

# ARIZONA DEPARTMENT OF MINERAL RESOURCES

## SMALL MINING COMPANIES' SHARE IN ARIZONA MINERAL PRODUCTION YEARS 1952, 1953 and 1954

### SMALL MINES BECOME A 37 MILLION DOLLAR INDUSTRY IN 1954

Beginning with 1952, the United States Bureau of Mines has been reporting Arizona's mineral production in more detail than formerly. These reports have enabled this Department to determine the part played in mineral production by the small mines of the State. In making this distinction, the production of the following large companies, compiled from their annual reports, or other available sources, has been deducted from the total State production, as reported by the U. S. Bureau of Mines, and the difference credited to small mine production:

American Smelting & Refining Company . . . . .	Silver Bell Mine
Bagdad Copper Company. . . . .	Bagdad Mine
Inspiration Consolidated Copper Company. . . . .	Inspiration Mine
Kennecott Copper Corporation . . . . .	Ray Mine
Magma Copper Company . . . . .	Superior Mine
Miami Copper Company . . . . .	Castle Dome, Copper Cities, and Miami Mines.
Phelps Dodge Corporation . . . . .	Morenci, New Cornelia, United Verde, Copper Queen, and Lavender Pit Mines.

The table, which accompanies this report, shows the details of the study, and indicates that in 1952 the value of mineral production from the small mines amounted to 13.31% of the State's total production; in 1953, it was 11.73%; and in 1954, it was 14.22%. In dollar value, the small mines accounted for \$30,835,385 in 1952, \$30,661,486 in 1953, and \$37,538,694 in 1954.

There are no exact records of the actual number of small mines in operation, nor of the number of men employed, but a study of the Arizona State Mine Inspector's Reports indicates the following for those small mines which were inspected:

	<u>1952</u>	<u>1953</u>	<u>1954</u>
	No. Small Mines In- spected	No. Small Mines In- spected	No. Small Mines In- spected
Total employed above ground	1,490	711	1,025
Total employed under ground	1,378	901	1,119
Total employed by small mines	2,868 105	1,612 141	2,144 171

The increase in number of mines in 1953 over 1952 was due to the large increase in manganese mining following the opening of the Wenden Manganese Purchasing Depot. The increase in 1954 over 1953 was due to the large increase in Uranium-Vanadium and Tungsten mines in 1954. The decrease in number of men employed was largely due to the shutting down of many of the larger lead-zinc mines such as Mammoth St. Anthony and Eagle Picher mines.

TABLE SHOWING COMPARATIVE MINERAL PRODUCTION OF LARGE AND SMALL

MINING COMPANIES - YEARS 1952, 1953 and 1954

Compiled by Arizona Department of Mineral Resources  
from U. S. B. M. and Company Reports.

	<u>1954 Preliminary</u>	
	<u>Production</u>	<u>Value</u>
<b>Large Mining Companies:</b>		
Copper (lbs.)	737,000,000	\$218,889,000
Gold (oz.)	93,500	3,272,500
Silver (oz.)	3,100,000	2,805,656
Lead (lbs.)	-	-
Zinc (lbs.)	-	-
Molybdenum (lbs.)	1,460,000	1,438,100
Total Value of Production		<u>\$226,405,256</u>
<b>Small Mining Companies:</b>		
Copper (lbs.)	20,000,000	\$ 5,940,000
Gold (oz.)	20,000	700,000
Silver (oz.)	1,235,000	1,117,738
Lead (lbs.)	17,800,000	2,420,800
Zinc (lbs.)	43,500,000	4,828,500
Tungsten (Tons 60% WO <sub>3</sub> )	120	411,500
Clays (tons)	200,000	725,000
Gypsum (tons)	15,000	48,750
Lime (tons)	90,000	1,155,600
Pumice & Pumicite (tons)	120,000	412,800
Sand & Gravel (tons)	3,450,000	2,690,000
Silica (tons)	260,000	327,600
Stone (tons)	182,000	355,000
Coal (tons)	5,000	33,000
Mica (scrap) (tons)	2,000	114,250
Manganese (long tons 35% Mn)	120,000 *	9,600,000 *
Fluorspar (concentrates (tons)	2,000	116,500
Perlite (tons)	2,000	13,000
Brucite (tons)	-	-
Undistributed	<u>1/</u>	<u>6,528,656</u>
Total Value of Production		<u>\$ 37,538,694</u>
GRAND TOTAL VALUE OF MINERAL PRODUCTION		<u>\$263,943,950</u>
PERCENTAGE DUE TO SMALL MINES		<u>14.22%</u>

TABLE SHOWING COMPARATIVE MINERAL PRODUCTION OF LARGE AND SMALL

MINING COMPANIES - YEARS 1952, 1953 and 1954    Cont'd

Compiled by Arizona Department of Mineral Resources  
from U. S. B. M. and Company Reports.

	1952		1953	
	Production	Value	Production	Value
<b>Large Mining Companies:</b>				
Copper (lbs.)	783,546,100	\$189,618,156	777,056,051	\$223,015,087
Gold (oz.)	87,100	3,048,500	87,200	3,052,000
Silver (oz.)	3,020,000	2,734,600	2,900,000	2,624,645
Lead (lbs.)	2,818,278	453,743	750,000	98,250
Zinc (lbs.)	18,218,000	3,024,188	4,100,000	471,500
Molybdenum (lbs.)	2,022,832	1,987,418	1,446,557	1,425,552
Total Value of Production		\$200,866,605		\$230,687,034
<b>Small Mining Companies:</b>				
Copper (lbs.)	7,891,900	\$ 1,909,840	9,993,949	\$ 2,868,263
Gold (oz.)	25,255	883,925	25,624	896,840
Silver (oz.)	1,681,330	1,520,331	1,451,429	1,313,618
Lead (lbs.)	30,221,722	4,865,697	18,106,000	2,371,886
Zinc (lbs.)	76,068,000	12,627,288	50,960,000	5,860,400
Tungsten (60% WO <sub>3</sub> ) (tons)	71	251,136	148	474,836
Clays (tons)	247,329	579,175	197,401	715,248
Gypsum (tons)	11,314	28,285	13,484	43,824
Lime (tons)	53,019	757,390	96,408	1,238,204
Pumice & Pumicite (tons)	14,500	87,000	123,797	425,985
Sand & Gravel (tons)	1,824,330	1,635,903	3,446,821	2,680,470
Silica (tons)	1/	1/	264,582	334,340
Stone (tons)	235,020	355,709	182,882	357,272
Coal (tons)	5,003	33,000	5,140	33,000
Mica (scrap) (tons)	1/	1/	3,721	114,870
Manganese (long tons 35% Mn)	203	1/	59,694*	4,775,520*
Fluorspar (concentrates) (tons)	434	1/	1,911	111,368
Perlite (tons)	2,747	1/	1,511	9,824
Brucite (tons)	1/	1/	46	570
Undistributed	1/	5,300,706	1/	6,035,148
Total Value of Production		\$30,835,385		\$ 30,661,486
GRAND TOTAL VALUE OF MINERAL PRODUCTION		\$231,701,990		\$261,348,520
PERCENTAGE DUE TO SMALL MINES		13.31%		11.73%

1/ Minerals such as Beryllium, Mercury, Manganese, Vanadium, Asbestos, Barite, Brucite, Cement, Feldspar, Fluorspar, Gem Stones, Mica, Perlite, Silica, whose values are canceled, are included by the Government in one valuation. Uranium is not reported at all.

\* Based on the conversion of 2,089,283 units of Manganese in 1953 into long tons of 35% Mn, and valued at \$80 per long ton (the average for 1952), and 4,200,000 units in 1954. The U. S. B. M. will not credit this production in 1953 and 1954 until the ore is processed into 35% Mn or better.