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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 07-07-2006

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: SOUTHWEST SILVER CORP. #1

ALTERNATE NAMES:
JIM DOUGLAS
FORTUNA
ARAVAIPA METALS

PINAL COUNTY MILS NUMBER: 535

LOCATION: TOWNSHIP 7 S RANGE 17 E SECTION 2 QUARTER NW
LATITUDE: N 32DEG 51MIN 33SEC LONGITUDE: W 110DEG 35MIN 12SEC
TOPO MAP NAME: HOLY JOE PEAK - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
SILVER
COPPER OXIDE
COPPER SULFIDE
SILICON

BIBLIOGRAPHY:
ADMMR SOUTHWEST SILVER CORPORATION #1 FILE

SOUTHWEST SILVER CORPORATION #1 PINAL COUNTY

There are 4 dumps that contain a total of between 3 to 5 tons.

The SiO_2 content is 72-77%, the silver and copper will average $11.70.
A shipment several years ago of 8 tons, ran 132 oz Ag and 10% Cu.

Note GWI 3/16/66

Visited Southwest Silver Mines. Old Fortuna was the former name. No one at the mine. Mr. Abe White who lives across the (Arivaipa Creek) said that the men had not been to the mine for a few days.

GWI WR 7/2/66

Visited S. W. Silver Mine on Aravaipa Creek, Not Active at present.

GWI WR 7/1/67

Phoenix office copy

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

Date February 21, 1966

1. Mine: SOUTHWEST SILVER CORPORATION #1

2. Location: Sec. 2 Twp. 7S Range 17E Nearest Town WINKELMAN Distance 19 Miles.
   Direction NW Nearest R.R. 8 MILES WILL NOT BE USED Distance
   Road Conditions 11 MILES OF PAVED HIGHWAY REST GRAVEL LAST MILE STEEP

3. Mining District and County: (OLD HAT-PINAL COUNTY) NOTE* MINE IS CLOSER TO COPPER CREEK

4. Former Name of Mine: JIM DOUGLAS-FORTUNA-ARAVAIPA METALS

5. Owner: LEASED FROM STATE OF ARIZONA BY DICK HARRIS OF 250 NORTH CHURCH TUCSON
   Address: AND JIM DOUGLAS OF ORACLE

6. Operator: SOUTHWEST SILVER CORPORATION----- LAWRENCE HALL, PRESIDENT, WM. RICH, VP
   Address: RAYMOND L. COOK, SECRY. JAMES HEDRICK, TREAS.

7. Principal Minerals: SILVER AND COPPER - SEE SMELTER RETURNS.

8. Number of Claims: Lode NW ¼ SEC. 2 Patented Unpatented
   Placer Patented Unpatented

9. Type of Surrounding Terrain: PRECIPITOUS-ON SOUTH SLOPE OF ARAVAIPA CREEK

10. Geology and Mineralization: STEEPLY DIPPING BRECIATED FAULT ZONE DIPPING STEEPLY TO THE NORTH AND CUTTING THRU DIABASE AND QUARTZITE. SEE ATTACHED REPORT

11. Dimension and Value of Ore Body: LIMITS NOT KNOWN

Please give as complete information as possible and attach copies of engineer's reports, shipment returns, maps, etc. if you wish to have them available in this Department's files for inspection by prospective leasors or buyers.

(over)

WILLIAM C. PETERS
MINING GEOLOGIST
5702 East 7th. Street
Tucson, Arizona

June 2, 1965

MEMORANDOM REPORT

To: Mr. W.G. Rich and Mr. James Hedrick
Subject: The Fortuna Mining Company (Arivaipa Metals) Mine
Pinal County, Arizona.

As a result of my May 29th. examination of your mine in the N.W. quarter of section 2, township 7 South, Range 17 East, Old Hat District, Arizona, I can make the following statements:

1. The ore-bearing structure is a persistent and quite uniform fault zone which can be traced as a brecciated zone with weak mineralization for at least 2000 feet. Figure 1 shows the location of the prospect pits on the East and West ends of the zone and shows the structure striking N 85° E and dipping 70° to 80° North as it passes through the mine.

The structure intersects diabase and quartzite. Mineralization seems to be about the same in both rock types although the daylight stope in quartzite suggests that the quartzite may be slightly more favorable. The ore-bearing parts of the structure appear to be similar in every locality examined; that is, a hanging wall or a footwall strand of oxidized copper-silver ore with occasional stringers branching on to the opposite wall - thus in many places there is both a hanging wall and a footwall strand. The strands we noted and sampled appeared to be a few inches in thickness with a weakly mineralized central zone of several feet in thickness. The assay results will tell us the grade of the stringers and the central zone.

The very uniformity and continuity of the structure suggests that the mined portions of the ore shoots were not more than twice or, at most, three times thicker than the pillars and stope faces remaining. There are no major cross-structures or favorable beds as near as I can tell. This means that there is no reasonable possibility for a better ore shoot than that already mined.

2. You have the record of smelter returns from shipments made in 1922-1924. There were probably some earlier shipments made as well. In any event, the dumps are large in comparison to the known stopes - this indicates a great deal of hand-sorting. I estimate that the tonnage above the tunnel level, mostly stoped out should be about 2000 tons of

ore plus 10,000 tons of waste. The old miners seemed to stop mining when they got to more than about a 5 to 1 waste to ore sorting ratio.

3. I estimate that the tonnage below the tunnel level and above the floor of the gulch should be about 1200 to 2500 tons of ore plus about five times that much waste, taking a four-foot mining width.

4. The feasibility of developing and stoping ore from the area below the tunnel will be entirely determined by the assay results. The following minima are suggested:

a. Ore at $25 per ton or better assay value over a mining width of four feet.
b. Ore at $50 per ton or better assay value over a width of one foot with hand sorting required.
c. Ore at $80 per ton or better assay value over a width of six inches with very clean hand sorting (ratio 7 to 1).

5. If the assay results are favorable and above the minima outlined in item #4, I would suggest the following procedure:

a. Take out one stope round in the best assay area, hand sort it on the basis of the known hanging and footwall strands being ore. Estimate the ratio of waste to ore after sorting. Break the ore into pieces not larger than 1/2 inch, quarter it several times, and have it assayed. Note the time and expense of the stope round and consider that the best ore will be two or, at most, three times the width mined. The grade should be the same.
b. If the test round indicates a favorable return for time and money, begin a drift from the floor of the gulch and on the structure pointed out on May 29th. This portal site will be subject to floods and will be hard to make dump room, but it is the only site left.

6. I would not suggest tunneling at any other point on the 2000 feet of exposure. An occasional trench would be of interest, but I would not spend much money on it.

7. Samples were taken for assay at the following points (see figures 1 and 2):

#1 - 6-ft. channel in back of tunnel, cutting three mineralized strands with visible iron oxides and copper oxides.
#2 - 16-inch channel in back of tunnel, across a mineralized strand.

#3 - 3-ft. channel in back of tunnel across a one-foot strand and adjacent breccia.
#4 - Picked sample from a few inches to six inches of mineralized breccia in a prospect pit at the East end of the entire zone.
#5 - Floor sample from the tunnel.
#6 - 1-1/4 inch hanging wall strand - upper glory hole.
#7 - 15-inch central waste horse - upper glory hole.
#8 - 1-1/2" footwall strand - upper glory hole.
#9 - 1-1/2" hanging wall strand - upper glory hole.
#10- 1 ft. 8 in. central waste horse - upper glory hole.
#11- 4-1/2 inch footwall strand - upper glory hole.

Respectfully submitted,

W.C. Peters
Registered Geological
Engineer (1965) Arizona

N M UEL COPPER CORPORATIO

MINE ASSAY CERTIFICATE

HEDRICK — COPPER ASSAY DATE 6-2-65

DATE	SAMPLE NO	CU % TOTAL	CU % OXIDE	CU % SULFIDE					
6-2-65	1.	0.34	0.22	0.12					
	2.	0.05	0.04	0.01					
	3.	0.18	0.12	0.06					
	4.	0.12	0.05	0.07					
	5.	0.51	0.38	0.13					
	6.	12.28	10.20	2.08					
	7.	0.96	0.73	0.23					
	8.	20.81	17.65	3.16					
	9.	0.84	0.60	0.24					
	10.	0.12	0.06	0.06					
	11.	11.26	9.75	1.51					

Don Hedrick 6-2-65

F-5C13

MAGMA COPPER COMPANY
SAN MANUEL DIVISION

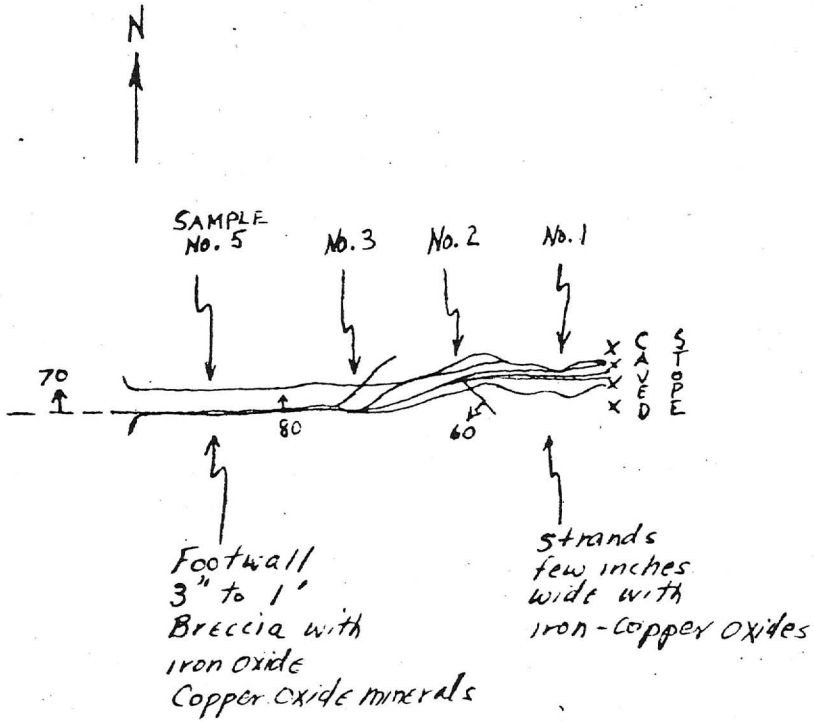
Mill Assay Certificate

HEDRICK — GOLD & SILVER Date 6--4-65

	Sample	Cu % Total	Cu % Oxide					
		Au	Ag					
	1.	NONE	1,40					
	2.	TRACE	105,20					
	3	NONE	5.50					
	4.	NONE	4.00					
	5.	NONE	4.86					
	6.	NONE	4.70					
	7.	NONE	10.70					
	8.	TRACE	299.20					
	9.	NONE	6.30					
	10.	NONE	1.00					
	11.	TRACE	96.80					

SMP 306

Don Hedrick



TUNNEL LEVEL

FORTUNA - ARIVAIPA METALS MINE

NW ¼ SEC. 2, T. 7 S. - R 17 E.

PINAL COUNTY, ARIZ.

SCALE 1" = 40 FT.

FORM 2A—0324—12-26-40—R

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Company **Hayden, Arizona,** April 13, 1923 **19**

Address Winkelman, Ariz. **Smelter Lot** 162

Shipping Point **Class** Crude ore **Shipper's Lot** 4

CAR		WEIGHT IN POUNDS					N. Y. QUOTATIONS
Number	Initial	Gross	Tare	Net	H₂O	Dry Weight	
81646	SP	72240	34820	37420	2.0	36672	Settlement Date 4-6-23
							Bill Lading Date
							Silver .99625
							Less
							Net
							Copper .169375
							Less .03
							Net .139375
			Tons			18.336	

PAYMENT FOR METALS									VALUE	
Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	121.0	Oz.				100	121.0	Oz.	.99625	120 55	
Copper	11.64	%	10.%	10.476	209.52	100	209.52	Lbs.	.139375	29 20	
		%						Lbs.			

Total Payment of Metals

FORM 2A—0324—12-26-40—R

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Co. **Hayden, Arizona,** 5-1-23 **, 19**

Address Winkelman, Arizona **Smelter Lot** 245

Shipping Point **Class** Crude **Shipper's Lot** 5

CAR		WEIGHT IN POUNDS					N. Y. QUOTATIONS
Number	Initial	Gross	Tare	Net	H₂O	Dry Weight	
33206	SLT	75460	42100	33360	2.4	32559	Settlement Date 5-1-23
							Bill Lading Date
							Silver 99.625
							Less
							Net
							Copper .165
							Less .03
							Net .135
			Tons			16.2795	

PAYMENT FOR METALS									VALUE	
Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	175.2	Oz.				100	175.2	Oz.	.99625	174 51	
Copper	13.7	%	10.0%	12.33	246.6	100	246.6	Lbs.	.135	33 29	
		%						Lbs.			

Total Payment of Metals 207 83

Debits Credits

FORM 2A—9324—12-26-40—R & G

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

COPY

Shipper Fortuna Mining Company Hayden, Arizona, 2-6-23, 19

Address Winkelman, Arizona Smelter Lot 59

Shipping Point Class Crude Shipper's Lot 3

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight
Trucked		30736	310	30426	3.5	29361
			Tons			14.6805

N. Y. QUOTATIONS

Settlement Date 2-6-23

Bill Lading Date

Silver 99.625

Less

Net

Copper .1475

Less .03

Net .1175

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	249.6	Oz.				100	249.3	Oz.	.99625	248 66	
Copper	17.55	%	10.3	15.615	312.3	100	312.3	Lbs.	.1175	36 70	
		%						Lbs.			
									Total Payment of Metals		285 36

CHARGES AND CREDITS Debits Credits

FORM 2A—1213—4-29-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Fortuna Mining Co., Hayden, Arizona, Nov. 13, 19 22

Address Foldman, Ariz. Smelter Lot 228

Shipping Point Cander Class Crude Shipper's Lot 2

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight
		18358	186	18172	3.1	17589
			Tons			8.7945

N. Y. QUOTATIONS

Settlement Date 11-11-22

Bill Lading Date

Silver 99.25

Less

Net

Copper .1355

Less .03

Net .1055

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold	3.0	Oz.						Oz.			
Silver	158.40	Oz.				100		Oz.	.9925	157 21	
Copper	12.00	%	10.0%	10.8	216	100	216	Lbs.	.1055	22 79	
								Lbs.			

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper J. M. Douglas Hayden, Arizona, [illegible] 2, 19[illegible]19

Address Feldman, Ariz. Smelter Lot 151

Shipping Point ..... Class Crude Shipper's Lot 1

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
Truck		17140	127	17013	3.3	16458	Settlement Date 9-30-[illegible]
							Bill Lading Date
							Silver 99.25
							Less
							Net
							Copper .1375
							Less .03
							Net .1075
			Tons			8.229	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	132.3	Oz.				100	132.3	Oz.	.9884	131 81	
Copper	10.0	%	10.0%	9.00	180	100	180.0	Lbs.	.1075	19 35	
		%						Lbs.			
									Total Payment of Metals		151 66

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Aravaipa Metals Company Hayden, Arizona, July 30th 1924., 19

Address Winkelman, Arizona Smelter Lot 345

Shipping Point ..... Class Crude Shipper's Lot 4

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
[illegible]3223	SP	51880	41520	10360 0	1.0	10256	Settlement Date 7-30-24
							Bill Lading Date
							Silver .68
							Less
							Net
							Copper .1265
							Less .03
							Net .0965
			Tons	5.18		5.128	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	108.00	Oz.				100	108.0	Oz.	.68	73 44	
Copper	8.62	%	10%	7.758	155.16	100	155.16	Lbs.	.0965	14 97	
		%						Lbs.			
									Total Payment of Metals		88 41

CHARGES AND CREDITS Debits Credits

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper: Fortuna Mining Company — Hayden, Arizona, September 28, 19[illegible], 19

Address: Winkelman, Arizona — Smelter Lot: 762

Shipping Point: — Class: Crude ore — Shipper's Lot: 8

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
61561	MC	81380	42980	38400	1.8	37709	Settlement Date 9-25-2[illegible]
							Bill Lading Date
							Silver .6525
							Less
							Net
							Copper .130625
							Less .0290
							Net .101625
			Tons	19.2		18.8545	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	134.00	Oz.				100	134.00	Oz.	.6525	87 44	
Copper	10.72	%	10%	9.648	192.96	100	192.96	Lbs.	.101625	19 61	
		%						Lbs.			
							Total Payment of Metals				107 [illegible]

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper: Arivaipa Metals Co. — Hayden, Arizona, 12-1[illegible], 19

Address: Winkelman, Ariz. — Smelter Lot: 989

Shipping Point: — Class: Crude ore — Shipper's Lot: 1

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
28431	SP	71100	42800	28300	1.8	27791	Settlement Date 1[illegible]-6-23
							Bill Lading Date
							Silver .64625
							Less
							Net
							Copper .12875
							Less .03
							Net .09875
			Tons				

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	62.50	Oz.				100	62.50	Oz.	.64625	40 39	
Copper	7.53	%	10%	6.777	135.54	100	135.54	Lbs.	.09875	13 38	
		%						Lbs.			
							Total Payment of Metals				53 77

FORM 2A—1213—4-19-40—R & G

AMERICAN SMELTING AND REFINING COMPANY

COPY

HAYDEN PLANT

Shipper Aravaipa Metals Company **Hayden, Arizona,** June 3rd, 1924, **19**

Address Winkelman, Arizona **Smelter Lot** 232

Shipping Point **Class** Crude **Shipper's Lot** 3

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
1348	AE	53980	41900	12080	1.0	11959	Settlement Date 6-3-24
							Bill Lading Date
							Silver .67125
							Less
							Net
							Copper .125
							Less .03
							Net .095
		Tons	6.04			5.9795	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	91.60	Oz.				100	91.60	Oz.	.67125	61 49	
Copper	14.15	%	10%	12.735	254.7	100	254.7	Lbs.	.095	24 20	
		%						Lbs.			
							Total Payment of Metals				85 69

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Aravaipa Metals Co. **Hayden, Arizona,** March 8, 1924, **19**

Address Winkelman, Ariz. **Smelter Lot** 93

Shipping Point **Class** Crude **Shipper's Lot** 3

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
6468	EWD	57960	37820	20140	1.8	19777	Settlement Date 3-4-24
							Bill Lading Date
							Silver .63875
							Less
							Net
							Copper .1375
							Less .03
							Net .0975
		Tons	10.07			9.8885	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	106.60	Oz.				100	106.60	Oz.	.63875	68 08	
Copper	14.85	%	10%	13.365	267.3	100	267.3	Lbs.	.0975	26 06	
		%						Lbs.			
							Total Payment of Metals				94 15

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Co. **Hayden, Arizona,** 5/31/23, **19**

Address Winkelman, Arizona **Smelter Lot** 366

Shipping Point **Class** Crude **Shipper's Lot** 6

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
11005	HTC	66560	41640	24920	1.1	24646	Settlement Date 5/31/23
							Bill Lading Date
							Silver .99625
							Less
							Net
							Copper .151875
							Less .03
							Net .121875
			Tons	12.46		12.323	

PAYMENT FOR METALS — **VALUE**

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	140.00	Oz.				100	140.00	Oz.	.99625	139 48	
Copper	12.22	%	10%	10.998	219.96	100	219.96	Lbs.	.121875	26 81	
		%						Lbs.			

S & G

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Fortuna Minin Company **Hayden, Arizona,** 8/8, **19** 23

Winkelman, Arizona **Smelter Lot** 614

Shipping Point **Class** Crude ore **Shipper's Lot** 7

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
16774	SP	71440	43660	27780	3.2	26891	Settlement Date 8-9
							Bill Lading Date
							Silver .1425
							Less .03
							Net .1125
							Copper
							Less
							Net
			Tons	13.89		13.4455	

PAYMENT FOR METALS — **VALUE**

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	107.50	Oz.				100	107.50	Oz.	.6275	67 46	
Copper	10.62	%	10%	9.558	191.16	100	191.16	Lbs.	.1125	21 51	
		%						Lbs.			

Total Payment of Metals 88 97

CHARGES AND CREDITS

	Debits	Credits
BASE CHARGE: F.O.B. Hayden for Metal Payments, not exceeding $.....per ton	7 50	

WILLIAM C. PETERS
MINING GEOLOGIST
5702 East 7th. Street
Tucson, Arizona

June 2, 1965

MEMORANDOM REPORT

To: Mr. W.G. Rich and Mr. James Hedrick
Subject: The Fortuna Mining Company (Arivaipa Metals) Mine
Pinal County, Arizona.

As a result of my May 29th. examination of your mine in the N.W. quarter of section 2, township 7 South, Range 17 East, Old Hat District, Arizona, I can make the following statements:

1. The ore-bearing structure is a persistent and quite uniform fault zone which can be traced as a brecciated zone with weak mineralization for at least 2000 feet. Figure 1 shows the location of the prospect pits on the East and West ends of the zone and shows the structure striking N 85° E and dipping 70° to 80° North as it passes through the mine.

The structure intersects diabase and quartzite. Mineralization seems to be about the same in both rock types although the daylight stope in quartzite suggests that the quartzite may be slightly more favorable. The ore-bearing parts of the structure appear to be similar in every locality examined; that is, a hanging wall or a footwall strand of oxidized copper-silver ore with occasional stringers branching on to the opposite wall - thus in many places there is both a hanging wall and a footwall strand. The strands we noted and sampled appeared to be a few inches in thickness with a weakly mineralized central zone of several feet in thickness. The assay results will tell us the grade of the stringers and the central zone.

The very uniformity and continuity of the structure suggests that the mined portions of the ore shoots were not more than twice or, at most, three times thicker than the pillars and stope faces remaining. There are no major cross-structures or favorable beds as near as I can tell. This means that there is no reasonable possibility for a better ore shoot than that already mined.

2. You have the record of smelter returns from shipments made in 1922-1924. There were probably some earlier shipments made as well. In any event, the dumps are large in comparison to the known stopes - this indicates a great deal of hand-sorting. I estimate that the tonnage above the tunnel level, mostly stoped out should be about 2000 tons of

ore plus 10,000 tons of waste. The old miners seemed to stop mining when they got to more than about a 5 to 1 waste to ore sorting ratio.

3. I estimate that the tonnage below the tunnel level and above the floor of the gulch should be about 1200 to 2500 tons of ore plus about five times that much waste, taking a four-foot mining width.

4. The feasibility of developing and stoping ore from the area below the tunnel will be entirely determined by the assay results. The following minima are suggested:

a. Ore at $25 per ton or better assay value over a mining width of four feet.
b. Ore at $50 per ton or better assay value over a width of one foot with hand sorting required.
c. Ore at $80 per ton or better assay value over a width of six inches with very clean hand sorting (ratio 7 to 1).

5. If the assay results are favorable and above the minima outlined in item #4, I would suggest the following procedure:

a. Take out one stope round in the best assay area, hand sort it on the basis of the known hanging and footwall strands being ore. Estimate the ratio of waste to ore after sorting. Break the ore into pieces not larger than 1/2 inch, quarter it several times, and have it assayed. Note the time and expense of the stope round and consider that the best ore will be two or, at most, three times the width mined. The grade should be the same.
b. If the test round indicates a favorable return for time and money, begin a drift from the floor of the gulch and on the structure pointed out on May 29th. This portal site will be subject to floods and will be hard to make dump room, but it is the only site left.

6. I would not suggest tunneling at any other point on the 2000 feet of exposure. An occasional trench would be of interest, but I would not spend much money on it.

7. Samples were taken for assay at the following points (see figures 1 and 2):

#1 - 6-ft. channel in back of tunnel, cutting three mineralized strands with visible iron oxides and copper oxides.
#2 - 16-inch channel in back of tunnel, across a mineralized strand.

#3 - 3-ft. channel in back of tunnel across a one-foot strand and adjacent breccia.
#4 - Picked sample from a few inches to six inches of mineralized breccia in a prospect pit at the East end of the entire zone.
#5 - Floor sample from the tunnel.
#6 - 1-1/4 inch hanging wall strand - upper glory hole.
#7 - 15-inch central waste horse - upper glory hole.
#8 - 1-1/2" footwall strand - upper glory hole.
#9 - 1-1/2" hanging wall strand - upper glory hole.
#10- 1 ft. 8 in. central waste horse - upper glory hole.
#11- 4-1/2 inch footwall strand - upper glory hole.

Respectfully submitted,

W.C. Peters
Registered Geological
Engineer (1965) Arizona

SAN M[illegible]UEL COPPER CORPORATION

MINE ASSAY CERTIFICATE

HEDRICK — COPPER ASSAY DATE 6-2-65

DATE	SAMPLE NO	CU % TOTAL	CU % OXIDE	CU % SULFIDE					
6-2-65	1.	0.34	0.22	0.12					
	2.	0.05	0.04	0.01					
	3.	0.18	0.12	0.06					
	4.	0.12	0.05	0.07					
	5.	0.51	0.38	0.13					
	6.	12.28	10.20	2.08					
	7.	0.96	0.73	0.23					
	8.	20.81	17.65	3.16					
	9.	0.84	0.60	0.24					
	10.	0.12	0.06	0.06					
	11.	11.26	9.75	1.51					

Don Hedrick 6-2-65

F-SC13

MAGMA COPPER COMPANY
SAN MANUEL DIVISION

Mill Assay Certificate

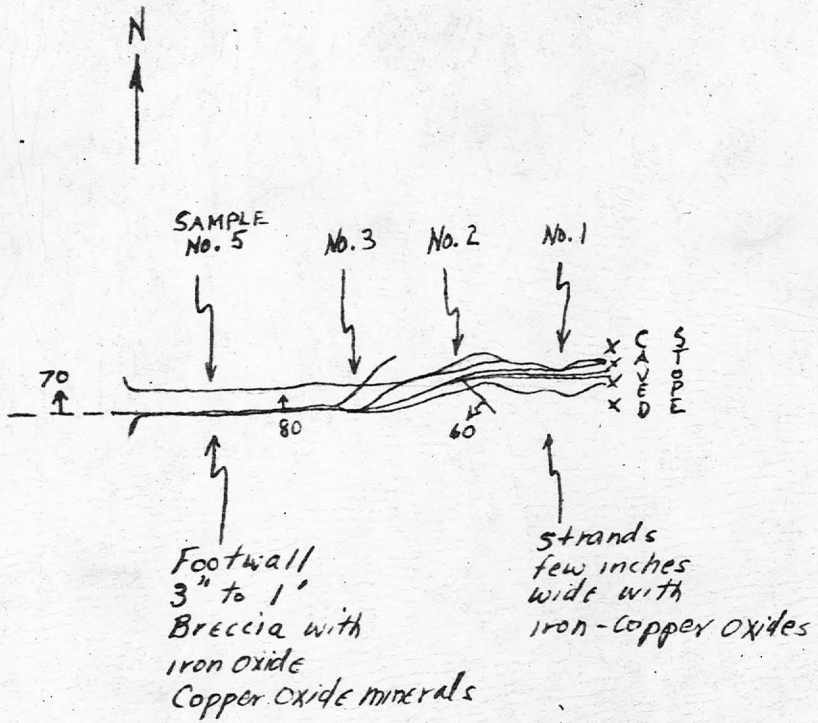
HEDRICK — GOLD & SILVER Date 6-4-65

	Sample	Cu % Total	Cu % Oxide					
		Au	Ag					
	1.	NONE	1,40					
	2.	TRACE	105,20					
	3	NONE	5.50					
	4.	NONE	4.00					
	5.	NONE	4.86					
	6.	NONE	4.70					
	7.	NONE	10.70					
	8.	TRACE	299.20					
	9.	NONE	6.30					
	10.	NONE	1.00					
	11.	TRACE	96.80					

SMP 306

Don Hedrick

Chief Chemist



TUNNEL LEVEL
FORTUNA-ARIVAIPA METALS MINE
NW ¼ SEC. 2, T. 7 S. - R 17 E.
PINAL COUNTY, ARIZ.

SCALE 1" = 40 FT.

FORM 2A—9324—12-26-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Fortuna Mining Company **Hayden, Arizona,** April 13, 1923 **19**

Address Winkelman, Ariz. **Smelter Lot** 162

Shipping Point **Class** Crude ore **Shipper's Lot** 4

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight
81646	SP	72240	34820	37420	2.0	36672
			Tons			18.336

N. Y. QUOTATIONS

Settlement Date 4-6-23
Bill Lading Date

Silver .99625
Less
Net
Copper .169375
Less .03
Net .139375

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	121.0	Oz.				100	121.0	Oz.	.99625	120 55	
Copper	11.64	%	10.%	10.476	209.52	100	209.52	Lbs.	.139375	29 20	
		%						Lbs.			

Total Payment of Metals

FORM 2A—9324—12-26-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Fortuna Mining Co. **Hayden, Arizona,** 5-1-23 **, 19**

Address Winkelman, Arizona **Smelter Lot** 245

Shipping Point **Class** Crude **Shipper's Lot** 5

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight
33206	MT	75460	42100	33360	2.4	32559
			Tons			16.2795

N. Y. QUOTATIONS

Settlement Date 5-1-23
Bill Lading Date

Silver 99.625
Less
Net
Copper .165
Less .03
Net .135

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	175.2	Oz.				100	175.2	Oz.	.99625	174 54	
Copper	13.7	%	10.0%	12.33	246.6	100	246.6	Lbs.	.135	33 29	
		%						Lbs.			

Total Payment of Metals 207 83

CHARGES AND CREDITS | Debits | Credits

FORM 2A—9324—12-26-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Company Hayden, Arizona, 2-6-23, 19

Address Winkelman, Arizona Smelter Lot 59

Shipping Point Class Crude Shipper's Lot 3

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
Truckload		30736	310	30426	3.5	29361	Settlement Date 2-6-23
							Bill Lading Date
							Silver 99.625
							Less
							Net
							Copper .1475
							Less .03
							Net .1175
			Tons			14.6805	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	249.6	Oz.				100	249.6	Oz.	.99625	248 66	
Copper	17.55	%	10.%	15.615	312.3	100	312.3	Lbs.	.1175	36 70	
		%						Lbs.			
									Total Payment of Metals		285 36

CHARGES AND CREDITS

FORM 2A—1213—4-30-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Co., Hayden, Arizona, Nov. 16, 1922

Address Foldman, Ariz. Smelter Lot 228

Shipping Point Gender Class Crude Shipper's Lot 2

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
		18338	186	18152	3.1	17589	Settlement Date 11-11-22
							Bill Lading Date
							Silver 99.25
							Less
							Net
							Copper .1355
							Less .03
							Net .1055
			Tons			8.7545	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold	0.0	Oz.						Oz.			
Silver	158.40	Oz.				100		Oz.	.9925	157 21	
Copper	12.00	%	10.0%	10.8	216	100	216	Lbs.	.1055	22 79	
		%						Lbs.			
											180 00

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper J. M. Douglas Hayden, Arizona, October 2, 1923

Address Feldman, Ariz. Smelter Lot 161

Shipping Point Class Crude Shipper's Lot 1

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
Trucked		17140	127	17013	3.3	16452	Settlement Date 9-30-23
							Bill Lading Date
							Silver 99.25
							Less
							Net
							Copper .1375
							Less .03
							Net .1075
			Tons			8.226	

PAYMENT FOR METALS Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	132.3	Oz.				100	132.3	Oz.	.9934	131 31	
Copper	10.0	%	10.0%	9.00	180	100	180.0	Lbs.	.1075	19 35	
		%						Lbs.			
									Total Payment of Metals		151 66

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Aravaipa Metals Company Hayden, Arizona, July 30th 1924., 19

Address Winkelman, Arizona Smelter Lot 345

Shipping Point Class Crude Shipper's Lot 4

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H_2O	Dry Weight	N. Y. QUOTATIONS
85963	SP	51880	41520	10360 0	1.0	10256	Settlement Date 7-30-24
							Bill Lading Date
							Silver .68
							Less
							Net
							Copper .1265
							Less .03
							Net .0965
			Tons	5.18		5.128	

PAYMENT FOR METALS Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	108.00	Oz.				100	108.0	Oz.	.68	73 44	
Copper	8.62	%	10%	7.758	155.16	100	155.16	Lbs.	.0965	14 97	
		%						Lbs.			
									Total Payment of Metals		88 41

CHARGES AND CREDITS | Debits | Credits

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Fortuna Mining Company **Hayden, Arizona,** September 28, 1923 **, 19**

Address Winkelman, Arizona **Smelter Lot** 762

Shipping Point **Class** Crude ore **Shipper's Lot** 8

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight
61561	NC	81380	42980	38400	1.8	37709
		Tons		19.2		18.8545

N. Y. QUOTATIONS

Settlement Date 9-25-23
Bill Lading Date

Silver .6525
Less
Net
Copper .130625
Less .0290
Net .101625

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	134.00	Oz.				100	134.00	Oz.	.6525	87 44	
Copper	10.72	%	10%	9.648	192.96	100	192.96	Lbs.	.101625	19 61	
		%						Lbs.			
							Total Payment of Metals				107 05

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Arivaipa Metals Co. **Hayden, Arizona,** 12-17 **, 19**

Address Winkelman, Ariz. **Smelter Lot** 989

Shipping Point **Class** Crude ore **Shipper's Lot** 1

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight
28431	SP	71100	42800	28300	1.8	27791
		Tons				

N. Y. QUOTATIONS

Settlement Date 1-6-23
Bill Lading Date

Silver .64625
Less
Net
Copper .12875
Less .03
Net .09875

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	62.50	Oz.				100	62.50	Oz.	.64625	40 39	
Copper	7.53	%	10%	6.777	135.54	100	135.54	Lbs.	.09875	13 38	
		%						Lbs.			
							Total Payment of Metals				53 77

CHARGES AND CREDITS Debits Credits

FORM 2A—1213—4-19-40—R & G

AMERICAN SMELTING AND REFINING COMPANY

COPY

HAYDEN PLANT

Shipper Aravaipa Metals Company **Hayden, Arizona,** June 3rd, 1924, **19**

Address Winkelman, Arizona **Smelter Lot** 232

Shipping Point **Class** Crude **Shipper's Lot** 3

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
1348	AE	53980	41900	12080	1.0	11959	Settlement Date 6-3-24
							Bill Lading Date
							Silver .67125
							Less
							Net
							Copper .125
							Less .03
							Net .095
		Tons	6.04			5.9795	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	91.60	Oz.				100	91.60	Oz.	.67125	61 49	
Copper	14.15	%	10%	12.735	254.7	100	254.7	Lbs.	.095	24 20	
		%						Lbs.			
									Total Payment of Metals		85 69

FORM 2A—1213—4-19-40—R & G

COPY

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

Shipper Aravaipa Metals Co. **Hayden, Arizona,** March 4, 1924, **19**

Address Winkelman, Ariz. **Smelter Lot** 98

Shipping Point **Class** Crude **Shipper's Lot** 2

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
6468	EWD	57960	37820	20140	1.8	19777	Settlement Date 3-4-24
							Bill Lading Date
							Silver .63875
							Less
							Net
							Copper .1275
							Less .03
							Net .0975
		Tons	10.07			9.8885	

PAYMENT FOR METALS

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	VALUE Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	106.60	Oz.				100	106.60	Oz.	.63875	68 09	
Copper	14.85	%	10%	13.365	267.3	100	267.3	Lbs.	.0975	26 06	
		%						Lbs.			
									Total Payment of Metals		94 15

COPY

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Shipper Fortuna Mining Co. Hayden, Arizona, 5/31/23, 19

Address Winkelman, Arizona Smelter Lot 366

Shipping Point Class Crude Shipper's Lot 6

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
11005	HTC	66560	41640	24920	1.1	24646	Settlement Date 5/31/23
							Bill Lading Date
							Silver .99625
							Less
							Net
							Copper .151875
							Less .03
							Net .121875
		Tons	12.46			12.323	

PAYMENT FOR METALS / VALUE

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	140.00	Oz.				100	140.00	Oz.	.99625	139 48	
Copper	12.22	%	10%	10.998	219.96	100	219.96	Lbs.	.121875	26 81	
		%						Lbs.			

AMERICAN SMELTING AND REFINING COMPANY
HAYDEN PLANT

Fortuna Minin Company Hayden, Arizona, 8/8, 19 23

Winkelman, Arizona Smelter Lot 614

Shipping Point Class Crude ore Shipper's Lot 7

CAR Number	CAR Initial	WEIGHT IN POUNDS Gross	Tare	Net	H₂O	Dry Weight	N. Y. QUOTATIONS
16774	SP	71440	43660	27780	3.2	26891	Settlement Date 8-9
							Bill Lading Date
							Silver .1425
							Less .03
							Net .1125
							Copper
							Less
							Net
		Tons	13.89			13.4455	

PAYMENT FOR METALS / VALUE

Elements	Assay Per Ton of 2000 Lbs.		Deducted	Net Assay	Equiv. in Lbs.	% Paid For	Net Paid For		Rate	Amount per Ton	Total Amount
Gold		Oz.						Oz.			
Silver	107.50	Oz.				100	107.50	Oz.	.6275	67 46	
Copper	10.62	%	10%	9.558	191.16	100	191.16	Lbs.	.1125	21 51	
		%						Lbs.			
									Total Payment of Metals		88 97

CHARGES AND CREDITS

	Debits	Credits
BASE CHARGE: F.O.B. Hayden for Metal Payments, not exceeding $ ..... per ton	7 50	
% of $		