUCTION L40 <1920 / YEAR OF LAST PRODUCTION L45 <1934 / PRESENT/LAST OWNER A12 <ADJUST MINING CO. (1920), HOPE METALS CO. (1935), RALPH GREENLAW (1946) / PRESENT/LAST OPERATOR A13 <ADJUST MINING CO. (1920-24), HOPE METALS CO. (1934-36), C. Mc GOWAN R. GREENLAW / EXPL./DEV. COMMENTS L110 <12 UNPATENTED CLAIMS, EXPLORATION BY A SARLO ON PROPERTY IN 1967

DESCRIPTION OF DEPOSIT

DEPOSIT TYPE(S) C40 <VEIN / DEPOSIT FORM/SHAPE M10 <TABULAR / DEPTH TO TOP M20 / UNITS M21 / MAXIMUM LENGTH M40 <500 / UNITS M41 / DEPTH TO BOTTOM M30 / UNITS M31 / MAXIMUM WIDTH M50 <12 / UNITS M51 <FT / DEPOSIT SIZE M15 <SMALL / M15 <MEDIUM / M15 <LARGE (circle one) / MAXIMUM THICKNESS M60 / UNITS M61 / STRIKE M70 <N 76 E / DIP M80 <VERTICAL / DIRECTION OF PLUNGE M100 / PLUNGE M90 / DEP. DESC. COMMENTS M110 <BLUE BIRD VEIN COMPLETELY OXIDIZED FROM THE SURFACE TO ABOUT 50 FT. IN DEPTH. AVERAGE WIDTH 4 FT.

DESCRIPTION OF WORKINGS

Workings are: SURFACE M120 UNDERGROUND M130 BOTH M140 (circle one) / OVERALL LENGTH M190 <1500 / UNITS M191 / DEPTH BELOW SURFACE M160 / UNITS M161 / OVERALL WIDTH M200 / UNITS M201 / LENGTH OF WORKINGS M170 <1500 / UNITS M171 <FT / OVERALL AREA M210 / UNITS M211 / DESC. OF WORK. COM. M220 <PRINCIPAL DEVELOPMENTS ON THE BLUE BIRD VEINS.

GEOLOGY

* AGE OF HOST ROCK(S) K1 <CRET.-PALEO. / * HOST ROCK TYPE(S) K1A <ANDESITE / * AGE OF IGNEOUS ROCK(S) K2 <CRET.-PALEO. 63 MY ON QUARTZ DIORITE CREASEY AND KUTLER, 1962 / * IGNEOUS ROCK TYPE(S) K2A <ANDESITE, QUARTZ MICA DIORITE / * AGE OF MINERALIZATION K3 <PALEO. / * PERT. MINERALS (NOT ORE) K4 <QUARTZ, BARITE, CALCITE / * ORE CONTROL/LOCUS K5 <NE TRENDING VEINS / * MAJ. REG. TRENDS/STRUCT. N5 <NE TRENDING QUARTZ-MICA DIORITE DIKES (ROSS, 1925) / * TECTONIC SETTING N15 / * SIGNIFICANT LOCAL STRUCT. N70 / * SIGNIFICANT ALTERATION N75 <ANDESITE IN VEINS LARGELY REPLACED BY VEIN MINERALS / * PROCESS OF CONC./ENRICH. N80 / * FORMATION AGE N90 / * FORMATION NAME N90A / SECOND FM AGE N95 / * SECOND FM NAME N95A / * IGNEOUS UNIT AGE N50 / * IGNEOUS UNIT NAME N50A / SECOND IG. UNIT AGE N55 / * SECOND IG. UNIT NAME N55A <AND AGE / GEOLOGY COMMENTS N85 <RELATED IN STYLE OF MINERALIZATION TO CHRISTMAS MINE, 3 MILES NW IN GILA COUNTY

GENERAL COMMENTS

GENERAL COMMENTS GEN <

**AMEF AN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT**

BOUGHT OF Hope Metals Mines EL PASO, TEXAS, 11/26/35
 ADDRESS Winkelman, Arizona A.C.W. Bowen SHIPPING POINT Winkelman, Arizona SMELTER LOT 2342
 CLASSIFICATION Concets SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	
			No.	Weight						
Truck		5627	67	48	5579	3.1	5406	11/22/35		
								Silver	77	Cts. per Oz.
								Foreign Silver	65375	Per 100 Lbs.
								Lead	\$ 4.50	
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
								£	s	d
Exchange N. Y.										

PAYMENTS FOR METALS								VALUE		
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	Amount Per Ton	Amount Total
GOLD	0.38 oz.					0.38 oz.		32.81825	12.47	
SILVER	102.6 oz.				95	97.47 oz.		.755	73.59	
LEAD	12.1 %	1.5	10.6	212	90	190.8 Lbs.		.03075	5.87	
COPPER	.27 %	no pay								
TOTAL PAYMENTS FOR METALS										91.93

DEDUCTIONS							DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$... 25.00 per ton							3.70	
... 10 % of \$... 66.93 excess over \$... 25.00 per ton - max							1.30	
Handling Sacks							.50	
Copper Deficiency								
ANALYSIS			Deduction	Net	Rate			
Insoluble	15.5 %				%	@ Cts.		
Silica	11.6 %				%	@ Cts.		
Iron	18.5 %				%	@ Cts.		
Lime	1.9 %				%	@ Cts.		
Zinc	15.6 %	10.	5.6		%	@ 30 Cts.	1.68	
Sulphur	29.0 %				%	@ Cts.		
Alumina	3.2 %				%	@ Cts.		
As ₂ Sb	.4 %				%	@ Cts.		
Bi					%	@ Cts.		
TOTAL DEDUCTIONS							7.18	7.18
NET VALUE PER TON								84.75

			DEBITS	CREDITS
Total Value on	2.7030	Dry Tons @ 84.75	Per Ton	
Less Freight on	2.8135	Wet Tons @	Per Ton	229.08
Less Freight on Sacks Returned		Freight Emergency Charge		
Less Demurrage		Switching		
Less Umpires				
Less Duty and Brokerage				
Amount withheld pending receipt of Silver Affidavit		Sampling	8.00	
BALANCE DUE SHIPPER			221.08	
			229.08	229.08

(COPY)

AMEL AN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 1/11/36
ADDRESS Winkelman, Ariz. SHIPPING POINT Hayden, Ariz. SMELTER LOT 28
CLASSIFICATION Concts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS	
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date
			No.	Weight					
15948	SP	6162	84	70	6092	3.9	5854	1/4/36	12/30/35
								Silver	77 Cts. per Oz.
								Foreign Silver	4975
								Lead	\$ 4.50 Per 100 Lbs.
								E. & M. J. Copper	Cts. per Lb.
								LONDON LEAD PER 2240 LBS.	
								£	s d
Exchange N. Y.									

PAYMENTS FOR METALS								VALUE			
ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	Amount Per Ton	Amount Total
GOLD	0.33	oz.					0.33	oz.	32.81825	10.83	
SILVER	86.0	oz.				95	81.7	oz.	.755	61.68	
LEAD	8.8	%	1.5	7.3	146	95	138.7	Lbs.	.03075	4.27	
COPPER	.47	%	No	Pay				Lbs.			
TOTAL PAYMENTS FOR METALS											76.78

DEDUCTIONS		DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton		3.70	
10% of \$ 51.78 excess over \$ 25.00 per ton Max.		1.30	
Handling Sacks		.50	

ANALYSIS			Deduction	Net	Rate			
Insoluble Silica	16.4	%			%	@	Cts.	
Iron	22.8	%			%	@	Cts.	
Lime		%			%	@	Cts.	
Zinc	11.6	%	10.0	1.6	%	@ 30	Cts. .48	
Sulphur	30.7	%			%	@	Cts.	
Alumina	2.8	%			%	@	Cts.	
As		%			%	@	Cts.	
Sb		%			%	@	Cts.	
Bi		%			%	@	Cts.	
TOTAL DEDUCTIONS							5.98	5.98
NET VALUE PER TON								70.80

		DEBITS	CREDITS
Total Value on	2.9270		207.23
Less Freight on	3.0810	20.82	
Less Freight on Sacks Returned		2.08	
Less Demurrage		2.25	
Less Umpires		7.00	
Less Duty and Brokerage		65.16	
Amount withheld pending receipt of Silver Affidavit			
Royalty			
BALANCE DUE SHIPPER		109.92	
		207.23	207.23

AME. AN SMELTING & REFINING COMPANY
 EL PASO SMELTING WORKS
 ORE SETTLEMENT

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 12/19/35
 ADDRESS Winkleman, Ariz. SHIPPING POINT Hayden, Ariz. SMELTER LOT 2503
 CLASSIFICATION Concts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	12/13/35	B/L Date 12/10/35
			No.	Weight						
123401	PA	9294	153	106	9188	4.8	8747	Silver	77	Cts. per Oz.
								Foreign Silver	6275	Per 100 Lbs.
								Lead	4.50	
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
£ s d										
Exchange N. Y.										

PAYMENTS FOR METALS								VALUE		
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	Amount Per Ton	Amount Total
GOLD	0.30 oz.					0.3 oz.		3281825	9.85	
SILVER	102.7 oz.				95	97.565 oz.		.755	73.66	
LEAD	10.3 %	1.5	8.8	17.6	90	158.4 Lbs.		.03075	4.87	
COPPER	.26 %	No	pay							
TOTAL PAYMENTS FOR METALS										88.38

DEDUCTIONS		DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$.25.00 per ton		3.70	
... 10 % of \$.63.38 excess over \$.25.00 per ton		1.30	
Handling Sacks		.50	
Copper Deficiency			
TOTAL DEDUCTIONS		6.46	6.46

ANALYSIS		Deduction	Net	Rate			
Insoluble	18.4 %			@	Cts.		
Silica	%			@	Cts.		
Iron	19.5 %			@	Cts.		
Lime	%			@	Cts.		
Zinc	13.2 %	10.0	3.2	@ 30	Cts. .96		
Sulphur	28.2 %			@	Cts.		
Alumina	3.9 %			@	Cts.		
As Sb	%			@	Cts.		
Bi	%			@	Cts.		
TOTAL DEDUCTIONS						6.46	6.46
NET VALUE PER TON							81.92

		DEBITS	CREDITS
Total Value on	4,3735		358.28
Less Freight on	4,6470		
Less Freight on (Sacks Returned)		35.04	
Less Demurrage		4.20	
Less Umpires		1.13	
Less Duty and Brokerage		6.00	
Amount withheld pending receipt of Silver Affidavit			60.79
BALANCE DUE SHIPPER		251.12	
		358.28	358.28

Dry Tons @ 81.92 Per Ton
 Wet Tons @ 7.54 Per Ton
 Freight - Emergency Charge 10% 3.50
 Switching
 Sampling
 PART RETURNED FROM GOVERNMENT

AMEX AN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Hope Metals Company EL PASO, TEXAS, 1/30/36
 ADDRESS Winkelman, Ariz. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 153
 CLASSIFICATION Concts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	
			No.	Weight						
229443	AT	9640	123	95	9545	5.0	9068	1/24/36	1/21/36	
								Silver		Cts. per Oz.
								Foreign Silver	.77	
								Lead	.4475	Per 100 Lbs.
									\$ 4.50	
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
								£	s	d
Exchange N. Y.										

PAYMENTS FOR METALS								VALUE	
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For	Rate	Amount Per Ton	Amount Total
GOLD	0.5 oz.					0.5 oz.	32.81825	16.41	
SILVER	80.1 oz.				95	76.095 oz.	.755	57.45	
LEAD	7.8 %	1.5	6.3	126	90	113.4 Lbs.	.03075	3.49	
COPPER	.32 %	No pay							
TOTAL PAYMENTS FOR METALS									77.35

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton						3.70	
... 10 % of \$ 52.35 excess over \$ 25.00 per ton Max						1.30	
Handling Sacks						.50	
Copper Deficiency							
ANALYSIS		Deduction	Net	Rate			
Insoluble	13.2 %			%	@	Cts.	
Silica				%	@	Cts.	
Iron	30.3 %			%	@	Cts.	
Lime				%	@	Cts.	
Zinc	5.1 %			%	@	Cts.	
Sulphur	36.1 %			%	@	Cts.	
Alumina	2.2 %			%	@	Cts.	
As Sb				%	@	Cts.	
Bi				%	@	Cts.	
TOTAL DEDUCTIONS						5.50	5.50
NET VALUE PER TON							71.85

				DEBITS	CREDITS
Total Value on	4,5340	Dry Tons @	71.85 Per Ton		325.77
Less Freight on	4,8200	Wet Tons @	6.76 Per Ton	32.58	
Less Freight on Sacks Returned		Freight Emergency Charge	10%	3.26	
Less Demurrage		Switching		2.25	
Less Umpires		Sampling		6.00	
Less Duty and Brokerage				111.26	
Amount withheld pending receipt of Silver Affidavit				170.42	
BALANCE DUE SHIPPER				325.77	325.77

AMEL AN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 2/13/36
 ADDRESS Winkelman, Ariz. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 257
 CLASSIFICATION Consts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS					N. Y. METAL QUOTATIONS			
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	
			No.	Weight						
35837	S.P.	11780	171	130	11650	3.7	11219	2/7/36	2/4/36	
								Silver	0.77	Cts. per Oz.
								Foreign Silver	0.4475	
								Lead	\$ 4.50	Per 100 Lbs.
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
£ s d										
Exchange N. Y.										

PAYMENTS FOR METALS								VALUE	
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For	Rate	Amount Per Ton	Amount Total
GOLD	0.46 oz.					0.46 oz.	32,81825	15.10	
SILVER	86.6 oz.				95	82.27 oz.	.755	62.11	
LEAD	10.8 %	1.5	9.3	186	90	167.40 Lbs.	.03075	5.15	
COPPER	.32 %	No	Pay						
TOTAL PAYMENTS FOR METALS									82.36

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton						3.70	
10 % of \$ 57.36 excess over \$ 25.00 per ton Max.						1.30	
Handling Sacks						.50	
Copper Deficiency							
ANALYSIS			Deduction	Net	Rate		
Insoluble	15.4 %				@ Cts.		
Silica	%				@ Cts.		
Iron	26.3 %				@ Cts.		
Lime	%				@ Cts.		
Zinc	7.0 %				@ Cts.		
Sulphur	31.9 %				@ Cts.		
Alumina	3.2 %				@ Cts.		
As Sb	%				@ Cts.		
Bi	%				@ Cts.		
TOTAL DEDUCTIONS						5.50	5.50
NET VALUE PER TON							76.86

				DEBITS	CREDITS
Total Value on	5.6095	Dry Tons @	76.86 Per Ton		431.15
Less Freight on	5.9900	Wet Tons @	6.78 Per Ton	39.82	
Less Freight on Sacks Returned		Freight Emergency Charge	10%	3.98	
Less Demurrage		Switching		2.25	
Less Umpires					
Less Duty and Brokerage					
Amount withheld pending receipt of Silver Affidavit		Sampling		5.00	
BALANCE DUE SHIPPER				148.82	
				231.88	
				431.15	431.15

MADE BY _____ CHECKED _____ APPROVED _____

**AMERICAN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT**

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 3/11/36
 ADDRESS Winkelman, Ariz. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 410
 CLASSIFICATION Ore. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	3/2/36	B/L Date
			No.	Weight						
27750	SP	7220	120	75	7145	1.7	7024	Silver	.77	2/25/35
								Foreign Silver	.4475	Cts. per Oz.
								Lead	\$	Per 100 Lbs.
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
								£	s	d
Exchange N. Y.										

PAYMENTS FOR METALS

ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	VALUE	
	oz.						oz.			Amount Per Ton	Amount Total
GOLD	0.15	oz.				95	0.15	oz.	32.81825	4.92	
SILVER	78.4	oz.					74.48	oz.	.755	56.23	
LEAD	1.6	%	No pay					Lbs.			
COPPER	.10	%						Lbs.			

TOTAL PAYMENTS FOR METALS

61.15

DEDUCTIONS

DEDUCTIONS							DEBITS	CREDITS	
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton							3.70		
.10 % of \$ 36.15 excess over \$ 25.00 per ton							1.30		
Handling Sacks							.50		
Copper Deficiency									
ANALYSIS							Deduction	Net	Rate
Insoluble	66.2	%			%	@	Cts.		
Silica		%			%	@	Cts.		
Iron	4.4	%			%	@	Cts.		
Lime		%			%	@	Cts.		
Zinc	2.9	%			%	@	Cts.		
Sulphur	5.8	%			%	@	Cts.		
Alumina	7.6	%			%	@	Cts.		
As Sb		%			%	@	Cts.		
Bi		%			%	@	Cts.		
TOTAL DEDUCTIONS							5.50	5.50	
NET VALUE PER TON								55.65	

				DEBITS	CREDITS
Total Value on	3.5120	Dry Tons @	55.65	Per Ton	
Less Freight on	3.6100	Wet Tons @	6.76	Per Ton	24.40
Less Freight on Sacks Returned		Freight Emergency Charge		10 %	2.44
Less Demurrage		Switching			2.25
Less Umpires		Sampling			7.00
Less Duty and Brokerage					84.36
Amount withheld pending receipt of Silver Affidavit					74.99
BALANCE DUE SHIPPER				195.44	195.44

AME' AN SMELTING & REFINING MPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 3/25 / 36
 ADDRESS Winkelman, Ariz. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 507
 CLASSIFICATION Ora. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	
			No.	Weight						
87258	AP	4880	79	35	4845	2.0	4748	3/14/36	3/10/36	
								Silver	.77	Cts. per Oz.
								Foreign Silver	.4475	
								Lead	\$	Per 100 Lbs.
								E. & M. J. Copper	.089	Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
								£	s	d
Exchange N. Y.										

PAYMENTS FOR METALS								VALUE		
ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For	Rate	Amount Per Ton	Amount Total
GOLD	0.18	oz.					0.18	32.31825	5.82	
SILVER	57.2	oz.				95	54.34	.755	41.03	
LEAD	1.0	%	No pay							
COPPER	0.07	%			1.4					
TOTAL PAYMENTS FOR METALS										46.85

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$.....per ton						4.20	
.....% of \$.....excess over \$.....per ton							
Handling Sacks						.50	
Copper Deficiency 8# - 1.4# = 6.6# @ .06375						.42	
ANALYSIS		Deduction	Net		Rate		
Insoluble	57.8	%			@	Cts.	
Silica		%			@	Cts.	
Iron		%			@	Cts.	
Lime	4.2	%			@	Cts.	
Zinc		%			@	Cts.	
Sulphur	0.7	%			@	Cts.	
Alumina	3.8	%			@	Cts.	
As Sb	8.2	%			@	Cts.	
Bi		%			@	Cts.	
TOTAL DEDUCTIONS						5.12	5.12
NET VALUE PER TON							41.73

				DEBITS	CREDITS
Total Value on	2,3740	Dry Tons @	41.73	Per Ton	
Less Freight on	2,4400	Wet Tons @	7.54	Per Ton	18.40
Less Freight on Sacks Returned		Freight Emergency Charge		10 %	1.84
Less Demurrage		Switching		Reweigh	3.15
Less Umpires				Sampling	8.00
Less Duty and Brokerage					41.62
Amount withheld pending receipt of Silver Affidavit					
BALANCE DUE SHIPPER				26.06	
				99.07	99.07

AME CAN SMELTING & REFINING COMPANY
EL PASO SMELTING WORKS
ORE SETTLEMENT

BOUGHT OF Hope Metals Co. EL PASO, TEXAS, 3/25/36
 ADDRESS Winkelman, Ariz. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 506
 CLASSIFICATION Concts. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	Silver
			No.	Weight						
87258	SP	10140	142	90	10050	2.3	9819	3/14/36	3/10/36	.77 Cts. per Oz.
										Foreign Silver .4475
										Lead \$ 4.60 Per 100 Lbs.
										E. & M. J. Copper Cts. per Lb.
										LONDON LEAD PER 2240 LBS.
										£ \$ d
										Exchange N. Y.

PAYMENTS FOR METALS								VALUE		
ELEMENTS	Assay per Ton 2000 Lbs.		Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For	Rate	Amount Per Ton	Amount Total
GOLD	0.51	oz.					0.51	oz. 32.81825	16.74	
SILVER	128.6	oz.				95	122.17	oz. .755	92.24	
LEAD	8.1	%	1.5	6.6	132	95	125.4	Lbs. .03175	3.98	
COPPER	.3	%	No	Pay				Lbs.		
TOTAL PAYMENTS FOR METALS										112.96

DEDUCTIONS		DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$... 25.00 per ton	25.00	3.70	
.10 % of \$ 87.96 excess over \$ 25.00 per ton	Max.	1.30	
Handling Sacks		.50	
Copper Deficiency			
TOTAL DEDUCTIONS		5.50	5.50

ANALYSIS		Deduction	Net	Rate
Insoluble	16.5 %			@ Cts.
Silica	%			@ Cts.
Iron	26.8 %			@ Cts.
Lime	%			@ Cts.
Zinc	6.2 %			@ Cts.
Sulphur	32.0 %			@ Cts.
Alumina	3.2 %			@ Cts.
As	%			@ Cts.
Sb	%			@ Cts.
Bi	%			@ Cts.
TOTAL DEDUCTIONS				5.50
NET VALUE PER TON				107.46

			DEBITS	CREDITS
Total Value on	4.9095	Dry Tons @ 107.46 Per Ton		527.57
Less Freight on	5.0700	Wet Tons @ 7.54 Per Ton	38.23	
Less Freight on Sacks Returned		Handling Sacks Frt. Emerg. Chge. 10%	3.82	
Less Demurrage		Switching	2.25	
Less Umpires		Sampling	5.00	
Less Duty and Brokerage				
Amount withheld pending receipt of Silver Affidavit			193.43	
Royalty				
BALANCE DUE SHIPPER			284.84	
			527.57	527.57

AMELON SMELTING & REFINING COMPANY
 EL PASO SMELTING WORKS
 ORE SETTLEMENT

BOUGHT OF Hope Metals Company EL PASO, TEXAS, 4/21/36
 ADDRESS Providence, R. I. SHIPPING POINT Winkelman, Ariz. SMELTER LOT 747
 CLASSIFICATION Concets. SHIPPER'S LOT _____

CAR		WEIGHT IN AVOIRDUPOIS POUNDS						N. Y. METAL QUOTATIONS		
No.	Initial	Gross	SACKS		Net Weight	Moisture %	Dry Weight	Settlement Date	B/L Date	
			No.	Weight						
Truck & IGL	SP	2591	44	26	2565	1.0	2539	4/13/36	4/7/36	
								Silver		Cts. per Oz.
								Foreign Silver	.77	
								Lead	.4475	Per 100 Lbs.
									\$ 4.60	
								E. & M. J. Copper		Cts. per Lb.
LONDON LEAD PER 2240 LBS.										
								£	s	d
Exchange N. Y.										

PAYMENTS FOR METALS									VALUE	
ELEMENTS	Assay per Ton 2000 Lbs.	Deducted	Net Assay	Equivalent in Lbs.	Per Cent Paid For	Net Paid For		Rate	Amount Per Ton	Amount Total
GOLD	0.42 oz.					0.42 oz.		32.81825	13.78	
SILVER	141.6 oz.				95	134.52 oz.		.755	101.56	
LEAD	7.0 %	1.5	5.5	110	95	104.5 Lbs.		.03175	3.32	
COPPER	.43 %		No pay							
TOTAL PAYMENTS FOR METALS										118.66

DEDUCTIONS						DEBITS	CREDITS
BASE CHARGE: F. O. B. El Paso, for Metal Payments, not exceeding \$ 25.00 per ton						3.70	
... 10% of \$ 93.66 excess over \$ 25.00 per ton						1.30	
Handling Sacks						.50	
Copper Deficiency							
ANALYSIS							
		Deduction	Net		Rate		
Insoluble	27.4 %				@ Cts.		
Silica	%				@ Cts.		
Iron	21.3 %				@ Cts.		
Lime	%				@ Cts.		
Zinc	7.8 %				@ Cts.		
Sulphur	25.1 %				@ Cts.		
Alumina	7.6 %				@ Cts.		
As Sb	%				@ Cts.		
Bi	%				@ Cts.		
TOTAL DEDUCTIONS						5.50	5.50
NET VALUE PER TON							113.16

				DEBITS	CREDITS
Total Value on	1.2695	Dry Tons @	113.16		143.66
Less Freight on	1.2955	Wet Tons @	8.32	10.78	
Less Freight on Sacks Returned		Freight Emergency Charge	10% 1.08	1.60	
Less Demurrage		Switching		2.59	
Less Unples	Hauling (Smelter Sand & Gravel Co.)	Sampling		9.00	
Less Duty and Brokerage				54.98	
Amount withheld pending receipt of Silver Affidavit				64.71	
BALANCE DUE SHIPPER				143.66	143.66

MADE BY _____ CHECKED _____ CORRECT APPROVED _____

August 19, 1940

Mr. Ralph M. Greenlaw,
1417 Turks Head Bldg.,
Providence, R. I.

Dear Mr. Greenlaw:

I thank you for your letter of
July twenty-fourth, enclosing mine owners report on
the Hope Metals Mine, to which was attached the follow-
ing papers:

Reports of C. L. Oram, A. L. Flagg, and supplements;
List of the buildings;
Records of Little Treasure Samples, Adjust Mine
Samples; Shipments of Crude Ore;
Assay Map Legend, Adjust Mine Plan and Elevation and
Ore Settlement - Phelps Dodge Corporation date 6-29-29;
Mining Claims Map and Ore Settlements of American
Smelting & Refining Company dated August 7 and Sept.
13, 1934; November 26 and December 19, 1935; January
11 and 30th, February 13 and March 11, 1936.

I am enclosing herewith a copy of mine
owners report for your records.

With best wishes, I am

Yours very truly,

J. S. Coupal,
Director.

JSC-aam

Enclosures

January 2, 1947

✓ Mr. Ralph M. Greenlaw
1417 Turks Head Building
Providence, Rhode Island

Dear Mr. Greenlaw:

In comparing a report recently received from you on your property located in the Saddle Mountain District, Gila County, we note that you have changed the name from Hope Metals to Adjust, and that you list only 12 claims on the new report as against 58 on the one dated 1940.

We would appreciate hearing from you at your convenience, giving us the names of the claims that you are listing under the name Adjust, and whether or not you are abandoning the other 46 claims, as well as 4 millsites.

Since there is now considerable activity in lead-silver properties and we are receiving quite a few inquiries in regard to them, we would appreciate knowing whether or not this property is still for sale and approximate price and terms.

Yours very truly,

Roger I. C. Manning
Field Engineer

RICH:LP

RALPH M. GREENLAW
COUNSELLOR AT LAW
1417 TURKS HEAD BUILDING
PROVIDENCE, R.I.

July 24, 1940

Mr. J. S. Coupal
Director of Revenue
Department of Mineral Resources
State House
Phoenix, Arizona

Re Hope Metals Mine

Dear Mr. Coupal:

I am sending you under separate cover report to be filed with your department, together with the following documents:

Report of Fred H. Perkins
Report of C. L. Oram, dated August 1, 1921
Report of A. L. Flagg, dated June 28, 1916
Supplemental Report of A. L. Flagg dated July 1, 1925
Summary of Flagg's Report dated March 21, 1927
List of the buildings
Records - Little Treasure Samples; Adjust Mine Samples;
Shipments of Crude Ore
Assay Map Legend
Adjust Mine Plan and Elevation
Ore Settlement-Phelps Dodge Corporation, dated
June 29, 1929
American Smelting & Refining Co.
dated August 7, 1934
" Sept. 13, 1934
" Nov. 26, 1935
" Dec. 19, 1935
" Jan. 11, 1936
" " 30, 1936
" Feb. 13, 1936
" Mar. 11, 1936

Mining Claims Map

I am at the present time having the raise from the fourth to the second level completed. Just how far this work has progressed I do not know at the moment.

I have had a pretty unfortunate experience with this property and have succeeded in getting a large sum of money invested and now my problem is to get the money out, if possible, either through sale, lease, or some other manner. I would appreciate anything that the department can do to assist me in solving the problem.

#2

Mr. J. S. Coupal

July 24, 1940

I had intended to get these papers to you long before this but since my return from Arizona I have been extremely busy and have had negotiations with one or two different parties, but unfortunately was unable to conclude a deal with either, hence I am in a position now of desiring to get some kind of a deal to dispose of the property, if possible.

I enjoyed my brief meeting with you when I was in Arizona and I also fully appreciate the work that your department is doing. You have certainly done a splendid job for the mine owners of Arizona and it is unfortunate that people like myself should get into these enterprises, who have no knowledge of mining, without having some responsible person directing the work and the work being done to the best advantage of the property, but many like myself have experienced just the opposite of what should have been accomplished.

With kind personal regards.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Paul M. Keenan".

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

Date July 24, 1940

1. Mine Hope Metals
2. Location 9 miles southeasterly from Winkelman, Arizona
3. Mining District & County Pinal County, Arizona
Saddle Mountain District
4. Former name Hope Metals Company
5. Owner Ralph M. Greenlaw
6. Address (Owner) 1417 Turks Head Bldg.
Providence, R.I.
7. Operator Same as 5
8. Address (Operator) Same as 6
9. President, Owning Co.
- 9A. President, Operating Co.
10. Gen. Mgr. None
14. Principal Minerals Gold, Silver, Lead, Z
11. Mine Supt. None
15. Production Rate None
12. Mill Supt. None
16. Mill: Type & Cap. Gates #5 primary press
Harding 6' x 22" conical
ball mill, Dorr duplex classifier
belt elevator and a 36' x 8" Dorr
thickener complete;
5 electric motors 50 35 & 5 H.P.
Capacity 100 tons
daily
13. Men Employed Raise being put through
under contract with C. B. Pettengill, Contractor
17. Power: Purchased from the U. S.
through San Carlos Irrigatio
Project, Coolidge Division.
18. Operations: Present
Putting through raise from 4th
to 2nd level.
19. Operations: Planned None
20. Number Claims, Title, etc. See Engineer's Report, Pages 2, 3, 4 and 5.
21. Description: Topography & Geography See Engineer's Report, Pages 1 and 2.
22. Mine Workings: Amt. & Condition See Engineer's Report, Pages 8 and 9

23. Geology & Mineralization See Engineer's Report, pages 1 and 2.

24. Ore: Positive & Probable, Ore Dumps, Tailings See Engineer's Report, pages 8 and 9

24A. Dimensions and Value of Ore body Same as 24

25. Mine, Mill Equipment & Flow-Sheet See Engineer's Report, Pages 7 and 8

26. Road Conditions, Route See Engineer's Report, Page 1

27. Water Supply See Engineer's Report, Pages 5 and 6.

28. Brief History See Engineer's Report

29. Special Problems, Reports Filed

30. Remarks

31. If property for sale: Price, terms and address to negotiate. Property is for sale. Glad to discuss terms. Address Ralph M. Greenlaw, 1417 Turks Head Bldg. Providence, Rhode Island

32. Signature.....

Ralph M. Greenlaw

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date July 24, 1940

1. Mine Hope Metals
2. Mining District & County Saddle Mt Pinal County
3. Former name Hope Metals Company
4. Location 9 miles S.E. of Winkelman;
5. Owner Ralph M. Greenlaw
6. Address (Owner) 1417 Turks Head Bldg Providence, R.I.
7. Operator Ralph M. Greenlaw
8. Address (Operator) Same as above
9. President _____
10. Gen. Mgr. none
11. Mine Supt. _____
12. Mill Supt. none
13. Principal Metals Silver, Gold, Lead
14. Men Employed Contract Raise being driven by C.B. Pottengill
15. Production Rate - Raising
16. Mill: Type & Cap. Flotation - Gates #5 primary pressure Hardinge 6' x 22" conical ball mill, Dorr duplex classifier belt elevator, + 36' x 8" Dorr thickener, electric motors 50, 25, and 5 HP. 100 Tons Daily Capacity
17. Power: Amt. & Type Electric. purchased San Carlos Irrigation District.
18. Operations: Present Raising from the 4th to the second level (contract)
19. Operations Planned None
20. Number Claims, Title, etc. 5 groups - 58 unpatented lode claims and 4 mill sites, all on the Little Treasure Mine claim.
21. Description: Topography & Geography Rough from 2000' to 4500' above sea level, sharp ridges + peaks cut by steep sided canyons, principal drainage Ash & Deer Creek
22. Mine Workings: Amt. & Condition 10,000' of mine workings, upper tunnel 215' with 50' raise to surface, lower tunnel 400' with 3-40' raises + 45' of winzes The above is in the Little Treasure Mine on the adjacent 900' Tunnel and other workings mentioned on the Blue Bird (over) claim.

23. **Geology & Mineralization** It occurs in type fissure veins in andesite series overlying Siphonous limestone - usually paralyzing. Quartz, Magnetite - Gangue Quartz, barite, Calcite -
24. **Ore: Positive & Probable, Ore Dumps, Tailings** 1927 - 1928 Flogg 60,000 tons value at \$1,200,000 blocked out and possible ore supply of 1,000,000 tons value at \$20,000,000
- 24-A **Vein Width, Length, Value, etc.** 1500' Length? Principal vein strikes N70E dips vertical, oxidation shallow 50' - average vein width 2 1/2 feet, vein gangue highly altered breccia
25. **Mine, Mill Equipment & Flow Sheet** Electric wiring thru out, mining equipment 21, misc. buildings, 100 ton flotation mill. Commercial flotation recoveries 98% Gold, 96% Silver 92% Lead, No mine timber needed.
26. **Road Conditions, Route** Fairly good wagon road connects mine with Winkelman.
27. **Water Supply** A 12,000' pipe line brings mill water from Gila River
28. **Brief History** considerable ore sold to have been shipped in the eighties - 1920; 287 tons net to shipper \$11,560.00
1921 - 556 tons net to shipper \$19,087 - 1922, 874 tons net \$15,392 - 1923 - 1912 tons net to shipper \$35,000 -
29. **Special Problems, Reports Filed** Data herein contained from Report (Economic) (1939) - Fred H. Perkins - G.L. Oram - L.L. Flogg (1927) additional information on file.
30. **Remarks**, Costs of improvements: - Road construction, buildings trucks, assaying & engineering equipment \$40,000, Power plant & mining equipment \$100,000, Mill \$100,000, Water development & surveys \$10,000, Working capital \$200,000 total \$450,000
31. **If property for sale: Price, terms and address to negotiate.** Property is for sale. Glad to discuss terms address. Ranch on Green land.

32. Signed.....

33. Use additional sheets if necessary.

1417 Tuttlehead Bldg
Burlingame, Cal.

new name
(4 MEPS file)

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

DEPT. MINERAL RESOURCES
RECEIVED
NOV 4 1946
ARIZONA

Date...October 31, 1946

1. Mine:.....ADJUSTED.....
2. Location: Sec.....Twp.....Range.....Nearest Town.....
Distance.....Direction.....Road Condition.....
3. Mining District & County:.....Saddle Mountain, Gila County.....
4. Former Name of Mine:.....Hope Metals.....
5. Owner:.....Ralph M. Greenlaw.....
Address:.....1417 Turks Head Building, Providence, R. I.....
6. Operator:.....Not in operation.....
Address:.....
7. Principal Minerals:.....Silver, lead, zinc, and gold.....
8. Number of Claims:.....12.....Lode.....Yes.....Placer.....
Patented.....No.....Unpatented.....Yes.....
9. Type of Surrounding Terrain:.....Mountainous.....
.....
.....
10. Geology & Mineralization:.....
.....
.....
.....
.....
11. Dimension & Value of Ore Body:.....Unknown.....
.....
.....
.....
.....
.....

12. Ore "Blocked Out" or "In Sight": Unknown

Ore Probable:

13. Mine Workings—Amount and Condition:

No.	Feet	Condition
Shafts. <u>None</u>	<u>None</u>	
Raises. <u>None</u>	<u>None</u>	
Tunnels.....	<u>4000</u>	<u>Poor</u>
Crosscuts.....	<u>1500</u>	<u>Poor</u>
Stopes.....		

14. Water Supply: Gila River

15. Brief History:

16. Signature: Robert M. Greenlaw

17. If Property for Sale, List Approximate Price and Terms:

MH-26

DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
OWNERS MINE REPORT

Date July 24, 1940.

1. Mine Hope Metals
2. Mining District & County Saddle Mt.
Pinal County.
3. Former name Hope Metals Company
5. Owner Ralph M. Greenlaw
7. Operator " "
9. President
11. Mine Supt.
13. Principal Metals Silver, Gold, Lead.
15. Production Rate Raising
17. Power: Amt. & Type Electric, purchased
San Carlos Irrigation District.
18. Operations: Present
Raising from the 4th to the
second level (contract)
19. Operations Planned None
20. Number Claims, Title, etc. 5 groups, 58 unpatented lode claims and 4 mill sites.
21. Description: Topography & Geography Rough, from 2000' to 4500' above sea level, sharp ridges and
peaks cut by steep canyons, principal drainage Ash and Deer Creek
22. Mine Workings: Amt. & Condition 10,000' of mine workings, upper tunnel 215' with 50' raise
to surface, lower tunnel 400' with three 40' raises and 45' of winzes. The above is
in the little Treasure Mine on the adjacent a 900' tunnel and other workings
mainly on the Blue Bird Claim.

4. Location 9 miles S. E. of Winkelman.

6. Address (Owner) 1417 Turks Head Bldg.
Providence, R. I.

8. Address (Operator) Same as above.

10. Gen. Mgr. None

12. Mill Supt. None

14. Men Employed Contract raise being
driven by C. B. Pettengill.

16. Mill: Type & Cap. Flotation- Gates #5
primary pressure, Harding 6' x 22" conical
ball mill, Dorr duplex classifier, belt
elevator, and 36' x 8" Dorr thickner,
electric motors 50, 35, and 5 HP.
100 tons daily capacity.

23. Geology & Mineralization Ore occurs in true fissure veins in andesite series overlying cretaceous sediments - roughly paralleling quartz monzonite - gangue quartz, barite, calcite.
24. Ore: Positive & Probable, Ore Dumps, Tailings 1927 report Flagg 60,000 tons valued at \$1,200,000 block out and possible ore supply of 1,000,000 tons valued at \$20,000,000
- 24-A Vein Width, Length, Value, etc. 1500' length of principal vein strikes N 70 E dips vertical, oxidation shallow 50' - average vein width $2\frac{1}{2}$ ft., vein gangue highly altered breccia.
25. Mine, Mill Equipment & Flow Sheet Electric wiring throughout, mining equipment 21 misc. buildings, 100,000 ton flotation mill. Commercial flotation recoveries 98% gold, 96% silver, 92% lead, no mine timber needed
26. Road Conditions, Route Fairly good wagon road connects mine with Winkelman.
27. Water Supply A 12,000' pipe line brings mill water from Gila river.
28. Brief History Considerable ore said to have been shipped in the eighties - 1920, 287 tons net to shipper \$11,560, 1921 - 556 tons net to shipper \$19,087, 1922 - 874 tons net \$15,392, 1923, 1912 tons net to shipper \$35,000
29. Special Problems, Reports Filed Data herein contained from , Reprot (engineers 1939)
Fred H. Perkins - G. L. Oram - A. L. Flagg (1927)
Additional information on file.
30. Remarks Costs of improvements - road construction, buildings, trucks, assaying and engineering equipment \$40,000, power plant and mining equipment \$100,000 Mill \$100,000, water development and surveys \$10,000, working capital \$200,000, total \$450,000
31. If property for sale: Price, terms and address to negotiate. Property for sale.
Glad to discuss terms,
Address - Ralph M. Greenlaw
1417 Turks Head Bldg.
Providence, R. I.
32. Signed.....
33. Use additional sheets if necessary.

Winkelman, Arizona.
August 1st, 1921.

The Board of Directors,
Adjust Mining Company,
Globe, Arizona.

Gentlemen:

Pursuant to the request of your president, Mr. P. R. McDowell, I have examined the property of the Adjust Mining Company and submit the following report thereon.

LOCATION

The property is situated on Deer Creek, in the Saddle Mountain mining District, Pinal County, Arizona, about three miles from the Christmas station of the Arizona Eastern Railroad.

GENERAL DESCRIPTION

This group of claims embraces an area of approximately two hundred and fifty-eight acres of lode claim locations, consisting of twelve full claims and one fraction. The names of the locations are: Silver Dollar Nos 1, 2 and 3; New York; Manhattan; Midway; Silver League; 96; Adjust Nos. 1; 2 and 3; and Blue Bird Fraction. The accompanying sketch illustrates the general shape of the group, relative position of the claims to each other, and the position of the more important veins.

The camp of the company lies about a mile and a quarter south of the property on Ash Creek. It consists of the General Manager's and Mine Foreman's houses, an office and bookkeeper's quarters.

A road extends from Gold Gulch, one half mile south of the property, through the company's camp to Winkelman, about seven miles. Here it connects with state and county highways to Phoenix, Tucson, Globe and Ray. An old road, now badly in need of repairs, extends from the highway near Christmas, up Deer Creek to the property, about two and one half miles.

Although in a region of deep canyons, good mill sites are available. Deer Creek flows through the property and runs about three months of the year. A shaft, located in this creek, some three hundred yards east of the property, has shown permanent water supply, even during very dry seasons. This seems to indicate that there will be little trouble in developing an adequate supply of water for a mill. However, it may prove desirable to locate a concentrator on the Gila River near the railroad, because of the excellent opportunity offered for cheap transportation by aerial tramway from the mine to this point, an airline distance of 8000 feet, with a drop in elevation of 700 feet.

HISTORY

Considerable ore is said to have been shipped in the early eighties from the No. 1 shaft on the Blue Bird vein, and from the old workings on the north side of Deer Creek. Old miners of the district state that this was packed to the Dripping Springs valley, and from there hauled in wagons to one of the little mills in the basin north of Globe.

The table below shows the smelter returns from 641 tons of ore shipped from the Blue Bird vein during the last twelve months. This ore contained 31,635 ounces of silver and 99.5 ounces gold. The smelter returns from 555 tons shipped to the Hayden plant of the American Smelting and Refining Company show a net value of \$23,328.00, an average of \$42.02 per ton. The total cost, shown in the table of estimated costs, averages \$19.20 per ton, leaving a net profit of \$22.82 per ton. The ore from your property has generally been treated at the copper smelter at Hayden, which is ten miles by railroad from the loading station at Christmas. Freight charges are forty cents per ton on a minimum lot of thirty tons. The ore is packed by burros down Deer Creek three and one half miles to the Christmas station.

Since the closing of the smelter at Hayden, your company has shipped two cars to the lead smelter at El Paso. Although this contained higher grade ore than the average shipped to Hayden, less profit per ton was obtained from them. This is due to the difference in smelter rates and the increased cost for freight.

-TOPOGRAPHY AND GENERAL GEOLOGY-

The topography of this district is very rugged, and affords an excellent opportunity for inexpensive development at depth. The prevailing country rock is a fine grained andesite tuff or tuffbreccia. It varies in color from dark greenish to reddish gray, and is cut by many porphyry dikes. Some of these are light colored, coarsely crystalline quartz monzonite or quartz diorite-porphyrics, many of which show considerable decomposition at the surface. Others are dark gray andesite porphyries, containing hornblende phenocrysts of varied sizes. F.L. Ransome describes this district as an area of somber-colored hills composed of tuff, which may consist in part of lava flows, but in the main is an indurated more or less decomposed tuff or tuff-breccia, traversed by many dikes of andesite to dioritic or monzonitic character. According to him, the quartz monzonite and quartz dioritic-porphyrics occur extensively over this area as well as the Ray Quadrangle, as dikes, sills and small intrusive masses, and the ore deposits at Christmas, London, Arizona and 79 mines are genetically dependent on the quartz diorite-porphyry, while the hornblende andesite porphyries are restricted to the andesitic areas and belong to the same epoch of eruptive activity as the tuffs.

M.R. Campbell, in his report on the Deer Creek Coal Fields which lie several miles east of the Adjust property, assigns the andesitic rocks to the late Cretaceous or early Tertiary periods, and describes them as overlying Cretaceous sediments which thin rapidly to the westward, while in the Ray Quadrangle they lie directly on the Carboniferous limestone. Both Ransome and Campbell estimate that this andesite has a probable thickness of 1000 feet.

-ORE DEPOSITS-

The ore deposits occur in well defined fault-fissure veins in the andesite. They roughly parallel the dikes and dip steeply to the north. Mineralization extends only a short distance into the walls which show a clayey gouge and slicken sides.

The main values are gold and silver, silver being the more important. Below the oxidized zone these are found closely associated with pyrite (iron sulphide), sphalerite (zinc sulphide) and galena (lead sulphide). Of these the pyrite and sphalerite will undoubtedly be found the more persistent with depth.

The veins contain a large amount of quartz with considerable heavy spar and calcite. They vary from two to fifteen

feet in width with a general average of about four feet, and are filled with a soft low grade material of altered andesite, and with high grade quartz lenses which average eighteen inches in width. These high grade lenses vary from narrow stringers, in some places, to the entire width of the vein in others.

Oxidation has reached a depth of from 25 to 50 feet. The oxidized zone contains much limonite and gypsum, with white quartz and calcite which show many cavities due to leaching out of the sulphides. Native wire silver is found deposited on the sulphides in the Blue Bird vein. This vein shows considerable post-mineral fracturing which combined with the fact that the water level must be fairly low here, may make for an enriched zone of considerable depth.

Assays of the galena show silver values of from twenty-five to two hundred ounces, of the sphalerite twenty-seven to eighty-nine ounces and of the pyrite seventeen to fifty ounces.

-DEVELOPMENT-

The most important development work is on the Blue Bird claim and consists of:-

- (1) 1500 feet of tunnels, winzes and raises.
- (2) Smaller amount of stoping and open cuts.

Ore produced from these workings during the past year is as follows:

Tons.	Oss. Silver per ton	Oss. Gold per ton
750 tons (shipping ore)	49.5	0.16
2000 " (#2 tunnel dump)	5.0	0.02
350 " (#1 " ")	12.0	0.08
50 " (#4 " ")	12.0	0.06
200 " (#5 " ")	7.0	0.04

This is a very favorable showing, in view of the amount of work done by your company, and the question naturally arises as to whether the values will continue with depth and along the veins.

The Blue Bird vein outcrops in a gentle curve, readily traceable along the entire length of the two claims. Assays taken from the outcrops west of the present workings show values of from \$7.00 to \$30.00 per ton in gold and silver.

A number of cuts and tunnels driven on the other veins throw considerable light on the extent of mineralization. The veins on your property and many of the veins on nearby claims show long and persistent ore shoots, and some of them like the Blue Bird vein contain relatively high grade ore on or near the surface. In the ore shoots there will undoubtedly be a secondary enriched zone which may be some considerable depth, and it is probable that the primary sulphides below will be of workable grades. Assays show that the ore shoots carry higher silver values in the lowest workings than in those above. From this evidence it is reasonably certain that the ore will continue both along the Blue Bird vein and with depth; also that there can be opened up other veins that will add materially to your ore reserves.

The low cost at which this property may be developed at depth is one of its strong points. It is possible to obtain a depth of several hundred feet below the present workings by means of tunnels and open cuts. Another thing bearing on mining costs is the fact that the higher grade ore occurs in shoots which can be mined separately from the rest of the vein.

In discussing the finding of new ore bodies at depth, it should be mentioned that the quartz diorite porphyries, which are responsible for the more important deposits in the Carboniferous limestone at Christmas, the London-Arizona and 79 mines, cut the same favorable formations beneath the andesite on this property.

In the development of your property a large tonnage of low grade ore will be opened up, which cannot be handled profitably except by some method of concentration.

While it is true that every mine must determine the flowsheet best adapted to its own particular ore, still, in general it may be said that the treatment of all similar ores is somewhat the same.

Many of the small mines in Idaho are successfully milling galena-sphalerite ores containing silver, and are producing a clean lead-silver concentrate and a separate zinc concentrate. The Broken Hill mines in Australia have also successfully treated the same type of ore. I cite these cases merely to show that the lead-zinc ores can be profitably milled.

At present, development should be carried as outlined below to determine the size and nature of any reduction works.

-ORE RESERVES-

In your present workings you have developed approximately 18,000 tons of ore which will average 14 ounces silver and 0.05 ounces gold. By sorting and mining only the high grade lenses, you could produce about 3,000 tons as good as the average which you have shipped.

-RECOMMENDATIONS-

1.- Development work.

- (a) Blue Bird vein. The proposed development of this vein is graphically represented on the enclosed longitudinal section.
 1. Continue #2 tunnel, connecting by raise with #1 winze, until under west end of #4 tunnel and as much farther as the proposed upper tunnels show presence of suitable ore shoots.
 2. Connect #2 raise to surface at #2 open cut.
 3. Continue #3 raise to the surface.
 4. Continue #4 tunnel east to connect with #2 raise and west until under #3 open cut, connecting to the surface by a short cross-cut at C.
 5. Continue #5 tunnel to the surface below open cut #4.
 6. Sink at least four winzes on #2 tunnel at suitable intervals on the best ore shoots. Should these ore shoots be found satisfactory, drive proposed #6 tunnel at 100 feet lower elevation.
 7. West of present workings, start #3 tunnel at #3 open cut and continue westward until near the surface on the west end of the claim, driving raises and winzes at suitable intervals on the best ore.
- (b) Other veins. The other veins are less extensively developed but show the same general characteristics and are worthy of further exploration.

An assay on a small ore sheet in the discovery shaft of the Silver League showed 47.6 oss. Silver and 9.24 oss. gold. At another point about 400 feet from the east end of the claim an assay of the best ore from the outcroppings contained 8.7 oss. silver. Other assays indicate that nearly all the leached croppings show smaller amounts of gold and silver.

Prospect shafts or open cuts should be used to develop the ore at such favorable points and should good ore shoots be encountered, considerable depth can be reached by tunnel from the west

end of the claims.

The shaft on the New York claim is down 50 feet and shows values its entire depth over an average width of eighteen inches. This ore can be cheaply developed by connecting the tunnel, which has been driven from the west, with the bottom of the shaft.

Assays taken from the New York and Manhattan claims are as follows:-

- 1- Best grade of ore from 59 foot shaft on New York claim, 30.3 oss silver, 0.04 oss. gold.
- 2- Across twenty-eight inches, eighteen feet down the 50 foot shaft on New York claim, 9.4 oss. silver, 0.06 oss. gold.
- 3- At bottom of 50 foot shaft on New York claim, west end, ten inches wide, 6.0 oss. silver, 0.03 oss. gold.
- 4- Across ten inches on hanging wall of 30 foot tunnel near discovery shaft on Manhattan claim, 18.4 oss. silver.
- 5- Across eight inches in discovery shaft of the Manhattan claim, 74.8 oss. silver, 0.06 oss. gold.

The topography of both of these claims admits of several hundred feet depth by means of tunnels and this method should be used to explore these veins.

General.-

- 1- Installation of small compressor near #1 shaft, to operate power drills on all faces.
- 2- Tracks laid in the tunnels as they are driven, and ore chutes and manways constructed where stopes are situated.
- 3- As soon as sufficient ore has been proven by development, accurate mill tests should be run to determine the type of mill required.

Operation.-

- 1- Accurate records, based on careful sampling, assaying, and detailed assay maps, should be kept of all development work.
- 2- In carrying the development work westward on the Blue Bird vein, the face of each tunnel should be kept well in advance of the next one below.
- 3- Ore sorting should be done in the stopes, when practical, and the waste used as filling.
- 4- When completed, this work will have opened up, at the most favorable places on the Blue Bird vein, ten times the amount of ground that the present workings do.

-CONCLUSIONS-

This examination of your property has given me a favorable impression of its mineral possibilities. Well defined veins and persistent ore shoots, with the possibilities of low development and transportation costs, are some of its especially strong features. The carrying out of the above recommendations under a competent and conservative management should result in the development of a large additional tonnage that will be very profitable to your company.

Respectfully submitted,
Winkelman Assay & Engineering Company,
Examining Engineer

(signed) C.L. Orem

SHIPMENTS FROM ADJUST MINE.

Lot	Date	Smelter	Tons	Oz Au.	Oz Ag.	Price Ag.	Bal. to Shipper.
1	6/18/20	Hayden	27.02	.16	40.50	.90	818.46
2	7/15/20	Hayden	51.25	.10	29.00	.99	1126.44
3	8/10/20	Hayden	50.54	.12	28.30	.93	1005.72
4	9/9/20	Hayden	10.26	.14	34.00	.99	264.58
5	10/25/20	Hayden	50.24	.12	53.50	.99	2276.09
2	11/27/20	Hayden	50.85	.18	74.30	.99	3334.54
3	12/16/20	Hayden	47.34	.20	65.80	.99	2743.14
4	1/5/21	Hayden	37.61	.16	59.60	.99	1952.00
5	2/1/21	Hayden	29.10	.12	29.10	.99	784.81
6	2/16/21	Hayden	51.51	.08	21.40	.99	473.26
7	3/7/21	Hayden	44.88	.18	66.30	.99	2619.26
8	3/22/21	Hayden	37.36	.16	54.00	.99	1757.43
9	4/5/21	Hayden	50.57	.19	59.00	.99	2624.18
10	4/14/21	Hayden	36.74	.17	48.80	.99	1569.89
11	6/10/21	El Paso	44.51	.15	41.50	.99	882.69
12	6/10/21	El Paso	40.95	.23	53.50	.90	1327.25
13	7/29/21	El Paso	35.26	.10	44.50	.99	683.91
14	10/6/21	El Paso	37.06	.13	41.80	.99	772.36
15	11/10/21	El Paso	41.53	.14	47.75	.99	1077.61
16	12/2/21	El Paso	43.37	.14	49.40	.99	1202.50
17	12/17/21	El Paso	54.90	.15	53.60	.99	1460.79
18	1/19/22	El Paso	37.46	.11	48.60	.99	956.29
19	2/16/22	El Paso	39.99	.10	45.70	.99	952.10
20	3/20/22	El Paso	41.32	.12	37.00	.99	755.82
21	9/13/22	Hayden	45.84	.08	20.15	.99	659.87
2	10/3/22	Hayden	39.48	.08	25.00	.99	351.62
3	10/11/22	Hayden	35.17	.08	15.60	.99	744.53
4	10/17/22	Hayden	36.29	.08	18.80	.99	468.93
5	10/25/22	Hayden	41.28	.08	15.00	.99	385.00
6	10/31/22	Hayden	25.20	.07	15.80	.99	252.31
7	11/9/22	Hayden	30.67	.07	17.30	.99	350.24
8	11/15/22	Hayden	49.48	.08	18.17	.99	640.45
9	11/22/22	Hayden	43.72	.07	13.50	.99	342.10
10	11/22/22	Hayden	36.05	.07	12.00	.99	231.01
11	11/22/22	Hayden	33.40	.09	20.10	.99	479.36
12	12/6/22	Hayden	32.09	.08	22.50	.99	529.15
13	12/19/22	Hayden	60.73	.09	26.20	.99	1237.08
14	12/18/22	Hayden	49.77	.10	27.40	.99	1080.66
15	12/27/22	Hayden	36.20	.11	27.60	.99	794.85
16	1/9/23	Hayden	53.39	.11	29.00	.90	1248.39
17	1/9/23	Hayden	50.02	.12	29.30	.99	1188.16
18	1/16/23	Hayden	41.31	.11	31.10	.99	1043.19
19	1/24/23	Hayden	57.22	.10	33.20	.99	1554.25
20	1/30/23	Hayden	61.10	.11	36.30	.99	1849.47
21	1/30/23	Hayden	54.62	.12	36.70	.99	1678.93
22	2/6/23	Hayden	29.37	.02	14.70	.99	225.33
23	2/20/23	Hayden	60.96	.10	33.40	.99	1606.96
24	2/20/23	Hayden	39.40	.11	32.80	.99	1057.64
25	2/20/23	Hayden	46.64	.10	31.80	.99	1202.46
26	2/27/23	Hayden	59.20	.07	26.10	.99	1169.18
27	3/6/23	Hayden	41.15	.01	18.40	.99	454.07
28	3/13/23	Hayden	52.27	.09	24.90	.99	989.05
29	3/12/23	Hayden	39.94	.08	25.30	.99	761.73
30	3/13/23	Hayden	47.89	.08	26.30	.99	953.67
31	3/20/23	Hayden	28.87	.03	18.75	.99	325.89
32	3/27/23	Hayden	69.37	.08	28.90	.99	1559.99
33	4/3/23	Hayden	54.56	.08	28.10	.99	1187.00
34	4/3/23	Hayden	51.64	.08	28.35	.99	1354.08
35	4/16/23	Hayden	52.12	.02	26.25	.99	961.59

ADJUST SHIPMENTS PAGE 2

Lot	Date	Smelter	Tons	Oz Au	Oz Ag	Price Ag	Bal. to shipper.
56	4/16/23	Hayden	63.47	.07	29.40	.99	1446.81
57	4/24/23	Hayden	62.86	.07	25.45	.99	1078.75
58	4/24/23	Hayden	60.29	.07	24.20	.99	1194.66
59	4/24/23	Hayden	51.20	.07	26.00	.99	1001.64
40	4/24/23	Hayden	44.18	.02	30.00	.99	985.37
41	5/16/23	Hayden	58.26	.03	23.15	.99	918.01
42	5/19/23	Hayden	60.07	.01	18.00	.99	659.07
43	5/19/23	Hayden	48.91	.02	20.00	.99	622.75
44	5/19/23	Hayden	46.51	.03	19.00	.99	544.51
45	5/22/23	Hayden	48.94	.02	14.00	.99	341.04
46	5/22/23	Hayden	41.93	.01	23.50	.99	670.35
47	5/29/23	Hayden	60.98	.07	26.60	.99	1243.88
48	5/29/23	Hayden	30.47	.07	25.75	.99	594.99
49	6/5/23	Hayden	35.33	.03	17.90	.65	211.99
50	6/5/23	Hayden	27.71	.02	17.50	.65	157.34
51	6/5/23	Hayden	62.33	.01	23.25	.65	572.98
52	7/11/23	Hayden	26.76	.06	23.30	.63	271.90
53	8/21/23	Hayden	28.40	.10	21.20	.63	267.95
TOTALS			3417.62			\$ 22.51	\$ 77121.97

3418 - 25
 34 | 77
 68
 90
 68
 22
 170

R E P O R T

on

RALPH M. GREENLAW'S
PROPERTY

FRED H. PERKINS

CONSULTING MINING ENGINEER,

REGISTERED MINING ENGINEER, STATE OF ARIZONA

No. 368

No. 918 North 2nd. Street,

Phoenix, Arizona

I N D E X

	<u>Page No.</u>
Assays -----	9, 10
Claims -----	2, 3, 4
Climate -----	5
Conclusions -----	11, 12, 13
Costs -----	11
Development -----	8, 9
Equipment -----	7, 8
Geology and Commercial Conditions-----	1, 2
Labor -----	6
Mill Sites -----	4, 5
Power -----	6, 7
Situation -----	1
Title -----	5
Topography -----	1
Water -----	5, 6

-----oOo-----

SITUATION:-

The former holdings of the Hope Metals Company, now owned by Ralph M. Greenlaw, Providence, R. I., are situated in Pinal County, Arizona, Saddle Mountain District, which is nine (9) miles Southeasterly from Winkelman, the present shipping point on the Southern Pacific Railroad. A fairly good wagon road connects the present camps and Winkelman. A pack trail to Finney, the nearest railroad point, is two (2) miles long.

TOPOGRAPHY:-

The topography of the Saddle Mountain District is rough, varying in elevation from 2000 ft. to 4500 ft. above sea level. Sharp peaks and ridges cut by steep sided canyons make up the surface of this area. Ash and Deer Creeks afford the principal drainage for the district, both of which finally flow into the Gila River.

GEOLOGY AND COMMERCIAL CONDITIONS:-

Blue Bird vein on the Adjust group of claims has a N 76°E strike and a dip generally vertical. Country rock is principally andesite with occasionally dikes of gray porphyry paralleling the vein. The presence of gray porphyry is generally associated with the better ores in vein proper. The vein is well defined and has almost continuous slickensided walls. Width of vein is a few inches to twelve (12) ft., average about four (4) ft. The vein is banded in structure and mineralization. The gangue minerals are quartz, barite, and calcite, with altered brecciated country rock mixed with the banded leaves of ore. There are three well defined chutes of ore throughout the workings opened up at present, an extent of about fifteen hundred (1500) ft.

About two thirds of the vein along its length, the vein filling is too lean to mill. The vein is completely oxidized from the surface to about fifty (50) ft. in depth, at which point the sulphides of galena, sphalerite and pyrites are noted. Most of the gold and silver values are in the sulphides in the lower levels.

Little Treasure Group:-

The principal vein on the Little Treasure group has a N 70°E strike, and a dip almost vertical. Oxidization is very shallow, and the walls are only fairly well defined. The average width vein is two and one half (2½) ft. Vein gangue is a highly altered breccia. Present development shows two ore chutes, one chute having a decided zinc content.

CLAIMS:-

The former holdings of the Hope Metals Company are comprised of fifty eight (58) lode unpatented mining claims, and four (4) mill sites. The mining claims are in five (5) groups, and in each group all claims are contiguous. The claims cover a total of eleven hundred (1100) acres, the names of which, together with the book and page numbers of the record of the location or amended location notices thereof, in the office of the County Recorder of Pinal County, at Florence, are as follows, to wit:-

<u>NAME OF CLAIM</u>	<u>NUMBER AND NAME OF BOOK</u>	<u>PAGE NO.</u>
North Side	45 Book of Mines	52
Tunnel	" " " "	53
Silver Leaf	" " " "	54
South Side	" " " "	55

<u>NAME OF CLAIM</u>	<u>NUMBER</u>	<u>AND</u>	<u>NAME</u>	<u>PAGE</u>
	<u>OF</u>	<u>BOOK</u>		<u>NO.</u>
Little Treasure	45	Book	of Mines	56
Bluff	"	"	"	57
East End	"	"	"	58
High Point	"	"	"	45
Sunrise	"	"	"	46
Mountain View Fraction	"	"	"	47
Richard	"	"	"	48
Big Dike	"	"	"	49
Mountain View	"	"	"	50
Edward	"	"	"	51
Laurence	"	"	"	8
Little Doris	"	"	"	10
Ancho	"	"	"	11
Red Raven	44	"	"	472
Corner Stone Fraction	"	"	"	479
Gold Section Fraction	"	"	"	482
Gold Gulch No. 2	"	"	"	483
Submarine No. 2	"	"	"	484
Homestake No. 1	45	"	"	26
Homestake No. 2	"	"	"	27
Red Raven	"	"	"	28
Submarine No. 3	"	"	"	29
Submarine No. 1	"	"	"	30
Sylvester	"	"	"	31
Eagle	"	"	"	32
Gold Gulch No. 1	"	"	"	33
High Ball	"	"	"	34
Corner Stone	"	"	"	35
San Pedro	"	"	"	36

<u>NAME OF CLAIM</u>	<u>NUMBER AND NAME OF BOOK</u>	<u>PAGE NO.</u>
Gold Section No. 1	45 Book of Mines	37
" " " 2	" " " "	38
" " " 3	" " " "	39
" " " 4	" " " "	40
" " " 5	" " " "	41
" " " 6	" " " "	42
" " " 7	" " " "	43
" " " 8	" " " "	44
Midway	" " " "	7
Midway Extension	" " " "	9
Silver Dollar No. 1	" " " "	12
" " " 2	" " " "	13
" " " 3	" " " "	14
Adjust No. 1	" " " "	15
" " 2	" " " "	16
" " 3	" " " "	17
" " 4	" " " "	18
Silver League	" " " "	19
Silver League Extension	" " " "	20
Lulu	" " " "	21
Ninety Six	" " " "	22
Blue Bird	" " " "	23
New York	" " " "	24
Manhattan	" " " "	25
Silver Lead	49 " " "	83

<u>NAME OF MILL SITE</u>	<u>NUMBER AND NAME OF BOOK</u>	<u>PAGE NO.</u>
The Gold Gulch	1 Record of Mill Sites	195
Tunnel	" " " " "	235
Silver Leaf	" " " " "	235

<u>NAME OF MILL SITE</u>	<u>NUMBER AND NAME OF BOOK</u>	<u>PAGE NO.</u>
Little Treasure	1 Record of Mill Sites	236
Together with all water rights and rights of way.		

TITLE:-

The title is held by performance of annual assessment work as prescribed by the United States Government. So far as could be determined on the ground, there are no adverse claimants.

No abstract of title has been made for this report, but an abstract should be made for the protection of the owner.

ROADS:-

A fair wagon road eight (8) miles long connects the holdings with Winkelman, the nearest Post Office. Finney, the nearest railroad point is, at present, via pack-trail two (2) miles long.

CLIMATE:-

These claims are from two thousand (2000) ft. to thirty five hundred (3500) ft. above sea level. At this elevation the climate is very mild the year round. There is little or no snow in the winter. The annual rainfall is around three (3) inches. Generally speaking, the climatic conditions are exceptionally favorable, and the work need never be interrupted by unfavorable weather.

WATER:-

A pipe line twelve thousand (12,000) ft. long brings mill water from the Gila River. The well is situated one mile below the Christmas power house, and is equipped with a 40 HP U. S. electric motor, and a Worthington duplex pump,

2" discharge, which delivers 1000 gallons of water per minute to a 49,000 Gal. steel tank above the mill. Most of the joints in the pipe line are welded.

A 40 ft. well on Ash Creek, in the Little Treasure Group, has a Meyer "bulldozer" pump, driven by a 1 3/4 HP gasoline engine, and a pipe line 1,000 ft. long, which delivers water to a 5,000 Gal. steel tank above the Little Treasure Camp. This water is used for all domestic purposes at this time. Both Deer Creek and Ash Creek flow on the surface nine (9) months of the year. The No. 4 tunnel on the Blue Bird vein makes a little water which is collected in a forty (40) ft. winze on the vein below the tunnel level. At Present the water is removed by a "tugger" hoist and a bucket.

LABOR:-

Good, steady, capable miners can be obtained for five dollars (\$5.00) per day. This rate is used as a basis for estimates of mining costs. Muckers, car men and laborers command from three dollars (\$3.00) to four and one half dollars (\$4.50) per day. After the camp is well established and outfitted it might be possible to establish a slightly lower rate of pay. There is a large field of mines close to the camp to draw labor from, and no difficulty will be experienced in getting any and all kinds of help for this operation.

POWER:-

Power for this property is purchased from the United States, through the San Carlos Irrigation Project, Coolidge Division, which maintains a power line to within nine thousand (9,000) ft. of the camp. From this point to the mill the mine property owners have and maintain a line of their own. The cost

of power is one and three-tenths ($1 \frac{3}{10}$) cents per kilowatt, with a minimum purchase of one hundred dollars (\$100.00) per month.

EQUIPMENT:-

The Little Treasure Camp has a combined office and residence of three rooms, with shower room, screened porch, and a reinforced concrete vault, 10 ft. by 12 ft. Also, three two-room cabins, a four-car garage, gasoline pump of 500 Gal. capacity, a good well equipped with gasoline engine ($1 \frac{3}{4}$ HP) and pump, and one thousand (1,000) ft. of $1 \frac{1}{2}$ " pipe delivering water to a 5,000 Gal. steel tank located above the camp. Camp water supply is by gravity flow from tank. A telephone and line six (6) miles long connects this camp with the Adjust Mine and the pump station on the Gila River. The camp is all wired and electric lighted. A wagon road runs from camp to dump sites of both tunnels.

The Adjust Mine has a cook shack (for dining room and kitchen) and separate house for cooks living quarters; a bunkhouse for twelve (12) men; a combined shower, wash and change room, in connection with a large recreational room; a three (3) room building for general office and assay shop; a blacksmith shop fitted with forge and air-driven steel sharpener (Ingersoll-Rand # 33) and a large space for supplies, fittings and storage; a compressor house enclosing two (2) air compressors, and a 75 HP Westinghouse electric motor with belt-ing, switch board, etc; a small house for making up fuses and carbide storage; a group of transformers enclosed with wire fencing; a tigger hoist and cable; four thousand eight hundred (4,800) ft. of "tee" mine rail; five (5) mine cars; seven (7) air drills; four hundred (400) lineal ft. of metal air tubing, and three hundred (300) ft. of canvas air duct;

a large quantity of pipe for air line underground.

A power line of 9,000 ft. supplies the mill and camps with power. A telephone line connects the camps and the lower pump on the Gila River.

A pipe line comprised of 4,200 ft. of 3 inch diameter, and 8,000 ft. of 4 inch diameter pipe (most joints welded) furnishes water supply to the mill.

The mill is composed of ore bins, Gates # 4 primary crusher, Hardinge 6' x 22" conical ball mill, Dorr duplex classifier, flotation units, belt elevator, and a 36' x 8' Dorr thickener, complete, and three electric motors of 50, 30 and 5 H. P.

DEVELOPMENT:-

Main workings on the Little Treasure Mine consist of two (2) tunnels. The upper tunnel is two hundred fifteen (215) ft. long, with a raise fifty (50) ft. to the surface. The lower tunnel is four hundred (400) ft. long, and has three (3) forty (40) ft. raises, one twenty five (25) ft. winze, and one twenty (20) ft. winze. The distance between the upper and lower tunnels is seventy five (75) ft. vertically. With the showing in these two tunnels, it would be advisable to go as low on the mountainside as possible and drift in of the vein at this level. This third (3rd) level could be one hundred eighty (180) ft. lower than the present workings, and still be safely above creek level. Much splended grade of mill dirt has been developed by the above workings.

The main workings and development on the Adjust Group of claims is on the Blue Bird claim.

No. 1 Level has nine hundred (900) ft. of tunnel, many raises

and stopes, and seven (7) winzes seventy five (75) ft. deep which connect with No. 2 level.

No. 2 Level has a tunnel twelve hundred forty (1240) ft. long, one sixty (60) ft. winze and one ninety (90) ft. winze. A small amount of stoping has been accomplished on this level.

No. 3 Level has a tunnel five hundred (500) ft. long on the vein. (caved)

No. 4 Level is an eight hundred ninety (890) ft. cross cut to and beyond the vein. At the seven hundred twenty (720) ft. point in the cross cut is a drift easterly on the vein two hundred twenty (220) ft., and a drift seven hundred ten (710) ft. long on the vein in a westerly direction. On this drift there are nine (9) raises respectively, of 30 ft., 25 ft., 25 ft., 30 ft., 180 ft., 25 ft., 35 ft., 25 ft., and 40 ft., and one winze 40 ft. deep.

Very little timbering is necessary on the 1st, 2nd, and 3rd levels. Pillars of low grade ore can be left often enough to keep the ground from caveing. The same condition holds good in the Little Treasure Mine. The Blue Bird development work to date shows three (3) distinct ore chutes extending downward from the surface to and beyond the No. 4 level. Both the Little Treasure and the Blue Bird veins are of the true fissure type of vein, and will undoubtedly furnish ore for a great depth.

At a depth very little lower than the No. 4 level, and as a permanent water level is approached, we can expect to leave the leached zone values and run into an enriched zone of vein filling.

ASSAYS:-

Following samples taken from the 40 ft. winze below tunnel
level no. 4 ---

<u>DESCRIPTION</u>	<u>GOLD</u> (ounces per ton)	<u>SILVER</u> (ounces per ton)	<u>LEAD</u> (% per ton)	<u>ZINC</u> (% per ton)
Track level plus 5 ft. E & S sides	.06	15.6	0.5	2.3
" " " 5 " W & S "	.01	0.6		
" " " 10 " E & S "	.02	4.3	0.2	1.0
" " " 10 " W & S "	.02	3.4		
" " " 15 " E & S "	.03	11.9	0.4	1.3
" " " 15 " W & S "	.01	1.0		
" " " 20 " E & S "	.01	0.9		
" " " 20 " W & S "	.01	0.6		
" " " 25 " E & S "	.01	0.6		
" " " 25 " W & S "	.01	0.6		
" " " 30 " E & S "	.03	9.2		
" " " 30 " W & S "	.04	15.8		
" " " 33 " E & S "	.04	12.1		
" " " 35 " E & S "	.02	9.1	0.5	0.9
" " " 35 " W & S "	.01	1.4	0.2	0.5
" " " 38 " E & S "	.015	7.2	0.2	1.2

Following samples taken from Raise # 2, ^{44.3} west drift, No. 4 level ---

<u>DESCRIPTION</u>	<u>GOLD</u> (ounces per ton)	<u>SILVER</u> (ounces per ton)	<u>LEAD</u> (% per ton)	<u>ZINC</u> (% per ton)
Track level plus 15 ft. to 45 ft.	.031	1.03	0.27	0.9
" " " 50 " E & W sides	.03	1.5	0.3	2.5
" " " 77 " E & W "	.03	1.6	0.3	2.3
" " " 85 " E & W "	.03	1.0	0.4	3.0
" " " 89 " E & W "	.04	1.6	0.3	2.4

A smelter return dated May 9, 1939 for a shipment of mill

concentrates consisting of nine (9) tons gave returns of \$61.75 per ton for the gold and silver content. The same returns show 10.35% but did not assay for zinc, though this element was high. These concentrates were shipped to the American Smelting and Refining Company at Hayden, Arizona, but the smelter there does not pay for lead and zinc. Mill sheets show that the nine (9) tons of concentrates came from treatment of approximately two hundred seventy (270) tons of ore. This ore was secured from drifting, raising and clean-up along tunnel level No. 4. It is not a fair sample of ore in the ore chutes proper, as no attempt was made to keep wall material out of the material going to the mill.

COSTS:-

The cost of mining and milling of the ores found in the Adjust group of claims, provided the recommended changes are made in the mill, are as follows:-

Mining and development	-----	\$1.50	per ton
Milling	-----	1.14	" "
Loss of values in milling	----	<u>.39</u>	" "
Total	----	\$3.03	per ton

The above costs include such items as labor, powder, timber, oil and gasoline.

CONCLUSIONS:-

A small profit can be realized from milling the ore derived from the three (3) ore chutes between level No. 2 and level No. 4. The combined length of the chutes measures five hundred sixty five (565) ft. along tunnel No. 4. The average thickness of the ore in the chutes is four (4) ft. The distance between levels two and four (2 & 4) along the chute

is five hundred sixty five (565) ft., although the vertical distance between levels two and four (2 & 4) is only three hundred sixty (360) ft.

This block of ore is only opened on the top and bottom, and cannot be called "blocked out" ore for a certainty, but we can reasonably expect ore all the way between levels. To cut mining and development costs, a raise along one of the ore chutes from level No. 4 to level No. 2 would serve a double purpose, that of furnishing ventilation, and blocking out probable ore.

Reasonably high grade ore in the upper workings, with a decrease in values going down to the No. 4 level leads me to believe a leaching process has gone on. Such being the case, an enrichment of the vein can be expected at or near the permanent water level in the mine. I feel sure that the real mine is below tunnel level No. 4. Sinking would be the right method for future development.

Ore mined and hauled from the Little Treasure Mine could be treated at a profit. A tunnel one hundred eighty (180) ft. lower than the lowest present tunnel on Little Treasure could be driven on the vein all the way, and would be good mining.

The mill as it stands now could be greatly improved by replacing the Gates crusher with a gyratory type of crusher, and capable of crushing fifty (50) tons of ore to $\frac{1}{2}$ inch mesh. As it is, to get fifty (50) tons through the Gates crusher, the product is so coarse the ball mill is overworked. Thus the capacity of the mill is cut down about one half. Several minor changes would also improve the production of the concentrates both in cost and quantity.

The present showings justify the expenditure for further

and more systematic prospecting. This property is a very promising prospect, and its future development is a legitimate venture, and recommends itself as worthy of the investment required.

SIGNED Fred H. Perkins (sgd.)
FRED H. PERKINS

CONSULTING MINING ENGINEER

REGISTERED MINING ENGINEER

STATE OF ARIZONA

#368

Dated:

Phoenix, Arizona

August 21st., 1939

13 Pages ---- 1 Map