

ARIZONA PRODUCTION OF COPPER, LEAD, ZINC, GOLD AND SILVER, PRICES, AND VALUES  
BY YEARS, 1936-1952, COMPARED WITH YEARLY AVERAGES FOR PERIOD 1911-1935

Compiled by: Arizona Department of Mineral Resources  
Source: Minerals Yearbook, U.S.B.M.

The tables on the following pages, show the production, prices and values of copper, lead, zinc, gold and silver by years from 1936-1952 inclusive. They also show average annual data for the period 1911-1935 inclusive.

This 25 year period was chosen for comparison because it is a broad one in point of time and highly representative with respect to economic conditions, as it included a World War, two major depressions and a business boom which ended in 1929. It is given an index value of 100, and the other index values shown are based upon this normal value of 100.

It is believed that such index numbers will simplify economic measurement and correlation. The simple index figures obtained from the mass of individual figures serve to indicate the net resultant of the forces influencing the production of metals in Arizona, year by year, and thus the economic trend of that production can be more easily grasped.

To illustrate concretely, it will be noticed that the index of gold production for the year 1939 (161) was four times the index (39) for the year 1945, and as the index price of gold was the same for both years the resultant index of the value of gold production for 1939 (257) was also four times the index for 1945 (63). This shows the terrific effect of the government order closing the gold mines during World War II. This in spite of the fact that although the copper mines accounted for 80.6% of the total gold produced in 1945 as compared with 44.1% of that produced in 1939, and also in spite of the fact that the index for copper production was 105 in 1939 as compared with 115 in 1945, the price index increased from 64 to 84 and the value index from 68 to 96. If it had not been for this increase in copper production the production of gold would have suffered an even more disastrous reduction.

The tables showing the number of gold mines and gold-silver mines in operation in 1939 and 1945 also show the effect of the closing order. The number of gold mines decreased from 619 to 33, and the number of gold-silver mines decreased from 63 to 12, and the number of placers from 142 to 18.

Regarding the copper production figures the three noteworthy items were the drop in production in 1938, due to a "Recession"; in 1945, due to the end of the war; and in 1949 due to suspension of the copper import tax. A drop in production for 1952 as compared with 1951 was due to the gradual reduction in grade of ore treated, which was only partly offset by the increased tonnage of ore mined. It may be said that Arizona copper production has stabilized during the last five years, but beginning next year (1954) should start to show the effects of the large new development projects which commence to come into production during the latter part of 1954.

The tables on lead and zinc production indicate the effect of increased prices after the war stimulating production. This trend was halted in 1952 by the abnormal importation of foreign lead and zinc. The price dropped from 19 cents to 14 cents for lead, and from 19.5 cents to 12.5 cents for zinc.

ARIZONA COPPER PRODUCTION, PRICES AND VALUES BY YEARS FROM 1936-1952 INCL.

COMPARED WITH YEARLY AVERAGES FOR PERIOD 1911-1935

Compiled by: Arizona Department of Mineral Resources

Source: Minerals Yearbook, U.S.B.M.

<u>Year</u>	<u>P R O D U C T I O N</u>		<u>P R I C E S</u>		<u>V A L U E S</u>	
	<u>Actual Tons</u>	<u>Index</u>	<u>Actual</u>	<u>Index</u>	<u>Actual</u>	<u>Index</u>
1911-1935	249,510	100	16.16¢	100	\$ 80,637,681	100
1936	211,275	85	9.2	57	38,874,600	48
1937	289,478	116	12.1	75	69,811,676	87
1938	210,797	84	9.8	61	41,316,212	51
1939	262,112	105	10.4	64	54,519,296	68
1940	281,169	113	11.3	70	63,544,194	79
1941	326,317	131	11.8	73	77,010,812	96
1942	393,387	158	12.1	75	95,199,654	118
1943	403,181	162	13.0	80	104,827,060	130
1944	358,303	144	13.5	84	96,741,810	120
1945	287,203	115	13.5	84	77,544,810	96
1946	289,223	116	16.2	100	93,708,253	116
1947	366,218	147	21.0	130	153,811,560	191
1948	375,121	150	21.7	134	162,802,514	202
1949	359,010	144	19.7	122	141,449,940	175
1950	403,301	162	20.8	129	167,773,216	208
1951	415,870	167	24.2	150	201,281,080	250
1952	395,719	159	24.2	150	191,527,996	238

ARIZONA LEAD AND ZINC PRODUCTION, PRICES AND VALUES BY YEARS FROM 1936-1952

COMPARED WITH YEARLY AVERAGES FOR PERIOD 1911-1935

Y E A R	P R O D U C T I O N		P R I C E S		V A L U E S	
	<u>Actual Tons</u>	<u>Index</u>	<u>Actual</u> L E A D	<u>Index</u>	<u>Actual</u>	<u>Index</u>
1911-1935	6,376	100	6.25¢ lb.	100	\$ 797,090	100
1936	10,688	168	4.6	74	983,296	123
1937	12,354	194	5.9	94	1,457,772	183
1938	10,571	166	4.6	74	972,532	122
1939	10,771	169	4.7	75	1,012,474	127
1940	13,266	208	5.0	80	1,326,600	166
1941	15,638	245	5.7	91	1,782,732	224
1942	14,772	232	6.7	107	1,979,448	249
1943	13,727	216	7.5	120	2,059,050	259
1944	16,707	262	8.0	128	2,673,120	335
1945	22,867	359	8.6	138	3,933,124	493
1946	23,930	375	10.9	174	5,216,740	654
1947	28,566	448	14.4	230	8,227,008	1032
1948	29,899	469	17.9	286	10,703,842	1343
1949	33,568	526	15.8	253	10,607,488	1331
1950	26,383	414	13.5	216	7,123,410	994
1951	17,394	273	17.3	277	6,018,324	755
1952	16,570	260	16.1	258	5,319,440	667
Z I N C						
1911-1935	2,678	100	8.80¢ lb.	100	471,218	100
1936	3,589	134	5.0	57	358,900	76
1937	5,026	188	6.5	74	653,380	139
1938	5,814	217	4.8	55	558,144	118
1939	6,711	251	5.2	59	697,944	148
1940	15,456	577	6.3	72	1,947,456	413
1941	16,493	616	7.5	85	2,473,950	525
1942	18,522	692	9.3	106	3,445,092	731
1943	19,677	735	10.8	123	4,250,232	902
1944	29,077	1086	11.4	130	6,629,556	1407
1945	40,226	1502	11.5	131	9,251,980	1963
1946	43,665	1631	12.2	139	10,654,260	2261
1947	54,644	2040	12.1	138	13,223,848	2806
1948	54,478	2034	13.3	151	14,491,148	3075
1949	70,658	2638	12.4	141	17,523,184	3719
1950	60,480	2258	14.2	161	17,176,320	3645
1951	52,999	1979	18.2	207	19,291,636	4094
1952	47,143	1760	16.6	189	15,651,476	3321

ARIZONA GOLD AND SILVER PRODUCTION, PRICES AND VALUES, BY YEARS  
FROM 1936-1952 INCL., COMPARED WITH YEARLY AVERAGES FOR PERIOD 1911-1935

Y E A R	P R O D U C T I O N		P R I C E S		V A L U E S	
	Actual Ounces	<u>G O L D</u> Index	Actual	Index	Actual	Index
1911-1935	196,377	100	\$21.941	100	\$ 4,308,729	100
1936	322,408	164	35.00	159.5	11,284,287	262
1937	332,694	169	35.00	159.5	11,644,290	270
1938	305,043	155	35.00	159.5	10,676,505	248
1939	316,453	161	35.00	159.5	11,075,855	257
1940	294,807	150	35.00	159.5	10,318,245	239
1941	315,392	161	35.00	159.5	11,038,720	256
1942	253,651	129	35.00	159.5	8,877,785	206
1943	171,810	87	35.00	159.5	6,013,350	140
1944	112,162	57	35.00	159.5	3,925,670	91
1945	77,223	39	35.00	159.5	2,702,805	63
1946	79,024	40	35.00	159.5	2,765,840	64
1947	95,860	49	35.00	159.5	3,355,100	78
1948	109,487	56	35.00	159.5	3,832,045	89
1949	108,993	55	35.00	159.5	3,814,755	89
1950	118,313	60	35.00	159.5	4,140,955	96
1951	116,093	59	35.00	159.5	4,063,255	94
1952	112,355	57	35.00	159.5	3,932,425	91
<u>S I L V E R</u>						
1911-1935	5,344,540	100	68.82¢oz.	100	3,678,083	100
1936	8,386,043	157	77.5	113	6,494,990	177
1937	9,422,552	176	77.35	112	7,288,344	198
1938	7,479,153	140	64.65	94	4,835,008	131
1939	7,824,004	146	67.88	99	5,310,839	144
1940	7,075,215	132	71.11	103	5,031,264	137
1941	7,498,260	140	71.11	103	5,332,096	145
1942	7,064,467	132	71.11	103	5,023,621	137
1943	5,713,889	107	71.11	103	4,063,210	110
1944	4,394,039	82	71.11	103	3,124,650	85
1945	3,558,216	67	71.11	103	2,530,287	69
1946	3,268,765	61	80.8	117	2,641,162	72
1947	4,569,084	86	90.5	131.5	4,135,021	112
1948	4,837,740	91	90.5	131.5	4,378,399	119
1949	4,970,736	93	90.5	131.5	4,498,767	122
1950	5,325,441	100	90.5	131.5	4,819,793	131
1951	5,120,985	96	90.5	131.5	4,634,750	126
1952	4,701,330	88	90.5	131.5	4,254,941	116

# ORE CLASSIFICATION OF ARIZONA COPPER, LEAD, ZINC, GOLD AND SILVER MINES

## NUMBER OF MINES PRODUCING ORE, SOLD OR TREATED IN ARIZONA

Compiled by: Arizona Department of Mineral Resources

Source: Minerals Yearbook, U.S.B.M.

Y E A R	No. of Copper Mines	C O P P E R M I N E S		
		% of Total Copper Produced**	% of Total Gold Produced	% of Total Silver Produced
1936	95	99.3	51.6	72.4
1937	208	99.6	53.3	68.3
1938	97	99.3	43.7	60.5
1939	136	99.2	44.1	61.6
1940	164	99.2	43.7	63.1
1941	144	99.2	45.2	66.8
1942	125	99.3	57.1	70.7
1943	118	99.4	77.8	76.4
1944	113	99.0	81.2	70.7
1945	85	99.0	80.6	59.4
1946	74	99.0	77.6	54.0
1947	101	99.0	79.0	56.5
1948	104	98.9	77.1	58.2
1949	88	97.9	72.2	48.5
1950	104	98.0	67.3	53.6
1951	89	97.4	72.4	60.4
1952	69	97.9	75.8	62.1

\*\* Other Copper was produced from Gold and Silver Mines and Base Metal mines other than Copper.

Y E A R	L E A D M I N E S		L E A D - Z I N C M I N E S	
	No. of Lead Mines	% of Total Lead Produced*	No. of Lead-Zinc Mines	% of Total Lead Produced*
1936	95	40.0	3	48.7
1937	145	28.0	8	55.9
1938	96	9.6	7	56.4
1939	109	9.6	8	60.3
1940	120	7.1	12	68.4
1941	98	14.0	10	67.8
1942	113	14.4	18	74.5
1943	67	16.8	33	73.9
1944	52	12.2	25	82.7
1945	47	6.3	18	91.2
1946	30	5.9	29	90.4
1947	105	10.4	32	88.7
1948	123	9.2	52	89.8
1949	117	6.6	40	92.5
1950	96	6.6	29	91.8
1951	73	4.6	40	91.9
1952	55	3.6	33	91.0

\* Other Lead was produced from Precious Metal Mines and other Base Metal Mines.

ORE CLASSIFICATION OF ARIZONA METAL MINES (Cont'd)

Y E A R	<u>ZINC MINES</u>		<u>ZINC-LEAD MINES</u>	
	No.	% of Total Zinc Production*	No.	% of Total Zinc Production*
1936	-	-	3	100.0
1937	1	.3	8	99.5
1938	1	.4	7	84.8
1939	4	.8	8	67.8
1940	-	-	12	79.5
1941	2	.7	10	74.2
1942	3	4.7	18	72.5
1943	5	1.8	33	67.7
1944	7	1.0	25	79.9
1945	6	2.8	18	85.1
1946	7	2.7	29	86.9
1947	8	2.9	32	89.0
1948	4	.5	52	88.4
1949	8	1.5	40	86.1
1950	4	1.8	29	77.5
1951	9	2.3	40	55.0
1952	9	2.0	33	60.6

\* Other Zinc produced from Precious Metal Mines and from other Base Metal Mines

Y E A R	Gold Mines	Gold- Silver Mines	GOLD AND SILVER MINES			
			Gold Placers	% of Total Gold Produced*	Silver Mines	% of Total Silver Produced**
1936	546	36	787	44.1	96	6.1
1937	431	29	376	39.9	109	11.7
1938	554	73	329	50.2	92	12.6
1939	619	63	142	51.5	86	10.1
1940	620	77	276	50.8	77	8.4
1941	471	68	184	49.3	72	6.1
1942	216	28	163	37.9	36	6.0
1943	56	12	19	14.8	16	4.3
1944	37	9	17	9.5	13	2.7
1945	33	12	18	3.4	16	3.0
1946	48	11	33	4.7	14	3.3
1947	60	10	30	3.7	31	3.0
1948	67	9	39	6.5	36	5.2
1949	76	9	32	3.3	29	6.3
1950	59	7	24	2.5	28	7.9
1951	31	4	18	1.1	27	4.7
1952	15	2	7	1.8	8	3.1

\* Other Gold was produced from Silver and Base Metal Mines

\*\* Other Silver was produced from Gold, Gold-Silver and Base Metal Mines.