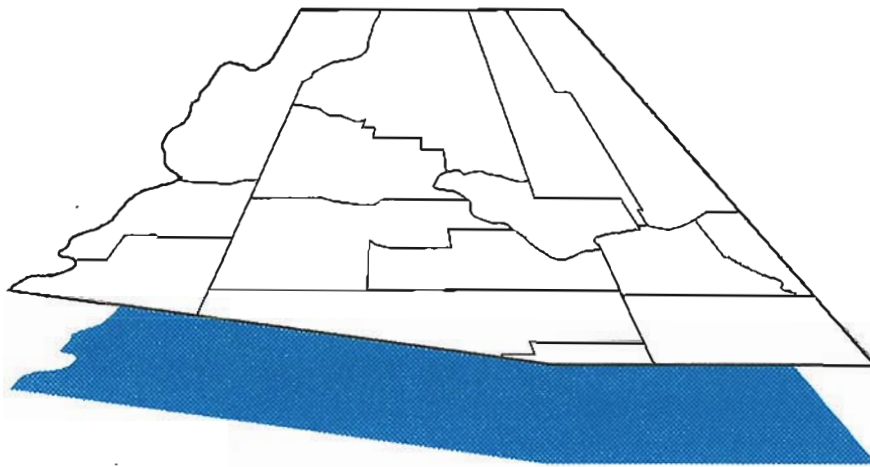


THE ECONOMIC IMPACT OF THE ARIZONA COPPER INDUSTRY 2010



Prepared by
George F. Leaming, Ph.D.

WEAC
Western Economic Analysis Center

May 2011

THE IMPACT OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY

- In 2010, the Arizona copper industry had a combined direct and indirect impact on the Arizona economy of

\$12.101 Billion

- including combined direct and indirect contributions of

\$3.624 Billion in personal income,
(equivalent to **73,100 jobs** for Arizonans)

\$7.876 Billion in business sales, and

\$601 Million in state and local government revenues

- as a result of the circulation (and multiplication) of the copper industry's total direct impact of

\$3.676 Billion

- that included direct payments of

\$194.396 Million (28% over 2009) to the State and its local governments in taxes and fees,

\$2,511.919 Million (19% more than in 2009) to other Arizona businesses for products and services, and

\$970.019 Million (26% above 2009) in personal income for Arizonans, including wages and salaries for the industry's

10,400 employees,

- who labored to produce 63% of the copper mined in the United States, i.e.

797,408 tons of copper plus other minerals with a total value of

\$6.034 Billion

(42% more than in 2009).

THE ECONOMIC IMPACT OF
THE ARIZONA COPPER
INDUSTRY
2010

*A REPORT ON THE CONTRIBUTIONS OF
THE ARIZONA COPPER INDUSTRY
TO PERSONAL INCOME, BUSINESS SALES, AND
GOVERNMENT REVENUES
IN 2010*

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May 2011

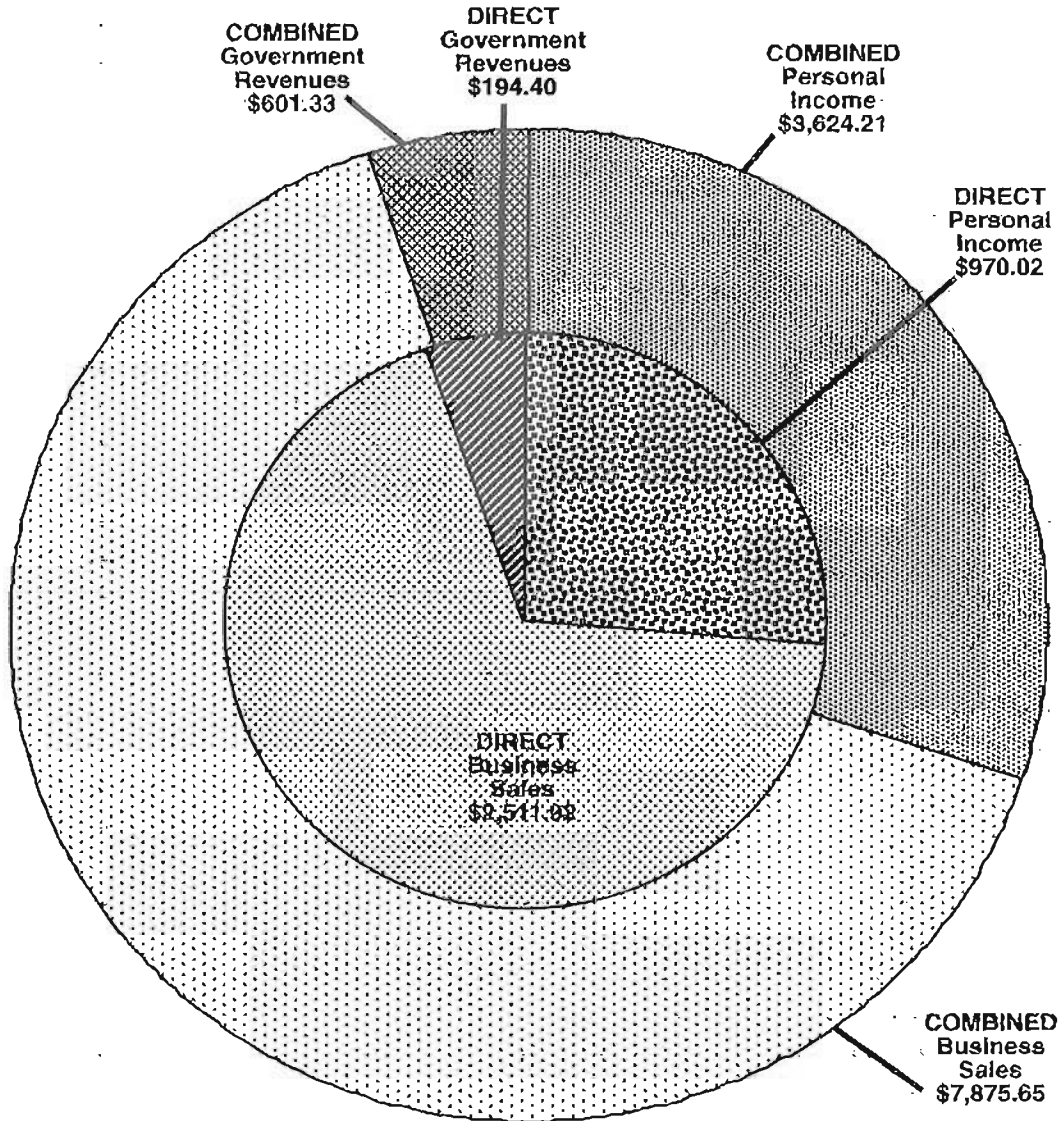
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DIRECT AND INDIRECT IMPACTS OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY IN 2010

TOTAL COMBINED IMPACT: \$12,101,183,000
TOTAL DIRECT IMPACT: \$3,676,334,000



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SEGMENT VALUES IN MILLIONS OF DOLLARS

Figure 1. The total impact of the copper industry on Arizona's economy in 2010 exceeded \$12.1 billion. That total impact, resulting from the circulation within the state's economy of the copper industry's direct payrolls, pensions, purchases, and taxes, was more than triple the industry's direct impact alone.

SUMMARY

TOTAL IMPACT

Arizona's economy gained over \$12.1 billion and 73,100 Arizona residents had jobs in 2010 as a result of the combined direct and indirect contributions of the copper industry to personal, business, and government income in the state. That \$12.1 billion total economic benefit was double the \$6.1 billion value of Arizona copper mine production last year. The total number of jobs created for Arizonans was seven times the number of people employed directly in the copper industry.

The greatest benefits from the copper industry's contributions to the Arizona economy in 2010 were realized by other Arizona businesses, as shown in *Figure 1* on the preceding page. The nearly \$8 billion in sales revenues obtained by Arizona business firms directly and indirectly as a result of copper industry activity formed nearly two thirds of the industry's total economic impact on the state. The 2010 figure was 28% more than in the previous year, despite a decrease in the physical volume of production. That decline in physical output was offset by a higher value of output resulting from higher metal prices. Lower production in response to the unfavorable market outlook early in the year was offset by greater buying later in the year by copper producers both inside and outside of Arizona. A higher rate of income circulation within the Arizona economy also helped to expand the overall impact from increased buying by Arizona copper firms.

Arizona residents received a significant amount of personal income in 2010 as a result of the copper industry's direct and indirect contributions to the state's economy. More

than \$3.6 billion in personal income received by Arizona residents last year came directly and indirectly from the copper industry. That was about 37% more than in 2009 and 39% more than in the cyclical peak year of 1981 when the Arizona copper industry had more than twice as many employees. The \$3.6 billion received by Arizona residents as a result of copper industry activity in 2010 was more than 3% of all wages and salaries earned by the state's residents last year from all industries. It provided earnings for 73,100 workers, most of whom were employed in wholesale and retail trade, the service industries, manufacturing, and state and local government, as well as in mining.

Arizona's state and local governments shared substantially in the economic benefit generated by the copper industry in 2010. More than \$601 million of the revenues received by state and local governments in Arizona in 2010 were created either directly or indirectly by the copper industry. That was 28% more than the year before, reflecting the 26% increase in direct taxes paid by the copper industry as well as the magnification of that increase caused by the faster rate of circulation of money within the Arizona economy in 2010 compared to 2009.

The share of the copper industry's total contribution to the Arizona economy that went to state and local government in 2010 was about 5%, the same as the year before. Over 10,000 government employees around the state received their salaries because of the taxes paid directly and indirectly by the Arizona copper industry. About half of those were employed in public education.

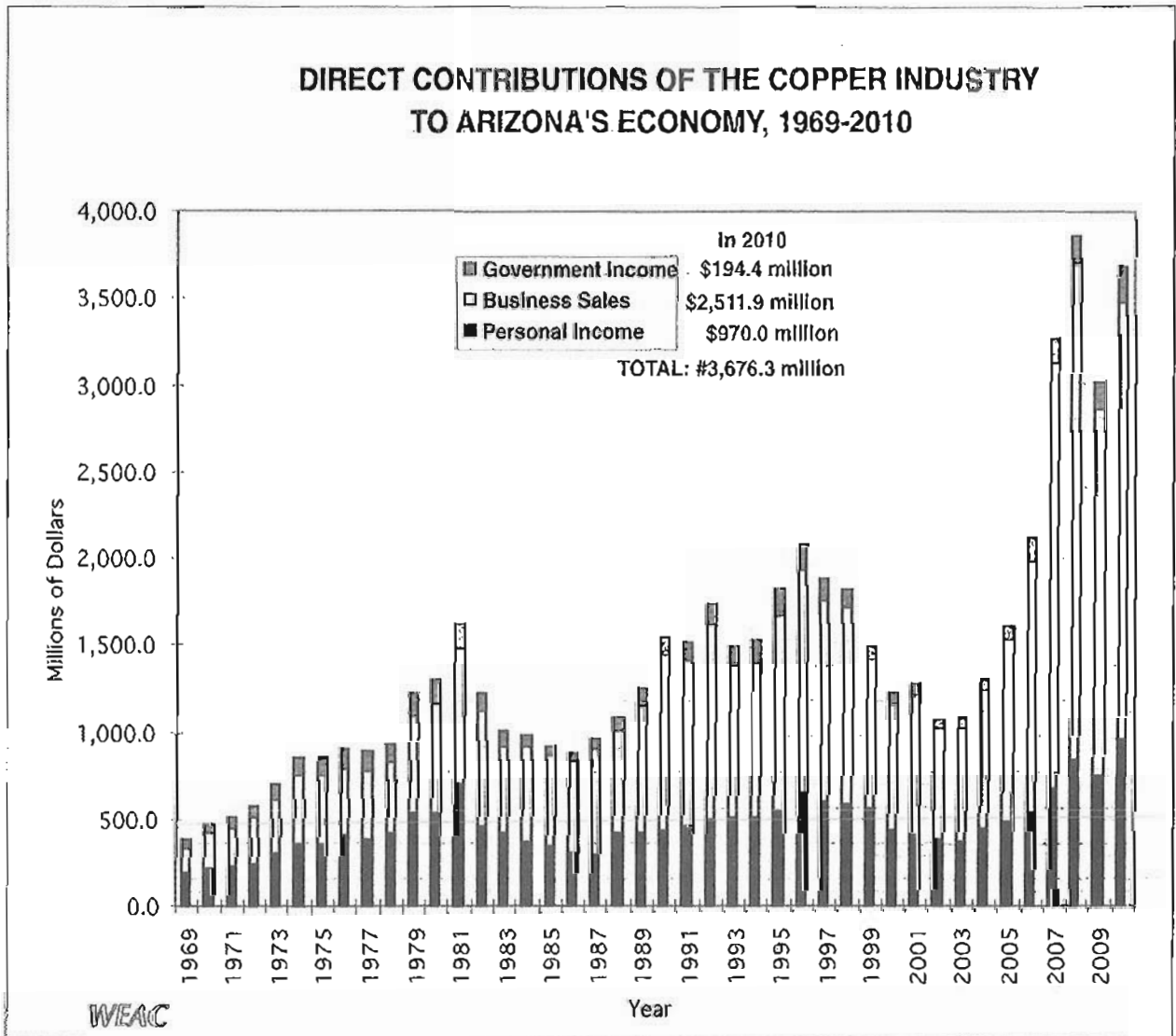


Figure 2. The direct contribution of the copper industry to Arizona's economy approached \$3.7 billion in 2010, up 22% from the year before, and still higher than any year prior to 2007. The biggest part of that impact on the state's economy, (over \$2.5 billion) went to other Arizona businesses for goods and services used in producing copper. The 2010 contributions of the copper industry to the Arizona economy remained markedly higher than during the depressed copper market conditions in the early part of the 21st Century's first decade.

The \$12.1 billion overall impact of the copper industry on the Arizona economy in 2010 was made by a copper industry that was much smaller than in the boom years of the late 1970s and early 1980s. In 2010, that leaner Arizona copper industry consisted of only two major producers and several smaller firms operating at a total of only 12 mining properties (including four small ones), and with only two smelters. That was an industry that had lost ten major producing firms,

reduced the number of active major mines by more than half, and cut the number of smelters to less than half of the 1981 figure. The amount of copper produced by the state's copper industry fell to under 798,000 tons, 2% less than the year before and almost 43% below the production level reached in the peak output year of 1997. The Arizona output amounted to 63% of all copper mined in the United States last year, slightly more than the 62% share mined in 2009.

DIRECT IMPACT

The copper industry's total \$12.1 billion impact on the Arizona economy in 2010 was the result of not only the industry's direct payments to its employees, its suppliers, and local taxing authorities, but also of the circulation and recirculation of those payroll, purchase, and tax dollars through the Arizona economy to create a ripple or multiplier effect. Those direct payments by the copper industry to Arizona residents, business firms, and governments totalled almost \$3.7 billion, up 22% over 2009, and more than double the total for 1981, when the industry had more than twice as many firms, mines, and smelters and more than twice as many workers.

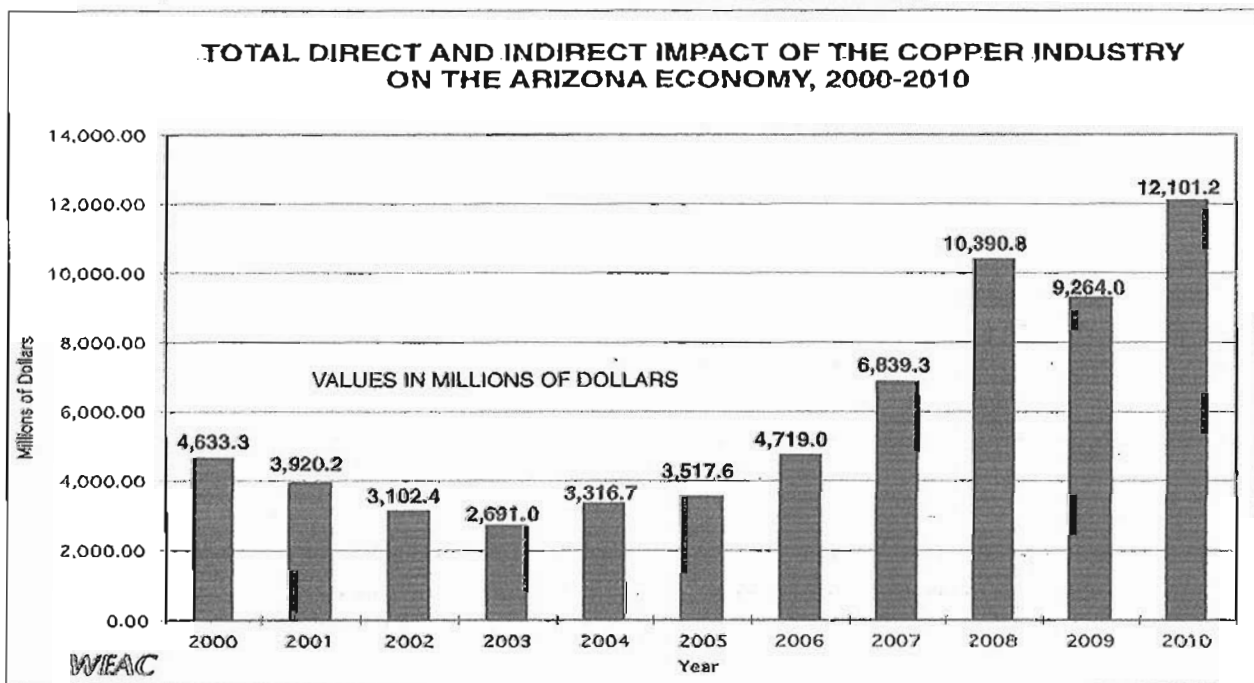
Of its \$3.7 billion direct payment total in 2010, the Arizona copper industry paid \$970 million directly to Arizona residents as personal income. That was 26% more than in the year before and 38% more than in 1981, even as the industry continued its long fight to keep a lid on costs by increasing the productivity of its workers.

The biggest share (68%) of the copper industry's direct contributions to the Arizona economy in 2010 went to other Arizona businesses for products and services used in producing copper and other metals by Arizona's copper mining firms. The total of more than \$2.5 billion paid directly to other Arizona business firms in 2010 was 19% more than in 2009, mostly as a result of greater purchases to support resumed operations and continue recent expansions.

The copper industry's direct payments to state and local governments in Arizona in 2010 rose 28% above the year before. The more than \$194 million paid by the copper industry directly as state and local taxes and fees in 2010 was more than triple the recent low reached in 2002.

METROPOLITAN AREA IMPACTS

Although most of Arizona's copper mines are located in the non-metropolitan areas of the state, major economic gains from those operations are realized each year in the Phoenix and Tucson



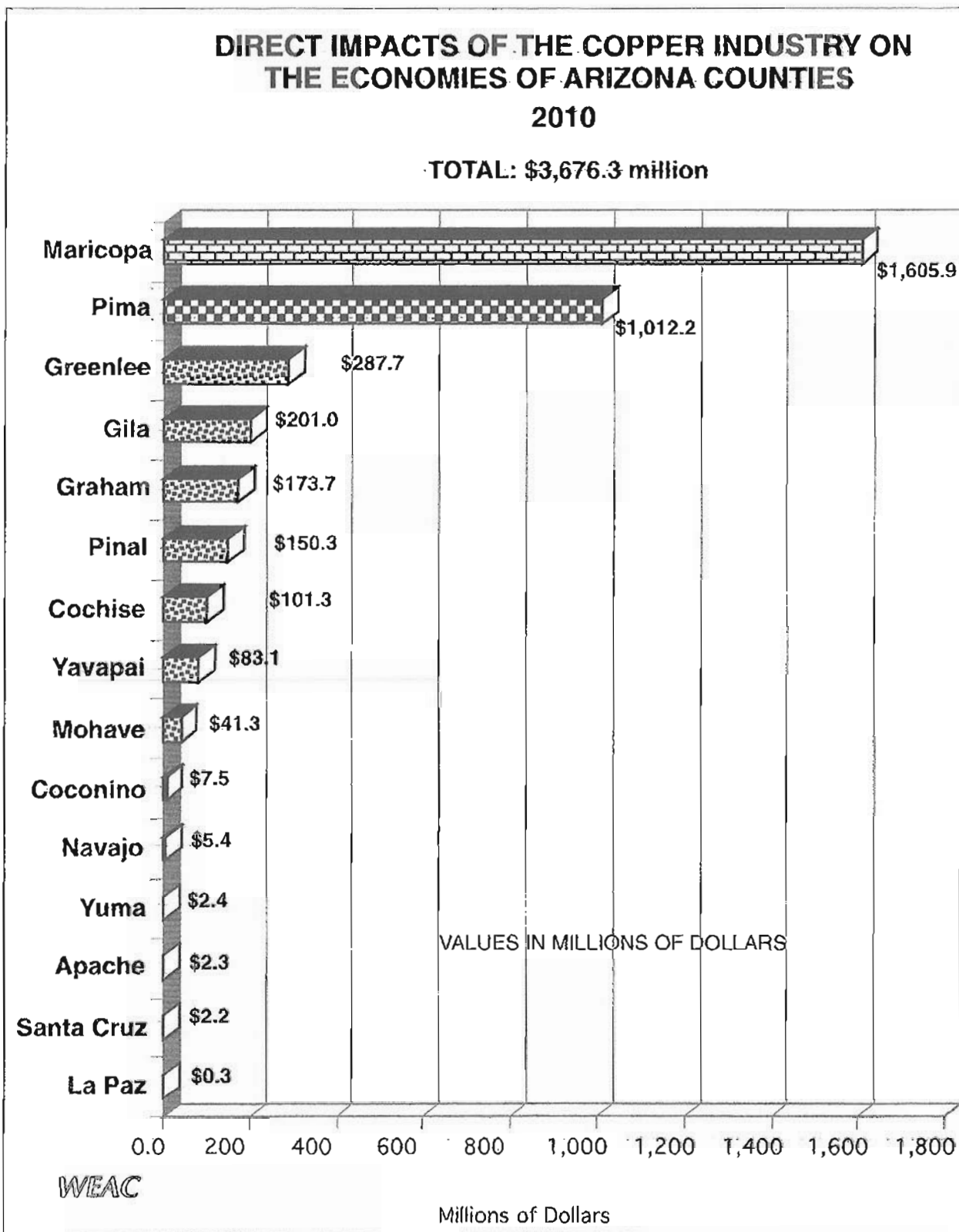


Figure 3. The Arizona copper industry had its biggest direct impact in 2010 on the economy of Maricopa County, the state's largest metropolitan economy. Even though the industry had no production facilities in the county, it purchased large amounts of supplies and services from Maricopa County businesses, and much of the industry's taxes went to state and local government units located in Maricopa County. The second largest impact was on Pima County.

Metropolitan Areas. In 2010, more than 46% of the copper industry's direct purchases from other Arizona businesses were made from firms located in Maricopa County. That resulted in a direct payment of over \$1.1 billion to businesses in the Phoenix Metropolitan Area.

State and local government units in Maricopa County got an even bigger share (60%) of the Arizona copper industry's direct payments to governments in the state. Those government units got more than \$116 million directly from the copper industry in 2010.

Maricopa County residents received over \$334 million in personal income directly from the copper industry last year, and they gained more than half of the \$2.7 billion of indirect personal income created by the circulation and recirculation of the Arizona copper industry's statewide direct payments to persons, businesses, and governments.

The total of direct payments by the copper industry to persons, business firms, and governments in Maricopa County in 2010 amounted to over \$1.6 billion, 44% of the industry's direct impact on the state and more than any other county, despite the fact that there were no active copper mines in the county. Arizona's largest copper producer did have its headquarters offices in Phoenix.

The Tucson Metropolitan Area (Pima County) also shared substantially in both the direct and indirect contributions of the copper industry to Arizona's economy in 2010. Copper producers bought almost \$833 million worth of products and services from firms in Pima County last year. That was a third of the total of copper industry purchases made in the state. State and local government units in the Tucson Metropolitan Area received over \$25 million in revenues directly from the copper

industry in 2010. That was about 12% of the industry's total direct payments to state and local governments in all of Arizona.

Residents of Pima County gained more than \$154 million in personal income directly from the copper industry in 2010. That was 16% of the industry's total direct contribution to personal income in the state. Residents of the state's second largest metropolitan county also got about a quarter of the \$2.7 billion of indirect personal income received by Arizonans from the state's copper industry last year. The total of direct payments by the copper industry to persons, businesses, and governments in the Tucson Metropolitan Area last year amounted to over \$1 billion. That was more than 27% of the industry's direct impact on the state. Two copper companies had a total of three major production operations in Pima County last year.

CONGRESSIONAL DISTRICT IMPACTS

Almost 75% of the copper mined in Arizona in 2010 came from mines located in Arizona's 1st Congressional District, which includes the major copper mining districts of Gila, Graham, Greenlee, Pinal, and Yavapai counties. The rest of Arizona's copper output last year came from mines located in the 7th and 8th districts, (which include the copper mining areas of Cochise and Pima counties) and from the 2nd District, which includes Mohave County.

Somewhat in line with copper production, employment in copper mines and processing facilities in the state in 2010 was found mostly in the 1st Congressional District. Last year, two thirds of the workers employed in Arizona's copper industry were employed at sites located in the 1st District. Another 17% were employed at sites in the 8th District, while 8% were employed at

facilities in the 7th District. There were no employment sites located in the 3rd, 5th, or 6th districts.

The commuting of copper workers across district boundaries, however, combined with the heavy purchase of goods and services from suppliers in the state's major metropolitan areas, and the distribution of copper industry taxes throughout the state, to spread the overall economic impact of the copper industry last year among all of the state's congressional districts. That statewide distribution was

much more even than the distribution of either copper production or employment. Nevertheless, the economy of the 1st District received the greatest direct benefit, almost \$910 million in personal income, business sales, and local government revenues. That was almost 25% of the state total.

The 7th Congressional District received the second biggest direct economic benefit from the Arizona copper industry last year. The 7th Congressional District gained \$694 million in personal income, business sales,

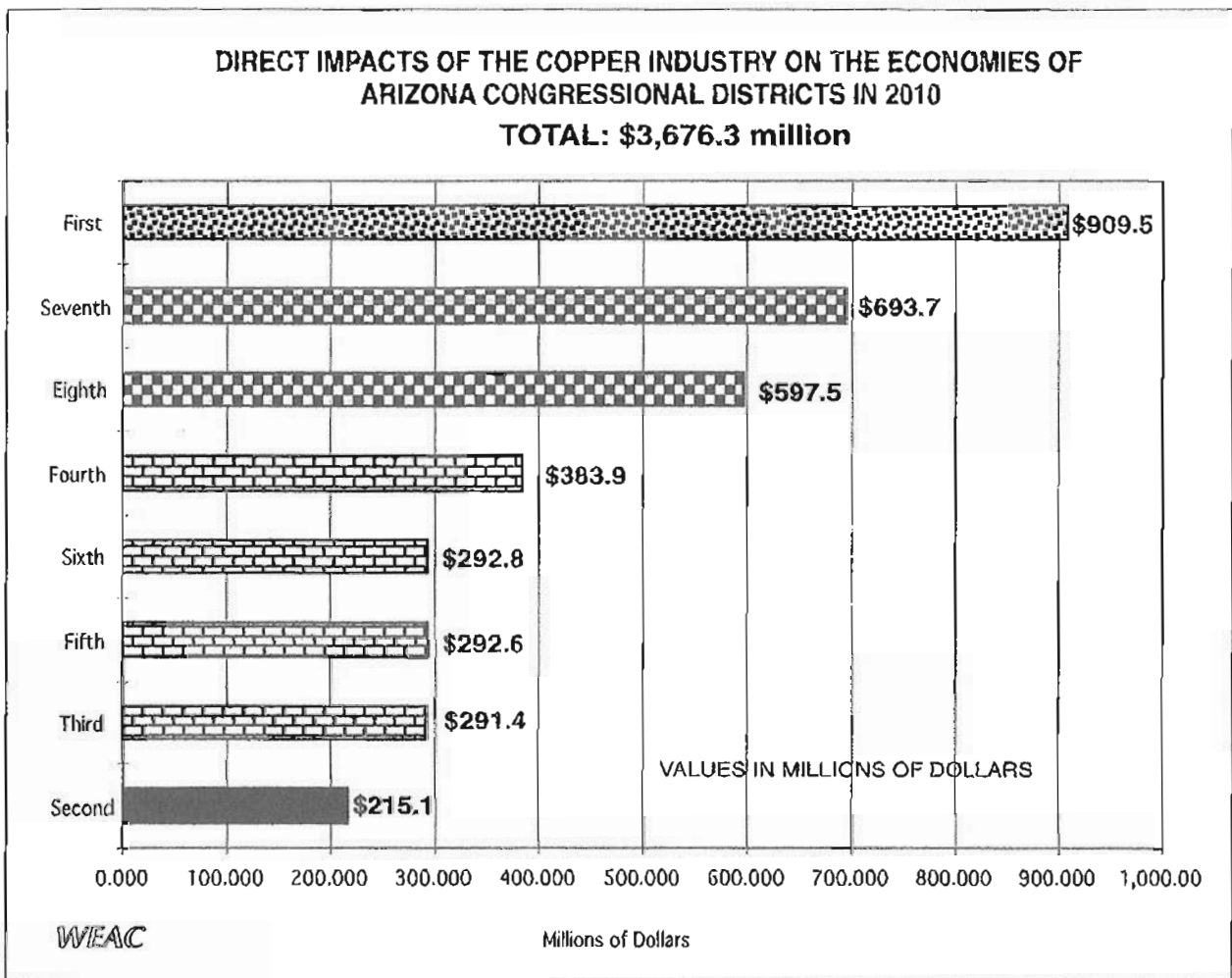


Figure 4. The biggest share, almost 25%, of the direct economic impact of the copper industry on Arizona in 2010 was felt in the First Congressional District, where 75% of the state's copper was mined. Because of commuting by copper workers who live in other districts, purchases from suppliers in the Tucson and Phoenix metropolitan areas, and the statewide distribution of copper industry taxes, other districts also benefited by substantial amounts.

and state and local government revenues directly from the Arizona copper industry in 2010. That was almost 19% of the state total.

The 8th Congressional District received the third biggest direct economic benefit from the Arizona copper industry last year. The total direct impact of the copper industry on the 8th Congressional District in 2010 was almost \$598 million, more than 16% of the industry's total direct impact on the Arizona economy. Residents of Arizona's 8th District received only 8% of the total direct contribution of the copper industry to personal income in Arizona in 2010, partly because many who work at copper facilities in the 8th District live in communities that are situated in the 7th Congressional District. Business firms located in the 8th District accounted for 20% of the sales by Arizona businesses to the Arizona copper industry. State and local government entities in the 8th District received 5% of such government revenues provided directly by the Arizona copper industry in 2010.

The 4th Congressional District, which had no copper production facilities but does have some of the industry's administrative offices, received almost \$384 million directly from the Arizona copper industry in 2010. The 3rd, 5th, and 6th districts each received about \$290 million of the copper industry's direct contribution to personal, business, and government incomes in the state last year. The 2nd Congressional District got about \$215 million.

NATIONAL IMPACT

Arizona's copper industry had a much greater impact on the economy of the United States in 2010 than it had on Arizona. The industry's direct contributions to personal income, business sales, and federal,

state, and local government revenues, as shown in Table 3 on page 12, exceeded \$5.7 billion, including over \$1 billion in federal revenues.

Because of the much larger income multipliers in the national economy, and the much larger ripple effect that resulted, the total direct and indirect impact of the Arizona copper industry on the national economy last year was more than \$34 billion. That included over \$9 billion in personal income, over \$20 billion in sales by businesses in other industries, and state and local government revenues of nearly \$2 billion. Of that total, more than 64% was realized by state and local governments situated in states other than Arizona.

In addition to its contributions to personal, business, and state and local government income throughout the nation, the Arizona copper industry generated both directly and indirectly nearly \$2.8 billion in federal government revenues. That combined total came not only from the industry's own tax payments but also from those of its employees and suppliers and from their employees and suppliers and from state and local governments to which they paid taxes.

The revenue total received directly and indirectly by the federal government in 2010 as a result of the operations of the Arizona copper industry amounted to \$13,750 per acre for the 207,700 acres used by the industry to produce copper and other metals. The revenues received by the federal government directly in taxes and fees from the Arizona copper industry in 2010 amounted to \$4,820 per acre.

The Arizona copper industry also helped to lower the nation's trade deficit in 2010. Arizona copper producers sold more

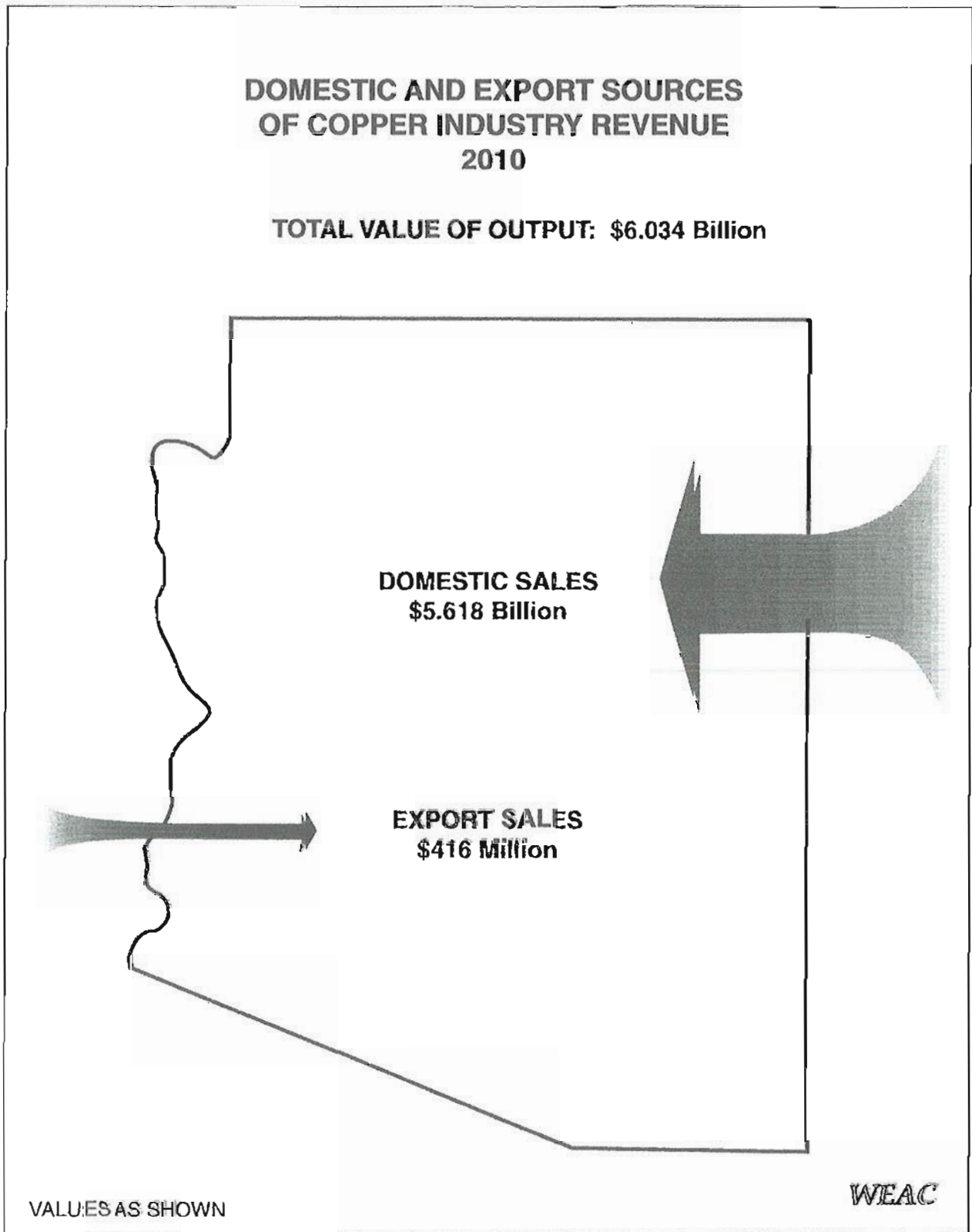


Figure 5. Almost 7% of Arizona's copper industry production in 2010 was sold to overseas customers, bringing in nearly \$416 million to offset the nation's foreign trade deficit. A significant part of the export amount was accounted for by byproduct metals, rather than copper.

than \$376 million worth of copper and other metals to overseas customers last year. That represented almost 7% of the total value of the Arizona copper industry's output in 2010.

A large part of those exports were shipped to buyers in the Far East, thereby providing a significant offset to the nation's imports from that part of the world.

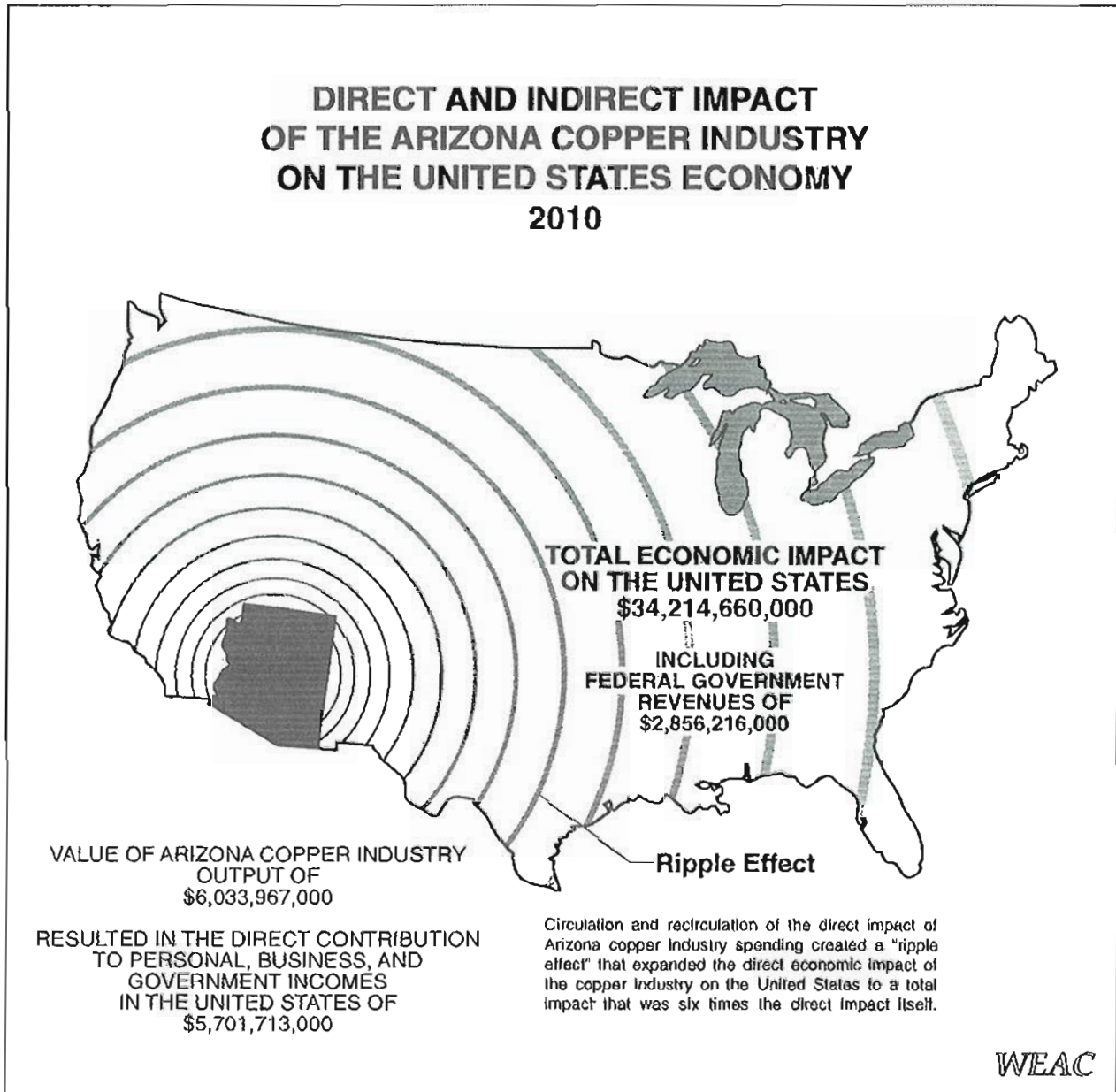


Figure 6. The total-impact of the Arizona copper industry on the economy of the United States in 2010 was more than \$34 billion, including nearly \$2.9 billion in federal government revenues. That amounted to \$13,750 in federal revenues for every acre of land devoted to copper production in Arizona.

Table 1

**THE DISTRIBUTION OF COPPER INDUSTRY INCOME
DIRECTLY TO THE ARIZONA ECONOMY
2010**

INDUSTRY SALES OF \$6,033,967,000

Provided:

PERSONAL INCOME FOR ARIZONANS OF \$970,019,000

including:

Wages and salaries for Arizona workers of \$674,241,000
 Transfer payments to Arizona residents of 62,976,000
 Other payments to Arizona residents of 232,802,000

and:

SALES FOR OTHER ARIZONA BUSINESSES OF \$2,511,919,000

including sales to copper producers by:

Wholesalers of \$1,202,232,000
 Construction contractors of 288,042,000
 Public utilities of 277,497,000
 Service businesses of 263,499,000
 Manufacturing firms of 239,071,000
 Other mining firms of 89,882,000
 Transportation firms of 73,898,000
 Finance, insurance, and real estate firms of 47,321,000
 All other types of businesses of 30,477,000

and:

STATE AND LOCAL GOVERNMENT REVENUES OF \$194,396,000

including amounts for:

The State of Arizona of \$83,441,000
 Public schools and junior colleges of 67,020,000
 Counties, cities, and towns of 42,581,000
 Special district governments of 1,354,000

with the net result for the Arizona economy being a:

TOTAL DIRECT CONTRIBUTION OF \$3,676,334,000

But to do this, copper producers made:

EXPENDITURES OUTSIDE OF ARIZONA OF \$2,025,439,000

to cover:

Out-of-state business expenses of \$1,024,999,000
 Federal income and payroll taxes and fees of 1,000,440,000

Resulting in:

EARNINGS TO INVEST OR REDUCE DEBT \$332,194,000

Source: Western Economic Analysis Center

Table 2

**COMBINED DIRECT AND INDIRECT IMPACT
OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY
2010.**

In 2010, the Arizona copper industry had a:

DIRECT IMPACT ON THE ARIZONA ECONOMY OF \$3,676,334,000

including direct payments to Arizonans for:

Personal Income of	\$970,019,000
Business Sales of	2,511,919,000
State and Local Government Revenues of	194,396,000

**which, by circulation and recirculation through
the Arizona economy, resulted in an:**

INDIRECT-ECONOMIC IMPACT ON ARIZONA OF \$8,424,853,000

including indirect benefits in:

Personal Income of	\$2,654,193,000
Business Sales of	5,363,729,000
State and Local Government Revenues of	406,931,000

to create a:

TOTAL ECONOMIC IMPACT ON ARIZONA OF \$12,101,187,000

including total benefits in:

Personal Income of	\$3,624,212,000
Business Sales of	7,875,648,000
State and Local Government Revenues of	601,327,000

Source: Western Economic Analysis Center

Table 3

**COMBINED DIRECT AND INDIRECT IMPACT
OF THE ARIZONA COPPER INDUSTRY
ON THE UNITED STATES ECONOMY
2010**

In 2010, the Arizona copper industry had a:

DIRECT IMPACT ON THE UNITED STATES ECONOMY OF \$5,701,773,000

including direct contributions to:

Personal Income of	\$970,019,000
Business Sales of	3,536,918,000
State and Local Government Revenues of	194,396,000
Federal Government Revenues of	1,000,440,000

which, by circulation and recirculation through
the United States economy, resulted in an:

INDIRECT ECONOMIC IMPACT ON THE NATION OF \$28,512,887,000

including indirect benefits in:

Personal Income of	\$8,428,664,000
Business Sales of	16,734,603,000
State and Local Government Revenues of	1,493,844,000
Federal Government Revenues of	1,855,776,000

to create a:

TOTAL ECONOMIC IMPACT ON THE UNITED STATES OF \$34,214,660,000

including total benefits in:

Personal Income of	\$9,398,683,000
Business Sales of	20,271,521,000
State and Local Government Revenues of	1,688,240,000
Federal Government Revenues of	2,856,216,000

Source: Western Economic Analysis Center

THE ARIZONA COPPER INDUSTRY IN 2010

THE INDUSTRY

The Arizona copper industry at the beginning of 2010 consisted of three large firms and several smaller ones. The large Arizona firms also were among the largest copper producers in the world. The biggest, Freeport-McMoRan Copper & Gold, Inc., had its headquarters in Phoenix and production operations in Gila, Graham, Greenlee, Pima, and Yavapai counties, non-producing mineral properties in Cochise, Pima, and Yavapai counties, as well as research facilities in Graham County.

The second largest, Asarco, LLC, had administrative offices in Tucson, and production operations in Gila, Pima, and Pinal counties. The other major company to operate in Arizona was BHP Billiton, a large Australian and British firm. It operated at a site in the Pinto Valley of Gila County and maintained an administrative presence at a former operating site in Pinal County, since virtually all of its Arizona production had been shut down in mid-1999.

Two of the smaller but rapidly growing producers were both Canadian firms. Mercator Minerals, Ltd. had a production operation in Mohave County, while the Carlota Copper Company, a subsidiary of Quadra FNX Mining, Ltd., operated a new mine in Gila County. Another relatively small copper producer, Nord Resources Corporation, headquartered in Tucson, conducted mining operations during the year at its Johnson Camp mine in northern Cochise County. The combined activity of both the larger and smaller producers, the older and the newer, resulted in Arizona accounting for 63% of the nation's copper mine output in 2010.

COPPER MARKET CONTINUED TO IMPROVE AS THE YEAR BEGAN

Copper prices continued to rise slowly as the market moved into the first quarter of 2010, to levels well above those of a year earlier. On the first trading day of January, 2010, the spot price of high-grade copper on the COMEX Division of the New York Mercantile Exchange was almost \$3.39 per pound. That was more than double the price at the beginning of the previous year and 2% above the 2009 high reached on December 30. It was 6% above the average for all of December, 2009. In the third week of January, however, the price of copper began to soften and finished the month down 10% from the start but still more than double the level of the previous year.

For all of January, the price of copper on the COMEX Division of the New York Mercantile Exchange averaged almost \$3.34 per pound. That was 126% above the average price of January 2009, and nearly 5% above the average for the last month of 2009. Producer delivered prices averaged about 4 cents higher than the COMEX price.

The rising price of copper apparently encouraged plans for expansion in the copper mining industry. On January 25, Freeport-McMoRan Copper & Gold, Inc. announced that it had bought the Twin Buttes Mine and surrounding property in eastern Pima County near the corporation's existing Sierrita Mine. The Twin Buttes Mine, originally developed by the Anaconda Company in the 1960s, had closed in 1994 but had been leased by Freeport-McMoRan for some time. The owner of the nearby Sierrita Mine paid \$200 million for the 8,900-acre inactive property.

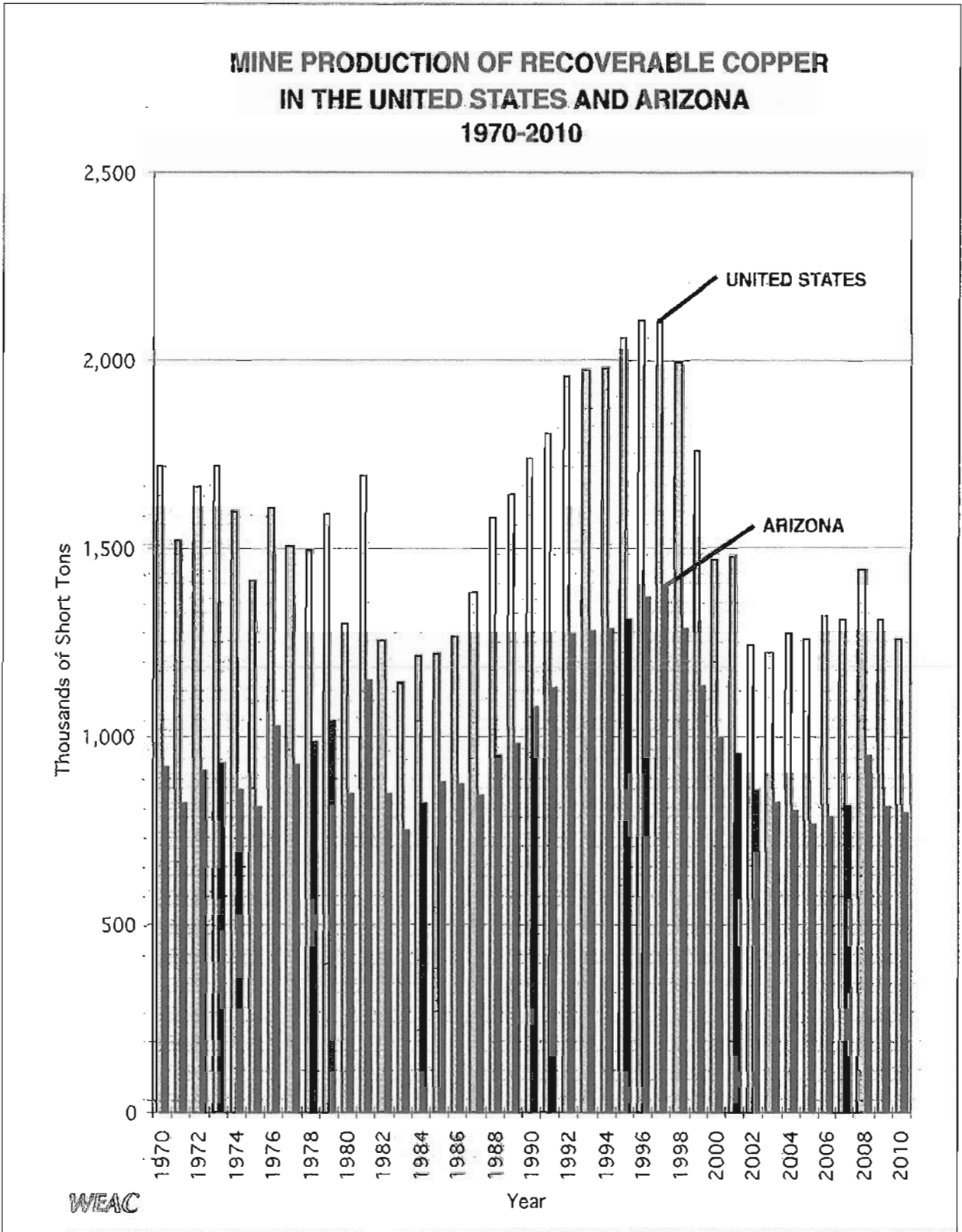


Figure 7. Mine production of recoverable copper in Arizona fell to under 798,000 tons in 2010, about 2% less than in 2009. Arizona still provided 63% of all copper mined in the United States last year, up from 62% a year earlier.

Too much rain, not a lack of land, was the problem at another Arizona copper mine in early February. On February 2, Quadra Mining Ltd. reported that its Carlota Mine near Miami in Gila County had suffered several major rain storms, but that the firm's storm runoff control system had functioned as planned and there were no severe adverse consequences. The record rain storms in January apparently did have an impact on the chemical reactions on the mine's leach heaps and did some damage elsewhere in the mine that required the construction of a secondary access route into new areas of the pit. Regular ore deliveries to the leach pad resumed normal operations in March. Despite the rain, the company reported record copper production from its Carlota Mine in the first quarter.

Throughout the first week of February, the price of copper continued to slide downward, reaching a low on February 7 of less than \$2.86 per pound but then climbing slightly from that level for the rest of the month. The average price for all of February was almost \$3.12 per pound, down 7% below the January average but still more than double the price of February a year earlier.

Copper prices continued rising in March, edging up to almost \$3.55 a pound by the end of the month. For all of March, the New York price of the red metal averaged almost \$3.40 per pound. That was 9% higher than in February and 98% above March of 2009.

The improvements in the copper market were apparently attracting the attention of more mining interests to the Arizona copper scene. On March 23, Quadra Mining Ltd., a Canadian company based in British Columbia, announced that it had agreed to merge with another Canadian firm, FNX Mining Co., Inc., of Ontario, to form Quadra FNX Mining Ltd.,

with Quadra shareholders owning the majority of stock in the combined company. Quadra operates the Carlota Mine in Gila County as well as the Robinson Mine in White Pine County, Nevada. FNX Mining Co., Inc. had its principal operations in the Sudbury Basin of Ontario.

The first quarter's higher metal prices had a favorable impact on the actual sales and earnings of Arizona's largest copper producer. Freeport-McMoRan Copper & Gold, Inc. revealed that sales revenues for its operations in North America during the first quarter were more than double sales revenues in the comparable quarter of 2009. The amount of metal produced from its Arizona mines, including its new mine at Safford, was about 10% less than in the first quarter of 2009, reflecting a 14% reduction in production at Morenci and a 15% reduction at its Sierrita Mine, but relatively stable levels of output at Bagdad and Safford.

One of Arizona's newer and smaller mining companies was expanding output and was making much more money. Mercator Minerals Ltd. reported that copper production from its Mineral Park Mine in Mohave County for the first quarter was up 78% over output for the same quarter of 2009. A copper price that was more than double that of a year earlier, however, boosted the value of that output to almost triple that of the first quarter of 2009. The addition of byproduct molybdenum and silver to the Mineral Park output mix also helped. Despite the first quarter gains, the company still was not making a profit on its Arizona operation.

Arizona's newest copper producer was having some problems with water but was still producing and selling much more copper than it had a year earlier. Nord Resources

Corporation reported sales of copper produced at its Johnson Camp Mine in Cochise County of more than \$6 million. That was more than four times the sales it realized in the first quarter of 2009. It also reported a net profit from those sales of over \$1 million, nearly double that of the same quarter of 2009.

COPPER PRICE DROPPED SLIGHTLY DURING THE SECOND QUARTER

The price of copper edged upward in early April. On April 5, the price of the red metal on the COMEX Division of the New York Mercantile Exchange rose to almost \$3.63 per pound as the copper market continued to recover. For the next two weeks, the New York price of copper remained relatively stable but then began to decline in the final week of the month. For the entire month of April, copper's New York spot price averaged \$3.52 per pound. That was 72% higher than that of April of 2009, but only 4% above the average for March of 2010.

One of Arizona's larger copper producers still seemed to have more problems with escaping tailings than with producing ore. In early April, Asarco LLC announced that it had agreed to pay the State of Arizona a fine of \$20,000 to settle alleged environmental violations that involved a pipeline leak that happened in 2007. The Arizona Department of Environmental Quality claimed that the broken pipe allowed the escape of 1,500 gallons of fluid tailings from the company's Ray Complex concentrator into the main channel of the Gila River near Hayden. The company already had spent \$1.7 million to install a new pipeline.

Not far away from Asarco's Ray Complex, at San Manuel in the San Pedro River Valley, copper mining's past was being

commemorated in another way. On April 17, the residents of San Manuel held the town's first Copper Town Days to note the history of copper mining in the town. Until 1999, San Manuel had been the site of the nation's largest underground copper mine and one of Arizona's major sources of copper.

One of Arizona's current copper producers took action towards the industry's future rather than its past. On April 1, it was reported that Freeport-McMoRan Copper & Gold, Inc. had reached an agreement with BioteQ Environmental Technologies, Inc. to restart operations at their joint venture in Bisbee. The plant to recover copper from waste had been inactive since April of 2009 but was expected to resume full production in the second quarter of 2010.

Near the end of April, Freeport-McMoRan Copper & Gold, Inc. announced that it was planning to hire several hundred more workers in the state as it increased production at operating mines and resumed output at others. The company already had restarted its concentrator at Morenci in Greenlee County to process sulfide ores that were being mined but untreated. It now planned to hire about 400 more workers to increase output from the Morenci Mine. The firm also announced that it would need about 250 new construction workers at its nearby Safford operations in Graham County to resume building a sulphuric acid plant to supply its Safford leaching operations. The company also said that it planned to continue efforts to restart production at its Miami operations in Gila County.

Some businesses selling to the copper industry were benefitting from the mining expansion plans. On May 6, a land development firm, Mission Peaks 4000 LLC, sold 3,500 acres of land it had been holding

west of Sahuarita in Pima County to Freeport-McMoRan Copper & Gold, Inc. for \$2.4 million. The land is near the Twin Buttes Mine that Freeport-McMoRan had recently acquired.

While one residential land developer was reducing its holdings in the face of possible mine expansion, one Arizona manufacturing firm was expanding. In late May, FK Smith Krebs, which supplies the international mining industry with mineral processing equipment, completed a 30,000 sq. ft. expansion to its factory at Marana in eastern Pima County.

Despite the optimism in the mining industry, the price of copper continued to decline in May, going from \$3.28 per pound at the start of the month to as low as \$2.92 on May 17. The price of the red metal then remained in a narrow range for the rest of the month. For all of May, the average spot price of copper in New York averaged \$3.11 a pound. That was 12% below what it had been in April, but still 48% above the average for May of 2009.

The price of copper continued falling in June. On June 8, the price of copper on the COMEX Division of the New York Mercantile Exchange dropped to less than \$2.76 a pound but then bounced back a little, finishing the month 4% below where it started. For all of June, the New York spot price of copper averaged about \$2.94 per pound, 5% below that of May, but still 29% above that of June, 2009.

For Arizona's existing copper producers, the second quarter proved to be not so good. Freeport-McMoRan Copper & Gold, Inc., reported that production of copper from the firm's Arizona mines was up almost 1% over the first quarter of the year but still

about 2% lower than the comparable quarter of 2009. Sales of metal by its copper mining units in North America exceeded \$900 million in the second quarter, down about 4% below the previous quarter of the year, but much higher than sales in the second quarter of 2009 as a result of higher metal prices. Actual production of copper from the firm's Arizona mines was about 2% below that of the second quarter of 2009.

At the other end of the spectrum, one of Arizona's smaller producers was doing quite well. Mercator Minerals, Ltd. reported that it finally realized a significant profit in the second quarter. Sales for the second quarter of 2010 were two and a half times those of the same quarter of 2009 as higher prices for copper, molybdenum, and silver offset a slight decline in physical copper production.

PRICES RESUMED RISING DURING THE THIRD QUARTER

As the third quarter of the year started, copper prices on world markets began to follow an upward trend. From a level of \$2.86 a pound on the first day of July, the price of copper on the COMEX Division of the New York Mercantile Exchange rose to almost \$3.31 by the end of the month. For all of July, the New York spot price of copper averaged over \$3.06 per pound. That was 4% higher than the average for the previous month and 28% above the level of July, 2009.

More changes appeared on the horizon in July in the structure of the copper industry. Late in the month it was announced that Grupo Mexico, SAB de CV, had proposed a merger of its Asarco LLC subsidiary with another subsidiary, Southern Copper Corp., which operates Grupo Mexico's large copper mines in Mexico and Peru. The merger

apparently would involve another Grupo Mexico subsidiary, Americas Mining Corp., which would then become the owner of the properties now owned by Asarco and Southern Copper and would be listed on the New York and Lima, Peru, stock exchanges.

In August, the price of copper stayed high, ranging between a low of \$3.21 a pound on August 25 to more than \$3.41 on August 30. The average price of copper on the COMEX Division of the New York Mercantile Exchange for all of August was \$3.32 per pound. That was 8% more than the July average and 18% above that of August of 2009.

August also saw one more Canadian firm expressing interest in Arizona copper. On August 23, Gold Hawk Resources, Inc. announced that it had signed a letter of intent to buy all of the shares of another Canadian company that was the owner of the Oracle Ridge Mining LLC, an American subsidiary with an inactive copper mining property on the north edge of the Santa Catalina Mountains in southern Pinal County.

In September, the price of copper continued to move upward, going from almost \$3.47 a pound at the beginning of the month to \$3.65 by the end of the month. For all of September, the New York price of copper averaged nearly \$3.52 per pound, 6% above the August figure and 25% above the average for September of 2009.

The rising metal price seemed to be having little impact on the state's biggest copper mining firm. For the third quarter, Freeport-McMoRan Copper & Gold, Inc. reported total sales revenues for its North American copper mining operations that approached \$900 million. That was 5% lower than the previous quarter but still 9%

higher than the \$815 million in sales that were reported for the third quarter of 2009. Actual copper production from the company's Arizona mines was still dropping, falling to a level about 3% below that of the previous quarter and 11% below the level of the third quarter of 2009.

The lack of higher revenues from its Arizona copper mines apparently was not discouraging the nation's largest copper producer from investing in other mineral industries. In late September, Freeport-McMoRan Copper & Gold, Inc. announced that it would invest \$500 million in Freeport-McMoRan Exploration Co., a Louisiana firm, engaged in exploration for, development of, and production from oil and gas deposits in the shallow waters of the Gulf of Mexico. The investment was being made specifically to allow that company to purchase the operations of the Plains Exploration and Production Company of Houston, Texas, a firm that also was engaged in shallow water petroleum operations in the Gulf of Mexico.

One of Arizona's newer and much smaller copper companies did move ahead significantly in the third quarter. Mercator Minerals, Ltd. reported total metal sales of nearly \$57 million for the quarter. That was more than double sales of copper in the same quarter of the previous year. Both higher metal prices and increased output contributed to the gain and boosted the Canadian firm's profits to more than triple those of the previous quarter.

FOURTH QUARTER SAW CONTINUED GAINS IN PRICES

The price of copper continued rising into the first part of October, reaching above \$3.85 per pound at the start of the third week. By the end of the month, the

price of copper at New York had dropped back below \$3.80 a pound but was still feeling some upward pressure. For the entire month, the COMEX price of refined copper averaged \$3.77 per pound. That was 7% higher than in September and 31% higher than in October of 2009.

The rising market for copper was causing changes not only for copper mining firms but also for non-mining firms wanting to get in on a good thing. Late in October, J.P. Morgan Chase & Co., one of the nation's largest financial firms, announced that it would issue a new exchange-traded security based on physical copper. The security was being offered to allow traders to become involved in the physical copper market without having to actually buy, ship, or store copper metal. Those logistical functions were to be handled by a subsidiary of J.P. Morgan Chase.

The new copper production capacity coming on line in Arizona did not depress the copper market. The price of copper continued to rise in November, climbing to almost \$4.05 per pound in the second week of the month and then dropping back slightly by the end of the month. For all of November, the average price of copper in the New York market was \$3.84 a pound. That was 2% above the October average and 27% higher than in November of 2009.

As the year drew near its close, the price of copper kept going up. In December, the New York copper price continued to climb, going from \$3.95 per pound on December 1 to over \$4.00 on December 6, and then going to a monthly high of nearly \$4.44 on New Year's Eve. For the month as a whole, the price of high grade refined copper on the New York Mercantile Exchange averaged \$4.17 per pound. That was 9%

above the November average, and 31% more than the year December 2009 figure. For all of 2010, the New York price of the red metal averaged better than \$3.43 per pound. That was 45% above the average for 2009 and 6% above the previous high of \$3.23 per pound reached in 2007.

The news was good for those firms already involved in Arizona copper production, but not for one that had been trying to get started for some time. On December 22, the U.S. Forest Service announced that the draft environmental impact statement for the proposed Rosemont Mine in eastern Pima County had been delayed again. That became the fourth such delay in two years. The formal release of the review was now being scheduled for sometime in 2011.

The fourth quarter proved to be a little better for Arizona's largest copper mining firm. The amount of copper mined by the Arizona operations of Freeport-McMoRan Copper & Gold, Inc. for the final quarter of 2010 was about 9% above the level of the previous quarter but still 5% below the final quarter of 2009. The amount of money the company was getting per pound of copper also was up, 18% more than in the previous quarter and 29% more than in the final quarter of 2009. As a result of the changes in production and product price, the corporation's revenues from all of its North American copper mining operations rose 6% over the previous quarter to a level a little less than 1% above the final quarter of 2009.

Largely because of the second half rebound in copper prices and greater output of byproduct metals, Freeport-McMoRan Copper & Gold, Inc. finished the year with revenues from its North American copper mining units of more than \$3.7 billion. That

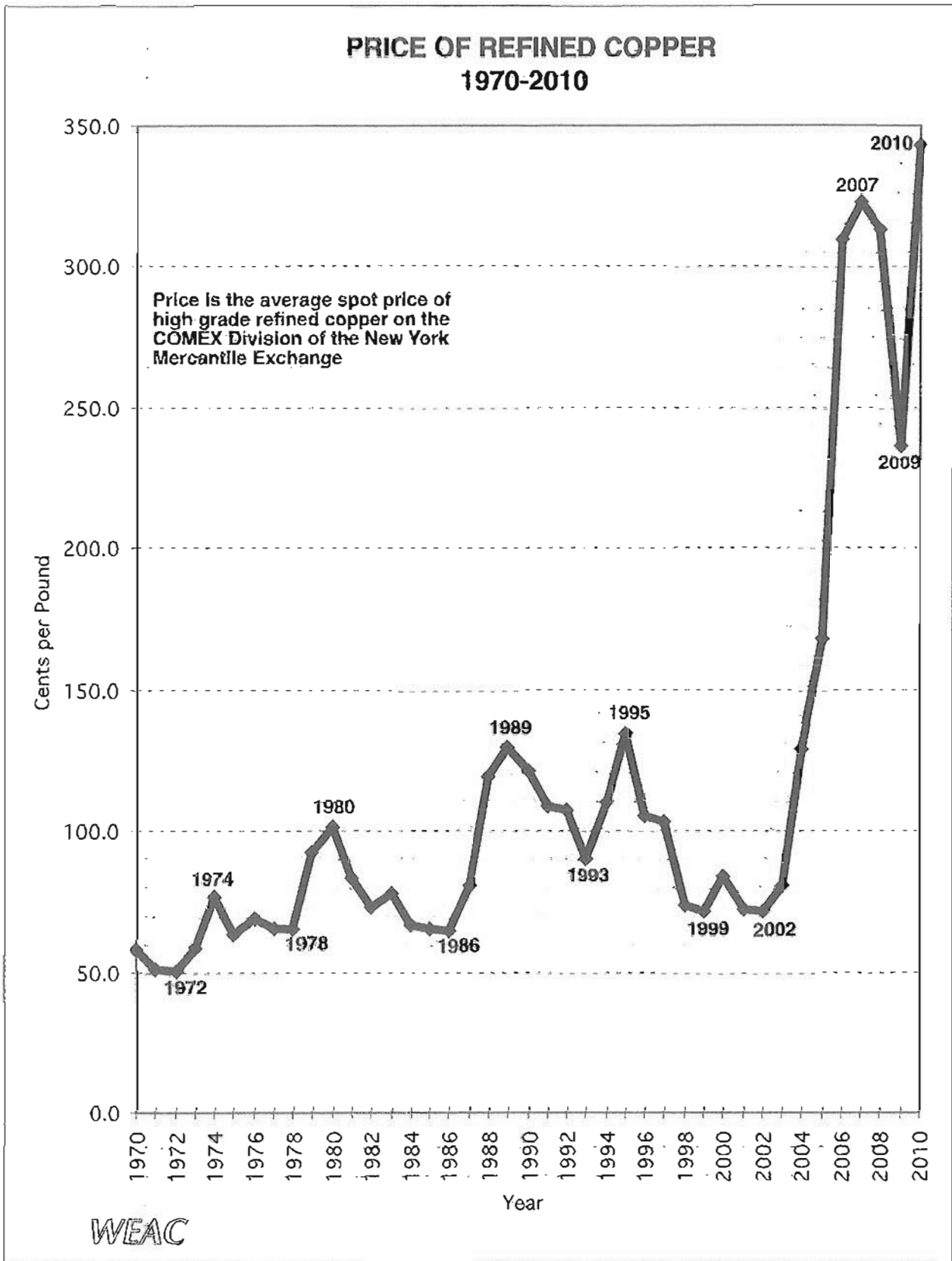


Figure 8. The average price of refined copper in New York during 2010 was 45% higher than in 2009, averaging almost \$3.43 per pound for the entire year.

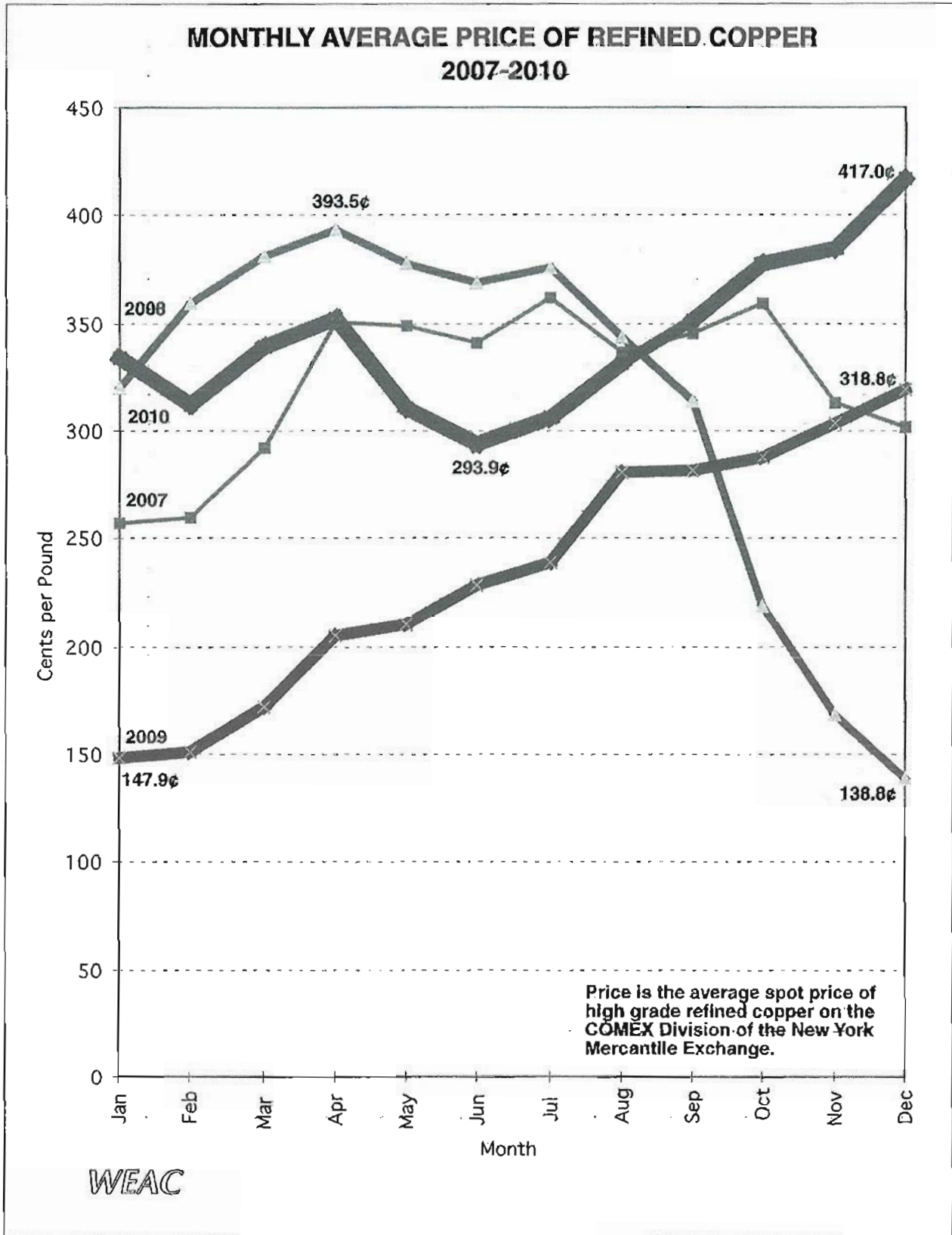


Figure 9. The price of copper remained well above 2009 levels during the first half of 2010 and then rose even further above the previous year's levels during the second half to finish the year at its highest level ever.

was better than 31% above the figure for all of 2009. For the entire year, the corporation's Arizona copper mine output was about 7% below its output for 2009, with the year's cutbacks at most mines only partially offset by the increases in metal prices.

The performance by the state's newer and smaller copper producers was mixed. The oldest of the smaller firms, Mercator Minerals, Ltd., saw its 2010 production from its mining operations near Kingman rise by 13%, its molybdenum output almost triple,

and its byproduct gold output more than triple the level of the previous year. Nord Resources Corporation achieved output of copper amounting to 4,500 tons after producing less than half as much the previous year at its mine in northern Cochise County.

The Arizona copper industry as a whole fared both better and worse. In 2010, the industry produced 2% less copper than in the year before but saw the value of that copper rise by 42% to more than \$5.4 billion and the total value of all metals produced soar to over \$6 billion.

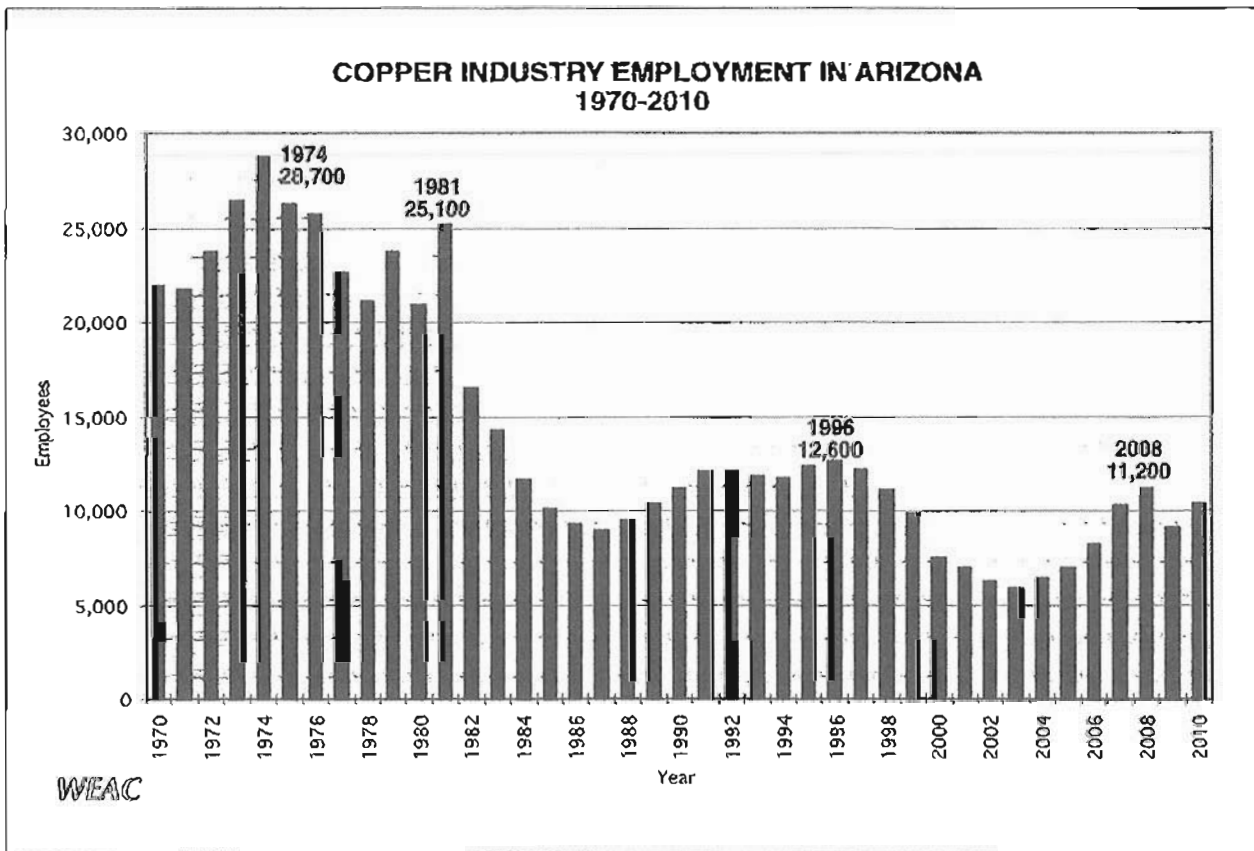


Figure 10. Copper industry employment in Arizona in 2010 averaged 10,400, up 14% from the year before but still only about a third of the peak of 28,700 reached in 1974. The number employed in 2010 was still 76% above the post World War Two low of 5,900 set in 2003. Annual earnings for those 10,400 workers last year averaged more than \$66,700, down 7% from the average in 2009 but still almost six times the average pay in 1974.

THE ARIZONA COPPER INDUSTRY AS A SOURCE OF JOBS AND PERSONAL INCOME

IMPACT ON INCOMES

The importance of the Arizona copper industry as a direct source of jobs and personal income increased in 2010, moving even higher than the average of the previous decade. Total employment in the Arizona copper industry in 2010 averaged 10,400, up 14% over the year before. The payrolls of Arizona copper mining companies, however, fell 1% under 2009. The decrease in payrolls in spite of rising employment reflected a significant drop in the average wage received by copper industry employees.

The total amount of personal income provided directly to Arizona residents by the Arizona copper industry actually rose 26% in 2010. The state's copper firms provided almost \$970 million of direct income payments to Arizona residents last year. Of the 2010 total, about \$674 million were paid as wages and salaries directly to copper industry workers. Another \$65 million were paid in pensions and other retirement benefits and supplemental unemployment benefits to current and former employees in the state. Another \$233 million went to investors living in Arizona.

The \$970-million in Arizona personal income provided directly by the state's copper industry in 2010 amounted to 0.4% of the total personal income received by Arizona residents last year. Nevertheless, it formed 2% of the state's basic personal income.

Basic personal income is that which comes into the state from outside sources, either in the form of direct payments such as social security benefits, or as the direct result of sales of products or services to non-

Arizonans by such industries as agriculture, mining, manufacturing, exported services, and tourism. Federal government agencies, which receive their money directly from outside of the state, are also considered to be sources of basic personal income. All other personal income, including most of that earned by workers in most of the trade, services, transportation, and public utility industries, as well as state and local government, is considered non-basic, derived from the circulation and recirculation of basic income dollars that are brought into the state's economy by the basic (money-importing) sectors.

The total impact of the copper industry on Arizona personal income in 2010 was not, of course, solely the result of the wages, salaries, pensions, dividends, and other payments made directly to Arizona residents by the copper industry. Additional personal income was generated indirectly for Arizona residents by the circulation and recirculation of the dollars paid by copper producers to other Arizona business firms that sold products and services to the copper industry. Additional personal income for Arizona residents also was generated indirectly by the circulation and recirculation of the dollars that the copper industry paid in taxes and fees to state and local governments.

The overall impact of the resultant ripple effect on personal income was to multiply the industry's direct contribution of personal income to a total combined direct and indirect impact of more than \$3.6 billion in personal income for Arizona residents.

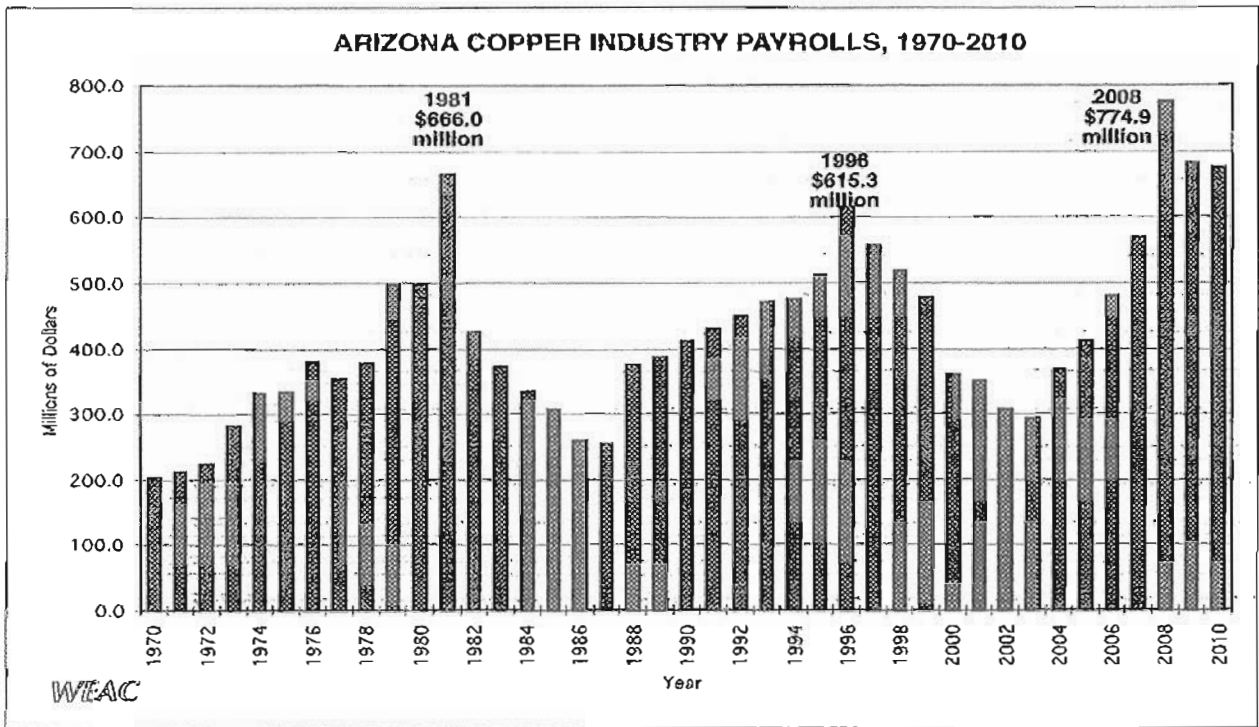


Figure 11. Arizona copper industry payrolls in 2010 fell 1% to \$674 million. That was still about 10% above the cyclical peak reached in 1996 and more than double the depressed levels of 2000 to 2004.

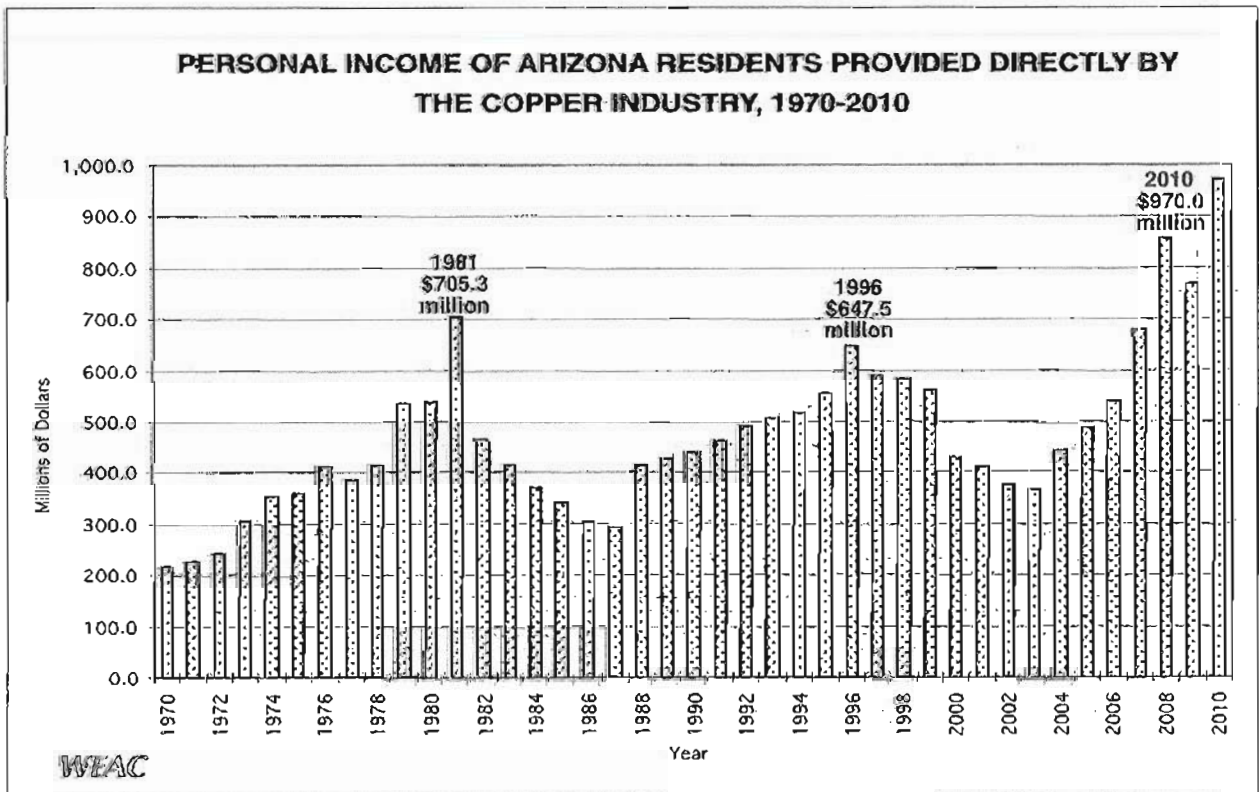


Figure 12. The personal income received by Arizona residents directly from the copper industry in 2010 climbed almost 26% from 2009 to just over \$970 million. About 70% of that was in the form of wages and salaries paid to copper industry workers. The remainder consisted partly (\$65 million) of pensions and other benefits paid to former industry employees.

That was 37% more than in 2009. It made the copper industry directly and indirectly responsible for about 1.6% of all the personal income received by Arizona residents in 2010 and about 2.4% of all earnings received by Arizona workers.

IMPACT ON JOBS

The nearly \$2.7 billion in personal income provided indirectly by the copper industry to Arizona residents in 2010 paid the wages and salaries of 62,700 workers throughout the state. Added to the 10,400 copper workers paid directly by the industry, that brought the total number of Arizonans who held jobs last year as a result of copper production to 73,100.

The biggest share of the indirect jobs created by the circulation of copper industry money in 2010 was in the services industries, where 19,000 people were employed because of copper industry activity. Another 17,000 workers in Arizona's wholesale and retail trade industries owed their jobs to copper production, while 4,300 workers in the state's contract construction industry also owed their jobs to the copper industry. State and local governments, including public schools, were able to pay 10,000 of their employees last year because of copper industry operations in the state. Another 3,500 workers in transportation and public utilities were paid directly or indirectly with copper industry dollars, and 3,900 workers in the state's manufacturing sector also owed their jobs to the copper industry. The great majority of

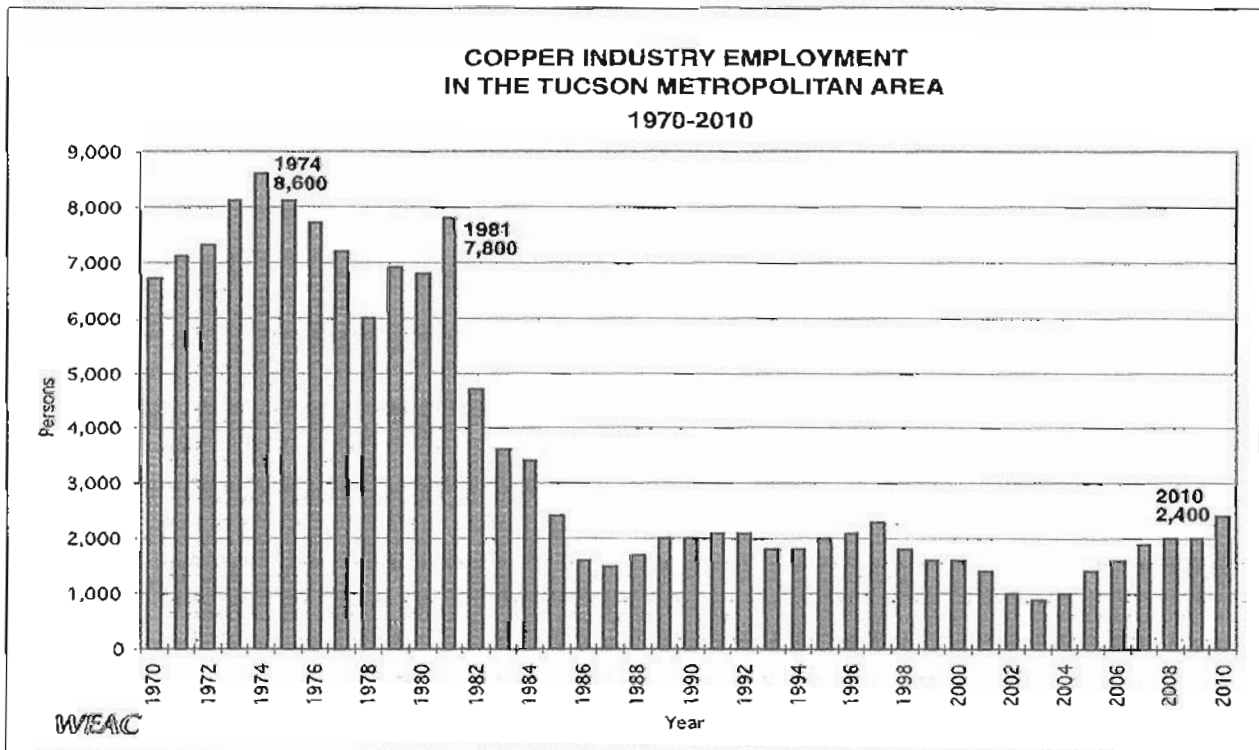


Figure 13. Copper industry employment in the Tucson Metropolitan Area in 2010 averaged 2,400. That was 20% higher than the year before, but still well below the levels of the 1970s when five major copper producers were active in Pima County. It was, however, more than double the depressed levels experienced from 2002 to 2004.

those jobs provided indirectly by the copper industry were held by residents of Maricopa County.

IMPACT BY AREA

Most of the direct impacts of the copper industry as a source of jobs and personal income in Arizona were felt in the non-metropolitan mining counties, but the Tucson Metropolitan Area also benefited by a significant amount from the industry's role as a source of personal income. Last year, one of every five Arizona copper workers lived in the Tucson Metropolitan Area. In 2010, copper production accounted directly and indirectly for one out of every \$72 of personal income received by Pima County residents. That put copper mining well behind retirement, the federal and state governments, and manufacturing, but only somewhat behind tourism and exported business services as a basic source of employment and personal income in the Tucson Metropolitan Area. Mining was almost ten times as important as agriculture as a basic income provider in the county.

The largest single source of basic personal income in both Pima County and Arizona in 2010, however, was not really an industry at all. Pensions, social security benefits, direct welfare payments, and other transfer payments provided over 63% of total basic personal income in Pima County and almost as much (62%) statewide.

In both Pima County and Arizona, government was important as a source of basic personal income for Arizonans in 2010. Federal jobs accounted for one of every \$7 of

basic personal income in the state and one of every \$12 in the Tucson Metropolitan Area. In the latter, state government jobs put government's share of basic personal income at 12%, putting that combined sector up to almost double that of manufacturing but still well behind retirement and welfare as a provider of basic income dollars.

Productive activity in electronics and defense-related manufacturing in both the Phoenix and Tucson metropolitan areas last year put manufacturing in a strong third position as a source of basic personal income in the state, providing one out of every \$8 of basic personal income in Arizona. In Pima County, those same types of activities helped manufacturing keep its position as an important basic income source in the local economy. Factory jobs provided almost one of every \$9 of personal income in the Tucson Metropolitan Area in 2010, behind the retirement sector but comparable to the state and federal government sectors, separately.

Tourism provided about 2% of the personal income received by Arizona residents last year, about half of the 4% share accounted for by exported business services. In the Tucson Metropolitan Area, the roles of the two basic industries were reversed, with exported business services providing just over 2% of the area's basic personal income, while tourism provided a little more.

Detailed data on the role of the copper industry as a source of jobs and personal income in Arizona and the Tucson Metropolitan Area in 2010 are shown in detailed data tables 6 through 13 on pages 38 through 41.

THE COPPER INDUSTRY AS A SOURCE OF BUSINESS SALES

IMPACT BY INDUSTRY

Arizona's copper industry provided more than \$2.5 billion of sales directly for other Arizona businesses in 2010 through the purchase of products and services used in the search for and production of copper and its byproducts. The total represented an increase of 19% above the level reached in 2009 but was still 12% lower than the record high reached in 2008.

Last year's increase in Arizona purchases came in spite of lower copper production levels and a decrease in some new mine development work. More purchases of equipment and supplies from Arizona wholesalers played a big part in the growth, as did more buying from Arizona service businesses, public utilities, and construction contractors. Those increases were partially offset by decreased buying from Arizona manufacturers, contract mining firms, and transportation firms.

Past efforts to shift to lower-cost production processes at copper mines and plants continued. Those efforts, along with expanded production at several new mines, combined to partially offset lesser purchases of materials and services at some older mines and plants. Payments to in-state finance, insurance, and real estate firms also declined significantly to lessen the overall increase.

The biggest share of copper industry purchases in Arizona in 2010 (over \$1.2 billion) went to the state's wholesalers that supplied the copper industry with equipment and parts, the fuel to run that equipment, and the hardware, chemicals, and many other products needed to produce copper.

Contract construction firms received a little over \$288 million from the Arizona copper industry in 2010. That represented a gain of 146% over the previous year as copper firms resumed work on many projects that had been designed to expand existing production capacity but had been curtailed temporarily. Some firms also shifted some mine activities that had been performed by other mining firms to construction contractors.

As a result of those shifting buying patterns, other mining firms got less than \$90 million from the Arizona copper industry in 2010. The 2010 total was a third less than the 2009 amount as newer mining operations relied more on construction contractors as well as contract mining companies. A small part of the amount paid to other mining firms, however, was for selling nonmetallic minerals such as limestone, silica, sand, and gravel to copper producers for use both in the copper production process and in construction. Most of it, however, was for the performance of in-mine activities that previously had been done by the copper companies' own personnel.

The third biggest share of copper industry purchases in Arizona in 2010 went to the state's electric, gas, and water utilities. They sold energy and services worth more than \$277 million to the copper industry last year, thereby accounting for 11% of the copper industry's Arizona buying. The amount was about 11% above the figure for 2009, reflecting mostly higher prices.

Arizona's service industries made over \$263 million in direct sales to the copper

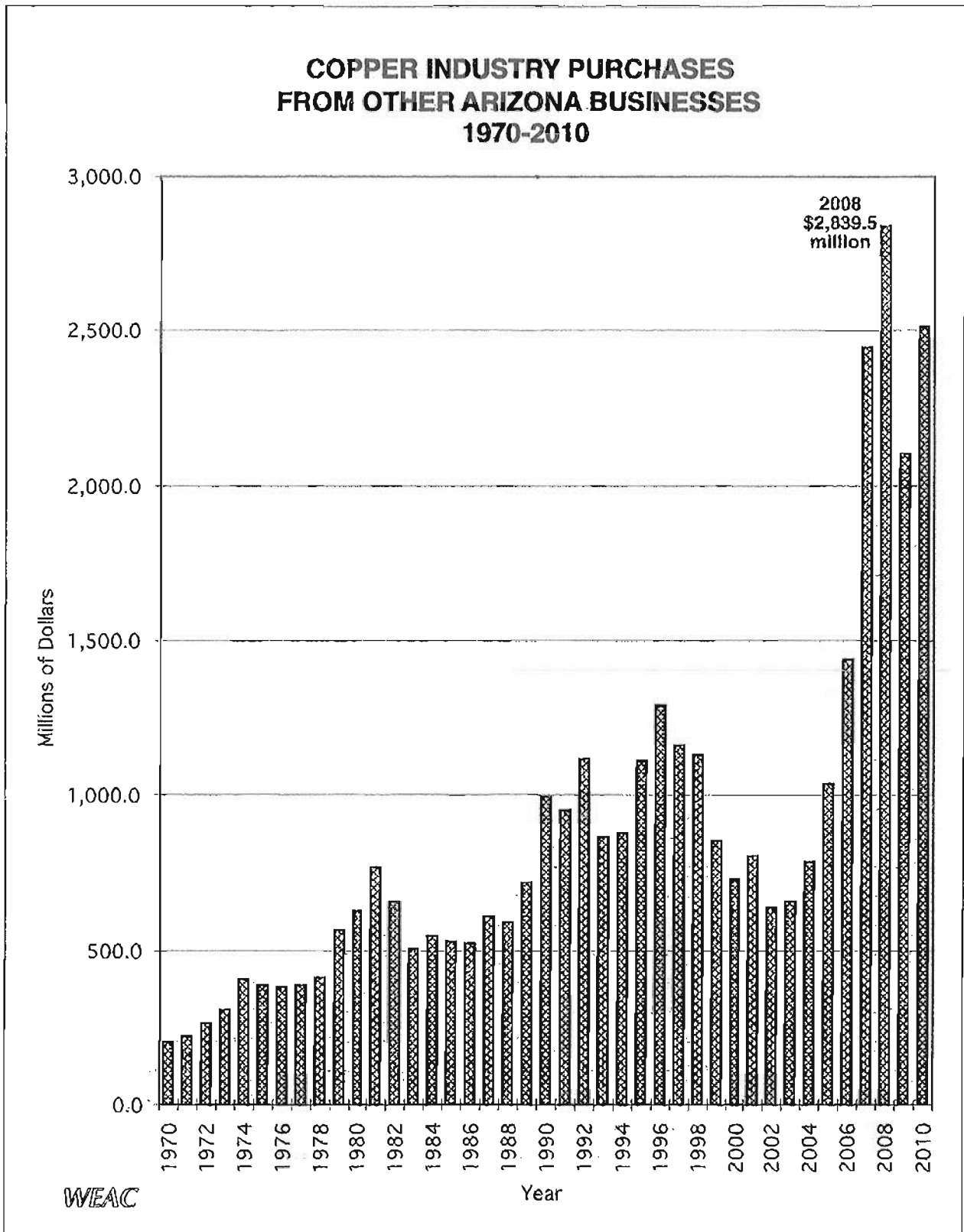


Figure 14. The Arizona copper industry bought over \$2.5 billion worth of equipment, supplies, energy, and services from other Arizona businesses in 2010. That was 21% above the amount bought in 2009. The difference was the result of a lower level of production that was more than offset by costs incurred for new mine development and higher prices.

OTHER ARIZONA INDUSTRIES RECEIVING INCOME DIRECTLY FROM THE COPPER INDUSTRY IN 2010

TOTAL: \$2,511.92 million

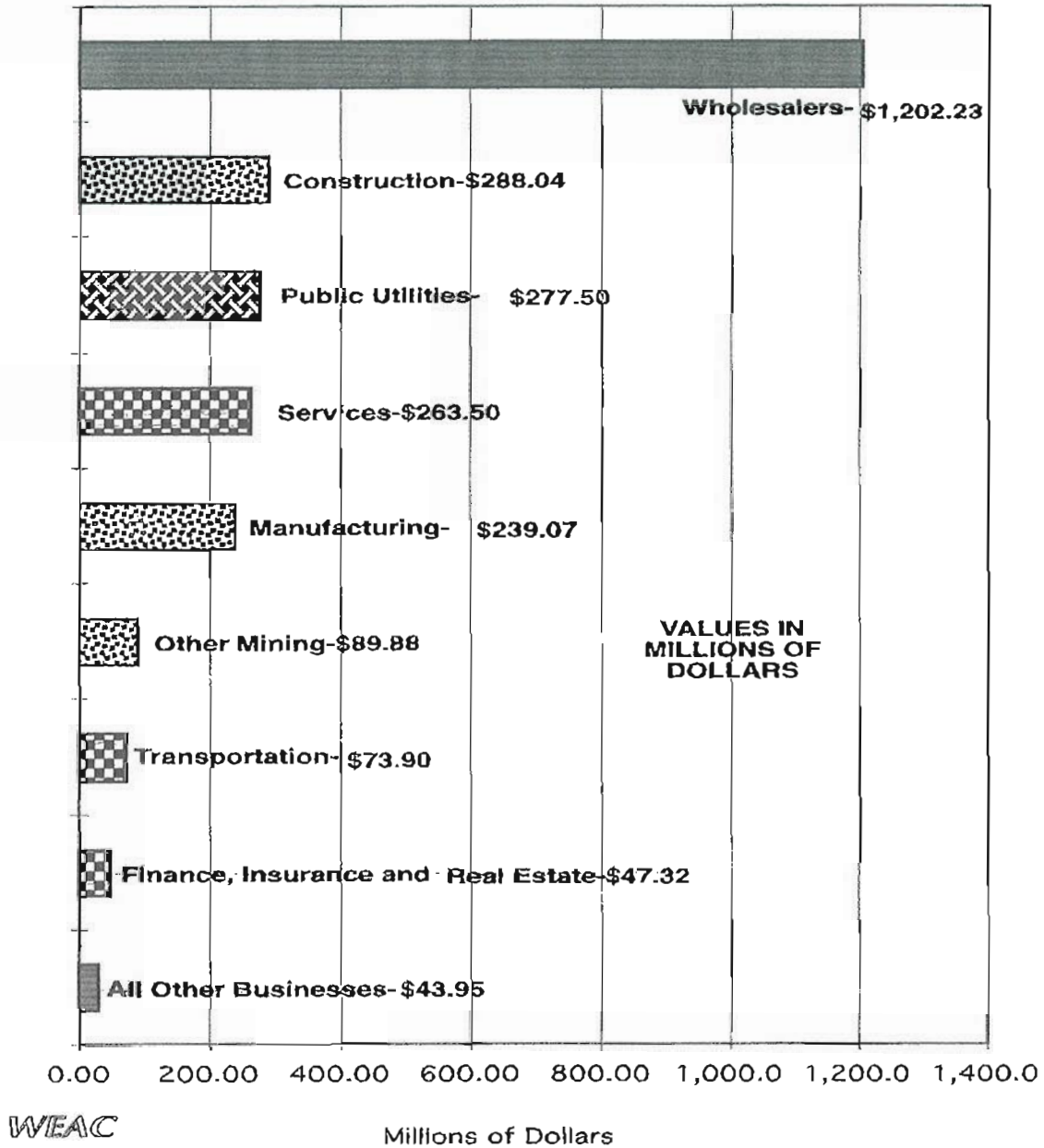


Figure 15. The biggest part (over \$1.2 billion) of Arizona copper industry purchases from other Arizona businesses in 2010 went to wholesalers of equipment and supplies. Arizona construction firms as well as public utilities (providing mostly electrical energy) and service businesses also received substantial amounts. Arizona manufacturers were paid a total of more than \$239 million directly by the copper industry for products made in the state.

industry in 2010, almost 31% more than in 2009. The biggest portion of that amount went to professional firms providing engineering services as well as to firms providing specialized business services. Suppliers of legal and repair services also shared significantly in the market provided by Arizona's copper producers last year.

Most of the products bought by the Arizona copper industry from Arizona wholesalers were manufactured outside of Arizona, but the state's own factories and shops also shared in the business income provided directly by the copper industry. In 2010, Arizona industrial plants making a variety of items that ranged from steel, lumber, and explosives to newspapers and computers, received more than \$239 million directly from the state's copper producers. That was 22% below the record high set in 2009.

Truck, rail, and air transportation firms got almost \$74 million from the Arizona copper industry last year for hauling materials and supplies to copper operations and for taking ores, concentrates, and metal to other sites for further processing or sale. That was about 20% below the 2009 amount.

Other major segments of the Arizona business community also benefited directly from copper industry buying in 2010. Finance, insurance, and real estate firms were paid more than \$47 million by Arizona copper producers last year. That was 24% lower than the amount of the year before. Arizona retailers got almost \$25 million directly from the state's copper producers last year. Most of that amount went to local businesses in mining areas for selling a wide variety of retail goods to copper producing companies. Communications firms received over \$3 million from the Arizona copper industry in

2010. Arizona farmers and ranchers gained more than \$2 million from the Arizona copper industry last year, primarily for providing land, water, and livestock for environmental uses.

IMPACT BY AREA

Of the copper industry's direct payments to other Arizona businesses in 2010, 46% went to firms located in the Phoenix Metropolitan Area (Maricopa County). The more than \$1.1 billion paid to Maricopa County firms represented a 20% increase over the 2009 level, reflecting mostly greater buying from Phoenix area wholesale firms, service businesses, and suppliers of energy that had offices and plants in the Phoenix area.

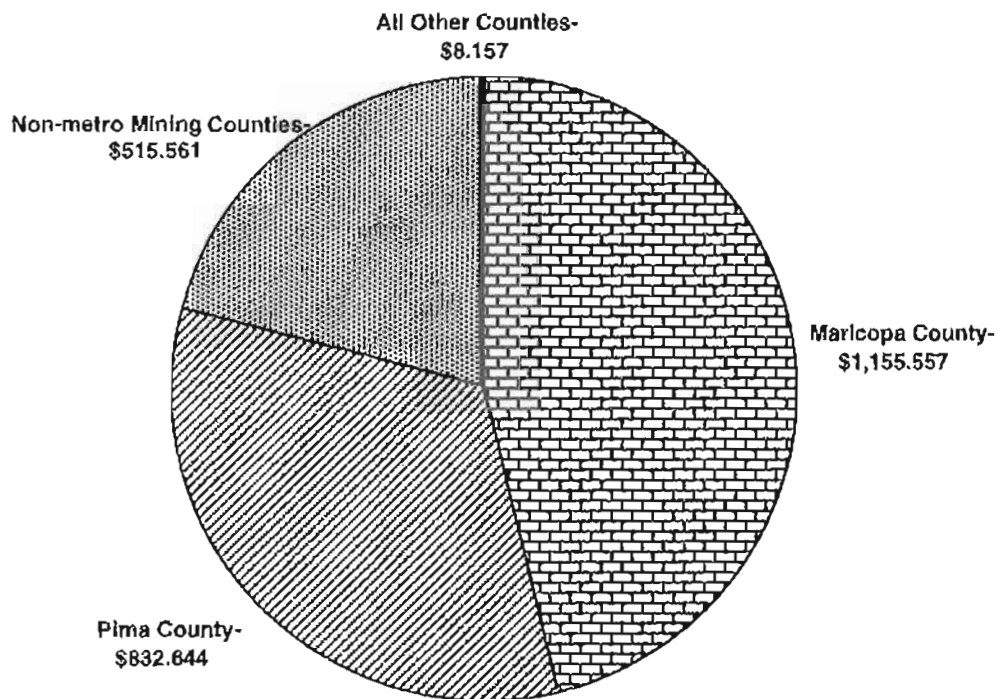
The second largest share of copper industry purchases (about 33%) was paid directly to firms situated in Pima County, the state's second largest metropolitan county. The dollar volume of purchases from Tucson area firms was up 20% from 2009, similar to the gain experienced by businesses in Maricopa County. The drop in sales by Pima County's businesses to the copper industry was accompanied by a slight increase in the amount of copper mined in the county.

A smaller share of the Arizona copper industry's direct payments to other Arizona businesses in 2010 went to firms located in the state's non-metropolitan mining counties, including Cochise, Gila, Graham, Greenlee, Mohave, Pinal, and Yavapai counties. Their 21% share in 2010 was the same as their share in 2009, but it reflected a slight drop in the dollar volume of such sales from 2009.

Less than half of 1% of the Arizona copper industry's purchases from other Arizona businesses in 2010 went to suppliers in the state's smaller non-mining counties.

GEOGRAPHICAL DISTRIBUTION OF COPPER INDUSTRY PURCHASES FROM ARIZONA SUPPLIERS 2010

TOTAL: \$2,511.919 million



SEGMENT VALUES IN MILLIONS OF DOLLARS

WEAC

Figure 16. Suppliers in the Phoenix Metropolitan Area (Maricopa County) gained the most (over \$1.1 billion) directly from Arizona copper industry purchases in the state in 2010. Suppliers in the Tucson Metropolitan Area (Pima County) also did well, as did those providing specialized services and products in the non-metropolitan mining counties.

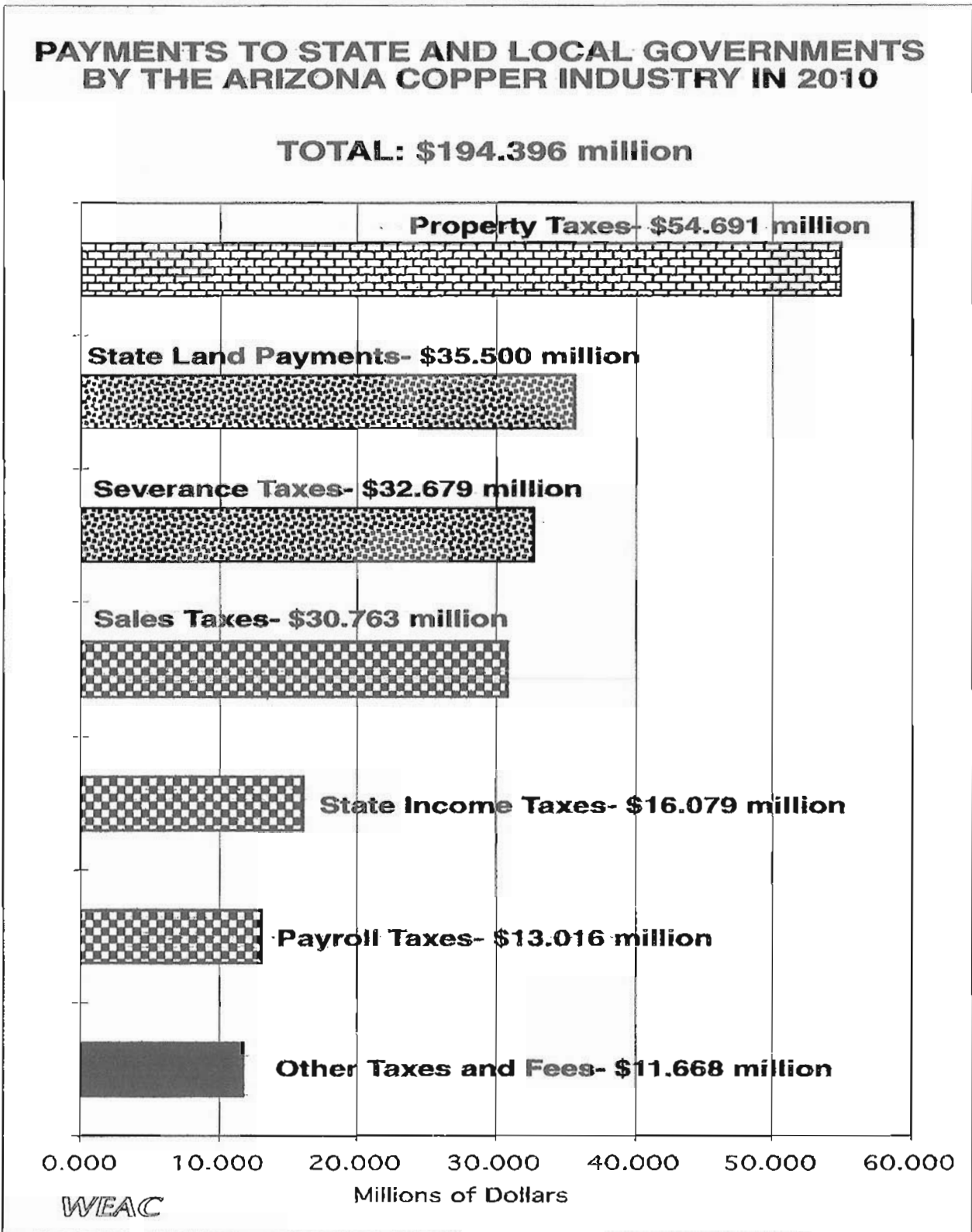


Figure 17. Property taxes levied on copper mining lands, production plants, and equipment accounted for the biggest share of the copper industry's direct contribution to state and local government revenues in Arizona in 2010. Payments for the use of state land, the severance tax paid on the value of mine output, and sales taxes paid on Arizona purchases also accounted for substantial sums.

THE COPPER INDUSTRY AS A SOURCE OF STATE AND LOCAL GOVERNMENT REVENUES

IMPACT BY TYPE OF TAX

The Arizona copper industry paid over \$194 million in 2010 in direct support of state, county, municipal, school district, and other local governments in the state. That was 28% more than in the year before. The \$194.4 million total was paid in the form of property taxes, severance taxes, income taxes, payroll taxes, sales taxes on Arizona purchases, rents and royalties for the use of State land, and a variety of other taxes and fees. (Figure 17 on the facing page and Table 21 on Page 46 indicate specific amounts.)

The copper industry's largest direct payments to state and local governments in Arizona last year were made in the form of property taxes levied on the industry's land, ore reserves, facilities, and equipment by nine of the state's 15 counties, 8 community college districts, 9 of the state's 90 municipalities, 25 school districts, the Central Arizona Water Conservation District, flood control districts, and other local jurisdictions that included fire districts. The nearly \$55 million in property taxes paid in 2010 by the Arizona copper industry accounted for more than a quarter (28%) of its direct provision of government revenues in Arizona.

Payments made for the use of lands owned by the State of Arizona accounted for 18% of the copper industry's direct payments to state and local government last year. That represented a substantial increase (more than fourfold) over the amount the industry paid in the previous year.

The copper industry's third largest category of direct payments to state and local government in Arizona last year was in the form of severance taxes, a type of tax paid only by mining firms and timber producers. The severance tax levied on the net value of the state's copper mine output in 2010 made up 17% of the industry's total payments to state and local governments in Arizona last year. The nearly \$33 million of severance taxes paid by the industry, while collected by the State of Arizona, went partly to the State and partly to the state's 15 counties and 90 incorporated cities and towns. In addition, a fifth of the severance tax total was apportioned to the state's more than 200 operating school districts as appropriated state aid to education.

Sales taxes paid on Arizona purchases of products and services were responsible for 16% of the copper industry's direct payments to state and local governments in Arizona in 2010. About 80% of that \$31 million was distributed to the state's school districts, with the rest going to the State, the counties, and incorporated cities and towns. Most of the amount paid by the copper industry in this way was collected for the State of Arizona by transportation firms, construction contractors, and public utilities that sold their services directly to the industry.

Corporate income taxes paid by copper producers operating in Arizona rose to over \$16 million in 2010. That accounted for better than 8% of the industry's total payments to state and local government last year.

Payroll taxes, including both unemployment insurance and workmen's

compensation premiums, were responsible for about 7% of the copper industry's payments to state and local governments in Arizona last year. The \$13 million total included only those payroll taxes paid to the State of Arizona or to private insurance carriers as required by state law. It did not include the total of federal payroll taxes, which were actually a direct leakage from the Arizona economy and not a contribution to it.

Miscellaneous taxes and fees (including a long list of permit and license fees) as a whole accounted for about 6% of the copper industry's direct payments to state and local governments in Arizona in 2010. The nearly \$12 million total of such taxes and fees was 8% higher than in 2009.

IMPACT BY TYPE OF GOVERNMENT

The State of Arizona received the largest benefit from copper industry taxes in 2010. State government agencies received more than \$83 million from the copper industry last year through property taxes, income taxes, and appropriated severance and sales taxes. That was almost 43% of the industry's direct contribution to state and local government revenues in 2010 and much greater than the 24% share received in 2009.

Second in line among the many beneficiaries of copper industry taxes in 2010 was the state's public school districts. Public schools throughout Arizona received more

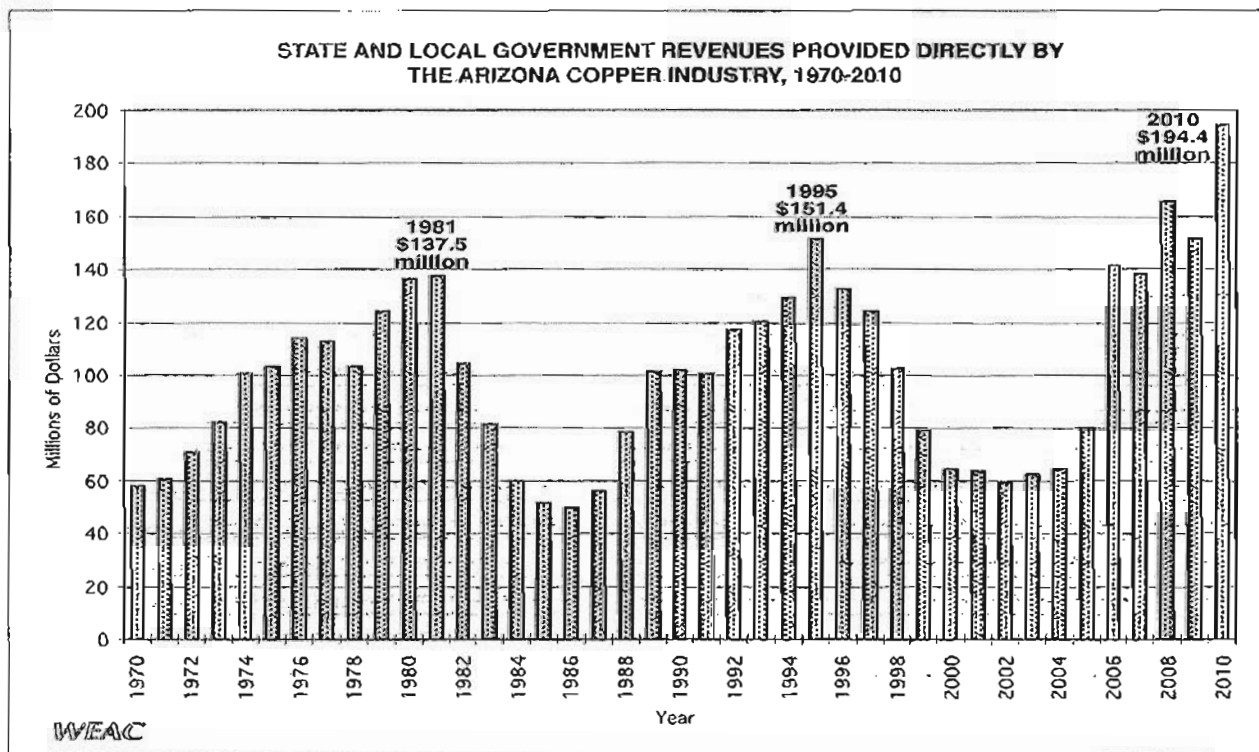


Figure 18. The Arizona copper industry paid more than \$194 million directly in taxes and fees to support state and local governments in Arizona in 2010. That was about 28% more than the year before and was the largest amount ever paid. The 2010 total was 17% higher than the previous peak recorded in 2008 and more than triple the amount paid in 2002, when the industry was at the bottom of the most recent copper market depression.

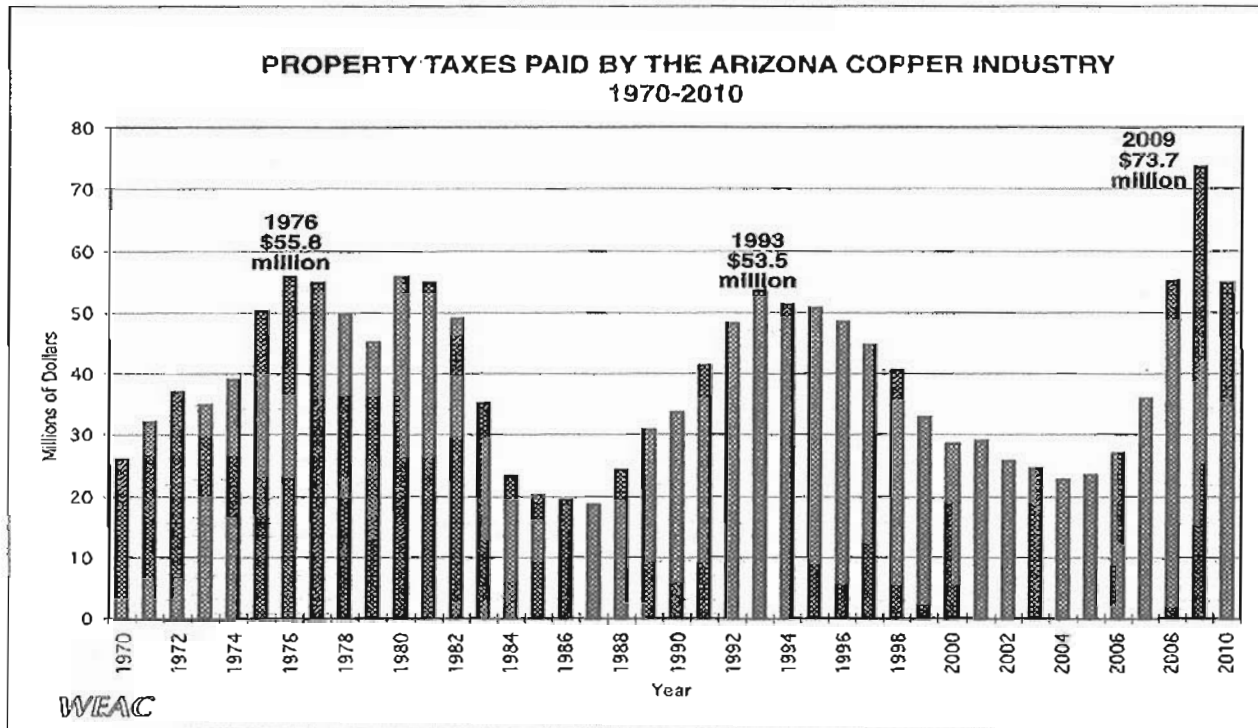


Figure 19. Property taxes paid by the Arizona copper industry approached \$55 million in 2010, about 24% less than the year before but still among the highest amounts ever paid. The decrease reflected the effects of lower property valuations for mining facilities related to declining copper prices the year before. Changes in copper mine valuations lag somewhat behind changes in copper output values in both rising and falling copper market cycles.

than \$61 million from the copper industry last year through property taxes and appropriated severance and sales taxes. That was almost a third (32%) of the copper industry's direct contribution to state and local government revenues in 2010. It was substantially less than the share received in 2009, even though the dollar amount was down only 4%.

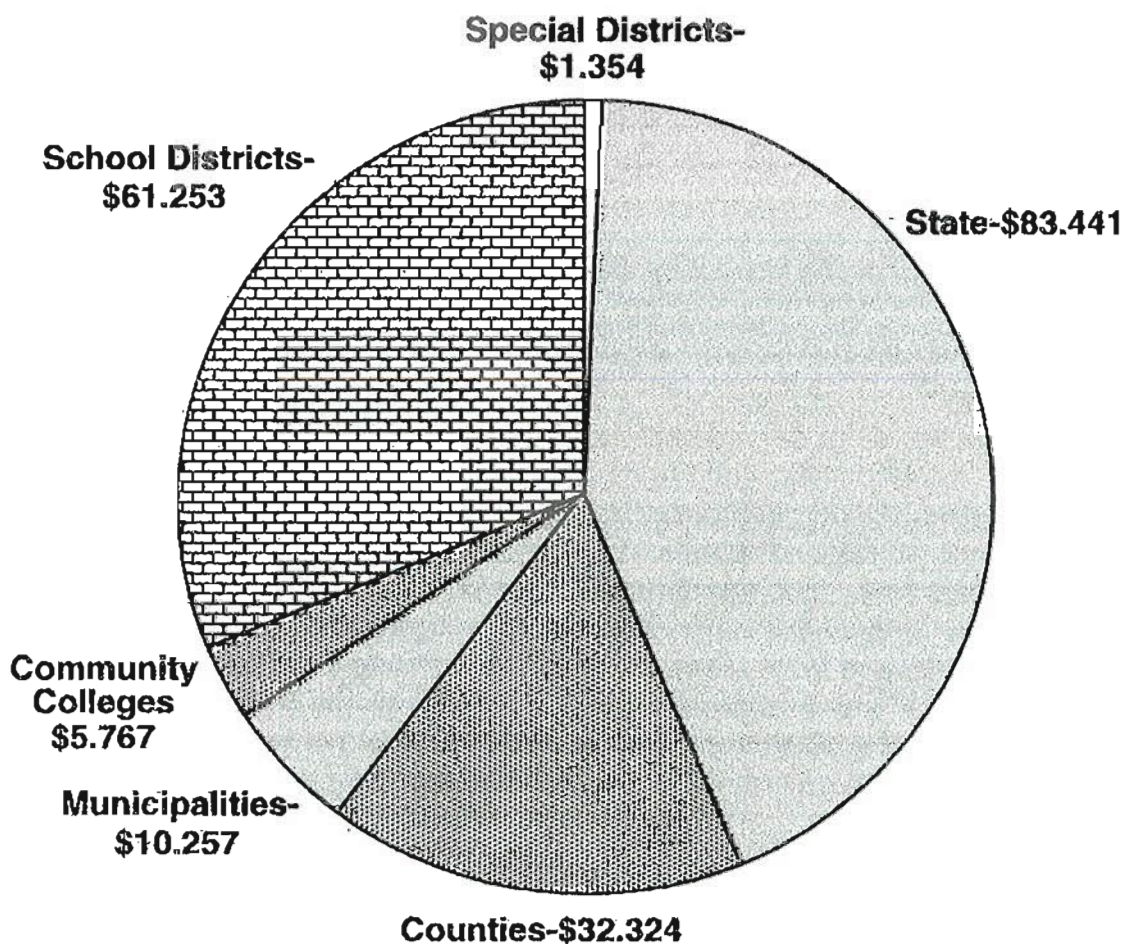
Arizona's 15 counties got over \$32 million in copper industry taxes in 2010. That amounted to nearly 17% of the total paid by the state's copper producers to state and local governments in 2010. The state's two major metropolitan counties (Maricopa and Pima) got half of the total mainly as a result of shared sales and severance taxes. Most of the smaller counties that shared in the other half of the industry's benefit to counties

received their shares through property taxes levied on mining property located within their borders.

Eight of Arizona's community college districts shared a total of less than \$6 million received from the Arizona copper industry in 2010. That 3% of the industry's total tribute to state and local government revenues came entirely from property taxes levied on mine property within their jurisdictions. Arizona's cities and towns received over \$10 million directly from Arizona's copper industry in 2010. That formed about 5% of the industry's total tribute to state and local government. A variety of other local governments shared in the remaining \$1.3 million of copper industry direct payments to state and local governments. Most of those payments were in the form of direct property taxes.

STATE AND LOCAL GOVERNMENTS RECEIVING PAYMENTS DIRECTLY FROM THE ARIZONA COPPER INDUSTRY 2010

TOTAL: \$194.396 million



SEGMENT VALUES IN MILLIONS OF DOLLARS

WEAC

Figure 20. The biggest share of the Arizona copper industry's direct contributions to state and local governments in Arizona in 2010 went to the State of Arizona. The second largest amount went to the state's public school districts, including large contributions to many school districts in the larger metropolitan areas as well as in rural mining communities. County governments received about half as much as the schools from copper industry taxes last year.

DETAILED DATA TABLES

Table 4

DIRECT IMPACT OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY 1988-2010

Total Direct Contributions (thousands of dollars)

Year	Personal Income	Business Sales	Government Revenues	Total
1988	414,830	587,630	78,612	1,081,072
1989	425,471	719,411	101,113	1,245,995
1990	438,371	997,285	101,672	1,537,328
1991	461,276	952,896	100,799	1,514,971
1992	490,735	1,121,679	117,499	1,729,913
1993	505,412	864,099	120,360	1,489,871
1994	515,239	879,047	128,987	1,523,273
1995	552,935	1,113,060	151,415	1,817,410
1996	647,546	1,292,411	132,152	2,072,109
1997	597,162	1,164,565	124,390	1,886,117
1998	583,956	1,132,875	102,572	1,819,403
1999	560,247	853,417	79,216	1,492,880
2000	430,045	731,164	64,323	1,225,532
2001	411,116	803,047	64,005	1,278,168
2002	376,819	639,423	59,128	1,075,370
2003	367,563	656,801	62,555	1,086,919
2004	443,340	788,153	64,493	1,295,986
2005	486,611	1,038,269	80,089	1,604,969
2006	538,567	1,439,740	141,305	2,199,612
2007	677,476	2,447,786	138,514	3,263,776
2008	857,281	2,839,483	165,686	3,862,450
2009	766,915	2,109,954	151,409	3,021,278
2010	970,019	2,511,919	194,396	3,676,334

Business sales excludes the sales of copper producers.

Source: Western Economic Analysis Center

Table 5

TOTAL IMPACT OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY 1988-2010

Total Direct and Indirect Impact (thousands of dollars)

Year	Personal Income	Business Sales	Government Revenues	Total
1988	1,689,136	3,500,693	481,971	5,671,800
1989	1,563,985	3,883,160	453,812	5,900,957
1990	1,641,749	4,348,822	336,709	6,327,291
1991	1,518,156	3,833,173	294,761	5,646,090
1992	1,765,647	4,395,890	396,418	6,557,955
1993	1,581,189	3,751,320	340,917	5,673,426
1994	1,576,950	4,349,352	361,494	6,278,796
1995	1,952,277	5,313,902	435,215	7,701,394
1996	2,379,551	6,833,837	432,047	9,645,435
1997	2,389,108	6,357,076	399,149	9,145,333
1998	2,403,181	6,405,504	385,117	9,193,802
1999	1,718,218	4,242,165	282,569	6,242,952
2000	1,283,284	3,137,213	212,788	4,633,285
2001	1,151,579	2,566,243	202,354	3,920,176
2002	938,159	1,995,171	169,026	3,102,356
2003	817,261	1,717,801	155,949	2,691,011
2004	1,048,025	2,073,312	194,362	3,315,699
2005	1,095,651	1,198,959	222,986	3,517,596
2006	1,404,056	2,990,337	329,599	4,718,992
2007	1,944,613	4,509,322	385,357	6,839,292
2008	2,871,770	6,981,960	537,087	10,390,817
2009	2,642,963	6,153,041	468,040	9,264,044
2010	3,624,212	7,875,648	601,327	12,101,188

Business sales excludes the sales of copper producers.

Source: Western Economic Analysis Center

Table 6

THE COPPER INDUSTRY
AS A DIRECT SOURCE OF EMPLOYMENT IN ARIZONA
2010

Source	Average Wage and Salary Employment in 2010
COPPER EXPLORATION AND PRODUCTION	10,400
Agriculture and Forestry	28,700
All Mining	11,400
Contract Construction	115,600
All Manufacturing	170,600
Transportation	67,700
Communications	14,600
Public Utilities	12,300
Wholesale Trade	103,000
Retail Trade	496,700
Finance, Insurance, and Real Estate	161,900
Services	851,300
Government	415,300
All Industries Total	2,449,100

Source: Western Economic Analysis Center, based on data from the Arizona Department of Commerce, the Arizona Department of Mines and Mineral Resources, the United States Bureau of Labor Statistics, the Arizona Mining Association, and individual copper producers.

Table 7

THE COPPER INDUSTRY AS A DIRECT SOURCE OF EMPLOYMENT
IN THE TUCSON METROPOLITAN AREA
2010

Industry	Average Wage and Salary Employment in 2010
THE COPPER INDUSTRY	2,400
Agriculture	300
All Mining	2,500
Contract Construction	14,200
Manufacturing	27,100
Transportation	7,400
Communications	3,100
Public Utilities	1,800
Wholesale Trade	8,400
Retail Trade	69,100
Finance, Insurance, and Real Estate	17,500
All Services	131,800
Government	77,700
All Industries Total	360,900

The Tucson Metropolitan Area is defined as Pima County, Arizona.

Source: Western Economic Analysis Center, based on data from the Arizona Department of Commerce, the Arizona Department of Mines and Mineral Resources, and individual copper producers.

Table 8

**AVERAGE EARNINGS IN ARIZONA INDUSTRIES
2010**

Industry	Average Weekly Earnings by Employees
COPPER INDUSTRY	\$1,244
Agriculture	755
All Mining	1,144
Contract Construction	943
All Manufacturing	1,068
Transportation	788
Communications	1,123
Public Utilities	1,371
Wholesale Trade	868
Retail Trade	364
Finance, Insurance, and Real Estate	1,039
All Services	860
Government	862

Source: Western Economic Analysis Center, based on data from the Arizona Department of Commerce, the United States Bureau of Labor Statistics, the United States Department of Commerce, and Arizona copper producers.

Table 9

**PERSONAL INCOME OF ARIZONA RESIDENTS
BY MAJOR SOURCES
2010**

Direct Source of Personal Income	2010 Personal Income
EARNED INCOME (a)	\$153,108,000,000
Agriculture	\$1,128,000,000
All Mining	1,171,000,000
COPPER INDUSTRY PAYROLLS	\$674,241,000
Contract Construction	8,391,000,000
All Manufacturing	15,055,000,000
Transportation	4,820,000,000
Communications	1,504,000,000
Public Utilities	1,231,000,000
Wholesale Trade	8,079,000,000
Retail Trade	16,335,000,000
Finance, Insurance, and Real Estate	13,293,000,000
All Services	53,382,000,000
Government	28,719,000,000
DIVIDENDS, INTEREST, AND RENT INCOME	40,342,000,000
FROM THE COPPER INDUSTRY	\$232,802,000
NET TRANSFER PAYMENTS (b)	36,717,000,000
FROM THE COPPER INDUSTRY	\$62,976,000
TOTAL PERSONAL INCOME	\$230,167,000,000
COPPER INDUSTRY TOTAL	\$970,019,000

(a) Includes wages, salaries, other labor income, and proprietors' income. Does not include social security taxes paid by employers.

(b) Net transfer payments includes pensions, direct welfare payments, social security benefits, and other transfer payments less personal contributions for social insurance, including employee social security taxes and other employee contributions to pension funds.

Source: Western Economic Analysis Center, based on data from the Arizona Department of Commerce, the United States Department of Commerce, and individual copper producers.

Table 10

ARIZONA BASIC PERSONAL INCOME
2010

Basic Personal Income Source (a)	Amount	Percent
Agriculture (b)	\$1,127,000,000	1.9
Mining (c)	1,171,000,000	2.0
Export Manufacturing (d)	7,828,000,000	13.3
Exported Business and Professional Services (d)	2,356,000,000	4.0
Tourism	1,127,000,000	1.9
Federal Government Employment(e)	8,573,000,000	14.6
Retirement and Welfare (Net)(f)	36,717,000,000	62.3
Total Basic Income	\$58,899,000,000	100.0
THE COPPER INDUSTRY	\$970,019,000	1.4

(a) Basic personal income is defined as that income which comes directly from outside of the state (such as social security benefits) or is derived directly from activities (such as copper mining and tourism) that sell their products and services to those who are not residents of Arizona.

(b) Agricultural income includes both farm labor and farm proprietors' income.

(c) Mining income includes the personal income received by workers at copper mining, smelting, and refining operations and associated administrative facilities that are part of vertically integrated copper producing operations. It does not include pensions or supplemental unemployment benefits.

(d) Export manufacturing is defined to include all manufacturing establishments that export their products from the state. Exported business and professional services includes businesses that perform such services mainly for customers outside of Arizona.

(e) Federal Government income includes both civilian and military payrolls.

(f) Net Retirement and Welfare income consists of total retirement and other welfare benefits less personal contributions to retirement funds and social security taxes paid by employees. It includes \$83,710,000 in pensions and supplemental unemployment benefits paid by copper producers to former employees.

Source: Western Economic Analysis Center, based in part on data from the Arizona Department of Economic Security, the United States Department of Commerce, and the United States Department of Defense.

Table 11

ARIZONA JOBS CREATED DIRECTLY AND INDIRECTLY
BY THE COPPER INDUSTRY
2010

Industry	Jobs Created by the Copper Industry		Total
	Directly	Indirectly	
Agriculture and Forestry	0	400	400
Mining (a)	10,400	500	10,900
Contract Construction	0	4,300	4,300
Manufacturing	0	3,900	3,900
Transportation	0	2,100	2,100
Communications	0	100	100
Public Utilities	0	1,400	1,400
Wholesale Trade	0	5,500	5,500
Retail Trade	0	11,500	11,500
Finance, Insurance, Real Estate	0	3,400	3,400
Services	0	19,000	19,000
State and Local Government	0	10,600	10,600
Total Jobs	10,400	62,700	73,100

(a) Mining here includes all workers involved in mining, beneficiation, smelting, refining, and other operations owned by primary copper producers. In other tables in this report, such workers are included in the definition of the copper industry, but some smelter, refinery, and other workers are included in the manufacturing and services sectors rather than in mining.

Source: Western Economic Analysis Center

Table 12

**PERSONAL INCOME BY MAJOR SOURCE
IN THE TUCSON METROPOLITAN AREA
2010**

Source of Income	Personal Income
EARNED INCOME (a)	\$15,492,253,000
Agriculture	\$14,427,000
Mining	142,185,000
Contract Construction	644,643,000
Manufacturing	1,913,566,000
Transportation and Public Utilities	411,399,000
Wholesale Trade	424,295,000
Retail Trade	1,804,867,000
Finance, Insurance, and Real Estate	757,852,000
Services	5,335,047,000
Government	4,043,972,000
DIVIDEND, RENT, AND INTEREST INCOME	6,703,830,000
NET TRANSFER PAYMENTS (b)	6,427,006,000
Total Personal Income	\$28,623,089,000

(a) Earned income includes wages and salaries, other labor income, and both farm and non-farm proprietors' income.

(b) Net Transfer Payments equals gross transfer payments to Pima County residents less personal contributions for social insurance made by employees working in Pima County.

Source: Western Economic Analysis Center, based in part on data from the Arizona Department of Commerce, the University of Arizona, the United States Department of Commerce, and the United States Department of Defense.

Table 13

**BASIC PERSONAL INCOME BY SOURCE
IN THE TUCSON METROPOLITAN AREA
2010**

Source of Basic Income (a)	Personal Income	Percent
Agriculture (b)	\$14,427,000	0.1
Mining	142,185,000	1.4
Export Manufacturing (c)	1,114,600,000	10.9
Exported Business Services (c)	213,199,000	2.1
Tourism	238,822,000	2.3
Federal Government (d)	835,806,000	8.2
State Government	1,217,876,000	12.0
Retirement and Welfare (Net)(e)	6,427,006,000	63.0
Total Basic Income	\$10,203,921,000	100.0

(a) Basic personal income is defined as income that comes directly to Pima County residents from outside of the county or is derived directly from activities that sell their products or services to those who reside outside of the Tucson Metropolitan Area. It includes the income of those who live in Pima County but work elsewhere.

(b) Agricultural income includes both farm labor and farm proprietors' income.

(c) Export manufacturing includes all firms that produce goods for export from Pima County. Exported business services includes firms selling services mainly to customers located outside of Pima County.

(d) Federal government income includes both civilian and military payrolls.

(e) Net retirement and welfare income is defined as total retirement and other welfare benefits less personal contributions to retirement funds and employee social security taxes.

Source: Western Economic Analysis Center, based in part on data from the Arizona Department of Commerce, the United States Department of Commerce, and the United States Department of Defense.

Table 14

**OTHER ARIZONA BUSINESSES RECEIVING INCOME
DIRECTLY FROM THE ARIZONA COPPER INDUSTRY
2010**

Business Sector	Sales to the Copper Industry in 2010
Agriculture	\$2,314,000
Other Mineral Industries	89,882,000
Contract Construction	288,042,000
Manufacturing	239,071,000
Lumber and wood products	\$1,239,000
Printing and publishing	871,000
Chemicals	47,487,000
Stone, clay, and glass products	20,166,000
Primary metals	41,588,000
Fabricated metals	26,092,000
Non-electrical machinery	17,647,000
Electrical machinery and equipment	24,628,000
All other manufacturing	59,353,000
Transportation	73,898,000
Communications	3,499,000
Public Utilities	277,497,000
Wholesale Trade	1,202,232,000
Automotive equipment	\$29,070,000
Drugs and chemicals	32,633,000
Electrical goods	55,842,000
Hardware, plumbing, and heating supplies	80,021,000
Machinery and equipment	651,113,000
Petroleum products	293,582,000
All other wholesalers	59,971,000
Retail Trade	24,664,000
Building materials and supplies	\$4,485,000
Automobile dealers and service stations	9,531,000
All other retailers	10,648,000
Finance, Insurance, and Real Estate	47,321,000
Services	263,499,000
Personal services	\$2,404,000
Business services	36,574,000
Repair services	32,662,000
Miscellaneous professional services	87,768,000
All other services	104,091,000
Total Arizona Purchases by Copper Firms	\$2,511,919,000

Source: Western Economic Analysis Center, based on data from the Arizona Mining Association, the Arizona Department of Mines and Mineral Resources, individual copper producing firms, and specific suppliers of products and services to the copper industry.

Table 15

**GEOGRAPHICAL DISTRIBUTION OF BUSINESS INCOME
PROVIDED DIRECTLY BY THE ARIZONA COPPER INDUSTRY
2010**

Region	Copper Industry Purchases of Products and Services
Phoenix Metropolitan Area (a)	\$1,155,557,000
Tucson Metropolitan Area (b)	832,614,000
Non-Metropolitan Mining Counties (c)	515,561,000
All Other Counties (d)	8,157,000
Arizona Total	\$2,511,919,000
Outside of Arizona (e)	1,024,999,000
Total Purchases	\$3,536,918,000

(a) Maricopa County

(b) Pima County

(c) Cochise, Gila, Graham, Greenlee, Mohave, Pinal, and Yavapai counties.

(d) Apache, Coconino, La Paz, Navajo, Santa Cruz, and Yuma counties.

(e) Includes only purchases of products and services made by Arizona copper producers outside of Arizona for use in Arizona. Does not include purchases made by Arizona copper producers outside of Arizona for use outside of Arizona. Such excluded external spending includes such items as smelting and refining charges paid in other states for processing Arizona copper and marketing and administrative expenses incurred outside of Arizona. Included are such items as purchases of equipment, supplies, services, and fuels in other states for use in Arizona.

Source: Western Economic Analysis Center

Table 16

**PROPERTY TAXES PAID BY
THE ARIZONA COPPER INDUSTRY
1980-2010**

Year	Amount Paid to All Jurisdictions
1980	\$55,730,000
1981	54,749,000
1982	48,761,000
1983	35,096,000
1984	23,259,000
1985	20,002,000
1986	19,394,000
1987	18,700,000
1988	24,302,000
1989	30,798,000
1990	33,667,000
1991	41,444,000
1992	48,207,000
1993	53,493,000
1994	51,233,000
1995	50,847,000
1996	48,534,000
1997	44,497,000
1998	40,578,000
1999	32,924,000
2000	28,508,000
2001	28,979,000
2002	25,726,000
2003	24,375,000
2004	22,745,000
2005	23,379,000
2006	27,044,000
2007	35,967,000
2008	55,120,000
2009	73,748,000
2010	54,691,000

Source: Western Economic Analysis Center, based on data from the Arizona Mining Association, the Arizona Tax Research Association, the Arizona Department of Revenue, and individual copper producers.

Table 17

**SEVERANCE TAXES PAID BY
THE ARIZONA COPPER INDUSTRY
1985-2010**

Year	Total Amount Paid
1985	\$15,556,000
1986	10,737,000
1987	14,244,000
1988	24,816,000
1989	30,819,000
1990	30,394,000
1991	26,356,000
1992	27,625,000
1993	21,378,000
1994	31,328,000
1995	40,698,000
1996	29,961,000
1997	29,778,000
1998	20,539,000
1999	15,456,000
2000	6,274,000
2001	1,475,000
2002	1,127,000
2003	2,402,000
2004	11,624,000
2005	21,526,000
2006	41,215,000
2007	37,672,000
2008	35,892,000
2009	18,120,000
2010	32,679,000

Prior to 1983, severance taxes were defined as taxes paid on the value of mineral products produced and sold within the state or exported from the state. They included both privilege excise (sales) taxes and education excise taxes. Beginning in 1983, the severance tax for metal mining firms was defined explicitly by law as a tax on the value of mineral products mined in the state.

Source: Western Economic Analysis Center

Table 18

**ARIZONA CORPORATE INCOME TAXES
PAID BY THE ARIZONA COPPER INDUSTRY
1985-2010**

Year	Amount Paid
1985	0
1986	\$407,000
1987	0
1988	732,000
1989	10,095,000
1990	8,702,000
1991	2,989,000
1992	3,134,000
1993	2,684,000
1994	3,057,000
1995	4,193,000
1996	6,398,000
1997	5,065,000
1998	2,842,000
1999	2,743,000
2000	0
2001	0
2002	0
2003	0
2004	7,000
2005	137,000
2006	31,334,000
2007	13,706,000
2008	9,099,000
2009	350,000
2010	16,079,000

Source: Western Economic Analysis Center, based on data from the Arizona Mining Association, the Arizona Department of Revenue, and individual copper producers.

Table 19

**MISCELLANEOUS STATE AND LOCAL TAXES PAID BY THE ARIZONA COPPER INDUSTRY
1988-2010**

Year	Sales Taxes on Arizona Purchases	All Other Taxes and Fees	Total
1986	\$10,267,000	\$304,000	\$10,571,000
1987	13,023,000	510,000	13,533,000
1988	16,572,000	253,000	16,825,000
1989	17,693,000	867,000	18,560,000
1990	17,232,000	1,648,000	18,880,000
1991	16,161,000	1,432,000	17,593,000
1992	21,067,000	1,561,000	22,628,000
1993	27,367,000	2,189,000	29,556,000
1994	20,143,000	4,816,000	24,959,000
1995	21,939,000	4,453,000	26,392,000
1996	21,801,000	2,626,000	24,427,000
1997	21,660,000	5,527,000	27,187,000
1998	17,418,000	5,945,000	23,363,000
1999	14,203,000	2,235,000	16,438,000
2000	14,809,000	3,743,000	18,552,000
2001	15,440,000	7,167,000	22,607,000
2002	13,346,000	9,087,000	22,433,000
2003	15,972,000	5,172,000	21,144,000
2004	18,434,000	4,340,000	22,774,000
2005	22,114,000	3,042,000	25,156,000
2006	25,448,000	4,709,000	30,157,000
2007	30,763,000	7,451,000	38,214,000
2008	40,596,000	11,016,000	51,612,000
2009	26,927,000	18,400,000	45,327,000
2010	30,763,000	47,168,000	77,931,000

Source: Western Economic Analysis Center, based on data from the Arizona Mining Association, the Arizona Department of Mines and Mineral Resources, and individual copper producers.

Table 20

**STATE PAYROLL TAXES PAID BY
THE ARIZONA COPPER INDUSTRY
1986-2010**

Year	Unemployment Compensation	Workmen's Compensation	Total
1986	\$3,062,000	\$4,401,000	\$7,463,000
1987	1,922,000	5,262,000	7,184,000
1988	2,150,000	4,519,000	6,669,000
1989	1,441,000	5,337,000	6,778,000
1990	1,473,000	5,575,000	7,048,000
1991	1,404,000	6,732,000	8,136,000
1992	1,469,000	8,467,000	9,936,000
1993	1,726,000	7,698,000	9,424,000
1994	1,782,000	9,567,000	11,349,000
1995	2,440,000	12,439,000	14,879,000
1996	1,857,000	13,193,000	15,050,000
1997	1,598,000	9,995,000	11,263,000
1998	1,128,000	10,798,000	11,926,000
1999	1,069,000	8,780,000	9,849,000
2000	595,000	8,772,000	9,367,000
2001	643,000	9,332,000	9,975,000
2002	707,000	8,626,000	9,333,000
2003	3,897,000	10,259,000	14,156,000
2004	664,000	6,679,000	7,343,000
2005	1,179,000	8,712,000	9,891,000
2006	1,462,000	8,526,000	9,988,000
2007	1,768,000	9,586,000	11,354,000
2008	2,121,000	9,028,000	11,149,000
2009	1,583,000	12,281,000	13,864,000
2010	2,169,000	10,847,000	13,016,000

The above payroll taxes include only those paid to the State of Arizona or paid as required by Arizona law to private insurance carriers. Federal social security taxes are excluded since they are a leakage from the Arizona economy and not a contribution to it. Federal social security taxes paid by copper industry employers are included in the leakage figures presented in Table 1 of this report as part of federal payroll and income taxes.

Source: Western Economic Analysis Center, based on data from individual copper producers.

Table 21

**STATE AND LOCAL GOVERNMENT REVENUES
PROVIDED DIRECTLY BY THE ARIZONA COPPER INDUSTRY
2010**

Type of Payment	Amount Paid
Property Taxes	\$54,691,000
Severance Tax	32,679,000
Corporate Income Tax	16,079,000
Payroll Taxes	
Unemployment Compensation Premiums	2,169,000
Workmen's Compensation Premiums	10,847,000
Sales Taxes on Arizona Purchases	30,763,000
Other State and Local Taxes and Fees (a)	11,668,000
State Land Payments (b)	35,500,000
Total	\$194,396,000

(a) Other state and local taxes and fees includes motor vehicle license fees and taxes and fees paid for miscellaneous permits, licenses, and other requirements.

(b) State land payments include rents, royalties, fees, and other amounts paid to the State of Arizona for the use of State lands and for the use of State-owned mineral resource lying beneath State-owned land.

Source: Western Economic Analysis Center, based on data from the Arizona Mining Association, the Arizona Department of Revenue, the Arizona Department of Commerce, and the Arizona State Land Department, as well as individual copper producers.

Table 22

**ARIZONA STATE GOVERNMENT REVENUES
PROVIDED DIRECTLY BY THE ARIZONA COPPER INDUSTRY
2010**

Type of Revenue	Amount of Revenue
State Property Tax	\$2,510,700
Severance Tax (a)	9,016,600
Corporate Income Tax	14,874,000
Payroll Taxes	
Unemployment Compensation Premiums	2,169,000
Workmen's Compensation Premiums	10,847,000
Sales Taxes on Arizona Purchases (a)	2,122,000
Miscellaneous Taxes and Fees (b)	6,402,400
Land Rents, Royalties, and Fees	35,499,600
Total	\$83,441,300

(a) Excludes amounts collected by the State of Arizona but immediately distributed to county and municipal governments as well as amounts subsequently distributed to school districts by appropriation.

(b) Includes motor vehicle license and other non-tax fees paid to State agencies, except the State Land Department.

Source: Western Economic Analysis Center

Table 23

**COUNTY GOVERNMENT REVENUES PROVIDED DIRECTLY
BY THE ARIZONA COPPER INDUSTRY
2010**

County	Amount of Revenue
Maricopa	\$8,334,500
Pima	7,997,300
Greenlee	4,220,300
Pinal	3,176,400
Gila	2,496,000
Yavapai	1,986,900
Mohave	1,684,900
Graham	784,300
Cochise	620,500
Yuma	352,700
Coconino	240,200
Navajo	216,000
Apache	90,100
Santa Cruz	83,900
La Paz	39,900
Total	\$32,323,900

The above amounts are contributed directly through the property taxes and fees collected by the respective counties and through the automatic apportionment of sales taxes and severance taxes collected by the State of Arizona.

Source: Western Economic Analysis Center

Table 24

**COMMUNITY COLLEGE REVENUES PROVIDED DIRECTLY
BY THE ARIZONA COPPER INDUSTRY
2010**

Community College District	Amount of Revenue
Pima	\$1,422,500
Yavapai	1,390,200
Eastern Arizona	1,078,800
Central Arizona	953,600
Mohave	543,100
Gila	231,300
Cochise	131,000
Maricopa	16,400
Total	\$5,766,900

The above amounts are contributed directly through the property tax. These and other community college districts also receive some state and county funds by appropriation that have been paid in part by the Arizona copper industry through county property taxes and the state severance, sales, and income taxes.

Source: Western Economic Analysis Center

Table 25

SCHOOL DISTRICT REVENUES PROVIDED DIRECTLY
BY THE ARIZONA COPPER INDUSTRY
2010

School District	Amount of Revenue
Sahuaria Unified	\$7,788,200
Morenci Unified	6,744,500
Bagdad Unified	3,825,600
Kingman Unified	3,034,900
Ray Unified	2,801,200
Mesa Unified	2,578,900
Safford Unified	2,456,400
Tucson Unified	2,003,400
Hayden-Winkelmann Unified	1,455,900
Gilbert Unified	1,206,200
Chandler Unified	1,116,800
Marana Unified	1,062,900
Peoria Unified	984,100
Deer Valley Unified	944,300
Miami Unified	914,700
Washington Elementary	854,000
Dysart Unified	785,500
Paradise Valley Unified	784,500
Cartwright Elementary	706,500
Sunnyside Unified	608,600
Phoenix Union High School	583,100
Roosevelt Elementary	578,000
Alhambra Elementary	563,100
Kyrene Elementary	529,200
Glendale Union High School	486,800
Yuma Union High School	448,800
Tempe Combined (a)	436,100
Casa Grande Combined (a)	415,600
Pendergast Elementary	413,400
Amphitheater Unified	411,400
Litchfield Elementary	391,900
Yuma Elementary	391,500
Glendale Elementary	383,300
Vail Unified	383,200
Tolleson Combined (a)	362,500
Higley Unified	313,800
Florence Unified	312,700
Scottsdale Unified	290,000
Isaac Elementary	285,100
Phoenix Elementary	269,200
Creighton Elementary	257,100
Maricopa Unified	256,600
Agua Fria Union High School	253,200
Flagstaff Unified	249,900
Buckeye Combined (a)	239,500
Avondale Elementary	238,100
Nogales Unified	228,100
Gadsden Elementary	226,500
Sierra Vista Unified	208,400
Littleton Elementary	199,500
Flowing Wells Unified	194,800
East Valley Institute of Technology	189,300
Chino Unified	185,500
Laveen Elementary	180,700
Fowler Elementary	178,700
Humboldt Unified	175,800
J.O. Combs Elementary	171,700
Douglas Unified	171,600
Western Maricopa Education Center	166,800
Queen Creek Unified	159,100
Crane Elementary	153,900
Apache Junction Unified	153,100
Coolidge Unified	151,600
Liberty Elementary	145,500
Hillside Elementary	141,400

TABLE 25 CONTINUES

TABLE 25 (CONTINUED)

School District	Amount of Revenue
Pima County Joint Technical Education District	\$135,600
Bisbee Unified	135,300
Santa Cruz Valley Unified	135,300
Mammoth-San Manuel Unified	127,100
Window Rock Unified	118,000
Somerton Elementary	112,200
Lake Havasu Unified	111,100
Balsz Elementary	107,000
Snowflake Univied	106,500
Madison Elementary	102,000
Kayenta Unified	100,700
Globe Unified	97,200
Whiteriver Unified	96,900
Bullhead City Elementary	96,000
Catalina Foothills Unified	93,700
Holbrook Unified	92,500
Winslow Unified	88,300
Tuba City Unified	88,000
Page Unified	87,500
Prescott Unified	83,200
Ganado Unified	82,700
Cave Creek Unified	82,300
Osborn Elementary	80,800
Chino Valley Unified	79,600
Murphy Elementary	79,400
Red Mesa Unified	78,200
Show Low Unified	72,100
Cottonwood-Oak Creek Elementary	69,400
Union Elementary	68,600
Blue Ridge Unified	67,100
Pinon Unified	64,600
Payson Unified	64,000
Parker Unified	61,500
San Carlos Unified	60,600
Eloy Combined (a)	60,000
Palominas Elementary	59,500
Camp Verde Unified	53,800
Thatcher Unified	53,400
Sanders Unified	51,400
Fort Huachuca Accomodation	51,000
Toltec Elementary	50,900
Ajo Unified	50,600
Clifton Unified	48,700
Willcox Unified	48,400
Altar Valley Elementary	48,300
Northern Arizona Vocational Institute	46,400
Indian Oasis-Baboquivari Unified	43,000
Tanque Verde Unified	41,400
Mohave Valley Elementary	40,900
Colorado River Union High School	39,500
Pima Unified	38,100
Superior Unified	37,000
Fountain Hills Unified	36,000
Benson Unified	35,800
Fort Thomas Unified	32,900
Mingus Union High School	32,800
Northeast Arizona Technical Institute	32,200
Tombstone Unified	31,800
Wilson Elementary	31,100
Stanfield Elementary	26,500
Clarkdale-Jerome Elementary	25,300
Sacaton Elementary	24,500
Cedar Unified	24,100
All Other School Districts	1,150,700
Total	\$61,253,200

(a) Combined elementary and high school districts

The above amounts are contributed directly through the property taxes levied by the respective school districts and collected by the counties as well as through the apportionment of the sales and severance taxes collected by the State of Arizona and appropriated by the Legislature as State aid to education.

Source: Western Economic Analysis Center

Table 26

MUNICIPAL GOVERNMENT REVENUES PROVIDED DIRECTLY
BY THE ARIZONA COPPER INDUSTRY
2010

Municipality	Amount of Revenue
Phoenix	\$2,898,300
Tucson	1,017,900
Mesa	854,700
Hayden	653,800
Glendale	462,300
Scottsdale	449,300
Chandler	440,300
Gilbert	338,700
Tempe	316,300
Peoria	263,500
Yuma	170,300
Surprise	168,400
Safford	156,900
Avondale	132,300
Flagstaff	116,700
Lake Havasu City	101,900
Goodyear	88,200
Sierra Vista	83,300
Prescott	77,800
Oro Valley	75,200
Bullhead City	72,900
Apache Junction	65,000
Clifton	64,000
Prescott Valley	64,000
Casa Grande	61,900
El Mirage	61,200
Marana	51,000
Kingman	49,300
Buckeye	48,500
Fountain Hills	46,700
San Luis	43,700
Nogales	41,600
Florence	39,200
Douglas	32,800
Queen Creek	31,300
Maricopa	30,400
Payson	29,400
Sahuarita	26,900
Paradise Valley	26,400
Cibola Valley	23,500
Eloy	21,200
Sedona	20,900
Cottonwood	20,700
Camp Verde	20,500
Miami	19,600
Show Low	18,900
Winslow	18,800
Somerton	18,600
Thatcher	18,300
Globe	17,000
Coolidge	15,600
Page	13,600
Bisbee	12,500
Tolleson	12,400
Youngtown	11,800
Wickenburg	11,600
South Tucson	10,700
Guadalupe	10,600
Holbrook	10,300
Snowflake	9,400
Cave Creek	9,100
Benson	9,000
Litchfield Park	8,600
Eagar	8,500
Pinetop-Lakeside	7,900
Colorado City	7,800

TABLE 26 CONTINUES

TABLE 26 (CONTINUED)

Municipality	Amount of Revenue
Taylor	\$7,800
Dewey-Humboldt	7,700
Willcox	7,400
Saint Johns	7,400
Clarkdale	7,300
Carefree	7,000
Quartzsite	6,900
Jerome	6,600
Parker	6,300
Superior	6,200
Williams	6,000
Kearny	4,300
Pima	4,200
Springerville	3,900
Star Valley	3,800
Gila Bend	3,800
Wellton	3,800
Hunchuca City	3,500
Mammoth	3,400
Tombstone	3,100
Duncan	2,800
Predonia	2,100
Patagonia	1,800
Winkelmann	800
Total	\$10,257,600

The above amounts are contributed directly through municipal property taxes and the automatic apportionment of severance, sales, and corporate income taxes collected by the State.

Source: Western Economic Analysis Center

COMBINED IMPACT MATRIX

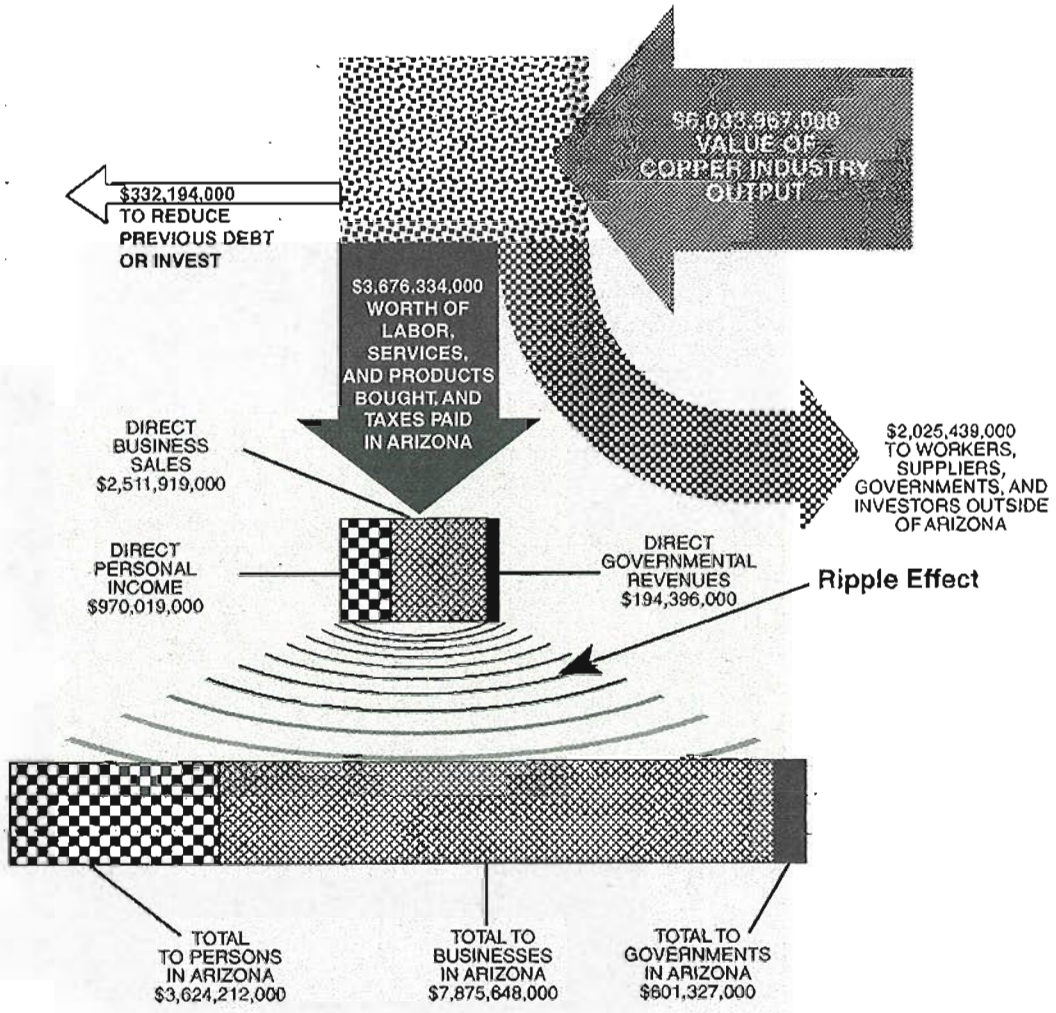
Direct and indirect impact of
THE COPPER INDUSTRY
on the economy of
ARIZONA
in
2010

IMPACTS (amounts in dollars)

	DIRECT IMPACT	INDIRECT ECONOMIC IMPACT		
		PERSONAL	BUSINESS	GOVERNMENT
PERSONAL	970,019,000	728,496,405	2,182,017,145	158,161,631
BUSINESS	2,511,919,000	1,749,137,164	2,912,022,673	231,333,359
GOVERNMENT	194,396,000	176,559,530	269,689,448	17,436,247
TOTAL DIRECT	3,676,334,000			
TOTAL INDIRECT	8,424,853,603	2,654,193,099	5,363,729,266	406,931,238
COMBINED	12,101,187,603	3,624,212,099	7,875,648,266	601,327,238
MULTIPLIERS				
		PERSONAL	BUSINESS	GOVERNMENT
PERSONAL INCOME		0.7510	2.2495	0.1631
BUSINESS INCOME		0.6963	1.1593	0.0921
GOVERNMENT REVENUES		0.9082	1.3973	0.0997

COMBINED IMPACT MATRIX						
Direct and indirect impact of THE ARIZONA COPPER INDUSTRY on the economy of THE UNITED STATES in 2010						
IMPACTS (amounts in dollars)	DIRECT IMPACT	INDIRECT ECONOMIC IMPACT				
		PERSONAL	BUSINESS	ST & LOC GOV	FED GOV	
PERSONAL	970,019,000	1,298,287,946	3,213,520,824	272,042,559	398,395,691	
BUSINESS	3,536,918,000	5,010,511,048	10,072,183,149	802,429,031	1,060,986,288	
STATE & LOCAL GOVERNMENT	194,396,000	246,479,409	390,140,893	32,759,949	51,862,188	
FEDERAL GOVERNMENT	1,000,440,000	1,873,385,147	3,058,758,470	386,612,486	344,531,995	
TOTAL DIRECT	5,701,773,000					
TOTAL INDIRECT	28,512,887,072	8,428,663,549	16,734,603,336	1,493,844,025	1,855,776,162	
COMBINED	34,214,660,072	9,398,682,549	20,271,521,336	1,688,240,025	2,856,216,162	
MULTIPLIERS						
		PERSONAL	BUSINESS	ST & LOC GOV	FED GOV	
PERSONAL INCOME		1.3384	3.3128	0.2805	0.4107	
BUSINESS INCOME		1.4166	2.8477	0.2269	0.3000	
STATE & LOCAL GOVERNMENT REVENUES		1.2679	2.0069	0.1685	0.2668	
FEDERAL GOVERNMENT REVENUES		1.8726	3.0574	0.3864	0.3444	

DIRECT AND INDIRECT IMPACTS OF THE COPPER INDUSTRY ON THE ARIZONA ECONOMY 2010



Ripple Effect

Circulation and recirculation of the direct impact of copper industry spending created a "ripple effect" that expanded the direct economic impact of the copper industry on Arizona to a total impact that was more than triple the direct impact itself.

**TOTAL IMPACT
ON ARIZONA
\$12,101,187,000**

WEAC

