

CONTACT INFORMATION Mining Records Curator Arizona Geological Survey 416 W. Congress St., Suite 100 Tucson, Arizona 85701 602-771-1601 http://www.azgs.az.gov inquiries@azgs.az.gov

The following file is part of the Arimetco, Inc. 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.

ORE RESERVE ESTIMATE AND MINE PLAN FOR THE ZONIA PROJECT YAVAPAI COUNTY, ARIZONA

Prepared for:

Arimetco International, Inc.

Prepared by:

-

Mine Reserves Associates, Inc. 2700 Youngfield Street, Suite 250 Lakewood, Colorado 80215 Phone: (303) 231-9446 FAX: (303) 232-5946

February 8, 1994

TABLE OF CONTENTS

		æ
1.0	Executive Summary	1
2.0	Introduction	2
3.0	Data Base	2
4.0	Geostatistical Analysis	3
5.0	Computer Model	4
6.0	Geologic Resource	6
7.0	Minable Reserves	7
	7.1 Floating Cone Evaluation	7
	7.2 Pit Design	7
	7.3 Minable Reserves	9
	7.4 Reserve Classification	9
8.0	Production Schedule	9
9.0	Conclusions and Recommendations 1	0

Appendix - Production Schedule Detailed Listing

1.0 EXECUTIVE SUMMARY

An ore reserve estimate and a mine plan were prepared at the request of ARIMETCO INTERNATIONAL INC. for their Zonia Project in Yavapai County, Arizona. The Zonia porphyry copper deposit contains disseminated mineralization amenable to open pit bulk tonnage mining methods and recovery by the solvent extraction electrowinning process.

A computer model of the deposit was constructed from drilling and topographic information and was used as the basis for the reserve and mine planning study. Total copper grades were estimated in the model by the geostatistical "Outlier Restricted Kriging" method. The ultimate pit limits were determined by the floating cone technique and were based on a Cu price of \$0.85 per pound, a 70% metallurgical recovery, and operating costs reflecting Arimetcos' experience at their other operating properties. The reserves and production schedule presented in this report are from a final pit design which includes haul roads, catch benches, pit wall smoothing, and equipment working considerations.

The reserves reported below are minable, diluted, proven plus probable oxide ore with no metallurgical recovery applied and are based on a tonnage factor of 12.5 cubic feet per ton. All tons are short tons, grade is in percent total Cu, and dollars are U.S. dollars.

Zonia Project <u>Minable Reserves</u>

Cutoff Grade	0.14	%Total	Cu
Tons Of Ore	47,253,000		
Average Grade	0.33	%Total	Cu
Pounds Of Copper	311,869,000		
Tons Of Waste	22,363,000		
Stripping Ratio	0.47:1		

Mine Reserves Associates

2.0 INTRODUCTION

ARIMETCO INTERNATIONAL INC. retained MINE RESERVES ASSOCIATES, INC (MRA) to prepare an ore reserve estimate and mine plan for their Zonia copper deposit. The property is a mixture of both patented and unpatented mining claims and is located approximately 20 miles south of Prescott, and 6 miles east of Kirkland Junction in Yavapai County, Arizona.

The area has a past mining history with underground production of direct shipping ore in the 1880s. In the first part of this century, the property saw considerable exploration and drilling by a number of companies and by the U.S. Bureau Of Mines. In 1966 the mine was opened and operated by McAlester Fuel Co. as a full scale open pit mine using heap leach and cement copper processing technology. Recorded production was 30 million pounds of copper from 7.1 million tons of oxide ore grading approximately 0.4% copper. The mine was closed in 1975 due to depressed copper prices and has been inactive since that time.

The deposit is of the "porphyry copper" type and is hosted primarily in a hydrothermally altered quartz monzonite porphyry which intruded older metamorphosed paleosediments, volcanics, and granites occurring along a northeast trending Precambrian shist belt. Alteration halos and mineralization extend into the intruded rocks but the bulk of the deposit is contained in the quartz monzonite. Oxide copper mineralization is the only economic target as molybdenum grades are low and lead, zinc, gold, and silver occur only in trace amounts. Oxidation is several hundred feet deep in the area and the deposit ore zone has been somewhat enhanced by supergene enrichment.

The scope of work for this project included a review of the drillhole data base, a geostatistical analysis, construction of a computer model, estimation of minable reserves, a mine design with phased mine plans, and a mining production schedule by period.

3.0 DATA BASE

The data base for Zonia incorporated information compiled from a number of drilling campaigns by various companies over the years. Data were included from earlier holes completed by Miami Copper Co., U.S. Bureau Of Mines, Bunker Hill And Sullivan Co., Homestake Mining Co., and from the more recent drilling by MacAlester Fuel Co. Out of the 370 total holes present, 285 came from the MacAlester Fuel Co. files and were drilled just prior to or during

Mine Reserves Associates

the time the mine was in production. There are a total of approximately 85,500 feet of drilling represented by 15400 individual copper assays (see Figure No. 3.1). Of the holes drilled on the property, eleven were diamond core, and the remainder were drilled by the open hole rotary method. All assays were taken at face value as duplicate or check assays were not available for use in determining accuracy and precision in the sampling and assaying procedures.

A special adjustment was made at this time to the assays from some of the drilling in the in-situ leach areas. By way of background, MacAlester Fuel Co. attempted to in-situ leach several areas in the pit floor by using heavy blasting to fracture the rock and then circulating an acidic fluid to dissolve the copper minerals which were then recovered from the return solution. The areas contain both pre and post in-situ drilling information and a comparison was made to determine the copper resource depleted by leaching. Average assays from the pre leach vrs. the post leach drilling indicate a grade loss in the range of 20 to 25 percent. To accommodate this loss and to still use the pre leach drilling in the computer model construction, the pre leach drilling grades were reduced by 30 percent.

Stored in the data base are the drillhole collar positions and elevations, the downhole from - to footages, total copper grades and acid soluble copper grades where available, zone codes representing leach dumps, in-situ leach areas, and areas delineating ore grade material. A topographic map of the present as-mined surface was digitized and a contour plot was made and checked against the original to insure an accurate surface representation for the model.

Assay intervals were next weight averaged to 40 foot composites to simulate a mining bench height. The 40 foot height was selected as it offers the best trade-off between economy of scale achieved with larger equipment and the required mining selectivity for adequate grade control.

4.0 <u>GEOSTATISTICAL ANALYSIS</u>

The initial step in this study was to gain a basic understanding of the copper grade population in the deposit. Only total copper grades were considered in this study and the following modelling exercise as there are only a small number of acid soluble assays available. A frequency distribution histogram of the total Cu composite grades was calculated and plotted as Figure No. 4.1. Summary statistics are displayed below.





<u>Cutoff</u>	No. of <u>Samples</u>	% Composites <u>Above Cutoff</u>	Average <u>Grade</u>	Std. <u>Dev.</u>	Coeff. of <u>Variation</u>
0.00	2015	100.0	0.27	0.23	0.85
0.10	1631	80.9	0.32	0.23	
0.20	1142	56.7	0.40	0.23	
0.30	708	35.1	0.50	0.25	
0.40	403	20.0	0.61	0.27	

The coefficient of variation shown above reflects relatively low grade variability and suggests that linear kriging would provide a reasonable grade estimate for this deposit. However, Figure No. 4.2, a log transform cumulative probability graph of the composite grades which should plot as a straight line if the samples represent a lognormal distribution, shows a change in the slope of the plotted line at 0.2 TCu percent. This break in the population, which may represent separate mineralizing events, requires that the two halves of the population be estimated individually to achieve the best result. Given this situation, a modified single indicator method was selected as a more appropriate approach for this modelling exercise. The technique known as "Outlier Restricted Kriging" (ORK) is less comprehensive than a full indicator method, but still has the advantage of being able to adjust the model to correctly contain and portray the higher grade zones while preventing the spreading of this material to the lower grade areas.

Absolute variograms were calculated to determine the orientation and continuity ranges of the Cu mineralization (see Figures No. 4.3 and 4.4). The primary or strike direction was found to be 0 degrees azimuth with a plunge of 30 degrees to the South and a range of 170 feet. The secondary direction at 90 degrees azimuth and 0 degrees dip shows a range of 148 feet. The vertical range is 190 feet. A spherical model was fit to the primary variogram with the following parameters selected:

Nugget	-	0.00024
Sill	=	0.05679
Range(1)	=	170
Range(2)	=	148
Range(3)	=	190

5.0 COMPUTER MODEL

The computer model constructed for the Zonia project has the following dimensions and specifications:

Mine Reserves Associates

FIGURE 4.2



ZONIA - %TCU ZONE 4.5

....

FIGURE 4.3



FIGURE	4.4
--------	-----



Minimum Easting	=	8000
Maximum Easting	=	13000
Minimum Northing	=	5000
Maximum Northing	=	14000
Minimum Elevation	=	4200
Maximum Elevation	=	5000
Grid size in plan		50 x 50
Number of rows	=	180
Number of columns	=	100
Bench Height	=	40
No. of benches	=	20

The as-mined topographic surface and zone codes representing leach pad, in-situ leach areas, and ore grade zones above a 0.10 cu grade cutoff were initially loaded into the model blocks. Normally, geologic rock types and structural boundaries would be used to control grade interpolation, but since this information was not yet compiled for the project, the zone codes were used to control the grade assignments. The ORK method provides a further interpolation constraint by maintaining the integrity of the higher grades areas while preventing the type of smoothing and high grade spreading associated with uncontrolled linear kriging.

The ORK process first requires the identification and separation of the high and low grades segments of the population. An identifying indicator is assigned to each composite grade such that composite values greater than 0.20 percent Cu received a one(1), and values less than 0.20 were assigned a zero(0). The next step is to calculate and store in each block the probability or proportion of the block that is expected to contain the higher grade material. This is accomplished by first calculating indicator variograms to determine a direction and range for the higher grade segment of the population (see Figures No. 5.1, 5.2, and 5.3). The high grade proportion of the block is then calculated by kriging the composite indicators falling within the search radius around the block. Since the indicators are either zero or one, the result must fall somewhere in that range and can be considered as a percentage of the block between zero and 100 percent.

Block grades are next estimated by using ORK to assign weights to all the composite data points in the search envelope so that the higher grade weights (equal to the percentage of the block determined by the above described method) plus the lower grade weights sum to 1 thus insuring an unbiased estimator. The search envelope used for this block grade estimation was oriented to reflect the grade variogram directions and ranges previously noted in the section on geostatistics. The major axis was aligned N-S with a range of 170 feet and the minor E-W axis had a range of 148 feet. The vertical search was held to 80 feet to avoid excessive smoothing. A minimum of 2 and a maximum of 10 composites were

Mine Reserves Associates

FIGURE 5.1



FIGURE 5.2



FIGURE 5.3



required for block grade estimation. Also, the zone codes defining the in-situ leach areas and the delineated grade zones were estimated separately.

Bench maps showing composite Cu grades were plotted for a number of elevations to help visualize the geometry of the mineralization and to compare against block grade maps to check the grade assignments. These test benches showed good agreement between composites and block grades and the model was therefore judged reasonable and acceptable for further reserve work.

6.0 GEOLOGIC RESOURCE ESTIMATE

The estimated Zonia deposit geologic resource is summarized in the following table:

Zonia Geologic Resources (All Material)

<u>Cutoff (%TCu)</u>	Ktons	<u>Grade (%TCu)</u>
0.10	85,814	0.27
0.15	72,844	0.30
0.20	58,536	0.33
0.25	43,568	0.37
0.30	31,340	0.41

All resource and minable reserve estimates are based on a uniform tonnage factor of 12.5 ft^3/ton . Grades are reported in percent total copper (%TCu). The following lists the estimated inventory of in situ leached material that is contained within the mineralized inventory between levels 4440 and 4600:

Zonia Geologic Resources (In Situ Leached Only)

<u>Cutoff (%TCu)</u>	Ktons	<u>Grade (%TCu)</u>
0.10	4,026	0.32
0.15	3,495	0.35
0.20	2,978	0.38
0.25	2,549	0.41
0.30	2,108	0.43

Total in situ leached tonnages are estimated to be 5.963 million tons, based on the geologic interpretations provided by Arimetco.

7.0 MINABLE RESERVES

Economic open pit limits were evaluated using the floating cone algorithm. Three pit shells were developed at copper prices of \$0.75, \$0.85 and \$1.00 per pound, with the \$0.85 cone used as the basis for subsequent pit design. The extraction sequence within the economic pit limits is controlled by the deposit's geometry and the pit walls left from previous mining operations.

7.1 Floating Cone Evaluation

Three floating cone runs were made using the following slope and economic parameters derived from cost figures supplied by Arimetco:

Copper Recovery	70	%		
Freight & Refining Cost	\$ 0.065	1	lb Cu	
Mining Cost	\$ 0.68	1	ton of	material
Pad/Leach Cost	\$ 0.48	1	ton of	ore
Processing Cost	\$ 0.83	1	ton of	ore
G & A Cost	\$ 0.20	1	ton of	ore
Contingency	\$ 0.06	1	ton of	ore
Slope Angle (includes allowance				
for ramps within pit walls)	38	de	egrees	

Floating cone evaluations were made using copper prices of \$0.75, \$0.85 and \$1.00 per pound. The results are summarized below:

Cu	Cutoff	Or	e	Waste	Total	Strip
Price	<u>%TCu</u>	<u>Ktons</u>	%TCu	<u>Ktons</u>	<u>Ktons</u>	Ratio
\$0.75 \$0.85 \$1.00	0.164 0.143 0.120	35,192 45,488 60,064	0.36 0.34 0.31	11,112 16,608 25,192	46,304 62,096 85,256	0.36 0.37 0.42

7.2 Pit Design

The \$0.85/lb Cu floating cone pit shell was used as the basis for the design of the Zonia ultimate pit. Generally, pit walls above ramps were pushed outward to accommodate the 80 ft road width. The pit design criteria are listed below:

Bench Height	40	ft
Catch Bench Interval (vertical)	40	ft
Catch Bench Width (toe to crest)	21	ft
Bench Face Angle	65	0
Interramp Slope Angle	45	0
Road Width (including safety berm & ditch)	80	ft

Mine Reserves Associates

Maximum Road Gradient Minimum Phase Width (between new cuts)

10 % 160 ft

Figures 7-1 through 7-5 illustrate the five mining phases (i.e, pushbacks) developed for the Zonia deposit. Phase 1 represents a deepening of the existing pit in the northern half of the deposit. Very little preproduction stripping would be required and over half of the in situ leached material would be excavated during the development of this phase.

The mining sequence would shift to the south for Phase 2. The southern limits of the ultimate pit would be defined by this three million ton ore "pod". This pushback has the second lowest stripping ratio and would allow lengthening of the advanced stripping period required to expose sufficient quantities of ore in the very large Phase 3.

Phase 3 would expand the northern pit area outward in all directions. Pit walls would generally be pushed back a minimum of 160 ft on the west and east sides, and more to the north. Except for an isolated mineralized zone, the ultimate pit limits in the northern half of the Zonia deposit would be reached by the end of Phase 3. Most of the remaining in situ leached material would be mined in this pushback.

The southeast wall of Phase 3 between levels 4560 and 4760 has cuts that narrow down to 120 ft between the existing pit wall and the ultimate pit limits. These cuts would extend for a limited distance (500 to 1000 ft) and would be mostly in waste rock. Pushing the southeast wall back an additional 40 ft would add about a million tons of waste to the Phase 3 stripping. It was felt that the operating difficulties associated with a narrow, 120-ft cut could be endured for this limited area in order to save considerable stripping.

The fourth mining phase would develop a small, near surface ore zone in the extreme north part of the deposit. This zone is largely defined by the recently added McAlester Fuel Company drill holes.

The last pushback, Phase 5, would expand the main pit to the south, toward Phase 2. A couple of the upper benches of this phase would be prestripped by Phase 3 because of access considerations. Late development of Phase 5 would allow ample time for the relocation of a small section of an existing heap leach pad on the southwest side of the pit.

7.3 Minable Reserves

Tables 7.1 through 7.5 present the bench-by-bench minable reserve estimates for Phases 1 through 5, respectively. Table 7.6 summarizes the total minable reserves contained within the ultimate pit shown in Figure 7-5 (which was based on the \$0.85/lb Cu floating cone). Minable reserves would total 47.3 million tons grading 0.33% TCu above an internal cutoff grade of 0.14% TCu. About 22.4 million tons of waste and low grade material would be associated with this ore, for a stripping ratio of 0.47:1. All reserve estimates are based on a uniform tonnage of 12.5 ft³/ton for all rock types.

In situ leached material is contained within the area defined by Phases 1 and 3. All of this material lies between the 4440 and 4600 elevations.

7.4 Reserve Classification

Reserves for the Zonia project were classified into proven and probable categories along the guidelines set forth in the Canadian National Policy 2-A. Proven ore included blocks above the operational cutoff grade of 0.14% total Cu that were estimated from drillholes less than 112 feet away (half the omni-directional variogram range). Ore falling into the probable category included blocks greater than 112 feet away but less than 224 feet form a drillhole. There are no reserves in the possible category within the designed pit. Classified minable reserves containing only oxidized material are shown below:

Proven Ore:

Cutoff	0.14% TCu
Tons	41,621,000
Total Cu Grade	0.33%

Probable Ore:

Cutoff	Ē		0.14%	TCu
Tons			5,632,000	
Total	Cu	Grade	0.33%	

8.0 PRODUCTION SCHEDULE

A mine production schedule was developed to met the needs of an SX-EX plant having a refined copper production capacity of 50,000 pounds per day. It was assumed that, because of lag time in heap leach recoveries, the plant copper production would average

Mine Reserves Associates

about 40,000 pounds per day during the first year of operation. Table 8.1 summarizes the SX-EW plant refining schedule and the corresponding pit production requirements (in terms of contained copper delivered to the pads).

Recoveries were projected at 45% of the total contained copper in the first year of leaching, 15% in the second year, and 10% in the third year. Total recovery was capped at 70% of the total copper. (Metallurgical column testing of Zonia ores suggests heap leach recoveries in excess of 70%.)

Table 8.2 presents the resulting Zonia mine production schedule. Preproduction stripping would be minimal at only 130,000 tons to open up the first mining phase. Most of the work would involve internal pit ramp development.

A peak production rate of 6.9 million tons per year (total material) would be reached during Years 1-5. This production rate would be equivalent to about 19,000 tons per day for an operation scheduled seven days per week, or 26,500 tons per day for five days per week. The overall mining rate would then decrease to an annual rate of about 5.25 million tons for Years 6-11. Ore production would vary by year to match the SX-EW plant's capacity, accounting for changes in grade and the copper recovery lag time associated with heap leaching. Initial ore grades are projected at 0.35% TCu for the first three years.

Detailed material production listings on a phase/bench basis by time period are presented for this schedule in the accompanying Appendix. The production schedule listed in Table 8.2 suggests a mine life of nearly 12 years, based on known mineralization represented by the deposit model.

9.0 <u>CONCLUSIONS AND RECOMMENDATIONS</u>

The mine plan presented in this report substantially reduces the amount of waste mined from previous pit plans. This is evidenced by the reduction in the stripping ratio from 0.58:1 to the current estimate of 0.47:1. The previous pit plan contained an estimated 54.6 million tons of ore grading 0.29% TCu using a 0.12% TCu cutoff and was based on a copper price of \$1.00/lb. The current pit plan, based on a \$0.85/lb copper price, contains an estimate 47.3 million tons grading 0.33% TCu using a 0.14% TCu cutoff. Part of the 7.3 million ton difference is the result of smaller pit volumes and part is due to the increase in the internal cutoff grade associated with the lower copper price. The net value per ton of material mined has been improved.

The production schedule developed in this study indicates a mine life of almost 12 years. Additional drilling will likely add

Mine Reserves Associates

to the known mineral inventory by extending reserves along the prominent north-south trend and by deepening the relatively flat bottom pit in the northern half of the deposit. Initial head grades are estimated to be about 0.35% TCu (using a 0.14% TCu cutoff). Only 130,000 tons of preproduction stripping, excluding external road development, would be required to begin ore delivery to the pads.

The mine plan and production schedule are very workable projections. Minor changes to the design parameters can be easily accommodated given the low stripping ratio of the deposit.

Additional drilling on the north side of the deposit should be conducted to confirm the continuity of mineralization between Phases 3 and 4. While the present mine plan does not assume such continuity, the ultimate pit limits can be affected and should be finalized before stripping in Phase 3 reaches the 4520 level (late in Year 4). Also, more drilling on the floor of Phase 3 would likely add significant reserves to the deposit with minimal stripping and is therefore recommended. APPENDIX

Production Schedule Detailed Listing

TABLE 8.2 Arimetco International Zonia Project

Production Schedule Summary 50,000 lb/day SX-EW Plant

Time	Cutoff	off Ore		Waste	Total	Strip	
Period	%TCu	Ktons	%TCu	Ktons	Ktons	Ratio	
PP	0.143	0.	0.000	130.	130.	999.99	
1 2 3 4 5	0.143 0.143 0.143 0.143 0.143 0.143	4650. 4250. 3375. 3855. 4135.	0.349 0.350 0.347 0.338 0.323	2250. 2650. 3525. 3045. 2765.	6900. 6900. 6900. 6900. 6900.	0.48 0.62 1.04 0.79 0.67	
6 7 8 9 10	0.143 0.143 0.143 0.143 0.143	3815. 3930. 4070. 4230. 3875.	0.339 0.331 0.321 0.308 0.337	1435. 1320. 1180. 1020. 1369.	5250. 5250. 5250. 5250. 5244.	0.38 0.34 0.29 0.24 0.35	
11 12	0.143 0.143	3985. 3083.	0.327 0.321	1199. 475.	5184. 3558.	0.30	
Total		47253.	0.333	22362.	69616.	0.47	

Arimetco International Zonia Project

Production Schedule - Detailed Listing 50,000 lb/day SX-EW Plant

Time			<u>Ore (>= 0.</u>	<u>14%TCu)</u>	Waste	Total	Strip
Period	Phase	Bench	Ktons	%TCu	Ktons	Ktons	Ratio
•					-		
0	1	4680.	0.	.000	0.	0.	999.99
0	1	4640.	0.	.000	48.	48.	999.99
0	1	4600.	0.	.000	82.	82.	999.99
.0			0.	.000	130.	130.	999.99
-		4640	•				
1	Ţ	4640.	0.	.528	0.	0.	.00
Ţ	1	4600.	0.	.433	0.	0.	.00
1	1	4560.	356.	.295	171.	527.	.48
1	1	4520.	2200.	.358	438.	2638.	.20
1	1	4480.	1429.	.363	376.	1805.	.26
1	2	4760.	0.	.000	38.	38.	999.99
1	2	4720.	39.	.197	258.	297.	6.57
1	2	4680.	555.	.315	478.	1034.	.86
1	3	4760.	31.	.668	206.	236.	6.73
1	3	4720.	40.	.196	285.	324.	7.19
1			4650.	.349	2250.	6900.	.48
2	1	4480.	2337.	.363	301.	2638.	.13
2	1	4440.	1573.	.360	104.	1678.	.07
2	3	4720.	118.	.196	851.	970.	7.19
2	3	4680.	221.	.235	1394.	1615.	6.31
2			4250.	.350	2650.	6900.	.62
2		4440	1004				
3	1	4440.	1384.	.360	57.	1441.	.04
3	1	4400.	1083.	.389	2.	1085.	.00
3	3	4680.	25.	.235	159.	184.	6.31
3	3	4640.	263.	.248	1978.	2241.	7.53
3	3	4600.	620.	.293	1329.	1949.	2.14
			2205				
3			33/5.	.34/	3525.	6900.	1.04
4	1	4400	569	389	0	569	00
4	2	4640	772	306	525	1000	.00
Å	2	4600	528	.300	525.	1290.	.00
1	2	4600.	140	. 347	200.	128.	. 38
4	2	4000.	1645	.293	300.	440.	2.14
4	2	4500.	1045.	. 338	T830.	3541.	1.15
4	3	4520.	200.	.328	123.	324.	. 62
1			2055	220	2045	6000	
4			3033.	. 338	3045.	6900.	. 79

Arimetco International Zonia Project

Production Schedule - Detailed Listing 50,000 lb/day SX-EW Plant

Time		_	<u>Ore (>= 0.</u>	<u>14%TCu)</u>	Waste	Total	Strip
Period	<u>Phase</u>	Bench	Ktons	<u>%TCu</u>	Ktons	Ktons	Ratio
55555555555	2 2 3 3 4 4 4 5	4600. 4560. 4520. 4480. 4440. 4400. 4360. 4320. 4720.	419. 501. 210. 2324. 665. 0. 0. 0. 0. 0.	.347 .271 .288 .328 .342 .000 .000 .000 .000 .000	0. 134. 16. 1434. 240. 2. 25. 89. 225. 288.	419. 635. 226. 3758. 905. 2. 25. 89. 225. 288.	.00 .27 .08 .62 .36 999.99 999.99 999.99 999.99 999.99
5	5	4680.	16.	.186	311.	327.	18.89
5	 7		4135.	.323	2765.	6900.	.67
6 6 6	3 3 5	4480. 4440. 4680.	3119. 686. 10.	.342 .332 .186	1090. 155. 189.	4209. 842. 199.	.35 .23 18.89
6			3815.	.339	1435.	5250.	. 38
7 7	3 5	4440. 4680.	3906. 24.	.332	875. 445.	4781. 469.	.22 18.89
7			3930.	.331	1320.	5250.	.34
8 8 8 8	3 3 5 5	4440. 4400. 4680. 4640.	416. 3561. 6. 87.	.332 .322 .186 .242	87. 787. 107. 199.	503. 4348. 112. 287.	.21 .22 18.89 2.28
8			4070.	.321	1180.	5250.	.29
9 9 9	3 3 5	4400. 4360. 4640.	1435. 2652. 142.	.322 .303 .242	289. 406. 325.	1724. 3059. 467.	.20 .15 2.28
9			4230.	.308	1020.	5250.	.24
10 10 10 10	3 3 3 5	4360. 4320. 4280. 4640.	1074. 2084. 523. 195.	.303 .357 .360 .242	135. 491. 298. 444.	1209. 2575. 821. 639.	.13 .24 .57 2.28
10			3875.	.337	1369.	5244.	.35

Arimetco International Zonia Project

.

Production Schedule - Detailed Listing 50,000 lb/day SX-EW Plant

Time			<u>Ore (>= 0.</u>	14%TCu)	Waste	Total	Strip
Period	Phase	Bench	Ktons	%TCu	Ktons	Ktons	Ratio
11	3	4280.	626.	.360	179.	806.	.29
11	3	4240.	689.	.331	125.	814.	.18
11	4	4280.	338.	.244	110.	448.	.33
11	4	4240.	345.	.345	0.	345.	.00
11	5	4600.	1603.	.324	685.	2287.	.43
11	5	4560.	384.	.335	100.	484.	.26
11			3985.	.327	1199.	5184.	.30
12	5	4560.	1088.	.335	284.	1372.	.26
12	5	4520.	1117.	.277	188.	1304.	.17
12	5	4480.	583.	.353	з.	586.	.01
12	5	4440.	297.	.376	0.	297.	.00
12			3083.	.321	475.	3558.	.15

	J G -30-94 T	UE 11:20	P
gwort I C	R	MINE RESERVES ASSOCIATES, INC. 4860 Ward Road, Suite 202 Wheat Ridge, Colorado 80033-2122 Phone: (303) 421-9656 FAX: (303) 421-9470	
		FACSIMILE TRANSMISSION	
	To: From:	Ellect no/A eag leig	
	Date:	8-30-94 s in this transmission (including this cover page):	

P.01

Please call (303) 421-9656 if you have any questions or if there are any problems with this transmission. Thank you.

Notes:





đ

٠









