

FIFTY YEARS OF MINING  
IN THE  
STATE OF ARIZONA

1912 — 1962



by

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## FIFTY YEARS OF MINING IN THE STATE OF ARIZONA

1912 - 1962

Fifty years of Statehood for Arizona have witnessed an amazing growth of the mining industry, with copper playing the leading role. In 1855 the first copper ore was hauled from Ajo to San Diego for shipment to Swansea, Wales. However it was not until 1874 that records were kept of copper production in Arizona. The first year of record reported a production of 400 tons of copper. In 1961, the annual production has exceeded 538,000 tons! Records of gold and silver production go back to 1858; of lead to 1894; and of zinc to 1905.

Prior to Statehood in 1912, Arizona had produced 3,822,046 troy ounces of gold, which, at 20.67 per ounce was worth \$79,009,000; 89,663,960 ounces of silver, which, at \$0.8287 per ounce, was worth \$74,307,000; 1,755,052 short tons of copper, which, at \$0.14424 per pound, was worth \$506,283,000; 40,419 short tons of lead, which, at \$0.0433 per pound, was worth \$3,501,000; 8,551 short tons of zinc, which, at \$0.0545 per pound was worth \$933,000.

In the fifty years of Statehood, 1912-1961, Arizona has produced 8,878,292 troy ounces of gold, which, at \$28.65 per ounce, was valued at \$254,398,000; 274,789,689 ounces of silver, which at \$0.7566 per ounce, was worth \$207,911,000; 16,027,939 short tons of copper, at \$0.2049 per pound, worth \$6,567,926,000; 574,192 tons of lead, at \$0.1012 per pound, worth \$116,184,000; 871,349 tons of zinc, at \$0.1214 per pound, worth \$211,582,000. See Table I.

The total value of the five principal metals produced in Arizona prior to Statehood, is estimated at \$664,033,000, while for the fifty years of Statehood, it amounted to \$7,358,001,000.

In 1911, the last year prior to Statehood, Arizona had produced 4½ million tons of ore, while in the year 1961, Arizona has produced an estimated 68 to 70 million tons of ore, in addition to stripping tremendous tonnages of waste overlying the open-pit ores.

Statehood for Arizona was coincidental with the development of the flotation process for the treatment of metallic sulphide ores. The big low-grade copper mines began to experiment with this process which was successful in increasing recovery of copper from the low-grade ores over the old gravity methods of extraction, by several percent. As time went on, this improved recovery became of increasing importance, as the grade of ore in all the big mines tended to become lower as the mines became deeper.

Prior to Statehood and the Flotation Process, only the mines with rich ores were profitable. Bisbee's Copper Queen Mine, the United Verde Mine at Jerome, Globe's Old Dominion Mine, and the Clifton and Morenci Mines were among these. There have been only two "bonanzas" discovered since that time: the Magma Mine at Superior (1912), and the United Verde Extension at Jerome (1916). The development of the caving system of mining was responsible for the exploitation of the Ray, Miami and Inspiration mines in the early years. The Ray and Inspiration mines became open pit mines in the "fifties". Operations at the Miami underground mine have recently been converted to leaching in place. Magma Copper Company's San Manuel Mine is now the only large low-grade underground copper mine in Arizona. It started production in 1956, mining ore averaging less than 15 pounds of copper to the ton.

The open-pit copper mines now operating are the Inspiration, the Copper Cities, the Ray, the Morenci, the New Cornelia, the Lavender Pit, the Silver Bell, the Pima, the Bagdad, the Esperanza and the Mission Unit. The high-grade underground mines are the Copper Queen at Bisbee, the Magma at Superior. The biggest lead-zinc underground mine is the Iron King at Humboldt.

Before the advent of the big porphyry copper producers in 1912, the gold lode mines and placers were accounting for 75 percent of gold production in Arizona. From 1912 until 1942, the gold mines and placers still accounted for almost half of Arizona's gold production, but since then, production from gold lode mines and placers has dropped to below 3 percent of the total. In 1942 the annual production from these mines had dropped from 156,000 ounces to a mere trickle of 1,000 ounces, a loss of 155,000 ounces, or almost five and one-half million dollars. The loss in silver was over 1,050,000 ounces, which had a value (including seignorage) of almost one and one-half million dollars. Although the gold mines were permitted to re-open after World War II, the deterioration of the mines, due to the long shut-down, and the rapid increase in mining costs together with the rapid decline in the purchasing power of the dollar, prevented their doing so. Today there is not one bona-fide gold or gold-silver mine in operation in Arizona, except for the few producing siliceous fluxing ores for the copper smelters. Because of the federal government's control of both gold and silver prices, the producers have not enjoyed the inflationary benefits which other commodities have enjoyed. Result, there has been no incentive for them to re-open open their old gold mines or explore for new ones. The high rate of out-flow of gold from the United States in 1960 raised the hopes of gold miners that there would be an early return to economic conditions favoring gold mining.

For each ton of Arizona copper ore mined in 1959, \$0.109 in gold and silver were recovered. This gold and silver content tends to decrease, as does the copper, with deeper ores. For example, the value of the gold and silver recovered from copper ores in 1941 was \$0.354 per ton of ore mined. For each ton of copper ore mined in 1941, 0.0059 ounces of gold and 0.207 ounces of silver were recovered, and in 1959 these figures dropped to 0.0018 ounces and 0.051 ounces respectively.

#### Mineral Fuels

Coal production to the amount of 5,000 to 10,000 short tons annually has been coming for several years from 2 mines in the Indian Reservation, in Coconino and Navajo Counties.

The year 1959 was probably the most significant in the history of oil and gas in Arizona. Twenty-seven wells were completed compared with 19 in 1958. Of the 27 completed wells, 25 were exploratory and 2 were development. Two exploratory wells, both in Apache County were listed as discoveries, one an oil well and the other gas. The oil discovery, 8 miles south of the Boundary Butte field in Utah, produced 240 barrels of oil a day from Mississippian formations at a depth of 5,566-5,589 feet. One successful development well, an extension of the East Boundary Butte field, was completed in Pennsylvanian formations and produced 104 barrels of oil and 774 thousand cubic feet of gas a day. The gas well was 4 miles west of the Bita Peak field and flowed at 4 million cubic feet a day from the Hermosa(Pennsylvanian) formation at a depth of 4,999-5,071 feet.

Production of crude petroleum, all from Apache County, increased in 1960 more than threefold over 1959. Drilling activity increased with 32 wells completed in the first 10 months compared with 24 for the same period in 1959. At the end of October two rotary drills were active compared with one in 1959.

The Kaibab National Forest was opened to oil and gas exploration. As of June 12, 1961, lease applications for 400,000 acres had been filed and were awaiting action by the Bureau of Land Management.

### Helium

Interest in the helium wells in northeastern Apache County was heightened by passage by the 86th Congress of the helium conservation bill. The measure encourages production of helium from natural gas by private industry. A number of wells drilled in recent years in the Pinta Dome field contain significant quantities of helium.

Production of helium from the Nation's first privately owned helium plant, owned and operated by Kerr-McGee Oil Industries, Inc., was scheduled to start November 1, 1961. Availability of salable quantities of Grade A helium was expected December 1. The raw gas, from the Pinta Dome field in Apache County, contained 8 percent helium, 90 percent nitrogen, 1 percent argon, and 1 percent carbon dioxide. The helium, the only gas recovered, was valued at \$35 per thousand cubic feet.

### COPPER PRODUCTION RECORD AND OUTLOOK

Throughout the fifty years of Statehood, Arizona has not only retained its number one position in copper production in the United States, but has reached the point where it is producing more copper than all the other states combined.

Since 1958, for four years, Arizona's production of copper has amounted to 2,042,341 tons, which is 50.8 percent of the reported U. S. production of 4,020,344 tons. In the first year of Statehood (1912), Arizona produced 182,519 tons of copper, which was only 29.3 percent of the U. S. production of 621,634 tons. Yet Arizona's production has ranked first in the United States for more than fifty years.

This amazing increase in copper production in recent years has been due to exploration activity by several large companies, which are continuing their search for new deposits, and presently show promise of further expansion of the copper industry as future growth in consumption expands.

Note: A booklet "Mining in Arizona, Its Past, Its Present, Its Future" published by this Department in April, 1961, accompanies this commemorative pamphlet, because it has considerable detail not covered in the pamphlet.



TABLE I

ARIZONA METAL PRODUCTION

REPORTED PRODUCTION AND VALUE OF FIVE MAJOR METALS  
(000 omitted)

PERIOD 1858-1911

<u>GOLD</u>		<u>SILVER</u>		<u>COPPER</u>		<u>LEAD</u>		<u>ZINC</u>	
Ounces	Value	Ounces	Value	Tons	Value	Tons	Value	Tons	Value
3,822	\$79,009	89,664	\$74,307	1,755	\$506,283	40	\$3,501	9	\$ 933
	\$20.67/oz		\$0.8287/oz		\$0.14424/lb		\$0.0433/lb		\$0.0545/lb

50-YEAR PERIOD 1912-1961

<u>GOLD</u>		<u>SILVER</u>		<u>COPPER</u>		<u>LEAD</u>		<u>ZINC</u>	
Ounces	Value	Ounces	Value	Tons	Value	Tons	Value	Tons	Value
8,878	\$254,398	274,790	\$207,911	16,028	\$6,567,926	574	\$116,184	871	\$211,582
	\$28.65/oz		\$0.7566/oz		\$0.2049/lb		\$0.1012/lb		\$0.1214/lb

First year of reported production: gold & silver 1858; copper-1874; lead-1894; zinc-1905.

Total Value of Five Major Metals - Period 1858-1911	-	\$ 664,033,000
Total Value of Five Major Metals - 50 Yr. Period 1912-1961	-	<u>7,358,001,000</u>

GRAND TOTAL VALUE OF FIVE MAJOR METALS 1858-1961 INCL.	-	\$ 8,022,034,000
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MINERAL PRODUCTION OTHER THAN THE FIVE MAJOR METALS

No significant amount of minerals other than copper, lead, zinc, gold and silver was reported during Arizona territorial days. The Arizona Bureau of Mines and the United States Bureau of Mines have both made rough estimates of the value of the production since Statehood, of the following miscellaneous minerals which have been produced in Arizona since 1911:

Metals: Beryllium, manganese, mercury, molybdenum, tungsten, uranium, vanadium and rare metals.

Non-Metallics: Asbestos, cement, clays (bentonite), gypsum, lime, mica, perlite, pumice, sand & gravel, stone, and such miscellaneous non-metallics as barite, coal, diatomaceous earth, feldspar, fluorspar, nitrogen compounds, and gem-stones.

The total estimated value of the miscellaneous metals and non-metallics up to and including 1961 was \$445,990,000.

## TERRITORIAL AND STATE HISTORY OF MINING IN ARIZONA

### Period 1854 - 1870

In 1854, one year after the Gadsden Purchase from Mexico, Charles D. Poston began the search for gold and silver near Tubac. In the following year, rich copper ore was hauled from Ajo to San Diego for shipment to Swansea, Wales. In 1856 the Santa Rita silver mine near Tubac was opened. In 1857, prospectors began to enter Arizona in numbers, and gold ore was found in Mohave County near the Colorado River. In 1858 came the discovery of the Mowry lead-silver mine in the Patagonia Mountains; also discovery of the Gila City or Dome placers near Yuma.

In 1859 rich silver ore was mined at Heintzelman Mine in Cerro Colorado Mountains.

In 1861 came the Civil War with withdrawal of troops, followed by Apache depredations. In 1862 Confederate troops occupied Tucson. They were driven out by California Column under General A. M. Carleton who established posts at Camp Verde, Fort McDowell, and Fort Whipple. Also in this year, the La Paz gold placers were discovered by Pauline Weaver.

In 1863, the Castle Dome district, near Yuma, became known. Discovery of many placer and lode deposits was made in the Prescott region. The Moss Mine, Oatman District, Vulture Mine near Wickenburg and Planet Mine, near the Williams River, were discovered. The Moss and Vulture were gold mines, the Planet was copper. Many lode deposits were discovered in Mohave County.

Arizona was made a Territory, chiefly because of the many gold discoveries, but also because of the influence of that indefatigable explorer, Charles D. Poston, who was the first individual to present an organized plan for the Territory of Arizona to Congress, in December, 1862. The Congress provided for a temporary government for the Territory of Arizona, approved February 24, 1863; but it was not until December 27, 1863 that the Territorial officers appointed by Lincoln arrived in Arizona. Attended by a military escort to protect them from Indians, they set up the Territorial government on December 29 in a snow storm at Navajo Springs. John Gurley of Maine, had been named by President Lincoln as Arizona's first Governor, but Mr. Gurley died before assuming the office. John Goodwin was named by Lincoln to assume the office of first Territorial Governor of Arizona in 1863. The Capital was moved from Prescott to Tucson, November 1, 1867. It was relocated in Prescott in 1877, and remained there until it was moved to Phoenix on February 4, 1889.

### CHRONOLOGY

#### Period 1871 - 1911

1871 The Federal Government sends a large number of troops to end the Apache problem, which is finally settled with the surrender of Geronimo in 1886.

1872 The Town of Clifton founded by Metcalf and Stevens.

1873 The U. S. Mint, by Act of Congress, discontinues the coinage of silver dollars. Great financial and industrial panic.

- 1874 Globe becomes a booming silver camp. Railroad built from Clifton to Metcalf, the first in Arizona. McCracken silver-lead mine discovered in Mohave County. Richmond Basin Silver district northeast of Globe is opened.
- 1875 Silver King Mine in Superior district is discovered by Mason and Copeland. Silver Queen (Magma) also discovered. The Lesinsky brothers build a copper furnace of one ton daily capacity at Clifton. Detroit Copper Company founded, and mining started at Morenci.
- 1876 Southern Pacific Railway reaches Gila Bend from California. United Verde ore body discovered at Jerome by M. A. Ruffner. Activity at Mineral Park district, Mohave County.
- 1877 John Dunn, Army Scout, makes first location in Warren district. Ed Schieffelin begins his hunt for his "tombstone".
- 1878 First shipment of matte from Copper Queen claim. First locations made at Tombstone recorded. Act of Congress makes silver legal tender.
- 1879 Boom started at Tombstone.
- 1880 Lesinsky sells out to Arizona Copper Company at Clifton after making \$2,000,000. Phelps Dodge, on advice of Dr. James Douglas, buys half interest in Detroit Copper and builds a small smelter at Morenci. Dr. Douglas makes first visit to Bisbee. Silver-copper ore is mined from Silver Queen (now the Magma) at Superior.
- 1881 Railroad reaches Lordsburg. Old Dominion Copper and Smelting Company starts operations at Globe. Phelps Dodge acquires Atlanta claim at Bisbee. Mammoth district opened. A small copper furnace goes into operation at the present site of Miami.
- 1882 United Verde Copper Company is organized. Atlantic and Pacific Railroad crosses northern Arizona.
- 1883 Some copper mining is undertaken at Ray. A small smelter is built at Jerome.
- 1885 Copper Queen Consolidated Mining Company is formed. Territorial Legislature creates the University of Arizona.
- 1886 Bonanza ores become exhausted at Morenci and a concentrator is built by William Church to treat oxidized ore that averaged 6.5 percent copper. Six furnaces in operation at Globe.
- 1887 Dennis May discovers Congress gold mine.
- 1888 Dr. James Douglas turns down United Verde because of inaccessibility. Old Dominion Company reorganized at Globe. First building to house the School of Mines at University of Arizona is completed at Tucson. Harquahala gold deposit is discovered.
- 1889 Territorial Capital is moved from Tucson to Phoenix on February 4th. Senator W. A. Clark obtains control of the United Verde mine, which resumes operations.

- 1890 Sherman silver purchase bill is enacted by Congress. Louis D. Ricketts becomes assistant to Dr. Douglas.
- 1891 The cyanide process, after years of experimenting, becomes a success in South Africa and revolutionizes gold mining.
- 1892 Phelps Dodge Corporation purchases United Globe Mines at Globe, and also certain claims in the Miami district.
- 1893 Silver is demonetized. Disastrous panic. Prospectors turn from silver to gold. Copper Queen begins working sulphides.
- 1894 Rail connection completed to Jerome. An unsuccessful attempt is made to work the Ajo deposit.
- 1895 Cyanide process is introduced at Congress Mine, one of the first installations of its kind in this country. Fortuna Mine southeast of Yuma is discovered.
- 1896 King of Arizona Mine, northeast of Yuma is discovered by Chas. E. Eichelberger. McKinley elected President, and gold standard assured. First disseminated copper ore is treated at Clifton by James Colquhoun, but this was relatively high-grade ore.
- 1898 War with Spain.
- 1899 Daniel C. Jackling pioneered treatment of low-grade porphyry ore at Bingham, Utah. United Verde Extension Mining Company formed. An English Company, Ray Copper Mines, Ltd., unsuccessfully attempts to work Ray deposit.
- 1900 A smelter is built at Douglas by Phelps Dodge Corporation. Rich gold ore is found in Oatman district. John R. Boddie, Captain Huie, and several others organize the Cornelia Copper Company to work the Ajo deposit.
- 1902 Calumet and Arizona Company is organized.
- 1903 Phelps Dodge obtains control of the Old Dominion at Globe. Gold Road Mine is discovered in Oatman district.
- 1904 F. L. Ransome, of the U. S. Geological Survey, prepares report on the Bisbee district.
- 1905 Waldemar Lindgren writes report on Morenci for the U. S. Geological Survey.
- 1906 Philip Wiseman and Seeley Mudd obtain options at Ray. J. Parke Channing examines the copper deposits at Miami, and exploratory shafts are started. The famous McGahan vacuum smelter is built at Ajo, the most fantastic metallurgical scheme ever devised. First low-grade porphyry copper production at Morenci.
- 1907 Daniel C. Jackling undertakes extensive development work at Ray. John Lawler owns eight claims at Bagdad. Panic of 1907.
- 1907-1908 Arizona passes Montana in copper production and becomes the No. 1 copper producer in the U. S.



- 1908 Miami Copper Company and Inspiration Copper Company are organized. Tom Reed Gold Mines Company starts intensive operations on the Tom Reed vein in the Oatman district.
- 1909 Sacramento Hill at Bisbee is drilled. J. Parke Channing and Seeley Mudd drill at Ajo and reject property. Cornelia Copper Company reorganized as New Cornelia Copper Company. Louis S. Cates is placed in active charge at Ray. Arizona loses its No. 1 position in copper production.
- 1910 Magma Copper Company at Superior organized. Arizona regains the No. 1 position in copper production. A gravity test mill is erected and placed in operation by Inspiration Copper Company.
- 1911 Production starts at Miami Copper Company. American Smelting and Refining Company builds smelter at Hayden. Ray production starts on large scale. General John C. Greenway becomes interested in Ajo, and the New Cornelia property is drilled by the Calumet and Arizona Company. Production starts at Magma.

CHRONOLOGY  
Period 1912-1961

- 1912 Town of Oatman is started. Arizona is admitted to the Union as forty-eighth state. James S. Douglas becomes interested in United Verde Extension, and development work there is begun.
- 1913 A Flotation test mill is erected and placed in operation at Inspiration.
- 1914 World War I starts.
- 1915 Large gold ore body is developed in United Eastern Mine at Oatman. Metal prices start to boom. International Smelting Company erects smelter at Miami. Flotation introduced at Inspiration, the first large-scale copper flotation plant in this country. Legislature creates Arizona Bureau of Mines.
- 1916 United Verde Extension mines bonanza ore body at Jerome.
- 1917 United Eastern purchases Big Jim at Oatman. Production starts at New Cornelia with leaching ore. War prices for metals. Extensive working of small high-cost copper, manganese, and tungsten deposits. New Cornelia buys property of Ajo Consolidated Company.
- 1918 Steam shovel operations start at Sacramento Hill at Bisbee.
- 1919 Experimental flotation plant is installed at Ajo.
- 1921 Postwar depression and shut down of copper properties. Entire Morenci district now controlled by Phelps Dodge.
- 1922 End of postwar depression.
- 1923 Copper Queen mill south of Bisbee is placed in operation.

- 1924 Ray and Chino merge. Concentrator at Ajo put into operation, and treatment of sulphide ore commences. Smelter is completed at Magma.
- 1925 End of high-grade ore at Miami in sight. Company plans for working low grade
- 1926 Ray Consolidated is absorbed by Nevada Consolidated. Large-scale leaching operations started at Inspiration.
- 1928 Drilling program started on Clay ore body at Morenci. Extensive addition to concentrator at Ajo.
- 1929 Climax of boom and start of the great depression. Sacramento Hill open pit operations are discontinued. Miami Copper mining low-grade ore body successfully.
- 1930 Copper price collapses from 18 to under 10 cents a pound. Louis S. Cates becomes president of Phelps Dodge.
- 1931 Phelps Dodge absorbs Calumet and Arizona. Great Britain abandons gold standard.
- 1932 Curtailed copper operations. Extensive reworking of gold placer deposits. Four-cent tariff is placed on copper imports. Copper price declines to under 5 cents a pound.
- 1933 Price of gold is raised to \$25.56. Silver legislation.
- 1934 Price of gold is raised to \$34.95 per ounce with subsequent boom in small gold properties.
- 1935 Price for newly mined domestic silver is raised to 77.57 cents.
- 1936 Period of general recovery.
- 1937 Business pick up, high copper prices and subsequent collapse in summer and fall. Extensive development of Clay ore body (Morenci Open Pit Mine) is started.
- 1938 Partial or complete shutdown of copper properties and re-opening in late summer. Price for newly mined domestic silver is reduced to 64.64 cents. War scares. United Verde Extension finishes ore body, and smelter is dis-mantled and sold. Arizona Small Mine Operators Association is formed.
- 1939 Arizona Department of Mineral Resources is created by Legislature. World War II begins. Mineral industries geared to high production. Copper, lead and zinc prices begin long climb upward.
- 1940 U. S. copper imports exceed exports: government stock-piling stimulates entry of Latin American and African copper into United States. Zinc output largest in Arizona's history.
- 1941 Pearl Harbor. United States declares war on Axis nations. Copper price under voluntary control.

- 1942 Morenci begins large-scale, open-pit production. Record zinc output. Government premium prices inaugurated February, 1942. Most gold mines closed by government order L-208, October, 1942.
- 1943 Open pit production at Castle Dome mine commences in April. Arizona's metal output greatest since 1929. Severe labor shortages. Zinc output establishes new record. U. S. Bureau of Mines starts exploratory drilling at San Manuel copper deposit after recommendation by B. S. Butler and N. P. Peterson, of University of Arizona and U. S. Geological Survey.
- 1944 Magma Copper Company becomes interested in San Manuel mine near Mammoth. Seven percent decrease in Arizona metal production owing in part to labor shortage. Increase from 25,000 to 45,000 tons of ore per day at Morenci copper concentrator. Lead and zinc output highest in State's history.
- 1945 Cessation of hostilities with Axis. Zinc production makes new record, 38 percent greater than 1944. Lead also sets new record, 37 percent greater than 1944.
- 1946 San Manuel exploration continues: 211,500,000 tons of ore proved up. Lead and zinc production continues upward trend, exceeding 1945. Stimulation of interest in non-metallics owing to building boom.
- 1947 San Manuel Copper Company reports a total of 462,784,500 tons of copper ore proved. Government premium prices expire in June.
- 1948 Copper excise tax is reduced from 4 cents to 2. (Tax had been suspended during the war, and suspension continued to March 31, 1949.) High metal prices continue to stimulate mining industry. The output of copper ore and zinc-lead ore is the highest of any year in the history of the State. Open-pit development is completed at Inspiration and in progress at Ray. Underground exploration begins at San Manuel.
- 1949 Copper import tax is again suspended in March to June 30, 1950. Owing to a drop in base-metal prices in March and April and subsequent reduction of the work-week to 40 hours, copper production is curtailed by 5 percent under the output of 1948. Production of zinc and lead, however, reaches a new high.
- 1950 Production of copper, gold, and silver increases while the output of zinc and lead decreases. Interest in tungsten, manganese, and other critical metals and minerals is stimulated by world conditions. 2-cent copper tax resumes July 1st. Open-pit production commences at Ray. Phelps Dodge begins development of Lavender Pit. New copper smelter blows in at Ajo.
- 1951 The 2-cent copper tax is suspended April 1st, with provision for resumption of the tax if copper drops to 24 cents.
- 1951-1953 Flood of imports of lead and zinc causes shut-down of many lead and zinc mines.
- 1952-1954 Banner Mining Company and Pima Copper Mining Company appear among notable producers of copper in the Pima Mining District south of Tucson.

- 1953 Castle Dome ore reserves are exhausted.  
Operations cease at United Verde in March.  
Development of Miami's low grade ore starts.  
Manganese ore purchasing depot opens at Wenden, January 26th.  
Copper price decontrolled May 1st.  
Asbestos purchase depot is opened by U. S. Government at Globe.  
Copper tax suspension is continued to June 30, 1954.
- 1954 Castle Dome's mill building is moved to Copper Cities, and production is begun at the latter mine in August.  
Miami begins production from low-grade ore-body.  
Inspiration takes option on Christmas mine.  
A. S. & R. Company begins production from Silver Bell mine in Pima County in March.  
Phelps Dodge begins production at Lavender Pit (Bisbee), August 7th.  
Copper tax suspension is extended to June 30, 1955.  
Wenden Depot closed after purchase of 6,000,000 recoverable long-ton units of manganese.  
Duval Sulphur & Potash Company begins development of Esperanza Mine.
- 1955 Trial runs on stockpiled ore are made by San Manuel Mining Co.  
Carlot purchases of +35% manganese ore and concentrates to be continued until 1959.
- 1956 Underground mining, flotation concentration and smelting of concentrates begin at San Manuel.  
Tremendous demand for copper both here and abroad, causes price to rise to over 50 cents. U. S. average for year 41.8 cents.
- 1957 Construction of 12,000 tons per day concentrator begun by Duval.
- 1958 First commercial oil producer in State drilled by Humble Oil & Refinery Co. in Apache County.  
Excise tax of 1.7 cents per lb. placed on copper imports July 1, 1958.
- 1959 Two exploratory wells in Apache County listed as discoveries, one an oil well, the other gas.  
Asarco's Mission Mine's pre-stripping and construction of 15,000 tons per day capacity concentrator commenced in August, 1959.  
Operation of Duval's mine & mill begun in March, 1959.  
Kennecott Copper Corporation purchases 120 claims in a copper mineralized area northeast of Safford.
- 1960 Phelps Dodge Corporation also exercises options to buy 300 mining claims 10 miles north of Safford.  
Bagdad Copper Corporation starts leaching its immense stock-pile of oxidized copper.  
Pima Mining Company reaches agreement to mine and mill a large tonnage of Banner Mining Company's ore, and is increasing its mill capacity from 3,000 to 3,800 tons per day.
- 1961 Asarco's Mission Unit starts its new mill, August 1, 1961, handling 15,000 tons copper ore per day.