

Pima County, Arizona | Case Studies

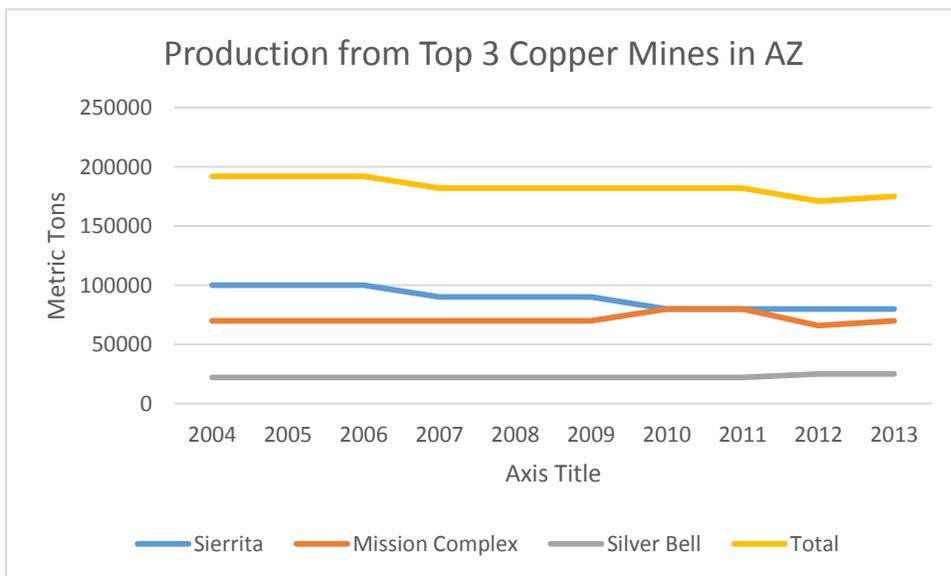
Copper is a major industrial metal used in construction, electronics, transportation, industrial machinery, and consumer products. In 2014, the U.S. was the world's fourth-largest copper producer, mining 1.13 million tons of copper worth approximately \$9.7 billion.ⁱ Of the five major copper-producing states (Arizona, Utah, New Mexico, Nevada, and Montana), Arizona increased production the most in 2014; its copper output totaled 893,000 metric tons, representing 66% of the national total.ⁱⁱ Copper represented 89% of the value of mining in Arizona.ⁱⁱⁱ If Arizona were a country, it would be the seventh largest copper producer in the world.^{iv} Greenlee and Pima counties generated the majority of that production.

Geology and history

In Pima County, much like nearby Greenlee County, copper mining began in the 1870s. Mining activity in Pima County flourished in the late nineteenth century, particularly as the arrival of the Southern Pacific Railroad brought increased commerce and traffic to the region. The copper-mining industry followed a series of boom-and-bust cycles throughout the following decades, with particular spikes during the two world wars, when demand soared. Today, copper output in Pima County is driven by operations at three open-pit mines: Sierrita, Mission Complex, and Silver Bell.

Production

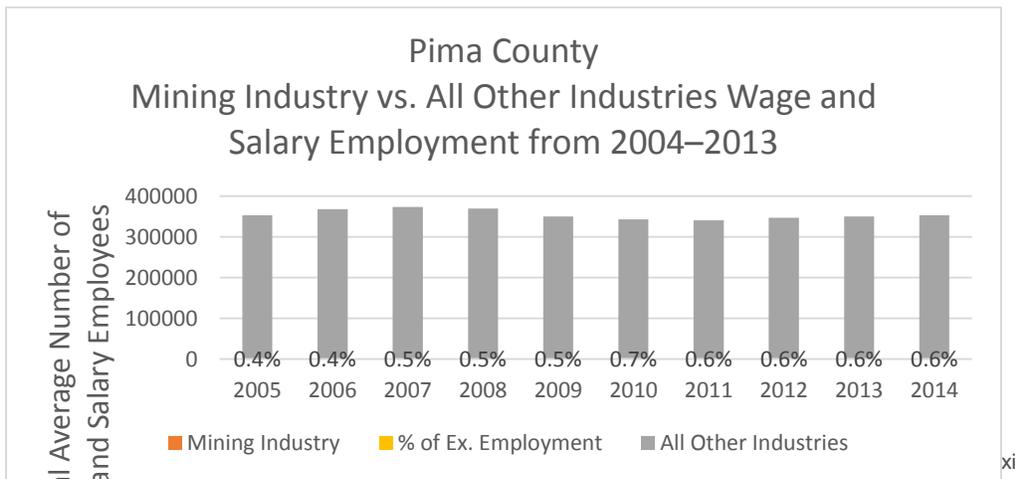
In 2014, the combined copper production from Pima County's three major mines totaled 175,000 metric tons.^v This output constituted 22% of national production for that year.^{vi} Freeport-McMoRan Inc. manages the Sierrita mine, the top-producing operation in the county, while ASARCO LLC owns both the Mission Complex and Silver Bell mines.^{vii}



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Employment

Copper mining makes up a relatively small portion of Pima County’s overall employment, largely as a result of the Tucson metropolitan area’s more diversified economy and workforce. Of Pima County’s total 2014 employment of 282,653 copper mining and related activities account for less than 1% (2,328 workers).^{ix} Data for mining and support activities for the entire mining industry shows an overall increase in employment in Pima County from 2004 through 2014.^x



Revenue

State revenue from copper extraction is directed back to Pima County primarily through the state’s severance tax. Arizona levies this tax on metal minerals (including copper) set at 2.5% on 50% of the difference between the gross value of production and the production costs. While 47.6% of this revenue goes to the state’s General Fund, the other 52.4% is distributed to cities and counties.^{xii} In 2013, \$19 million was distributed to all cities and counties in Arizona from the severance tax on metals.^{xiii}

Pima County derives revenue from copper mining within its borders. However, in order to protect individual mines’ sales information, the state does not disclose what percentage of the \$19 million distributed to all cities and counties in Arizona from severance taxes goes to Pima County. In 2014, Phelps Dodge Corporation (now Freeport-McMoRan Inc.) and ASARCO LLC, the two largest copper-mining companies in the county,^{xiv} ranked numbers 2 and 4 respectively, in terms of largest property tax payers. These two corporations, which operate the three largest mines in Pima County.^{xv} These funds are channeled toward public services such as infrastructure development, public safety, and local schools.

ASARCO LLC also pays royalties to both the State of Arizona and the Tohono O’odham Nation as part of the leasing agreement to operate the Mission Mine, which is located on both state-owned and Indian land.

Costs

Publicly available government sources specifying the fiscal costs of copper mining in Pima County were not found.

Data availability

The table below highlights data sources used to compile this narrative, as well as any gaps in publicly available data.

Measure	Data availability	Data gaps
Production	The U.S. Geological Survey published copper production data at the mine level from 2004-2010.	
Employment	The Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages publishes mining-industry data at the Pima County level using NAICS codes 212 (Mining Except Oil and Gas) and 213 (Support Activities for Mining) from 2004–2013.	BLS is missing data for NAICS codes specific to copper or metal mining prior to 2010.
Revenue	Revenue information was gathered from a range of Arizona state and county government sources for 2012, including the Arizona Department of Revenue and the Pima County 2012 Comprehensive Annual Financial Report.	Data on how sales and use taxes relate to extractive activities in the county was not found.
Costs		Data on connections between county transportation, emergency services, reclamation, and water-infrastructure investments and extractive industries was not found.

Notes

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- ⁱ U.S. Geological Survey, [2015 Copper Commodity Summary \(PDF\)](#)
- ⁱⁱ Arizona State University, [The Economic Impact of Mining in the State of Arizona \(PDF\)](#)
- ⁱⁱⁱ Ibid.
- ^{iv} Ibid.
- ^v U.S. Geological Survey [2014 Minerals Yearbook, Copper](#)
- ^{vi} Ibid.
- ^{vii} Ibid.
- ^{viii} Ibid
- ^{ix} Bureau of Labor Statistics, [Quarterly Census of Employment and Wages for NAICS Codes 212 \(Mining Except Oil and Gas\) and 213 \(Support Activities for Mining\) 2004–2013](#)
- ^x Ibid.
- ^{xi} Ibid.
- ^{xii} State of Arizona, [2013 Tax Handbook \(PDF\)](#), p. 25
- ^{xiii} Arizona Department of Revenue, [2015 Annual Report \(PDF\)](#), p. 39, table 7
- ^{xiv} Pima County, Arizona, [Comprehensive Annual Financial Report \(PDF\)](#), 2014
- ^{xv} Ibid.