

ATTN: _____

Jackson _____
Hernandez _____
Jones _____
Crowther *me* _____
File _____

THE COPPER INDUSTRY

STATISTICS FOR 1974 COMPARED WITH OTHER YEARS
ARIZONA, THE UNITED STATES AND THE WORLD

COMPILED BY

THE ARIZONA DEPARTMENT OF MINERAL RESOURCES
MINERAL BUILDING - FAIRGROUNDS PHOENIX, ARIZONA

JOHN H. JETT
DIRECTOR

KEN A. PHILLIPS
MINERAL RESOURCES ENGINEER

GLENN A. MILLER
MINERAL RESOURCES SPECIALIST

FEBRUARY 1976

RECEIVED
REAL PROP. MGMT.

MAR 3 1976

BOARD OF GOVERNORS

WALTER HEINRICHS, JR., TUCSON
(TERM EXPIRES JANUARY 31, 1977)

RONALD F. TEISSERE, KINGMAN
(TERM EXPIRES JANUARY 31, 1978)

A. J. PERRY, TUCSON
(TERM EXPIRES JANUARY 31, 1979)

CURTIS RITTER, KIRKLAND
(TERM EXPIRES JANUARY 31, 1980)

MRS. ANN CHESLEY, GLOBE
(TERM EXPIRES JANUARY 31, 1981)

The following pages contain all statistical tables from the 1973 Copper Report, with all data current through calendar year 1974. The narrative section previously included in this report has been excluded in the interest of releasing the available statistical data without further delay.

Future copper reports will be issued in two volumes; the first volume, published in late Spring, will contain a discussion of the copper industry, with brief statistical data, and the second volume, published in the latter part of the year, will contain final statistical tables.

To implement this new publication schedule, the first volume published in the Spring of 1976 will contain the combined copper industry discussion for the years 1974 and 1975.

C O N T E N T S

	<u>Page</u>
<u>Statistics</u>	
Copper and Molybdenum Production of Large Arizona Copper Mines	Table I 1,2
Arizona Leach Copper Production	Table II 3
Arizona Copper Mining - Output of Copper Ore; Amount and Value of Copper, Gold, Silver and Molybdenum Recovered Therefrom	Table III 4
Arizona Mine Production of Copper, Lead, Zinc, Gold and Silver	Table IV 5
Mine Production of Gold, Silver, Copper, Lead and Zinc in Arizona	Table V 6
Mine Production in Arizona	Table VI 7
Arizona Industries Covered by Social Security	Table VII 8,9
"Covered Employment" and Wages in Arizona Copper Mining and Smelting	Table VIII 10
Salient Copper Statistics	Table IX 11
Mine Production of Recoverable Copper in the U.S.	Table X 12
World Mine Production of Copper by Countries	Table XI 13,14
Mine Production of Copper in Arizona, the U.S. and the World	Table XII 15-17
U.S. Production and Consumption of Copper	Table XIII 18
Imports of Primary Copper into the U.S.	Table XIV 19,20
U.S. Copper Mining - Output of Copper Ore; Amount and Value of Copper, Gold and Silver Recovered Therefrom	Table XV 21
Employment, Earnings and Hours in Copper Mining in the U.S. and Arizona	Table XVI 22-24

TABLE I

COPPER AND MOLYBDENUM PRODUCTION OF LARGE ARIZONA COPPER MINES

Company Mine	1973			1974		
	Tons Copper Ore Mined	Pounds Recoverable Copper	Pounds Recoverable Molybdenum	Tons Copper Ore Mined	Pounds Recoverable Copper	Pounds Recoverable Molybdenum
<u>ANAMAX:</u> Twin Buttes	<u>10,891,871</u>	<u>123,424,094</u>	<u>3,239,623</u>	<u>10,822,187</u>	<u>92,947,158</u>	<u>1,477,145</u>
<u>ASARCO:</u>						
Silver Bell	3,866,100	39,436,966	-	3,848,500	39,089,608	
Precipitate Copper	-	8,092,408	-		7,860,146	
Mission	8,782,500	93,116,867	813,742	7,539,100	80,664,685	649,919
San Xavier - Si. flux	24,900	401,465	-			
Precipitate Copper 1/	837,100	4,955,319	-	1,221,000	11,762,040	
Sacaton 2/				1,926,500	19,032,682	
Total	<u>13,510,600</u>	<u>146,003,025</u>	<u>813,742</u>	<u>14,535,100</u>	<u>158,409,161</u>	<u>649,919</u>
<u>CITIES SERVICE-MIAMI OPERATIONS</u>						
<u>MIAMI-COPPER CITIES OPERATIONS:</u>						
Copper Cities	5,222,974	41,952,762	262,341	3,698,317	31,472,441	109,081
Copper Cities Precipitate		4,569,813			3,294,832	
Miami - Precipitate		11,987,674			11,968,789	
Total	<u>5,222,974</u>	<u>58,510,249</u>	<u>262,341</u>	<u>3,698,317</u>	<u>46,736,062</u>	<u>109,081</u>
Pinto Valley Operations 3/				<u>3,263,331</u>	<u>19,036,823</u>	
Total				<u>6,961,648</u>	<u>65,772,885</u>	<u>109,081</u>
<u>CYPRUS MINES:</u>						
Bagdad	2,088,074	24,036,267	500,022	2,171,161	24,717,342	611,741
Cathode Copper		14,266,685			13,508,462	
Pima	20,320,848	176,280,641	1,875,621	20,017,884	170,450,752	1,735,022
Total	<u>22,408,922</u>	<u>214,583,593</u>	<u>2,375,643</u>	<u>22,189,045</u>	<u>208,676,556</u>	<u>2,346,763</u>
<u>DUVAL:</u>						
Esperanza	6,454,040	35,646,020	3,424,619	6,405,712	36,728,004	3,666,926
Precipitate Copper		2,267,530			1,816,891	
Mineral Park	6,754,708	40,920,576	3,735,026	6,379,877	32,535,537	2,837,052
Precipitate Copper		6,431,410			6,801,301	
Sierrita	30,489,595	151,189,684	14,297,148	30,497,451	159,187,623	11,342,997
Total	<u>43,698,343</u>	<u>236,455,220</u>	<u>21,456,893</u>	<u>43,283,040</u>	<u>237,069,356</u>	<u>17,846,975</u>

(continued next page)

Company Mine	1973			1974		
	Tons Copper Ore Mined	Pounds Recoverable Copper	Pounds Recoverable Molybdenum	Tons Copper Ore Mined	Pounds Recoverable Copper	Pounds Recoverable Molybdenum
INSPIRATION:						
Inspiration	8,743,989	86,268,188	105,275	8,454,428	81,513,656	-0-
Copper recovered by dump, in-place and vat leaching		16,395,179			17,887,479	
Christmas Division	1,938,611	19,016,412		1,677,272	13,397,391	
Ox Hide Mine	1,528,527	8,949,641		3,382,260	9,678,652	
Total	12,211,127	130,629,420	105,275	13,513,960	122,477,178	-0-
KENNECOTT:						
Ray	12,322,927	164,319,931	614,100	11,721,547	150,516,709	682,514
Precipitate Copper		28,369,163			25,478,119	
Total	12,322,927	192,689,094	614,100	11,721,547	175,994,828	682,514
MAGMA:						
San Manuel	21,899,574	279,658,911	5,427,939	19,725,713	248,846,856	4,219,793
Superior	542,828	45,781,968		732,937	60,937,589	
Total	22,442,402	325,440,879	5,427,939	20,458,650	309,784,445	4,219,793
PHELPS DODGE:						
Morenci	18,360,585	213,400,380		16,785,756	202,874,739	
Precipitate Copper		25,668,461			22,703,862	
New Cornelia	10,343,337	107,589,514		9,038,923	86,999,288	
Lavender Pit 4/	3,770,041	30,242,798		3,529,578	17,264,710	
Precipitate Copper		8,531,891			6,402,132	
Copper Queen	620,387	45,255,978		480,375	30,113,233	
Precipitate Copper		5/			5/	
Total	33,094,350	430,689,022		29,834,632	366,357,964	
Total - Large Companies	175,803,516	1,858,424,596	34,295,556 7/	173,219,809	1,737,489,581	27,332,190 7/
GRAND TOTAL 6/	8/ 181,218,661	1,854,542,000	37,657,000 7/	178,913,296	1,717,566,000	28,346,000 7/

Source: Company Reports unless otherwise noted 1/ San Xavier discontinued production of siliceous flux and commenced production of copper precipitate as of May 1, 1973 2/ Asarco's Sacaton Unit commenced production May 7, 1973 3/ Cities Service's Pinto Valley Operation commenced production in mid-November of 1974. 4/ Lavender Pit mine and concentrator operations were terminated on December 14, 1974. 5/ Included with Lavender Pit precipitate copper. 6/ U.S. Bureau of Mines (USBM) data: The USBM data includes total Arizona copper and molybdenum production and, therefore, should, except in the case of recoverable molybdenum (See footnote 7/), be larger than that production listed under "Total Large Companies." Arizona Department of Mineral Resources estimates of total Arizona copper production as recoverable content of ores and precipitates was 1,891,552,294 pounds in 1973 and 1,766,864,434 in 1974. Differences are due to times and methods of reporting. The USBM total is used throughout this report. 7/ Arizona's entire molybdenum production is a product of the copper mines. Differences in totals are due to times and methods of reporting. 8/ Includes 92,820 short tons of copper-zinc ore.

TABLE II
ARIZONA LEACH COPPER PRODUCTION 1/
(Thousand Pounds)

<u>Property</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Bagdad <u>2/</u>	15,507	15,833	13,024	11,066	14,258	14,731	7,281	14,681	13,391	14,267	13,508
Bisbee <u>3/</u>	11,209	10,784	8,197	4,443	7,285	7,002	7,407	8,345	10,000	8,532	6,402
Bluebird <u>4/</u>	-	-	7,200	7,690	1,449	9,921	11,520	12,458	14,680	15,005	15,344
Castle Dome	4,883	4,060	4,122	2,172	2,431	1,831	934	-	-	-	-
Copper Cities	5,719	4,259	5,169	2,792	4,356	3,799	4,491	4,376	4,577	4,570	3,293
Emerald Isle	-	-	-	275	1,611	4,180	3,713	3,822	3,629	2,180	-
Esperanza	4,969	4,348	5,909	6,132	4,478	3,619	4,428	4,454	2,094	2,268	1,817
Inspiration	56,571	66,048	51,352	27,969	30,930	45,108	48,097	45,588	56,487	50,401	47,765
Miami	17,757	17,906	17,168	8,726	11,077	13,756	14,965	12,806	12,170	11,988	11,969
Mineral Hill	-	-	-	-	4,901	2,837	-	-	-	-	-
Mineral Park	-	1,484	4,837	7,005	7,051	6,221	7,710	7,315	8,936	6,431	6,801
Morenci	1,624	1,561	24,903	27,780	23,162	22,754	16,950	14,188	24,493	25,668	22,704
Old Reliable	-	-	-	-	-	-	-	-	-	5,992	2,175
Ox Hide	-	-	-	-	744	7,243	13,298	7,962	9,673	8,950	9,679
Ray <u>5/</u>	18,085	18,838	21,017	21,188	21,742	29,968	43,971	31,622	31,472	28,369	25,478
Red Hills	-	-	-	-	-	-	-	46	-	-	-
San Xavier	-	-	-	-	-	-	-	-	-	4,955	11,762
Silver Bell <u>6/</u>	4,854	4,580	5,066	5,017	4,909	5,226	5,614	6,297	7,897	8,092	7,860
United Verde	-	-	457	190	307	248	232	165	140	214	44
Zonia	-	-	1,814	3,264	3,928	3,576	4,456	4,769	4,778	2,991	1,358 2,717

- 1/ Copper recovered from precipitate and/or by solvent extraction from material dump, heap, vat or in situ leached.
2/ Precipitation replaced by solvent extraction in 1971
3/ Lavender Pit and Copper Queen
4/ Precipitation replaced by solvent extraction in 1969
5/ Includes only copper contained in precipitates from dump leaching. Does not include copper produced by electrowinning.
6/ San Xavier discontinued production of Siliceous Flux and commenced production of copper precipitate as of 5/1/73.

TABLE III

ARIZONA COPPER MINING - OUTPUT OF COPPER ORE; AMOUNT AND VALUE OF
COPPER, GOLD, SILVER AND MOLYBDENUM RECOVERED THEREFROM 1/

Year	Copper Ore Tons	Gold Troy Ounces Value	Silver Troy Ounces Value	Molybdenum <u>2/</u> Lbs.) Thou- Value) sands	Copper <u>3/</u> Pounds Value	Lbs./Ore Ton Ave./c lb. <u>4/</u>	Value of Copper, Gold, Silver & Molybdenum
1964	86,132,039	133,983 \$4,689,405	4,915,362 \$ 6,355,563	6,296 \$ 9,532	1,279,898,700 \$ 409,055,625	14.9 31.960	\$ 429,632,593
1965	92,859,535	133,830 \$4,684,050	5,352,850 \$ 6,921,235	9,399 \$15,880	1,309,809,700 \$ 458,305,893	14.1 35.017	\$ 485,791,178
1966	101,558,298	127,431 \$4,460,085	5,595,644 \$ 7,235,168	10,161 \$17,812	1,359,481,200 \$ 491,724,350	13.39 36.170	\$ 521,231,603
1967	74,289,203	66,933 \$2,342,655	3,996,587 \$ 6,193,431	9,261 \$15,385	901,853,500 \$ 344,742,519	12.14 38.226	\$ 368,663,605
1968	101,293,963	89,419 \$3,510,600	4,697,394 6/ \$10,074,000	12,127 \$19,207	1,146,313,600 \$ 479,697,900	11.32 41.847	\$ 512,489,500
1969	127,848,828	108,718 <u>5/</u> \$4,586,800	5,899,843 <u>5/</u> \$10,564,700	12,699 \$20,947	1,477,520,000 \$ 702,324,400	11.56 47.534	\$ 738,422,900
1970	150,240,842	107,292 <u>5/</u> \$3,904,400	7,130,261 <u>5/</u> 6/ \$12,626,700	15,672 \$26,700	1,694,294,000 \$ 977,608,000	11.28 57.700	\$1,020,838,800
1971	149,293,547	93,617 <u>5/</u> \$3,820,510	6,106,204 <u>5/</u> 6/ \$ 9,437,749 <u>7/</u>	22,684 \$39,872	1,529,780,500 \$ 786,812,004	9.76 51.433	\$ 830,598,891
1972	165,914,825 <u>8/</u>	102,526 <u>5/</u> \$5,987,518	6,614,957 <u>5/</u> 6/ \$11,143,226 <u>7/</u>	27,216 \$46,791	1,695,858,000 \$ 858,392,446	10.22 50.617	\$ 922,314,190
1973	181,311,945 <u>8/</u>	102,376 <u>5/</u> \$10,013,397	7,164,988 <u>5/</u> 6/ \$18,325,173 <u>7/</u>	37,657 \$59,372	1,735,012,000 \$1,021,314,814	9.57 \$8.865	\$1,109,025,384
1974	178,913,296 <u>8/</u>	90,206 \$14,488,424	6,308,721 \$29,701,332 <u>7/</u>	28,346 \$57,067	1,609,808,000 \$1,233,901,735	9.00 76.649	\$1,335,158,491

1/ U.S. Bureau of Mines. 2/ Molybdenum content of recovered concentrate. 3/ Does not include precipitate copper from dump and in-place leaching. 4/ E/MJ average prices, domestic, f.o.b. refinery. 5/ Does not include gold or silver recovered from vat or heap leaching of copper ores. 6/ At average gold prices; See note 7/, Table XV 7/ At average E/MJ N.Y. market price for .999 fine silver. 8/ Includes some copper-zinc and lead-zinc ore in addition to copper ore, all of which is combined to avoid disclosing individual company confidential data.

TABLE IV

ARIZONA MINE PRODUCTION OF COPPER, LEAD, ZINC, GOLD AND SILVER

1858 To Present - In terms of Recoverable Metals

	COPPER		LEAD		ZINC	
	<u>Short Tons</u>	<u>Value (thousands)</u>	<u>Short Tons</u>	<u>Value (thousands)</u>	<u>Short Tons</u>	<u>Value (thousands)</u>
1858 - 1973	26,726,634	14,978,539	655,192	130,197	1,065,751	264,310
1974	<u>858,783</u>	<u>1,327,678</u>	<u>1,059</u>	<u>476</u>	<u>9,699</u>	<u>6,964</u>
Total 1858 - 1974	27,585,417	16,306,217	656,251	130,673	1,075,450	271,274

	GOLD		SILVER		COPPER, LEAD, ZINC, GOLD AND SILVER
	<u>Ounces</u>	<u>Value (thousands)</u>	<u>Ounces</u>	<u>Value (thousands)</u>	<u>Combined Value</u>
1858 - 1973	14,161,015	393,895	436,544,226	479,565	16,167,375,000
1974	<u>90,586</u>	<u>14,470</u>	<u>6,356,000</u>	<u>29,935</u>	<u>1,379,523,000</u>
Total 1858 - 1974	14,251,601	408,365	442,900,226	509,500	17,546,898,000

Est. Value of Other Metals & Non-Metallics Produced through 1973

1,475,637,000

Value of Other Metals & Non-Metallics Produced in 1974

182,711,000

Est. Value of Other Metals & Non-Metallics Produced through 1974

1,658,348,000

Grand Total Estimated Value of Arizona Mineral Production through 1974

19,205,246,000

Source: U.S. Bureau of Mines; U.S. Geological Survey; Arizona Bureau of Mines

TABLE V

Mine production (recoverable) of gold, silver, copper,
lead and zinc, by class of ore or other source material

Source	Number of mines ^{1/}	Material sold or treated (short tons)	Gold (troy ounces)	Silver (troy ounces)	Copper (short tons)	Lead (short tons)	Zinc (short tons)
Lode ore:							
Gold-----	3	17,453	43	424	80	--	--
Silver-----	3	16,790	7	4,940	1	--	--
Total-----	6	34,243	50	5,364	81	--	--
Copper-----	31	178,820,476	89,765	6,266,783	801,680	447	19
Copper-zinc-----	1	92,820	441	41,938	3,224	35	8,691
Lead, lead-zinc and zinc ^{2/} -----	5	6,282	26	19,580	2	577	990
Total ^{3/} -----	37	178,919,578	90,232	6,328,301	804,906	1,059	9,699
Other lode material:							
Tailings-----	1	67,249	304	21,863	74	--	--
Copper cleanup-----	(^{4/})	97	--	--	30	--	--
Copper precipitates	15	74,590	--	--	53,693	--	--
Total ^{3/} -----	16	141,936	304	21,863	53,796	--	--
Grand total-----	48	179,095,757	90,586	6,355,528	858,783	1,059	9,699

^{1/} Detail will not necessarily add to totals because some mines produce more than one class of material.

^{2/} Combined to avoid disclosing individual company confidential data.

^{3/} Data may not add to totals shown because of independent rounding.

^{4/} From properties not classed as mines.

TABLE VI

Mineral production in Arizona 1/

Mineral	1973		1974	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays 2/-----thousand short tons--	117	\$459	199	\$62
Coal (bituminous)-----do-----	3,247	W	6,448	
Copper (recoverable content of ores, etc.) short tons---	927,271	1,103,453	858,783	1,327,67
Gem stones-----	NA	170	NA	1,50
Gold (recoverable content of ores, etc.) troy ounces--	102,848	10,060	90,586	14,47
Gypsum-----thousand short tons--	158	669	141	47
Lead (recoverable content of ores, etc.)-short tons	763	248	1,059	47
Lime-----thousand short tons--	365	7,019	422	9,07
Mica, scrap-----do-----	W	W	2	8
Molybdenum (content of concentrate)-thousand pounds	37,657	59,372	28,346	57,06
Natural gas-----million cubic feet--	125	23	224	4
Petroleum (crude)-thousand 42-gallon barrels-	804	3,103	740	3,88
Pumice-----thousand short tons-	853	715	846	86
Sand and gravel-----do-----	27,440	38,503	23,417	41,90
Silver (recoverable content of ores, etc.) thousand troy ounces--	7,199	18,416	6,356	29,93
Stone-----thousand short tons--	4,265	9,469	4,932	11,47
Zinc (recoverable content of ores, etc.) short tons--	8,427	3,482	9,699	6,96
Value of items that cannot be disclosed:				
Asbestos, cement, fire clay, diatomite				
(1972), feldspar, fluorspar, helium, iron				
ore, mica (scrap), perlite, pyrites,				
tungsten and values indicated by symbol W				
	XX	49,827	XX	55,71
Total-----	XX	1,304,988	XX	1,562,23
Total 1967 constant dollars-----	XX	p/ 958,122	XX	747,06

p/ Preliminary. W Withheld to avoid disclosing individual company confidential data; included with "Value of items that cannot be disclosed." XX Not applicable. NA Not applicable.

1/ Production as measured by mine shipments, sales or marketable production (including consumption by producers.)

2/ Excludes fire clay (1973), included with "Value of items that cannot be disclosed."

TABLE VII

ARIZONA INDUSTRIES COVERED BY SOCIAL SECURITY

AVERAGE NUMBER OF COVERED EMPLOYEES, TOTAL WAGES, AVERAGE ANNUAL WAGE

AND AVERAGE WEEKLY WAGE

Years 1972, 1973 and 1974

<u>Industry</u>	<u>Average No. of 1/ Employees</u>	<u>Total Wages</u>	<u>Average Annual Wage</u>	<u>Average Weekly Wage</u>
<u>YEAR 1972</u>				
Copper Mining 2/	20,892	\$ 229,345,846	\$10,978	\$211.12
Copper Smelting 3/	2,341	25,371,495	10,838	208.42
Total Copper Mng. & Smelting	23,233	\$ 254,717,341	\$10,964	\$210.85
Other Mng., Quarry'g & Smelting	1,847	19,938,264	10,795	207.60
All Mng., Quarry'g & Smelting	25,080	\$ 274,655,605	\$10,951	\$210.59
Mfg., Ex. Copper Smelting	96,910	888,392,860	9,167	176.28
Construction	56,033	630,709,787	11,256	216.46
Transp., Utilities, etc. 4/	30,465	307,868,725	10,106	194.35
Wholesale - Retail Trade	150,437	919,886,942	6,115	117.60
Services, Finance and Misc.	167,654	1,145,753,218	6,834	131.42
TOTALS AND AVERAGES	526,579	\$4,167,267,137	\$ 7,914	\$152.19
<u>YEAR 1973</u>				
Copper Mining 2/	22,738	\$ 259,992,642	\$11,434	\$219.89
Copper Smelting 3/	2,756	31,301,686	11,358	218.42
Total Copper Mng. & Smelting	25,494	\$ 291,294,328	\$11,426	\$218.73
Other Mng., Quarry'g & Smelting	2,088	24,415,959	11,693	224.87
All Mng., Quarry'g & Smelting	27,582	\$ 315,710,287	\$11,446	\$220.12
Mfg., Ex. Copper Smelting	107,022	1,034,697,762	9,668	185.92
Construction	64,476	764,769,342	11,861	228.10
Transp., Utilities, etc. 4/	33,901	364,788,070	10,760	206.93
Wholesale - Retail Trade	166,517	1,073,728,923	6,448	124.00
Services, Finance and Misc.	185,090	1,328,368,192	7,177	138.02
TOTALS AND AVERAGES	584,588	\$4,882,062,576	\$ 8,351	\$160.60

(continued next page)

TABLE VII (continued)

<u>Industry</u>	<u>Average No. of 1/ Employees</u>	<u>Total Wages</u>	<u>Average Annual Wage</u>	<u>Average Weekly Wage</u>
<u>YEAR 1974</u>				
Copper Mining 2/	25,022	\$ 304,910,987	\$12,186	\$234.34
Copper Smelting 3/	2,872	35,921,109	12,507	240.53
Total Copper Mng. & Smelting	27,894	\$ 340,832,096	\$12,219	\$234.98
Other Mng., Quarry'g & Smelting	2,186	28,417,674	13,000	250.00
All Mng., Quarry'g & Smelting	30,080	\$ 369,249,770	\$12,276	\$236.07
Mfg., Ex. Copper Smelting	109,376	1,140,261,044	10,425	200.48
Construction	57,242	731,039,190	12,771	245.60
Transp., Utilities, etc. 4/	35,843	407,689,297	11,374	218.74
Wholesale - Retail Trade	175,192	1,198,454,445	6,841	131.55
Services, Finance and Misc.	168,053	1,289,728,390	7,675	147.59
Agriculture & Related Services	3,528	25,546,524	7,241	139.25
State & Local Government	41,932	342,323,902	8,164	157.00
TOTALS AND AVERAGES	621,246	\$5,504,292,562	\$ 8,860	\$170.39

Source: Arizona Employment Security Commission.

- 1/ Includes all covered employees. Figures relating to copper mining and smelting, and manufacturing, are adjusted as described in the following footnotes.
- 2/ The first number includes all covered employees in copper mining and milling and probably those in one smelter. The figure, therefore, is higher than that for "All Employees" in "Copper Mining" in Arizona in column 1, Table VIII.
- 3/ According to correspondence from the Employment Security Commission of Arizona, these figures include all covered smelter employees excepting those included in "Copper Mining." A majority of copper smelting employees customarily are reported under "Manufacturing" and the rest under "Copper Mining."
- 4/ Transportation exclusive of railroads.

TABLE VIII

"COVERED EMPLOYMENT" AND WAGES IN ARIZONA COPPER MINING AND SMELTING

Copper Mining	Average No. Covered Employees <u>1/</u>	Total Wages <u>2/</u>	Average Annual Wage	Average Weekly Wage	Tons Copper Ores <u>3/</u>
1947	11,340	\$ 36,365,277	\$ 3,207	\$ 61.67	37,810,448
1948	11,493	41,318,524	3,595	69.13	39,072,204
1949	11,001	40,612,224	3,692	71.00	37,365,611
1950	10,181	41,994,321	4,125	79.33	41,757,273
1951	10,754	47,825,698	4,447	85.52	42,784,388
1952	11,365	54,950,235	4,835	93.14	44,472,522
1953	12,068	62,742,982	5,199	99.98	45,187,838
1954	12,502	65,518,853	5,241	100.79	43,072,894
1955	12,399	71,293,263	5,750	110.58	52,189,728
1956	14,008	83,568,996	5,966	114.73	60,468,580
1957	14,652	85,125,320	5,809	111.71	59,571,834
1958	14,100	74,726,972	5,300	101.93	56,255,809
1959	11,568	72,095,130	6,232	119.85	53,121,545
1960	13,764	90,312,848	6,562	126.19	66,032,439
1961	14,275	97,271,286	6,814	131.04	71,918,991
1962	14,408	101,920,108	7,074	136.04	78,868,147
1963	14,303	104,291,588	7,292	140.23	80,615,132
1964	14,720	113,792,031	7,730	148.65	86,132,039
1965	15,239	122,163,124	8,016	154.16	92,859,535
1966 <u>1/</u>	17,018	137,187,611	8,061	155.02	101,558,298
1967	13,426	108,427,206	8,076	155.31	74,289,203
1968	15,734	136,089,579	8,649	166.33	101,293,963
1969	19,459	173,183,018	8,900	171.15	127,848,828
1970	21,479	201,665,064	9,389	180.56	150,241,000
1971	21,231	211,978,597	9,984	192.00	149,294,000
1972	23,233	254,717,341	10,964	210.85	165,914,825 <u>4/</u>
1973	25,494	291,294,328	11,426	218.89	181,311,945 <u>4/</u>
1974	27,894	340,832,096	12,219	234.98	178,913,296 <u>4/</u>

1/ "Covered Employment" by law includes all employees of employers of three or more persons. Therefore, the figures for "All Employees" in Table IX should be somewhat higher than those for "Covered Employees" in this table provided the same industries were involved. However, this table includes some smelter workers which the other does not. Prior to 1966 the average numbers in this table included roughly 500 to 1000 Arizona copper smelter workers, the rest of the smelter employees being included under "Manufacturing." Beginning in 1966, all covered smelter workers are included in the average in this column. Figures are from the Unemployment Compensation Division, Employment Security Commission of Arizona.

2/ "Total Wages in Covered Industry," "Mining-copper."

3/ Short tons of "Lode ore: copper" reported by the U.S. Bureau of Mines.

4/ Includes some copper-zinc and lead-zinc ore in addition to copper ore, all of which is combined to avoid disclosing individual company confidential data.

TABLE IX
SALIENT COPPER STATISTICS 1/

	In short tons		
	1972	1973	1974
<u>Mine Production</u>			
Arizona	908,612	927,271	858,783
United States	1,664,840	1,717,940	1,597,002
World	7,404,601 <u>r/</u>	7,931,807 <u>r/</u>	8,108,783
<u>Primary Refined Stocks at U.S. Refineries a/</u>			
Beginning of Year	75,000	57,000	37,000
End of Year	57,000	37,000	101,300
<u>Primary Refined Prod. of U.S. Refineries</u>			
From Domestic Ores	1,680,412	1,698,337	1,420,905
From Foreign Ores, Matte, etc. a/	192,821	170,151	233,753
Total	1,873,233	1,868,488	1,654,658
<u>Secondary Copper Produced from Scrap</u>			
Recovered as Unalloyed Copper	447,409	484,623	513,308
Recovered in Alloys b/	853,564	892,534 <u>r/</u>	831,012
Total Secondary Copper	1,300,973	1,377,157 <u>r/</u>	1,344,320
<u>Imports:</u>			
Copper In Ores, Concentrates, Matte	55,013	44,081 <u>r/</u>	56,045
Copper in Blister	157,432	154,104	207,830
Refined Copper a/	192,379	202,955 <u>r/</u>	313,569
Total Imports	404,824	401,140 <u>r/</u>	577,444
<u>Exports:</u>			
Copper in Ores, Concs., Matte, Blister	26,181	30,870	21,983
Refined Copper a/	182,743	189,396	126,526
Total Exports	208,924	220,266	148,509
<u>Excess of Imports Over Exports</u>	195,900	180,874 <u>r/</u>	428,935
<u>Consumption:</u>			
New Refined (Apparent Consumption)	1,901,000	1,902,000 <u>r/</u>	1,778,000
Total Refined (Actual Consumption)	2,238,867	2,437,048	2,194,168
<u>U.S. Mine Production</u>			
Percent of Apparent Consumption	87.6	99.3	89.82
<u>Average Price of Copper c/</u>	50.62¢	58.86¢	76.65¢

r/ Revised

1/ U.S. Bureau of Mines; American Bureau Metal Statistics

a/ May include some from scrap

b/ Includes copper in chemicals: 1972-3,036; 1973-3,704; 1974-2,649

c/ "Electrolytic copper, domestic refineries, on Atlantic Seaboard." Source: E/MJ

TABLE X

MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES 1/

(In short tons)

<u>STATE</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>RANK IN 1974</u>
Arizona	908,612	927,271	858,783	1
California	598	369	194	12
Colorado	3,944	3,123	3,012	9
Idaho	2,942	3,625	2,841	10
Maine	1,220	1,107	1,522	11
Michigan	67,260	72,221	67,012	6
Missouri	11,509	10,273	12,665	7
Montana	123,110	132,466	131,131	4
Nevada	101,119	93,702	84,101	5
New Mexico	163,034	204,742	196,585	3
Pennsylvania	2,611	1,845	-	
Tennessee	11,310	8,500	6,304	8
Utah	259,507	256,589	230,593	2
Other States <u>2/</u>	3,064	2,107	2,259	
TOTALS	1,664,840	1,717,940	1,597,002	

1/ Source: U.S. Bureau of Mines2/ Includes: Oklahoma, Oregon and Washington

TABLE XI

World mine production of copper by country 1/
(Short tons)

Country	1972	1973	1974 <u>p/</u>
North and Central America:			
Canada <u>2/</u> -----	793,303	908,240	928,550
Cuba <u>e/</u> -----	3,300	5,500	6,500
Dominican Republic <u>e/</u> -----	500	500	500
Mexico -----	86,774	88,737	91,128
Nicaragua <u>3/</u> -----	2,412	1,703	1,957
United States <u>2/</u> -----	1,664,840	1,717,940	1,593,590
South America:			
Argentina -----	<u>r/</u> 1,240	313	<u>e/</u> 330
Bolivia <u>4/</u> -----	<u>r/</u> 9,159	9,432	8,962
Brazil -----	<u>r/</u> 4,911	3,761	<u>e/</u> 4,400
Chile -----	<u>r/</u> 790,136	810,639	998,482
Colombia -----	71	<u>e/</u> 80	<u>e/</u> 80
Ecuador -----	483	335	197
Peru -----	<u>r/</u> 241,545	241,406	245,753
Europe:			
Albania <u>e/5/</u> -----	6,970	<u>r/</u> 7,690	8,540
Austria -----	2,539	2,991	2,962
Bulgaria -----	<u>r/</u> 41,932	44,048	53,000
Czechoslovakia -----	5,180	6,600	6,600
Finland -----	32,121	41,192	39,850
France -----	520	456	432
Germany, East <u>e/</u> -----	3,300	1,700	--
Germany, West <u>6/</u> -----	1,456	1,583	1,911
Greece -----	1,715	1,587	<u>e/</u> 3,300
Hungary <u>e/</u> -----	1,300	<u>r/</u> 1,300	1,300
Ireland -----	<u>r/</u> 15,052	14,330	14,000
Italy <u>6/</u> -----	1,156	946	1,183
Norway <u>6/</u> -----	<u>r/</u> 28,668	31,320	25,399
Poland -----	148,800	170,900	209,400
Portugal <u>6/</u> -----	6,744	6,409	6,226
Romania <u>e/2/</u> -----	38,600	46,300	55,100
Spain <u>6/7/</u> -----	39,812	42,420	41,970
Sweden -----	33,752	49,404	44,597
U.S.S.R. <u>e/2/5/</u> -----	733,000	772,000	816,000
United Kingdom -----	262	506	<u>e/</u> 660
Yugoslavia -----	113,685	123,231	<u>e/</u> 136,000
Africa:			
Algeria -----	<u>r/</u> 406	389	551
Botswana -----	--	<u>e/</u> 1,500	2,624
Congo (Brazzaville) <u>3/</u> -----	1,511	1,022	1,025
Kenya -----	79	<u>e/</u> 70	<u>e/</u> 70

(continued next page)

TABLE XI. (continued)

Country	1972	1973	1974
Mauritania -----	16,342	23,454	22,133
Morocco <u>3/</u> -----	4,220	4,762	5,820
Mozambique <u>3/</u> -----	198	441	689
Rhodesia, Southern <u>8/</u> -----	42,218	46,100	<u>e/</u> 44,400
South Africa, Republic of -----	178,494	193,783	197,730
South-West Africa, Territory of <u>3/9/</u> -----	<u>r/</u> 28,865	37,664	35,801
Uganda -----	17,346	17,259	13,900
Zaire -----	<u>r/</u> 480,322	538,312	599,708
Zambia -----	791,128	778,864	769,364
Asia:			
Burma <u>10/</u> -----	88	77	77
China, People's Republic of <u>e/</u> -----	110,000	110,000	110,000
Cyprus <u>6/</u> -----	<u>r/</u> 18,195	18,841	12,739
India -----	12,856	16,085	21,605
Indonesia -----	5,500	41,800	72,140
Iran <u>11/</u> -----	<u>r/</u> 1,320	3,300	1,980
Israel -----	12,318	11,202	11,000
Japan <u>12/</u> -----	123,584	100,619	90,538
Korea, North <u>e/</u> -----	14,000	14,000	14,000
Korea, Republic of -----	2,295	2,558	3,080
Malaysia <u>e/</u> -----	65	55	45
Philippines -----	235,558	243,825	248,554
Taiwan <u>e/</u> -----	2,760	2,650	2,760
Turkey -----	<u>r/</u> 24,339	39,700	42,765
Oceania:			
Australia -----	205,925	242,712	281,695
Fiji -----	3	--	--
New Zealand -----	136	<u>e/</u> 110	--
Papua New Guinea -----	136,641	201,613	202,935
Total -----	<u>r/</u> 7,321,950	7,848,266	8,108,783

e/ Estimate. p/ Preliminary. r/ Revised.

1/ Data presented represent copper content (recoverable where indicated) of ore mined wherever possible. If such data are not available, the nonduplicative total copper content of ores, concentrates, matte, metal and/or other copper-bearing products measured at the least stage of processing for which data are available has been used.

2/ Recoverable.

3/ Copper content of concentrate produced.

4/ Corporacion Minera de Bolivia (COMIBOL) production plus exports by medium and small mines.

5/ Smelter production.

6/ Includes copper content of cupriferous pyrites.

7/ Excludes an unreported quantity of copper in iron pyrites which may or may not be recovered.

8/ Year ending September 30 of that stated.

9/ Data are compiled from operating company reports of Tsumeb Corp. Ltd., General Mining and Finance Corp. Ltd. for Klein Aub Koper Maatskappy Ltd.'s mine near Rehoboth and Falconbridge Nickel Mines Ltd. for Oamites Mining Company (Pty.) Ltd., Oamites mine. Data for General Mining and Finance Corp. are for fiscal years ending June 30 of that stated, while data from other companies are for calendar years.

10/ Copper content of matte produced.

11/ Year beginning March 21 of that stated.

12/ Copper content of concentrate. Copper content of run-of-mine production was as follows in short tons: 1972--125,248; 1973--103,871; 1974--90,985.

TABLE XII

MINE PRODUCTION OF COPPER IN
ARIZONA, THE UNITED STATES AND THE WORLD

DOMESTIC PRICE OF COPPER a/

1874 - 1974

Period	ARIZONA			UNITED STATES			WORLD
	Short Tons	% of U.S. Prod.	% of World Prod.	Short Tons	% of World Prod.	Price- ¢ Per Pound	Short Tons
1874-							
1911	1,758,000	22.0	9.3	7,989,735 <u>b/</u>	49.1	14.40 <u>c/</u>	16,260,000
1912	182,519	29.2	16.2	624,547	55.5	16.341	1,125,656
1913	203,962	33.0	18.6	617,755	56.2	15.269	1,099,366
1914 <u>1/</u>	196,509	34.2	19.0	574,216	55.5	13.602	1,034,487
1915 <u>1/</u>	229,986	30.9	19.6	744,036	63.4	17.275	1,173,150
1916 <u>1/</u>	360,917	36.0	23.2	1,002,938	64.6	27.202	1,553,498
1917 <u>1/</u>	356,083	37.6	22.2	947,717	59.1	27.180	1,602,914
1918 <u>1/</u>	382,428	40.0	24.2	955,011	60.5	24.628	1,579,246
1919	269,050	44.4	24.6	606,167	55.3	18.691	1,095,697
1920	279,128	45.6	26.4	612,275	58.0	17.456	1,056,014
1921 <u>2/</u>	92,517	39.7	15.1	233,095	38.0	12.502	613,987
1922	200,022	41.5	21.4	482,292	48.2	13.382	935,374
1923	309,464	41.9	22.8	738,870	54.5	14.421	1,355,327
1924	338,876	42.2	23.0	803,083	54.5	13.024	1,472,712
1925	356,678	42.5	22.6	839,059	53.2	14.042	1,576,998
1926	361,648	41.9	22.7	862,638	54.0	13.795	1,596,147
1927	341,095	41.3	20.5	824,980	49.5	12.920	1,666,694
1928	366,138	40.5	19.2	904,898	47.5	14.570	1,903,672
1929	415,314	41.6	19.3	997,555	46.4	18.107	2,150,587
1930 <u>3/</u>	288,095	40.9	16.2	705,074	39.7	12.982	1,775,805
1931 <u>3/</u>	200,672	37.9	13.0	528,875	34.2	8.116	1,545,425

Source: Mineral Resources of the U.S., U.S. Geological Survey (Years 1882-1923), U.S. Bur. Mines (Years 1923-1931); Minerals Yearbooks and other reports, U.S. Bur. Mines (Years 1932-1969); Ariz. Bur. Mines Bull. 140 (1936).

a/ Annual average prices as reported by E/MJ.

b/ Smelter production from domestic ores.

c/ Average price for Arizona copper only, calculated from total of values reported or estimated by sources, amounting to \$506,283,000.

1/, 2/, 3/ See page 17.

(continued next page)

TABLE XII (continued)

Period	ARIZONA			UNITED STATES			WORLD
	Short Tons	% of U.S. Prod.	% of World Prod.	Short Tons	% of World Prod.	Price- c Per Pound	Short Tons
1932 <u>3/</u>	91,246	38.3	8.0	238,111	20.9	5.555	1,138,676
1933 <u>3/</u>	57,021	29.9	4.9	190,643	16.4	7.025	1,159,000
1934 <u>3/</u>	89,041	37.5	6.3	237,401	16.8	8.428	1,415,353
1935 <u>3/</u>	139,015	36.0	8.4	386,491	23.5	8.649	1,647,939
1936 <u>3/</u>	211,275	34.4	11.1	614,516	32.4	9.474	1,899,263
1937	288,475	34.3	11.2	841,998	32.8	13.167	2,567,916
1938 <u>4/</u>	210,797	37.8	9.3	557,763	24.5	10.000	2,274,145
1939 <u>5/</u>	262,117	36.0	10.6	728,320	29.4	10.965	2,481,277
1940 <u>5/</u>	281,169	32.0	10.5	878,086	32.7	11.296	2,688,510
1941 <u>5/</u>	326,317	34.1	11.2	958,149	33.0	11.797	2,903,458
1942 <u>5/</u>	393,387	36.4	12.9	1,080,061	35.5	11.775	3,039,041
1943 <u>5/</u>	403,181	37.0	13.2	1,090,818	35.6	11.775	3,064,394
1944 <u>5/</u>	358,303	36.8	12.5	972,549	33.9	11.775	2,866,000
1945	287,203	37.2	12.0	772,894	32.2	11.775	2,400,000
1946	289,223	47.5	14.1	608,737	29.6	13.820	2,056,000
1947	366,218	43.2	14.6	847,563	33.9	20.958	2,500,000
1948 <u>6/</u>	375,121	44.9	14.4	834,813	32.1	22.038	2,600,000
1949 <u>6/</u>	359,010	47.7	14.4	752,750	30.1	19.202	2,500,000
1950 <u>7/</u>	403,301	44.4	14.4	909,343	32.5	21.235	2,760,000
1951 <u>7/</u>	415,870	44.8	14.3	928,330	32.0	24.200	2,900,000
1952 <u>7/</u>	395,719	42.8	13.1	925,359	30.6	24.200	3,020,000
1953 <u>7/</u>	393,525	42.5	12.9	926,448	30.4	28.798	3,050,000
1954 <u>8/</u>	377,927	45.2	12.2	835,472	27.0	29.694	3,100,000
1955	454,105	45.5	13.3	998,570	29.2	37.491	3,420,000
1956	505,908	45.7	13.4	1,104,156	29.1	41.818	3,790,000
1957 <u>9/</u>	515,854	47.5	13.3	1,086,859	27.9	29.576	3,890,000
1958 <u>9/</u>	485,839	49.6	12.9	979,329	25.9	25.764	3,780,000
1959 <u>10/</u>	430,297	52.2	10.7	824,846	20.4	31.182	4,040,000
1960	538,605	49.9	11.6	1,080,169	23.2	32.053	4,650,000
1961	587,053	50.4	12.1	1,165,155	24.0	29.921	4,850,000

3/, 4/, 5/, 6/, 7/, 8/, 9/, 10/ see page 17.

(continued next page)

TABLE XII (continued)

Period	ARIZONA			UNITED STATES			WORLD
	Short Tons	% of U.S. Prod.	% of World Prod.	Short Tons	% of World Prod.	Price- ¢ Per	
1962	644,242	52.4	12.7	1,228,421	24.2	30.600	5,085,000
1963	660,977	54.5	13.0	1,213,166	23.8	30.600	5,088,000
1964	690,988	55.4	13.0	1,246,780	23.5	31.960	5,297,000
1965	703,377	52.0	12.7	1,351,734	24.4	35.017	5,549,000
1966	739,569	51.7	12.8	1,429,152	24.6	36.170	5,800,000
1967 <u>11/</u>	501,741	52.6	9.0	954,064	17.2	28.226*	5,552,000
1968 <u>11/</u>	627,961	52.1	10.4	1,204,621	20.0	41.847**	6,012,000
1969 <u>12/</u>	801,363	51.9	12.9	1,544,579	24.8	47.534	6,225,000
1970 <u>13/</u>	917,918	53.4	13.8	1,719,657	25.9	57.700	6,638,042
1971 <u>14/</u>	820,171	53.9	12.3	1,522,183	22.9	51.433	6,683,634
1972	908,612	55.2	12.4	1,644,840	22.5	50.617	7,404,601 <u>r/</u>
1973	927,271	54.0	11.8	1,717,940	21.9	58.865	7,931,807 <u>r/</u>
1974	858,783	53.8	10.6	1,597,002	19.7	76,649	8,108,783
1874-							
1974	<u>27,583,837</u>	<u>42.2</u>	<u>13.1</u>	<u>65,324,965</u>	<u>31.1</u>		<u>209,848,518</u>

r/ Revised

* Based on first 3 months of 1967. ** Based on the last 9 months of 1968.

1/ World War I 1914-1918.

2/ Post World War I Recession (1921). Lasted about one year.

3/ Depression began in 1930; was at its worst in 1933; gradually improved to 1937.

4/ Recession in 1938. Recovery in 1939 caused by War demand.

5/ World War II began in 1939; highest copper consumption in 1944.

6/ In 1948 and early 1949, copper was being produced in the U.S. at the rate of 68,000 short tons per month, imports ran 40,000 tons per month of blister and refined copper, exports ran 12,000 tons per month and the price of copper averaged 22.5 cents.

In March, 1949, Congress suspended the copper import tax, and in the ensuing months domestic demand fell drastically while imports continued at practically the same rate. The price dropped to 16½ cents. Many mines were forced to close. Production dropped to 56,000 tons from a high of 78,000.

7/ Korean War 1950-53.

8/ Curtailment early in the year (1954), and a series of strikes in August and September caused a loss in production of over 100,000 tons. Consumption in the U.S. was reduced but the reduction was offset by an appreciable rise in consumption in other countries, chiefly in Europe. Result: a short supply of copper at the end of the year.

9/ Recession 1957-58. Import tax restored 7/1/58 after 7 year suspension.

10/ First U.S. troops killed in Vietnam in mid-1959. Record copper production rate first half of 1959 but 75% of U.S. output halted in August by strikes which lasted into 1960.

11/ A major Copper Strike started in the U.S. on July 16, 1967, and ended in March, 1968. A loss of 855,000 tons of copper production is estimated as a result of the strike.

12/ 1969, Highest annual production in U.S. history.

13/ 1970, Highest annual production in U.S. history and supply catches up with demand.

14/ A copper strike started in the U.S. on July 1, 1971, and ended in August, 1971. A loss of 250,000 tons of copper production is estimated as a result of the strike.

TABLE XIII

UNITED STATES PRODUCTION AND CONSUMPTION OF COPPER

In Short Tons

<u>Year</u>	<u>Mine 1/</u>	<u>Production Secondary 2/</u>	<u>Total</u>	<u>Consumption Total 3/</u>	<u>Total Production As % of Consumption</u>
1950	909,343	260,704	1,170,047	1,424,434	82.2
1951	928,330	186,462	1,114,792	1,416,865	78.7
1952	925,359	173,904	1,099,263	1,479,732	74.3
1953	926,448	242,855	1,169,303	1,494,215	78.3
1954	835,472	212,241	1,047,713	1,254,729	83.5
1955	998,570	246,928	1,245,498	1,502,004	82.9
1956	1,104,156	273,060	1,377,216	1,521,389	90.5
1957	1,086,141	248,015	1,334,156	1,347,815	99.0
1958	979,329	255,121	1,234,450	1,250,677	98.7
1959	<u>824,846</u>	<u>261,588</u>	<u>1,086,434</u>	<u>1,463,031</u>	<u>74.3</u>
1960	1,080,169	300,259	1,380,428	1,349,896	102.3
1961	1,165,155	290,805	1,455,960	1,462,830	99.5
1962	1,228,421	301,374	1,529,795	1,599,676	95.6
1963	1,213,166	314,643	1,527,809	1,744,273	87.6
1964	1,246,780	366,197	1,612,977	1,825,281	88.4
1965	1,351,734	462,811	1,814,545	2,004,623	90.5
1966	1,429,152	509,084	1,938,236	2,359,954	82.1
1967	954,064	423,054	1,377,118	1,935,592	71.1
1968	1,204,621	433,041	1,637,662	1,880,300	87.1
1969	1,544,579	514,593	2,059,172	2,142,218	96.1
1970	1,719,657	521,137	2,240,794	2,043,303	109.7
1971	1,522,183	429,095	1,951,278	2,019,507	96.6
1972	1,664,840	447,409 <u>r/</u>	2,112,249 <u>r/</u>	2,238,867	94.3
1973	1,717,940	484,623 <u>r/</u>	2,202,563 <u>r/</u>	2,437,048	90.3
1974	1,597,002	513,308	2,110,310	2,194,168	96.2

Source: U.S. Bureau of Mines.

1/ Recoverable copper.

2/ Copper recovered as unalloyed copper.

3/ Refined copper in cathodes, wire bars, etc.; reported by consumers.

TABLE XIV

IMPORTS OF PRIMARY COPPER INTO THE UNITED STATES BY COUNTRY OF ORIGIN

<u>Source</u>	<u>Copper Content (short ton)</u>		
	<u>1972</u>	<u>1973</u>	<u>1974</u>
<u>Ore, Concentrate, Matte:</u>			
Australia	2,091	1,531	2,379
Canada	12,118	11,583	20,062
Chile	71	1,654	7
Honduras	-----	-----	4,595
Mexico	8	1,113	2,069
Nicaragua	(a)	200	2,771
Peru	9,486	8,697	7,284
Philippines	30,122	19,042	14,244
Republic of South Africa	-----	-----	1,754
Other Countries	<u>1,117</u>	<u>261</u>	<u>880</u>
Total Ore, etc.	55,013	44,081	56,045
<u>Blister Copper</u>			
Chile	33,208	29,617	65,093
Kenya	-----	-----	3,081
Mexico	9,544	8,799	7,644
Peru	81,599	86,896	94,686
Republic of South Africa	23,053	26,279	37,211
Other Countries	<u>10,063</u>	<u>2,513</u>	<u>115</u>
Total Blister	157,432	154,104	207,830

(a) Less than one-half unit.

(continued next page)

TABLE XIV (continued)

<u>Refined, Cathodes and Shapes:</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
Belgium-Luxemburg	----	9,982	8,024
Canada	124,983	130,553	118,429
Chile	26,598	27,492	66,549
Germany, West	1	8,627	7,177
Japan	1,125	22	73,055
Mexico	7,620	2,132	873
Netherlands	----	2,110	3,253
Peru	2,204	4,384	6,913
Poland	----	689	2,192
U. S. S. R	----	----	1,102
United Kingdom	3,938	7,726	6,643
Yugoslavia	24,379	716	14,844
Zambia	----	5,455	2,825
Other Countries	<u>1,531</u>	<u>3,067</u>	<u>1,690</u>
Total Refined	192,379	202,955	313,569
 Total: Primary Copper Imports	 404,824	 401,140	 577,444
Less: Primary Copper Exports	208,924	212,904	145,849
(ore, conct., matte			
blister & refined)			
<u>Net Primary Imports</u>	<u>195,900</u>	<u>188,236</u>	<u>431,595</u>
	 <u>1969</u>	 <u>1970</u>	 <u>1971</u>
Primary Copper Imports	408,168	390,400	352,020
Less: Primary Copper Exports	<u>205,786</u>	<u>290,554</u>	<u>224,478</u>
<u>Net Primary Imports</u>	<u>202,382</u>	<u>99,846</u>	<u>127,542</u>

TABLE XV

UNITED STATES COPPER MINING - OUTPUT OF COPPER ORE; AMOUNT AND VALUE OF
COPPER, GOLD AND SILVER RECOVERED THEREFROM 1/

Year	Copper Ore Tons	Gold Troy Ounces Value	Silver Troy Ounces Value <u>3/</u>	Copper <u>2/</u> Pounds Value	Lbs./Ore Ton Ave. <u>¢/lb.</u> <u>3/</u>	Value of Copper, Gold and Silver
1964	155,200,464	430,630 \$15,072,050	11,470,890 \$14,831,861	2,280,880,781 \$ 688,734,761	14.7 31.960	\$ 718,638,672
1965	173,286,198	567,531 \$19,863,585	12,801,638 \$16,552,518	2,430,879,000 \$ 851,220,899	14.0 35.017	\$ 887,637,002
1966	186,966,042	547,327 \$19,156,445	13,230,411 \$17,106,921	2,499,863,100 \$ 904,200,483	13.37 36.170	\$ 940,463,849
1967	127,066,097	321,398 \$11,248,930	8,351,423 \$12,942,033	1,608,078,200 \$ 614,703,973	12.66 38.226 <u>4/</u>	\$ 638,894,936
1968	170,054,065	405,863 \$15,934,200	9,532,341 <u>7/</u> \$20,443,000 <u>8/</u>	2,055,156,700 \$ 860,021,400	12.09 41.847 <u>5/</u>	\$ 896,398,600
1969	223,751,510	579,297 <u>6/</u> \$24,440,500 <u>7/</u>	13,581,516 <u>6/</u> \$24,320,000 <u>3/</u>	2,691,376,400 \$1,279,318,900	12.03 47.534	\$1,328,079,400
1970	257,729,000	552,140 <u>6/</u> \$21,080,600 <u>7/</u>	15,728,600 <u>6/</u> \$27,852,500 <u>8/</u>	3,025,021,000 \$1,745,437,000	11.74 57.700	\$1,794,370,000
1971	242,656,000	478,281 <u>6/</u> \$19,518,648 <u>7/</u>	13,142,041 <u>6/</u> \$20,312,339 <u>8/</u>	2,677,569,000 \$1,377,073,737	11.03 51.43	\$1,416,904,724
1972	266,831,000	484,552 <u>6/</u> \$28,297,837 <u>7/</u>	14,655,772 <u>6/</u> \$24,688,381 <u>8/</u>	2,922,127,000 \$1,479,180,687	10.95 50.62	\$1,532,166,905
1973	273,025,000	479,366 <u>6/</u> \$46,886,788 <u>7/</u>	15,910,462 <u>6/</u> \$40,691,961 <u>8/</u>	2,902,524,000 \$1,708,425,626	10.63 58.86	\$1,796,004,375
1974	293,443,000	410,866 <u>6/</u> \$65,626,804 <u>7/</u>	14,106,821 <u>6/</u> \$66,414,631 <u>8/</u>	2,852,933,000 \$2,186,744,615	9.80 76.649	\$2,318,786,050

1/ U.S. Bureau of Mines. 2/ Doesn't include precipitate copper from dump and in-place leaching. 3/ E/MJ average price, domestic, f.o.b. refinery 4/ Based on first 8 months of 1967 5/ Based on last 9 months of 1968 6/ Does not include gold or silver recovered from vat or heap leaching of copper ores. 7/ At average domestic gold prices in 'Metal Statistics, 1971': year 1968, \$39.26 per oz.; 1969, \$42.19; 1970, \$36.39; 1971, \$40.81; 1972, \$58.40; 1973, \$97.81; 1974, \$159.73. 8/ At average E/MJ N.Y. market price for silver .999 fine.

TABLE XVI

EMPLOYMENT, EARNINGS AND HOURS IN COPPER MINING

IN THE UNITED STATES AND ARIZONA

Period	All Employees		Production Workers							
	Ave. No.		Ave. No.		Ave. Weekly		Ave. Weekly		Ave. Hourly	
	(Thousands)		(Thousands)		Earnings		Hours		Earnings	
	1/ Ariz.	2/ U.S.	3/ Ariz.	4/ U.S.	5/ Ariz.	U.S.	6/ Ariz.	U.S.	7/ Ariz.	U.S.
1966	15.2	31.9	12.4	26.2	150.06	140.07	45.2	43.5	3.32	3.22
1967	12.2	25.4	9.0	19.1	141.43	140.18	42.6	43.0	3.32	3.26
7 Mos.	15.7	33.2	12.4	27.3	149.41	142.76	44.6	43.5	3.35	3.28
5 Mos.	7.3	14.4	3.8	7.5	130.05	127.95	39.9	40.4	3.27	3.16
1968	13.8	28.1	11.1	21.3	149.21	161.68	43.0	47.0	3.47	3.44
3 Mos.	7.5	14.9	4.3	8.3	118.17	129.06	36.7	40.2	3.22	3.21
9 Mos.	15.8	32.5	13.0	25.6	160.11	165.28	45.1	47.8	3.55	3.46
1969	17.0	33.7	13.9	26.9	166.50	169.00	44.4	46.3	3.75	3.65
1970	18.8	37.0	14.9	29.5	173.01	175.67	43.8	44.7	3.95	3.93
1971	18.9	34.7	14.9	26.8	178.50	178.46	42.4	42.9	4.21	4.16
1972	20.5	38.9	16.1	30.7	194.69	192.19	41.6	41.6	4.68	4.62
1973	21.5	42.3	17.6	33.7	206.75	206.42	41.6	42.3	4.97	4.88
1974	24.0	42.8	19.1	33.8	222.16	226.46	39.6	41.1	5.61	5.51

	Production Workers				Copper Ore ^{10/}	
	Ave. Earnings per		Aggregate Man-hours		Shipped or Treated	
	Man per Year ^{8/}		(Thousands) ^{9/}		(Thousand Short Tons)	
	Ariz.	U.S.	Ariz.	U.S.	Ariz.	U.S.
1966	\$ 7,803	\$7,284	29,145	59,264	101,558	186,966
1967	7,354	7,284	19,937	42,708	74,289	127,066
1968	7,759	8,407	24,820	52,057	101,294	170,054
1969	8,658	8,788	32,092	64,764	127,849	223,752
1970	8,997	9,135	33,936	68,570	150,241	257,729
1971	9,282	9,280	32,852	59,785	149,294	242,656
1972	10,124	9,994	34,827	66,410	165,815	266,831
1973	10,751	10,734	38,072	74,127	173,605	289,998
1974	11,552	11,776	39,331	72,237	178,821	293,443

(continued next page)

TABLE XVI (continued)

	Copper in Copper Ore <u>11/ 12/</u> (Recoverable Content) (Thousand pounds)		Production Workers			
			Copper Ore Mined per Man-hour (Tons)		Recoverable Copper Mined per Man-hour (Pounds)	
	Ariz.	U.S.	Ariz.	U.S.	Ariz.	U.S.
1966	1,474,447	2,805,136	3.485	3.155	50.590	47.333
1967	1,000,572	1,866,087	3.726	2.975	50.187	43.694
1968	1,252,919	2,349,046	4.081	3.267	50.480	45.124
1969	1,593,544	3,021,590	3.984	3.455	49.656	46.655
1970	1,826,734	3,368,957	4.427	3.759	53.829	49.132
1971	1,633,568	2,986,599	4.544	4.059	49.725	49.996
1972	1,816,618	3,264,113	4.761	4.017	52.161	49.151
1973	1,847,635	3,386,357	4.872	3.912	48.530	45.683
1974	1,710,744	3,145,148	4.547	4.062	43.496	43.539

- 1/ These estimates of "All Employees," made by the Employment Security Commission of Arizona, in cooperation with the U.S. Bureau of Labor Statistics, include all full and part time wage and salary workers who were employed in copper mining in any part of the pay periods which included the 12th of each month of the year. See note 2, Table 8 for explanation of differences between numbers of "Covered Employees" in Arizona Copper Mining in that table and those in this Table 16 for "All Employees," for the respective years.
- 2/ Estimates of "All Employees" in the United States industry division, "Mining-Copper Ores," which excludes copper smelting. The estimates have been made by the U.S. Bureau of Labor Statistics with the cooperation of the 50 states, and are based upon monthly samplings similar to those in 1/ above, adjusted periodically to census benchmarks.
- 3/ Estimates of production (non-supervisory) workers in Arizona Copper Mining, based upon samplings as in Note 1/.
- 4/ Estimates of "Production or Non-supervisory Workers" in U.S. "Mining-Copper Ores," made as in 3/ above.
- 5/ Figures for "Average Weekly Earnings" are products of the figures for "Average Weekly Hours" and "Average Hourly Earnings" for the respective years.

(continued next page)

TABLE XVI (continued)

- 6/ The gross number of hours worked by production (non-supervisory) and related workers in a monthly sample period divided by the average number of the same workers in the corresponding period, provides the basis for the estimate of "average weekly hours" for the month. Averages for a year or period of months are arithmetical averages of the estimates for the months involved.
- 7/ Gross payroll aggregates, exclusive of irregular bonuses and other pay not earned in a sample pay period, are divided by gross man-hour aggregates of production and related workers for the period in order to determine average hourly earnings. Average hourly earnings for a year or period of months are arithmetical averages of monthly estimates based on the results of the respective sample periods.
- 8/ "Average Weekly Earnings" times 52 weeks.
- 9/ Number of production workers times "Average Weekly Hours" times 52.
- 10/ Copper ore mined and shipped or treated by concentration, smelting or leaching.
- 11/ Recoverable copper from copper ore (Note 10/) and from copper precipitates from dump and in-place leaching.
- 12/ Copper from precipitates is held to be largely a byproduct of copper ores, similar to the gold, silver, molybdenum and other metals recovered from copper ores. In previous years, copper from precipitates has not been included in our tables similar to this one. For years prior to 1968, our tables have had added to the recoverable copper from ores a figure for "equivalent copper" computed by dividing the combined value of the byproduct gold and silver recovered from the ore, by the average price per pound of copper. The rapid increase in value of the annual recovery of molybdenum has made it rather pointless to continue this somewhat equivocal figure for "equivalent copper" without including the moly. In recent years copper precipitates have yielded value greater than that of the other byproducts combined. They require some labor from "Production Workers", and the inclusion of copper from precipitates as reported by the Bureau of Mines has some justification although its labor requirement is minor. The inclusion removes most if not all of the justification for a figure of "equivalent copper" - even with molybdenum added in its calculation.