

WAGE STATISTICS AND COPPER OUTPUT  
ARIZONA AND UNITED STATES COPPER MINES

Base Period (1947 - 1949) Compared With 1960 - 1962 Period

Source: Arizona Employment Security Commission, U. S. Dept. of Labor,  
U. S. Bureau of Mines

The Arizona Department of Mineral Resources has recently compiled several tables of wage statistics and copper output of Arizona copper mines, comparing them with wages paid in other major industries in Arizona and the United States.

The base period of 1947-1949 has been used in making the comparison because that is the period used by the U. S. Department of Labor in determining the Consumer Price Index (or Cost of Living).

As in previous reports, this Department has shown that hourly wage-rates in the copper mining industry have been increased annually at a much greater rate than the Consumer Price Index. For example, the Hourly Earnings Index in Arizona copper mining for 1962 has increased 103.9 percent over the base period, while the Consumer Price Index has increased only 29.3 percent. During the same period the Hourly Earnings Index in U. S. copper mining has increased 97.1 percent.

Incidentally, it might be noted that the hourly earnings in copper mining in Arizona for the base period were reported to be \$1.432 as compared with \$1.431 for U. S. copper mining, as reported by the U. S. Department of Labor "Employment and Earnings". For the year 1962, comparative figures \$2.920 for Arizona and \$2.82 for the United States. This is cited because of the general belief that there has been a wage differential in favor of the Northern States over Arizona.

In the copper mining industry, productivity would be based on the total output of copper and the measure of it would be pounds of copper produced per man-hour of labor. Responsibility for any change in productivity need not be the miner's labor alone. Improvements in technology and mechanical equipment are probably more important factors. The only reason the man-hour unit is used is because labor is the biggest factor in the cost of producing copper, and it is therefore a good practical measure, serving to indicate whether productivity is keeping up with rising costs, thus checking inflationary tendencies.

As mentioned in previous reports, it has been generally believed that real wages of labor cannot rise faster than real output. In other words, we cannot get more out of the economy than we produce. It has been shown that since World War II, real output, or productivity, in general has been growing at an average of only 2 to 3 percent a year - while wages, on the average, have been climbing 5 to 6 percent a year.

In this year's study of the copper mining industry, a comparison was made between the three-year base period (1947-1949) and the latest three-year period (1960-1962). Because the by-products of gold and silver, produced with the copper,

are factors in determining the miner's output, the total value of metal produced has been converted into pounds of copper at the average copper price. Preliminary figures for the 1962 production of copper, gold and silver from copper ores in Arizona and the United States were used in obtaining the three year averages for the 1960-1962 period.

The study shows that in Arizona the pounds of equivalent copper produced per man-hour was 29.9901 in the base period, as compared with 37.0497 pounds in the 1960-1962 period, or a total increase in productivity of 23.54% for the 13-year period or 1.81% per year. The hourly earnings for the base period were \$1.432, and for the 1960-1962 period were \$2.806, or a total increase of 95.95% or 7.38% per year.

Corresponding figures for the United States copper mining industry were 26.1639 pounds of equivalent copper produced per man-hour in the base period, as compared with 32.9439 pounds in the 1960-1962 period, or a total increase of 25.91% an average of 1.99% per year. The hourly earnings were \$1.431 in the base period, and \$2.73 in the 1960-1962 period, a total increase of 90.78%, or 6.98% per year.

The total covered employment in copper mining in Arizona in 1962, according to the Employment Security Commission, amounted to 14,408 employees with wages amounting to \$101,920,108. Additional copper smelter employees handling custom ores such as Asarco's Hayden smelter and Phelps Dodge's Douglas smelter, averaged 988 employees with covered wages amounting to \$6,639,024. This makes a grand total, for copper mining, milling and smelting of 15,396 covered employees and \$108,559,132 covered wages in the copper industry of Arizona.

This report does not include fringe benefits, which, in another study by this Department in 1959, were estimated to average 25% of the payroll. It has probably been slightly higher in 1962. With a copper industry pay-roll of \$108,559,132 in 1962, fringe benefits would add approximately \$27 million to labor costs for the year.

In some publicity information that came out from the International Union of Mine, Mill and Smelter Workers the following statement was made:

"John Clark, Mine-Mill president, noted that 1962 saw 5,000 fewer workers produce 10% more copper than in 1956, while in the nation's brass mills 2,800 fewer workers produced almost exactly the same tonnage as in '56. 'What we see in copper is not peculiar to this industry', Mr. Clark said, 'It is typical of all major U. S. industries as automation, increased mechanization, and speedup take their toll'.

This Department has checked the figures discussed by Mr. Clark in the March 22, 1963 issue of American Metal Market, and the statistics reported in the February, 1963, issue of U. S. Dept. of Labor's "Employment and Earnings", and the U. S. Bureau of Mines Preliminary Report of the Copper Industry in 1962, and present herewith comparative figures for 1956 and 1962:-

	Total Pounds Mine Copper Recovered	Number of Copper Mining Employees	Average Weekly Hours	Total Man Hours	Lbs. Copper Recovered per Man-hour
1956	2,049,455,804	34,400	43.7	79,243,840	25.863
1962P	2,200,000,000	28,500	44.3	63,577,800	34.610
	Avg. Hourly Earnings		Total Wages	Cost Per Lb. Copper	
1956	\$ 2.31		\$ 183,053,270	\$ .0893	
1962P	2.82		179,289,396	.0815	

TABLE I  
ESTIMATED HOURS AND EARNINGS IN SELECTED INDUSTRIES IN ARIZONA  
YEAR 1962

Source: "Arizona Current Employment" Employment Security Commission.

These estimates are based upon a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period ending the 15th of the month.

<u>1962</u>	<u>Average</u> <u>Employment</u>	<u>Average</u> <u>Weekly</u> <u>Earnings</u>	<u>Average</u> <u>Weekly</u> <u>Hours</u> 1/	<u>Average</u> <u>Hourly</u> <u>Earnings</u> 2/	<u>Base</u> <u>Hourly</u> <u>Rate</u> 3/
Copper Mining 4/	13,350	\$ 129.29	44.28	\$ 2.920	\$ 2.785
Manufacturing (total)	53,825	102.73	39.96	2.571	2.571
Copper Smelting 5/	988	129.24	44.64	2.895	2.752
Excl. Smelting	52,837	102.23	39.87	2.564	2.564
Contract Construction	31,242	152.62	37.70	4.048	4.048
Utilities	24,492	106.69	41.03	2.600	2.568
Retail Trade	69,375	72.12	39.67	1.818	1.818
Wholesale Trade	17,117+	99.95	40.75	2.453	2.430

1/ Actual hours worked.

2/ Includes overtime earnings.

3/ Base hourly rate is a straight time rate, and is obtained by dividing the "Weekly Earnings" by the "Weekly Hours" plus 50% of the excess hours over 40 hours.

4/ Includes smelter employees at Kennecott's Hayden smelter.

5/ Includes smelter employees at P. D.'s Douglas and Asarco's Hayden smelters.

OTHER NON-AGRICULTURE EMPLOYMENT \*

	<u>Average Employment</u>
Mining & Quarrying (Excl. copper mining) .....	2,000
Finance, Insurance, Real Estate .....	18,217
Services and Miscellaneous .....	55,758
Federal Government .....	22,350
State and Local Gov't. (Incl. Education) .....	54,842
Education .....	(29,017)
GRAND TOTAL NON-AGRICULTURE EMPLOYMENT .....	362,568

\* Hourly

Arizona Department of Mineral Resources

May, 1963

**TABLE II**  
**MONTHLY STATISTICS IN 1962 OF EMPLOYMENT, WEEKLY EARNINGS, WEEKLY HOURS**  
**AND HOURLY EARNINGS IN COPPER MINING, COPPER SMELTING, MANUFACTURING,**  
**CONTRACT CONSTRUCTION, UTILITIES, WHOLESALE AND RETAIL TRADE**

Source: Arizona Employment Security Commission

<u>1962</u>	<u>Employment</u>	<u>Avg. Weekly Earnings</u>	<u>Avg. Weekly Hours</u>	<u>Avg. Hourly Earnings</u>
<b>COPPER MINING: 1/</b>				
January	12,700	\$ 134.85	46.5	\$ 2.90
February	13,300	131.26	44.8	2.93
March	13,300	136.92	46.1	2.97
April	13,400	127.46	43.8	2.91
May	13,400	129.06	44.2	2.92
June	13,400	128.48	44.0	2.92
July	13,200	124.41	42.9	2.90
August	13,800	131.12	44.6	2.94
September	13,700	126.29	43.4	2.91
October	13,400	125.13	43.0	2.91
November	13,300	127.46	43.8	2.91
December	13,300	129.06	44.2	2.92
AVERAGE	13,350	\$ 129.29	44.28	\$ 2.920
<b>COPPER SMELTING: 2/</b>				
	A.S. & R.CO. at	Hayden - Phelps Dodge at Douglas		
January	992	\$ 131.33	45.6	\$ 2.88
February	985	133.11	45.9	2.90
March	974	133.61	45.6	2.93
April	979	129.76	44.9	2.89
May	976	132.82	45.8	2.90
June	985	129.92	44.8	2.90
July	987	129.89	45.1	2.88
August	938	123.38	42.4	2.91
September	961	126.58	43.8	2.89
October	954	121.38	42.0	2.89
November	944	130.34	45.1	2.89
December	939	129.63	44.7	2.90
AVERAGE	988	\$ 129.24	44.64	\$ 2.895
<b>TOTAL MANUFACTURING: (Includes Copper Smelting above)</b>				
January	51,000	\$ 102.40	40.0	\$ 2.56
February	51,100	102.51	40.2	2.55
March	51,600	101.12	39.5	2.56
April	52,800	101.38	39.6	2.56
May	53,700	102.26	40.1	2.55
June	54,600	102.77	40.3	2.55
July	54,100	102.03	39.7	2.57
August	54,600	101.89	39.3	2.56
September	55,200	103.83	40.4	2.57
October	55,500	101.39	39.3	2.58
November	55,800	103.22	39.7	2.60
December	55,900	107.98	40.9	2.64
AVERAGE	53,825	\$ 102.73	39.96	\$ 2.571

1/ Excludes all smelters except Kennecott's Hayden smelter.

2/ Included under Manufacturing (P.D.'s smelter at Douglas and Asarco's at Hayden).

TABLE II (Continued) MONTHLY LABOR STATISTICS

1962	Employment	Avg. Weekly Earnings	Avg. Weekly Hours	Avg. Hourly Earnings
<u>CONTRACT CONSTRUCTION:</u>				
January	30,100	\$ 137.77	35.6	\$ 3.87
February	29,800	142.56	36.0	3.96
March	30,600	149.27	37.6	3.97
April	31,900	157.54	38.9	4.05
May	32,200	156.80	39.2	4.00
June	31,600	157.17	39.0	4.03
July	31,900	160.70	39.1	4.11
August	31,300	155.83	38.1	4.09
September	32,400	157.00	38.2	4.11
October	31,900	159.00	38.5	4.13
November	30,600	139.59	33.8	4.13
December	30,600	158.21	38.4	4.12
AVERAGE	31.242	152.62	37.70	4.048

UTILITIES:

January	24,400	\$ 104.24	41.2	\$ 2.53
February	24,100	103.79	40.7	2.55
March	24,000	104.04	40.8	2.55
April	24,300	103.68	40.5	2.56
May	24,300	105.52	40.9	2.58
June	24,500	106.45	41.1	2.59
July	24,600	107.23	41.4	2.59
August	24,800	108.21	41.3	2.62
September	24,800	110.66	41.6	2.66
October	24,500	108.12	40.8	2.65
November	24,800	109.67	41.7	2.63
December	24,800	108.65	41.0	2.65
AVERAGE	24,492	106.69	41.03	2.568

	EMPLOYMENT		AVG. WKLY EARN'GS		AVG. WKLY HRS.		AVG. HRLY EARN'GS	
	Retail	Whole-sale	Retail	Whole-sale	Retail	Whole-sale	Retail	Whole-sale
TRADE:								
January	68,500	16,900	\$ 70.18	\$ 98.74	40.1	40.8	\$ 1.75	\$ 2.42
February	68,700	15,400	69.83	95.71	39.9	40.9	1.75	2.34
March	69,500	15,800	70.49	95.47	39.6	40.8	1.78	2.37
April	70,100	17,400	71.82	97.85	39.9	40.6	1.80	2.41
May	70,100	17,400	73.26	97.60	39.6	40.0	1.85	2.44
June	69,300	17,500	73.42	100.28	39.9	40.6	1.84	2.47
July	69,500	17,400	74.24	100.37	39.7	40.8	1.87	2.46
August	66,700	17,400	73.63	101.50	39.8	40.6	1.85	2.50
September	67,800	17,500	73.63	102.82	39.8	40.8	1.85	2.52
October	68,700	17,500	72.13	100.84	39.2	40.5	1.84	2.49
November	70,000	17,600	71.94	102.34	39.1	41.1	1.84	2.49
December	73,600	17,600	70.92	105.82	39.4	41.5	1.80	2.55
AVERAGE	69,375	17,117	\$ 72.12	\$ 99.95	39.67	40.75	\$ 1.818	\$ 2.453

TABLE III

ESTIMATED HOURS AND EARNINGS IN SELECTED INDUSTRIES IN ARIZONA

These estimates are based upon a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period ending nearest the 15th of the month.

Prepared by Arizona Employment Security Commission in co-operation with the U. S. Bureau of Labor Statistics.

	1947-49	1951	1956	1960	1961	1962
<u>Average Hourly Earnings:</u>						
Manufacturing <sup>1/</sup>	\$ 1.345	\$ 1.55	\$ 2.144	\$ 2.455	\$ 2.517	\$ 2.571
Copper Mining <sup>2/</sup>	1.432	1.74	2.377	2.674	2.817	2.920
Contract Construction	1.787	2.15	2.810	3.564	3.819	4.048
Utilities	1.369	1.54	1.929	2.366	2.493	2.600
Trade	1.090	1.32	1.618	1.848	1.853	1.944
<u>Average Weekly Hours:</u>						
Manufacturing	41.60	43.1	42.27	40.32	40.36	39.96
Copper Mining	44.83	47.7	47.15	43.69	44.83	44.28
Contract Construction	37.10	38.0	37.39	36.49	37.20	37.70
Utilities	41.39	40.1	40.78	41.42	40.68	41.03
Trade	41.98	42.8	41.37	40.56	40.78	39.88
<u>Average Weekly Earnings:</u>						
Manufacturing	\$ 55.95	\$ 66.81	\$ 90.63	\$ 99.00	\$ 101.57	\$ 102.73
Copper Mining	64.20	33.01	112.07	116.83	126.29	129.29
Contract Construction	66.30	81.70	105.09	130.44	142.07	152.62
Utilities	56.66	61.75	78.66	99.70	101.44	106.69
Trade	45.76	56.50	66.94	74.94	75.57	77.63
<u>Hourly Earnings Index (1947-1949 = 100):</u>						
Manufacturing	100.0	115.2	159.4	182.5	187.1	191.2
Copper Mining	100.0	121.5	166.0	186.7	196.7	203.9
Contract construction	100.0	120.3	157.3	199.4	213.7	226.5
Utilities	100.0	112.5	140.9	170.7	182.1	189.9
Trade	100.0	121.1	148.4	169.5	170.0	178.4
<u>Consumer Price Index:</u>	100.0	111.0	116.2	126.5	127.85	129.3
<u>Wholesale Price Index:</u>	100.0	114.8	114.3	119.6	118.3	119.4
<u>E. &amp; M. J. Copper Price:</u>	20.818¢	24.200¢	41.818¢	32.053¢	29.920¢	30.600¢
<u>Copper Price Index:</u>	100.0	116.2	200.8	154.0	143.7	147.0

1/ Beginning July 1952, Manufacturing includes aircraft modification operations. Manufacturing includes copper smelting at Asarco's Hayden Plant, International's Miami Smelter (to April 1, 1960), and Phelps Dodge's Douglas smelter.

2/ Copper Mining includes smelting at Kennecott's Hayden Smelter.

TABLE IV

COMPARISON OF AVERAGE NUMBER OF EMPLOYEES - WEEKLY EARNINGS  
WEEKLY HOURS AND HOURLY EARNINGS OF EMPLOYEES IN SELECTED  
INDUSTRIES OF THE UNITED STATES AND STATE OF ARIZONA

YEAR 1962

Source: Arizona Employment Security Commission.  
U. S. Department of Labor "Employment and Earnings",  
February, 1963

Year 1962	Number Employees	Avg. Weekly Earnings	Avg. Weekly Hours	Avg. Hourly Earnings
Copper Mining - United States	28,500	\$ 120.98	42.9	\$ 2.82
" " - Arizona	13,350	129.29	44.28	2.92
Manufacturing-United States	16,750,000	96.56	40.4	2.39
" -Arizona	53,825	102.73	39.96	2.571
Contract Construction -				
United States	2,696,000	121.73	37.0	3.29
" Arizona	31,242	152.62	37.70	4.048
Retail Trade - United States	3,500,000	66.33	37.9	1.75
" " - Arizona	69,375	72.12	39.67	1.818
Wholesale Trade -				
United States	3,071,000	96.63	40.6	2.38
" Arizona	17,117	99.95	40.75	2.453



TABLE V

ESTIMATED EMPLOYMENT, WEEKLY HOURS, HOURLY AND WEEKLY  
EARNINGS IN ARIZONA COPPER MINING BY YEARS FROM 1947 TO 1962 INCL.

Source: Arizona Employment Security Commission

These estimates are based upon a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period nearest the 15th of each month.

COPPER MINING

		Weekly Hours	Hourly Earnings	Base Hourly Rate	Weekly Earnings	Con sumer Price Index
	Employment	1/ 1/	2/ 2/	3/ 3/		
1947-49 Base	10,700	44.83	\$ 1.432	\$ 1.359	\$ 64.20	100.0
1950 Year	9,500	46.5	1.63	1.524	75.80	102.8
1951 - April	10,400	47.2	1.71	1.589	80.71	110.4
1951 Year	10,100	47.7	1.74	1.61	83.00	111.0
1952 Year	10,700	47.1	1.92	1.785	90.43	113.5
1953 Year	11,400	46.7	2.05	1.896	95.73	114.4
1954 Year	11,600	45.3	2.13	2.012	96.49	114.8
1955 Year	11,700	47.0	2.23	2.075	104.81	114.5
1956 Year	13,200	47.0	2.38	2.215	111.86	116.1
1957 Year	14,000	43.74	2.42	2.324	106.00	120.2
1958 Year	13,533	39.80	2.399	2.399	95.49	123.5
1959 Year	11,100	42.816	2.526	2.446	108.15	124.6
1960 Year	12,733	43.69	2.674	2.566	116.83	126.5
1961 Year	13,117	44.83	2.817	2.673	126.29	127.85
1962 Year	13,350	44.28	2.920	2.785	129.29	129.3

1/ Actual hours worked.

2/ Includes overtime earnings.

3/ Base Hourly Rate is a straight time rate, and is obtained by dividing the Weekly Earnings by the Weekly Hours plus 50% of the excess hours over 40 hours.



TABLE VI

## COPPER MINING EMPLOYMENT, WAGES AND HOURS IN U. S. AND ARIZONA

Base Period, (1947-1949) compared with Three-Year Period (1960-1962)

Source: "Employment and Earnings", U.S. Dept. of Labor.  
 U. S. B. M. Mineral Yearbooks "Arizona's Current Employment  
 Development" Arizona Employment Security Commission.

	"A" Number Of All Employees		"B" Weekly Earnings		"C" Weekly Hours		"D" Hourly Earnings	
	ARIZONA	U.S.	ARIZONA	U.S.	ARIZONA	U.S.	ARIZONA	U.S.
Base Period: 1947-49 Avg.	10,700	27,100	\$ 64.20	63.11	44.83	44.10	\$ 1.432	\$ 1.431
Last Three Years:								
1960	12,733	29,600	116.83	114.75	43.7	43.3	2.674	2.65
1961	13,117	29,000	126.29	119.03	44.8	43.6	2.817	2.73
1962	13,350	28,500	129.29	120.98	44.3	42.9	2.920	2.82
1960-62 Avg.	13,067	29,033	\$ 124.24	118.21	44.27	43.30	\$ 2.806	\$ 2.73

	"E" Annual Man-Hours		"F" Annual Earnings		Annual Earnings Per Man	
	"A" x "C" x 52		"E" x "D"		"F" ÷ "A"	
	ARIZONA	U.S.	ARIZONA	U.S.	ARIZONA	U.S.
Base Period: 1947-49 Avg.	24,943,412	62,145,720	\$ 35,718,966	\$ 88,930,525	\$ 3,338	\$ 3,282
Last Three Years:						
1960	28,934,469	66,647,360	77,370,770	176,615,504	6,076	5,967
1961	30,557,363	65,748,800	86,080,092	179,494,224	6,562	6,189
1962	30,753,060	63,577,800	89,798,935	179,289,396	6,726	6,291
1960-62 Avg.	30,081,631	65,324,653	\$ 84,409,057	\$ 178,336,303	\$ 6,435	\$ 6,143

Continued -

TABLE VI (Cont'd)

	"G" Tons Copper Ores		"H" Pounds Equiv. * Copper Produced From Copper Ores	
	ARIZONA	U.S.	ARIZONA	U.S.
Base Period: 1947-49 Avg	38,082,754	82,875,491	748,056,267	1,625,975,640
Last Three Years:				
1960	66,032,439	134,994,082	1,016,449,300	2,056,147,800
1961	72,000,000	144,000,000	1,127,100,000	2,200,000,000
1962 P	78,000,000	145,400,000	1,200,000,000	2,200,000,000
1960-62 Avg.	72,010,813	141,464,694	1,114,516,433	2,152,049,267

\* Includes value of gold and silver recovered from copper ores, converted into pounds copper at average copper price.

P = Preliminary

	Tons Copper Ore Produced Per Man-Hour "G" ÷ "E"		Lbs. Equiv. Copper Produced Per Man-Hour "H" ÷ "E"		Earnings Per Man-Hour "D"	
	ARIZONA	U. S.	ARIZONA	U.S.	ARIZONA	U.S.
Base Period: 1947-49 Avg.	1,5268	1.3336	29.9901	26.1639	\$ 1.432	\$ 1.431
1960-62 Avg.	2.3938	2.1656	37.0497	32.9439	\$ 2.806	\$ 2.73
% Incr. in 13 Yrs Per Year	56.79% 4.37%	62.10% 4.78%	23.54% 1.31%	25.91% 1.99%	95.95% 7.38%	90.78% 6.98%

TABLE VII

SUMMARY OF ESTIMATED\* COPPER MINING EMPLOYMENT, WEEKLY EARNINGS,  
WEEKLY HOURS, HOURLY EARNINGS, IN ARIZONA AND UNITED STATES,  
BY YEARS, 1947 to 1962 **INCLUSIVE**

Source: "Employment and Earnings" - U. S. Dept. of Labor.  
"Arizona's Current Employment Developments" -  
Arizona Employment Security Commission.

	ALL EMPLOYEES		WEEKLY EARNINGS		WEEKLY HOURS		HOURLY EARNINGS	
	Arizona	U.S.	Arizona	U.S.	Arizona	U. S.	Arizona	U.S.
1947	10,700	25,700	\$ 59.40	\$ 59.27	45.0	44.8	\$ 1.32	\$ 1.32
1948	10,900	27,800	65.99	65.81	45.2	45.2	1.46	1.46
1949	10,500	27,300	66.98	63.96	44.3	42.3	1.512	1.512
Avg. 1947-1949	10,700	27,100	\$ 64.20	\$ 63.11	44.83	44.1	\$ 1.432	\$ 1.431
1950	9,500	25,800	\$ 75.80	\$ 72.05	44.5	45.0	\$ 1.63	\$ 1.601
1951	10,100	25,900	83.01	78.37	47.7	46.1	1.74	1.70
1952	10,700	26,500	90.31	85.73	47.06	45.6	1.92	1.88
1953	11,400	28,600	96.03	91.60	46.73	45.8	2.055	2.00
1954	11,900	27,400	96.60	87.33	45.31	42.6	2.132	2.05
1955	11,800	27,200	104.90	95.70	47.0	44.1	2.232	2.17
1956	13,300	34,400	112.07	100.95	47.1	43.7	2.377	2.31
1957	14,000	32,500	106.22	93.23	43.3	41.1	2.425	2.39
1958	13,500	28,400	95.40	94.62	39.8	39.1	2.399	2.42
1959	11,100	22,400	108.15	106.25	42.8	42.5	2.526	2.50
1960	12,733	29,600	116.83	114.75	43.7	43.3	2.674	2.65
1961	13,117	27,000	126.29	119.03	44.8	43.6	2.817	2.73
1962	13,350	28,500	129.29	120.98	44.3	42.9	2.920	2.82

\* These estimates include all full and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month.

TABLE VIII

ARIZONA COPPER MINING - OUTPUT IN TONS COPPER ORE,  
VALUE OF COPPER, GOLD, SILVER PRODUCED

Source: U. S. Bureau of Mines

	Tons Copper Ore Annual Rate	Gold Ounces & Value	Silver Ounces & Value	Copper Pounds & Value	Lbs.Cu Recov. Per Ton & Copper Price	Value of Copper, Gold & Silver	Lbs.Copper-Equiv. to Total Val. Cu,Gold & Silver
1947-1949	38,082,754	79,612 \$2,786,420	2,603,485 \$2,356,154	723,353,767 \$150,588,843	19.0 lbs/ton 20.818¢	\$155,731,417	748,056,267
1950	41,757,037	79,562 \$2,784,670	2,853,375 \$2,582,304	765,334,514 \$162,250,916	18.3 lbs/ton 21.2¢	\$167,617,890	767,000,000
1951	42,734,388	83,521 \$2,923,235	3,087,865 \$2,794,518	775,609,514 \$187,697,501	18.1 lbs/ton 24.2¢	\$193,415,254	799,236,600
1956	60,468,580	119,435 \$4,180,225	3,963,579 \$3,587,039	935,039,400 \$390,846,469	15.5 lbs/ton 41.8¢	\$398,613,733	953,621,100
1960	66,032,439	115,502 \$4,046,070	3,689,622 \$3,339,108	993,370,700 \$317,878,624	15.0 lbs/ton 32.0¢	\$325,263,802	1,016,449,300
1961	71,918,991	129,184 \$4,521,440	4,380,458 \$4,049,690	1,092,360,900 326,845,395	14.6 lbs/ton 29.9¢	\$335,416,435	1,121,007,000
1962 P	78,000,000	122,500 \$4,287,500	4,751,150 \$5,083,730	1,170,000,000 \$358,021,000	15.0 lbs/ton 30.6¢	\$367,391,200	1,200,000,000

P= Preliminary

TABLE IX

UNITED STATES COPPER MINING - OUTPUT IN TONS COPPER ORE,  
VALUE OF COPPER, GOLD, SILVER PRODUCED

Source: U. S. Bureau of Mines

	Tons Copper Ore Annual Rate	Gold Ounces & Value	Silver Ounces & Value	Copper Pounds & Value	Lbs.Cu Recov. Per Ton & Copper Price	Value of Copper, Gold & Silver	Lbs.Copper Equiv. to Total Val. Cu,Gold & Silver
1947-1949	82,875,491	479,489 \$16,785,615	7,735,382 \$7,045,770	1,511,500,640 \$ 314,664,195	18.2 lbs. 20.818¢	\$338,495,580	1,625,975,640
1950	94,585,792	583,205 \$20,412,175	8,389,913 \$7,592,871	1,691,778,098 \$ 358,656,570	17.9 lbs. 21.2¢	\$336,616,616	1,823,876,000
1956	131,775,959	579,617 \$20,286,595	11,512,013 \$10,418,372	2,049,455,804 \$ 856,672,524	15.55 lbs. 41.8¢	\$837,377,491	2,122,912,000
1960	134,994,082	539,249 \$18,873,715	9,469,133 \$8,569,565	1,970,387,781 \$ 630,524,096	14.6 lbs. 32.0¢	\$657,967,376	2,056,147,800
1961	142,721,798	532,215 \$ 1,866,253	10,385,661 \$9,813,411	2,145,224,433 641,872,593	15.0 lbs. 29.9¢	\$653,552,257	2,184,260,000
1962 P	145,400,000	525,000 \$18,375,000	10,883,000 \$11,645,000	\$2,261,000,000 \$ 691,866,000	15.55 lbs. 30.6¢	\$721,886,000	2,200,000,000

P = Preliminary

**TABLE X**  
**AVERAGE NUMBER OF COVERED EMPLOYEES, TOTAL WAGES, AVERAGE ANNUAL WAGE, AND AVERAGE WEEKLY WAGE**  
 Base period 1947-49, 1960, 1961 and 1962  
 Arizona Covered Industry

Compiled by Department of Mineral Resources  
 Source: Arizona Employment Security Commission

	Average No. of $\frac{1}{2}$ / Employees	Total Wages	Average Annual Wage	Average Weekly Wage	Average No. of $\frac{1}{2}$ / Employees	Total Wages	Average Annual Wage	Average Weekly Wage
		Base Period	1947 - 1949			Year 1960		
Copper Mining Only $\frac{3}{4}$	11,278	\$ 39,432,008	\$ 3,496	\$ 67.23	13,764	\$ 90,312,848	\$ 6,562	\$126.19
All Mining & Quarrying	12,870	44,345,018	3,446	66.27	15,837	102,175,093	6,452	124.08
Smelting $\frac{2}{4}$	1,500	5,175,000	3,450	66.35	1,033	5,995,780	5,804	111.62
All Mining, Quar., & Smelting	14,370	49,520,018	3,446	66.27	16,870	108,170,873	6,412	123.31
Manufacturing (Excl. Smelting)	12,639	36,910,624	2,920	56.15	46,470	265,799,784	5,720	110.00
Construction	10,844	35,424,826	3,267	62.83	32,174	200,203,313	6,223	119.67
Transp. & Utilities (Excl. RR's)	10,530	29,948,944	2,844	54.69	19,906	106,302,227	5,340	102.69
Wholesale-Retail Trade	36,213	91,916,860	2,538	48.81	74,423	291,911,971	3,922	75.42
Services & Misc. (Incl. Agri.)	18,643	43,103,526	2,312	44.46	47,190	187,753,626	3,979	76.52
Totals and Averages	103,239	\$286,824,898	\$ 2,778	\$ 53.42	237,033	\$1,160,141,794	\$ 4,894	\$ 94.12
		Year 1961				Year 1962		
Copper Mining Only $\frac{3}{4}$	14,275	\$ 97,271,286	\$ 6,814	\$131.04	14,408	\$ 101,920,108	\$ 7,074	\$136.04
All Mining & Quarrying	16,178	107,813,787	6,664	128.15	15,988	110,647,421	6,921	133.10
Smelting $\frac{2}{4}$	965	5,923,749	6,139	118.05	988	6,639,024	6,720	129.23
All Mining, Quar., & Smelting	17,143	113,737,536	6,635	127.60	16,976	117,286,445	6,909	132.87
Manufacturing (Excl. Smelting)	48,865	289,083,011	5,916	113.77	52,811	321,603,378	6,090	117.12
Construction	31,233	209,974,317	6,723	129.30	31,348	229,040,530	7,306	140.50
Transp. & Utilities (Excl. RR's)	20,147	111,590,519	5,539	106.52	20,544	118,785,459	5,782	111.19
Wholesale-Retail Trade	77,471	309,450,570	3,994	76.81	81,289	334,681,623	4,117	79.17
Services & Misc. (Incl. Agri.)	52,451	214,534,013	4,090	78.66	56,702	238,801,787	4,212	81.00
Totals and Averages	247,300	\$1,248,370,766	\$ 5,048	\$ 97.08	259,670	\$1,360,199,222	\$ 5,238	\$100.73

1/ This number includes all covered employees on payroll, and is not restricted to production workers only, on which the average hourly and weekly earnings are reported. 2/ Smelting employment has been segregated from Manufacturing as reported by the Employment Security Commission. 3/ This number includes all copper mining and milling employees and some copper smelting employees not reported under Manufacturing by the Employment Security Commission.

Note: Fringe benefits are not included in the total wages.

TABLE XI

SUMMARY OF TOTAL COVERED EMPLOYMENT & WAGES IN ARIZONA COPPER MINING  
1947-1962 INCLUSIVESource: Arizona Employment Security Commission  
United States Bureau of Mines

COPPER MINING	No. Covered Employees	Covered Wages	Average Annual Wage	Tons Copper Ores	Average Weekly Wage
1947	11,340	\$ 36,365,277	\$ 3,207	37,810,448	\$ 61.67
1948	11,493	41,318,524	3,595	39,072,204	69.13
1949	11,001	40,612,224	3,692	37,365,611	71.00
1950	10,181	41,994,321	4,125	41,757,273	79.33
1951	10,754	47,825,698	4,447	42,784,388	85.52
1952	11,365	54,950,235	4,835	44,472,522	93.14
1953	12,068	62,742,982	5,199	45,187,838	99.98
1954	12,502	65,518,853	5,241	43,072,894	100.79
1955	12,399	71,293,263	5,750	52,189,728	110.58
1956	14,008	83,568,996	5,966	60,468,580	114.73
1957	14,652	85,125,320	5,809	59,571,834	111.71
1958	14,100	74,726,972	5,300	56,255,809	101.93
1959	11,568	72,095,130	6,232	53,121,545	119.85
1960	13,764	90,312,848	6,562	66,032,439	126.19
1961	14,275	97,271,286	6,814	72,000,000	131.04
1962	14,408	101,920,108	7,074	78,000,000 P	136.04

P = Preliminary