

ARIZONA WAGE STATISTICS AND COPPER OUTPUT

BASE PERIOD (1947-1949) COMPARED WITH PERIOD (1962-1964)

COMPILED BY

ARIZONA DEPARTMENT OF MINERAL RESOURCES

FAIRGROUNDS, PHOENIX, ARIZONA

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Sources:

Arizona Employment Security Commission
U. S. Department of Labor
U. S. Bureau of Mines

MAY, 1965

WAGE STATISTICS AND COPPER OUTPUT
ARIZONA AND UNITED STATES COPPER MINES

Base Period (1947-1949) Compared with 1962-1964 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 was the period used by the U. S. Department of Labor in determining the Consumer Price Index (or Cost of Living). At the present time, the base period of 1957-1959 is being used by the Department of Labor, but this study has retained the old base period for comparison purposes.

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 1964 has increased 118.8 percent over the base period, while the Consumer Price Index has increased only 32.6 percent. During the same period the Hourly Earning Index in U. S. copper mining has increased 112.5 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. Dept. of Labor "Employment and Earnings." For the year 1964, comparative figures \$3.133 for Arizona and \$3.04 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. However, 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 6 to 7 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 (1962-1964). 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 1964 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 1962-1964 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 41.5349 pounds in the 1962-1964 period, or a total increase in productivity of 38.50% for the 15-year period, or 2.57% per year. The hourly earnings for the base period were \$1.432, and for the 1962-1964 period were \$3.019, or a total increase of 110.83% or 7.39% 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 38.2310 pounds in the 1962-1964 period, or a total increase of 46.12%, an average of 3.07% per year. The hourly earnings were \$1.431 in the base period, and \$2.917 in the 1962-1964 period, a total increase of 103.85% or 6.92% per year.

The total covered employment in copper mining in Arizona in 1964, according to the Employment Security Commission, amounted to 14,720 employees with wages amounting to \$113,792,031. This item included the employees at Kennecott's copper smelter at Hayden. Additional copper smelter employees at seven other copper smelters averaged 1790 employees in 1964, and were classified under "Manufacturing." Their wages in 1964 amounted to \$12,428,972. This makes a grand total for copper mining, milling and smelting of 16,510 covered employees and \$126,221,003 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 undoubtedly been higher in 1964.

TABLE I

ESTIMATED HOURS AND EARNINGS IN SELECTED INDUSTRIES IN ARIZONA

YEAR 1964

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.

1964	Average Employment	Average Weekly Earnings	Average Weekly Hours <u>1/</u>	Average Hourly Earnings <u>2/</u>	Base Hourly Rate <u>3/</u>
Copper Mining <u>4/</u>	13,275	\$ 140.97	44.98	\$ 3.133	2.970
Manufacturing (total)	58,542	109.14	40.30	2.708	2.698
Copper Smelting <u>5/</u>	1,790	133.53	45.05	2.964	2.807
Excl. Smelting	56,752	108.37	40.15	2.700	2.694
Contract Construction	27,550	154.32	36.28	4.248	4.248
Utilities	25,350	114.45	40.81	2.787	2.777
Retail Trade	76,042	76.27	38.63	1.976	1.976
Wholesale Trade	18,192	114.24	41.29	2.690	2.646

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 all smelters except Kennecott's.

OTHER NON-AGRICULTURE EMPLOYMENT *

	Average Employment
Mining & Quarrying (Excl. copper mining)	1,750
Finance, Insurance, Real Estate	20,900
Services and Miscellaneous	62,067
Federal Government	24,400
State & Local Gov't. (Incl. Education	61,942
Education	33,500
GRAND TOTAL NON-AGRICULTURE EMPLOYMENT	390,010

* Hourly

TABLE II
MONTHLY STATISTICS IN 1964 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

1964 COPPER MINING: (Includes Kennecott's Copper Smelting)	Employment	Avg. Weekly Earnings	Avg. Weekly Hours	Avg. Hourly Earnings
January	13,300	\$ 137.33	44.3	\$ 3.10
February	13,400	139.78	44.8	3.12
March	13,400	137.64	44.4	3.10
April	13,500	137.64	44.4	3.10
May	13,500	140.85	45.0	3.13
June	13,700	140.71	45.1	3.12
July	12,400	134.47	43.8	3.07
August	12,500	141.05	45.5	3.10
September	13,400	140.57	45.2	3.11
October	13,400	145.92	45.6	3.20
November	13,400	147.29	45.6	3.23
December	13,400	148.44	46.1	3.22
AVERAGE	13,275	\$ 140.97	44.98	\$ 3.133
COPPER SMELTING (Included under Manufacturing) All copper smelters except Kennecott's				
January	1,774	\$ 132.89	45.2	\$ 2.94
February	1,772	132.89	45.2	2.94
March	1,789	130.68	44.6	2.93
April	1,777	129.65	44.4	2.92
May	1,785	132.44	45.2	2.93
June	1,815	133.93	45.4	2.95
July	1,704	130.38	44.5	2.93
August	1,808	130.39	44.2	2.95
September	1,809	133.35	44.9	2.97
October	1,797	136.35	45.3	3.01
November	1,821	138.32	45.5	3.04
December	1,828	141.37	46.2	3.06
AVERAGE	1,790	\$ 133.53	45.05	\$ 2.964
TOTAL MANUFACTURING (Includes all copper smelters except Kennecott's)				
January	57,100	\$ 110.84	40.9	\$ 2.71
February	56,900	107.47	40.1	2.68
March	57,300	109.35	40.5	2.70
April	57,800	107.46	40.4	2.66
May	58,600	107.20	40.3	2.66
June	58,800	107.87	40.4	2.67
July	58,000	108.41	40.3	2.69
August	58,600	109.60	40.0	2.74
September	59,000	110.52	39.9	2.77
October	59,800	108.65	39.8	2.73
November	60,500	110.42	40.3	2.74
December	60,100	111.92	40.7	2.75
AVERAGE	58,542	\$ 109.14	40.30	\$ 2.708

TABLE II (Continued) MONTHLY LABOR STATISTICS

<u>1964</u>				
<u>CONTRACT CONSTRUCTION:</u>	<u>Employment</u>	<u>Avg. Weekly Earnings</u>	<u>Avg. Weekly Hours</u>	<u>Avg. Hourly Earnings</u>
January	26,500	\$ 148.78	36.2	\$ 4.11
February	25,900	151.62	36.1	4.20
March	26,600	152.88	36.4	4.20
April	26,900	156.19	37.1	4.21
May	27,300	157.36	37.2	4.23
June	28,300	160.07	37.4	4.28
July	28,200	160.39	37.3	4.30
August	28,700	153.58	35.8	4.29
September	28,500	151.44	35.3	4.20
October	28,600	162.26	37.3	4.35
November	27,900	141.70	32.8	4.32
December	27,200	156.16	36.4	4.29
AVERAGE	27,550	\$ 154.32	36.28	\$ 4.248

UTILITIES:

January	25,400	\$ 111.50	40.4	\$ 2.76
February	25,300	112.89	40.2	2.74
March	25,400	112.06	40.6	2.76
April	25,200	112.31	40.4	2.78
May	25,500	113.27	40.6	2.79
June	25,900	113.96	40.7	2.80
July	26,100	115.51	41.4	2.79
August	25,200	115.78	41.5	2.79
September	25,100	118.30	42.4	2.79
October	24,800	115.36	41.2	2.80
November	25,100	118.29	41.8	2.83
December	25,200	114.21	40.5	2.82
AVERAGE	25,350	\$ 114.45	40.81	\$ 2.787

	<u>EMPLOYMENT</u>		<u>AVG. WEEKLY EARN'GS</u>		<u>AVG. WKLY HRS.</u>		<u>AVG. HRLY EARN'GS.</u>	
	<u>Retail</u>	<u>Whole-sale</u>	<u>Retail</u>	<u>Whole-sale</u>	<u>Retail</u>	<u>Whole-sale</u>	<u>Retail</u>	<u>Whole-sale</u>
Jan.	75,700	18,200	74.69	108.36	38.9	41.4	1.92	2.63
Feb.	75,600	18,200	72.54	110.80	37.2	41.5	1.95	2.67
Mar.	76,200	18,500	74.69	111.37	38.6	41.6	1.95	2.69
Apr.	76,500	18,500	76.05	111.22	38.8	41.5	1.96	2.68
May	76,500	18,400	77.41	111.24	38.9	41.2	1.99	2.70
June	76,000	18,600	78.20	109.71	39.1	41.4	2.00	2.65
July	75,200	18,400	78.79	109.61	39.2	40.9	2.01	2.68
Aug.	73,100	17,700	76.82	111.65	38.8	41.2	1.98	2.71
Sept.	74,500	17,700	77.79	109.20	38.7	40.9	2.01	2.67
Oct.	75,000	17,900	77.20	113.16	38.6	41.3	2.00	2.74
Nov.	76,800	18,000	76.62	111.24	38.5	40.6	1.99	2.74
Dec.	81,400	18,200	74.49	114.24	38.2	42.0	1.95	2.72
AVG.	76,042	18,192	76.274	110.98	38.625	41.29	1.976	2.690
	94,234		\$82.97		39.14		\$ 2.114	

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	1962	1963	1964
<u>Average Hourly Earnings:</u>						
Manufacturing ^{1/}	\$ 1.345	\$ 1.55	\$ 2.144	\$ 2.571	\$ 2.672	\$ 2.708
Copper Mining ^{2/}	1.432	1.74	2.377	2.920	3.003	3.133
Contract Construction	1.787	2.15	2.810	4.048	4.108	4.248
Utilities	1.369	1.54	1.929	2.600	2.691	2.787
Trade	1.090	1.32	1.618	1.944	2.025	2.114
<u>Average Weekly Hours:</u>						
Manufacturing	41.60	43.1	42.27	39.96	40.44	40.30
Copper Mining	44.83	47.7	47.15	44.28	44.56	44.98
Contract Construction	37.10	38.0	37.39	37.70	36.94	36.28
Utilities	41.39	40.1	40.78	41.03	41.13	40.81
Trade	41.98	42.8	41.37	39.88	39.92	39.14
<u>Average Weekly Earnings:</u>						
Manufacturing	\$ 55.95	\$ 66.81	\$ 90.63	\$ 102.73	\$ 108.06	\$ 109.14
Copper Mining	64.20	83.01	112.07	129.29	133.81	140.97
Contract Construction	66.30	81.70	105.09	152.62	151.75	154.32
Utilities	56.66	61.75	78.66	106.69	110.68	114.45
Trade	45.76	56.50	66.94	77.63	81.02	82.97
<u>Hourly Earnings Index (1947-1949 = 100):</u>						
Manufacturing	100.0	115.2	159.4	191.2	198.7	201.34
Copper Mining	100.0	121.5	166.0	203.9	209.7	218.79
Contract Construction	100.0	120.3	157.3	226.5	224.4	237.72
Utilities	100.0	112.5	140.9	189.9	196.6	203.58
Trade	100.0	121.1	148.4	178.4	185.8	193.95
<u>Consumer Price Index:</u>	100.0	111.0	116.2	129.3	131.0	132.6
<u>E. & M. J. Copper Price:</u>	20.818¢	24.200¢	41.818¢	30.600¢	30.600¢	31.960¢
<u>Copper Price Index:</u>	100.0	116.2	200.8	147.0	147.0	153.5

^{1/} Beginning July 1952, Manufacturing includes aircraft modification operations. Manufacturing includes copper smelting at all copper smelters except Kennecott's.

^{2/} Copper Mining includes copper 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 1964

Source: Arizona Employment Security Commission.
U. S. Department of Labor "Employment and Earnings,"
March, 1965.

Year 1964	Number Employees	Avg. Weekly Earnings	Avg. Weekly Hours	Avg. Hourly Earnings
Copper Mining - United States	27,000	\$ 130.42	42.9	\$ 3.04
" " - Arizona	13,275	140.97	45.0	3.133
Manufacturing - United States	17,303,000	102.97	40.7	2.53
" " - Arizona	58,542	109.14	40.30	2.708
Contract Construction - United States	3,106,000	132.06	37.2	3.55
" " - Arizona	27,550	154.32	36.28	4.248
Retail Trade - United States	8,969,000	69.94	37.4	1.87
" " - Arizona	76,042	76.274	38.625	1.976
Wholesale Trade - United States	3,220,000	102.56	40.7	2.52
" " - Arizona	18,192	110.98	41.29	2.690

TABLE V

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

Base Period 1947-1949 and Years, 1962, 1963 and 1964

ARIZONA INDUSTRIES COVERED BY SOCIAL SECURITY

Compiled by Arizona Department of Mineral Resources

Source: Arizona Employment Security Commission

	Average No. of 1/ Employees	Total Wages	Average Annual Wage	Average Weekly Wage
	Base Period 1947-1949			
Copper Mining Only 2/	11,278	\$ 39,432,008	\$ 3,496	\$ 67.23
Copper Smelting 3/	1,500	5,175,000	3,450	66.35
All Mining & Smelting	12,778	44,607,008	3,491	67.13
Other Mining & Quarrying	1,592	4,913,010	3,085	59.33
All Mining, Quarrying & Smelting . .	14,370	49,520,018	3,446	66.27
Manufacturing (Excl. Smelting) . . .	12,639	36,910,624	2,920	56.15
Construction	10,844	35,424,826	3,267	62.83
Trans. & Utilities (Excl. R.R.s) . . .	10,530	29,948,944	2,844	54.69
Wholesale - Retail Trade	36,213	91,916,860	2,538	48.81
Services - Misc. (Incl. Agri.) . . .	18,643	43,103,526	2,312	44.46
Totals and Averages	103,239	\$ 286,824,798	\$ 2,778	\$ 53.42
	YEAR 1962			
Copper Mining Only 2/	14,408	\$ 101,920,108	\$ 7,074	\$136.04
Copper Smelting 3/	1,868	12,216,000	6,540	125.76
All Copper Mining & Smelting	16,276	114,136,108	7,013	134.86
Other Mining & Quarrying	1,580	8,727,313	5,524	106.24
All Mining Quarrying & Smelting . .	17,856	\$ 122,863,421	\$ 6,881	\$132.33
	YEAR 1963			
Copper Mining Only 2/	14,303	\$ 104,291,588	\$ 7,292	\$ 140.23
Copper Smelting 3/	1,817	12,144,000	6,684	128.53
All Copper Mining & Smelting	16,120	\$ 116,435,588	\$ 7,223	\$ 138.90
Other Mining & Quarrying	1,591	9,299,379	5,845	112.40
All Mining Quarrying & Smelting . .	17,711	\$ 125,734,967	\$ 7,099	\$ 136.52
	YEAR 1964			
Copper Mining Only 2/	14,720	\$ 113,792,031	\$ 7,730	\$ 148.65
Copper Smelting 3/	1,790	12,428,972	6,944	133.53
All Copper Mining & Smelting	16,510	\$ 126,221,003	\$ 7,645	\$ 147.02
Other Mining & Quarrying	1,560	9,421,262	6,039	116.14
All Mining, Quarrying & Smelting . .	18,070	\$ 135,642,265	\$ 7,506	\$ 144.35
Manufacturing (Excl. Smelting) . . .	56,643	365,459,136	6,452	124.08
Construction	27,599	198,501,774	7,192	138.31
Trans. & Utilities (Excl. R.R.s) . . .	21,235	133,633,024	6,293	121.02
Wholesale - Retail Trade	88,805	381,893,083	4,300	82.69
Services & Misc. (Incl. Agri.) . . .	63,581	283,400,614	4,457	85.71
TOTALS - AVERAGES	275,933	\$ 1,498,529,896	\$ 5,431	\$ 104.44

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/ This number includes all copper mining and milling employees and some copper smelting employees not reported under Manufacturing by the Employment Security Commission. 3/ Smelting Employment has been segregated from Manufacturing as reported by the Employment Security Commission.

May, 1965

TABLE VI

SUMMARY OF ESTIMATED* COPPER MINING EMPLOYMENT, WEEKLY EARNINGS,
WEEKLY HOURS, HOURLY EARNINGS, IN ARIZONA AND UNITED STATES,
BY YEARS, 1947 to 1964 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	98.23	43.8	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
1963	13,393	27,800	133.81	124.48	44.6	43.1	3.003	2.89
1964	13,275	27,000	140.97	130.42	45.0	42.9	3.133	3.040

* 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 VII

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

Base Period (1947-1949) Compared with Three-Year Period (1962-1964)

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

	"A"		"B"		"C"		"D"	
	Number		Weekly		Weekly		Hourly	
	Of all Employees		Earnings		Hours		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								
1962	13,350	28,500	\$ 129.29	\$120.98	44.28	42.90	\$ 2.920	\$ 2.820
1963	13,393	27,800	133.81	124.48	44.56	43.06	3.003	2.891
1964	13,275	27,000	140.97	130.42	45.00	42.90	3.133	3.040
1962-64 Avg.	13,339	27,767	\$ 134.69	\$125.29	44.61	43.05	\$ 3.019	\$ 2.917

	"E"		"F"		Per Man	
	Annual Man Hours		Annual Earnings		Annual Earnings	
	"A" x "C" x 52		"E" x "D"		"F" x "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 Yrs.						
1962	30,753,060	63,577,800	89,798,935	179,289,396	6,726	6,291
1963	31,033,188	62,247,536	93,192,664	179,957,627	6,958	6,473
1964	31,063,500	60,231,600	97,321,946	183,104,064	7,331	6,782
1962-1964 Avg.	30,949,916	62,018,979	\$ 93,437,848	\$180,783,696	\$ 7,005	\$ 6,511

(Continued)

TABLE VII (Continued)

	"G" Tons Copper Ores		"H" Pounds Equiv. Copper Produced From Copper	
	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 Yrs.				
1962	78,868,147	150,216,710	1,230,386,000	2,332,794,000
1963	80,615,132	146,449,540	1,249,982,000	2,271,150,000
1964 P	85,400,000	150,000,000P	1,376,000,000 P	2,509,000,000P
1962-1964 Avg.	81,630,000P	148,900,000P	1,285,500,000P	2,371,000,000P

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 1947-1949 Avg.	1.5268	1.3336	29.9901	26.1639	\$ 1.432	1.431
1962-1964 Avg.	2.6375	2.4009	41.5349	38.2310	\$ 3.019	\$ 2.917
% Incr. in 15 Years	72.75	80.03	38.50	46.12	110.83	103.85
Per Year	4.85	5.34	2.57	3.07	7.39	6.92

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
1947-49	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	42,784,388	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	115,602 \$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	78,868,147	117,362 \$4,107,670	4,571,370 \$4,959,936	1,200,945,700 \$369,891,276	15.2 lbs/ton 30.8¢	\$378,958,882	1,230,386,000
1963	80,615,132	121,177 \$4,241,195	4,494,239 \$5,748,132	1,217,337,700 \$372,505,336	15.1 lbs/ton 30.6¢	\$382,494,663	1,249,983,000
1964 P	85,400,000	121,177 \$4,241,195	4,635,700 \$6,006,805	1,376,000,000 \$440,320,000	16.1 lbs/ton 32.0¢	\$450,568,000	1,408,000,000

P = Preliminary

TABLE IX

SUMMARY OF TOTAL COVERED EMPLOYMENT & WAGES IN ARIZONA COPPER MINING
1947 - 1964 INCLUSIVE

Source: 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	71,918,991	131.04
1962	14,408	101,920,108	7,074	78,868,147	136.04
1963	14,303	104,291,588	7,292	80,615,132	140.23
1964	14,720	113,792,031	7,730	85,400,000P	148.65

P = Preliminary

Arizona Department of Mineral Resources

May, 1965