

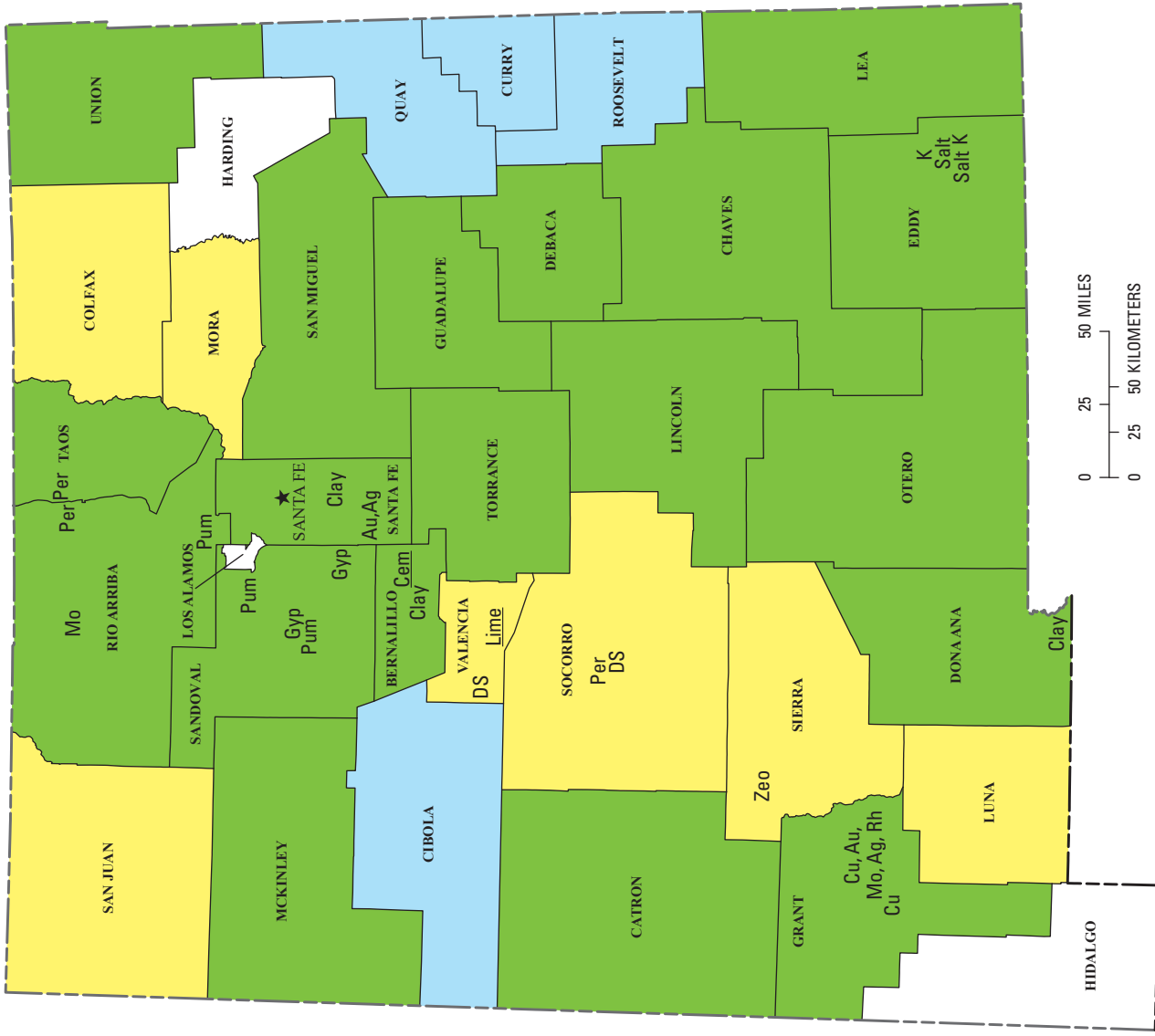


# 2014 Minerals Yearbook

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**NEW MEXICO [ADVANCE RELEASE]**

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**EXPLANATION**

- County producing only construction sand and gravel
- County producing only crushed stone
- County producing both aggregate types
- County boundary
- ★ Capital city

**Nonfuel mineral commodity**

- Ag Silver
- Au Gold
- Cem Cement plant
- Clay Common clay and (or) shale
- Cu Copper
- DS Dimension stone
- Gyp Gypsum
- K Potash
- Lime Lime plant
- Mo Molybdenum
- Per Perlite
- Pum Pumice and pumicite
- Rh Rhenium
- Salt Salt
- Zeo Zeolites

Base from U.S. Geological Survey digital data  
Albers Equal-Area Conic projection

**Figure 1.** Map showing major nonfuel-mineral-producing areas in New Mexico in 2014. Sources: New Mexico Bureau of Geology and Mineral Resources and U.S. Geological Survey.

# THE MINERAL INDUSTRY OF NEW MEXICO

By Madan M. Singh

**This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the New Mexico Bureau of Geology and Mineral Resources for collecting information on all nonfuel minerals.**

In 2014, the value of the nonfuel mineral production<sup>1</sup> in the State of New Mexico was \$1.75 billion, an 11% increase from the State's revised nonfuel mineral production value of \$1.57 billion in 2013 (table 1). The leading three minerals in the State, in descending order of published production value, were copper, potash, and construction sand and gravel. Nonfuel mineral production in the State surpassed \$1 billion in value for the first time in 2005, and only dropped below that figure in 2009 (fig. 1). In 2014, New Mexico accounted for approximately 2.2% of total U.S. production value, which ranked it 15th among the 50 States. On a per capita basis, New Mexico had a nonfuel mineral production value of \$839 in 2014 compared with the average national value of \$252. In 2014, the number of nonfuel mines and the mine employment both decreased from the previous year (table 2).

In 2014, Freeport-McMoRan Inc. (Freeport) operated two copper mines in New Mexico—the Chino Mine (also known as Santa Rita Mine) and the Tyrone Mine. The Chino operation had a solvent extraction–electrowinning (SX–EW) plant with a capacity of 68,000 metric tons per year (t/yr) and a concentrator with a capacity of 36,000 metric tons per day. Copper and molybdenum were produced at the facility, with gold and silver as byproducts. The Tyrone operation had a 45,000-t/yr-capacity SX–EW plant (Freeport-McMoRan Inc., 2014, p. 12) and produced only copper. Gold and silver were produced at the Summit Mine operated by Santa Fe Gold Corp., and molybdenum was mined at Chevron Mining, Inc.'s Questa Mine in Taos County, which operated intermittently from 1920 to 2014. The Questa Mine, which had been declared a Superfund site by the U.S. Environmental Protection Agency in 2011, was closed at yearend 2014 (U.S. Environmental Protection Agency, 2011).

New Mexico led the Nation in production of potash and zeolites, with the Carlsbad potash district leading, where producers use solution mining and underground methods. Common clay, dimension stone, gemstones, gypsum, perlite, pumice, and salt were also produced in New Mexico. The companies and the counties in which these mining operations are located are given in table 3.

## Events, Trends, and Issues

Despite an increase in the value of nonfuel mineral production, the total quantity produced has remained below

<sup>1</sup>The terms “nonfuel mineral production” and related “values” encompass variations in meaning, depending upon the mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All USGS mineral production data published in this chapter are those available as of June 2017. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the internet at <http://minerals.usgs.gov/minerals>.

2008–09 prerecession levels owing mainly to reduced aggregate production. Construction activity has remained at lower levels. In 2014, the production quantity of construction sand and gravel in New Mexico decreased by 15% and that of crushed stone declined by 6% from the previous year (table 1).

Freeport began the permitting process to change the status of the Cobre Mine (Grant County) from care-and-maintenance status to active mining. THEMAC Resources Group Ltd. applied for permits to resume mining at the Copper Flat Mine (Sierra County). Copper One Inc. drilled the Lone Mountain project for copper in Grant County. The Center, Jim Crow, and Billali Mines in the Steeple Rock district were being evaluated for potential production of gold and silver. Exploration drilling took place at Saddle Mountain. Micrex Development Corp. continued exploration for gold and silver at the Deadwood and Sunburst claims (Mogollon district) and Banks and Mt. Royal Mines (Steeple Rock district). El Capitan Precious Metals, Inc. continued exploration for gold, silver, and iron in Lincoln County (Virginia T. McLemore, Senior Economic Geologist, New Mexico Bureau of Geology and Mineral Resources, written commun., June 21, 2017).

Intercontinental Potash Corp. announced its intention to open a polyhalite mine as a part of its Ochoa project. Atlas Minerals, Inc. was evaluating the Toro perlite deposit northwest of Deming. St. Cloud Mining Co. was evaluating the McCauley Ranch perlite deposit in Grant County. Daleco Resources Corp. was appraising the Sierra kaolin deposit that was drilled in 2006. Anasazi Stone LLC was developing the Jaramillo humate mine in McKinley County. A company was examining the potential for garnet mining for abrasives (Virginia T. McLemore, Senior Economic Geologist, New Mexico Bureau of Geology and Mineral Resources, written commun., June 21, 2017).

## Aggregates by State and End Use

A companion dataset, “Aggregates by State and End Use,” replaces the discrete aggregate tables that were included in the individual State chapters prior to 2014 and is available on the State Minerals Statistics and Information web page at <https://minerals.usgs.gov/minerals/pubs/state/>. This dataset is updated annually.

## References Cited

- Freeport-McMoRan Inc., 2014, Form10-K—2014: U.S. Securities and Exchange Commission, 223 p. (Accessed March 7, 2018, at <https://www.sec.gov/Archives/edgar/data/831259/000083125915000016/a2014form10-k.htm>.)
- U.S. Environmental Protection Agency (EPA), 2011, Record of decision administrative record for Molycorp Incorporated Superfund site, Questa, New Mexico: U.S. Environmental Protection Agency EPA ID No. NMD002899094, January 31, 90 p. (Accessed November 2, 2017, at <https://semsub.epa.gov/work/06/9126119.pdf>.)

TABLE 1  
NONFUEL MINERAL PRODUCTION IN NEW MEXICO<sup>1, 2, 3</sup>

(Thousand metric tons and thousand dollars)

Mineral	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	8	48	W	W	W	W
Copper <sup>4</sup>	103	834,000 <sup>r</sup>	121	908,000 <sup>r</sup>	156	1,090,000
Gemstones, natural <sup>e</sup>	NA	17	NA	17	NA	18
Sand and gravel, construction	9,660 <sup>r</sup>	77,800 <sup>r</sup>	9,110 <sup>r</sup>	81,900 <sup>r</sup>	7,720	77,800
Stone, crushed	4,950	41,400	5,040	46,900 <sup>r</sup>	4,720	42,000
Combined values of cement, gold, gypsum (crude), molybdenum concentrates, perlite (crude), potash, pumice and pumicite, rhenium, <sup>5</sup> salt, silver, stone (dimension), zeolites, and values indicated by symbol W	XX	607,000 <sup>r</sup>	XX	537,000	XX	533,000
Total	XX	1,560,000 <sup>r</sup>	XX	1,570,000 <sup>r</sup>	XX	1,750,000

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; included in "Combined values" data. XX Not applicable.

<sup>1</sup>Includes data available through June 2017.

<sup>2</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>3</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>4</sup>Production based on publicly available data; refer to the 2014 Minerals Yearbook copper chapter and the Freeport-McMoRan Inc. Securities and Exchange Commission Form 10-K.

<sup>5</sup>Rhenium contained in molybdenite concentrates.

TABLE 2  
MINING ACTIVITY IN NEW MEXICO

Mining activity	2012	2013	2014
State rank <sup>1</sup>	13	14	15
Employment, number: <sup>2</sup>			
Nonfuel mineral mines	2710	2733	2,500
Mills and plants	1116	1206	1,068
Number of nonfuel mineral mines <sup>2</sup>	185	189	173
Number of mills and plants <sup>2</sup>	24	23	21
Average annual wage, all mining <sup>3</sup>	dollars per year	74,429	75,106
Average annual wage, all industries <sup>3</sup>	do.	39,525	39,660
Per capita value <sup>1</sup>	dollars per person	749	754
National per capita value <sup>1</sup>	do.	241	236

<sup>1</sup>Based on unadjusted State total value.

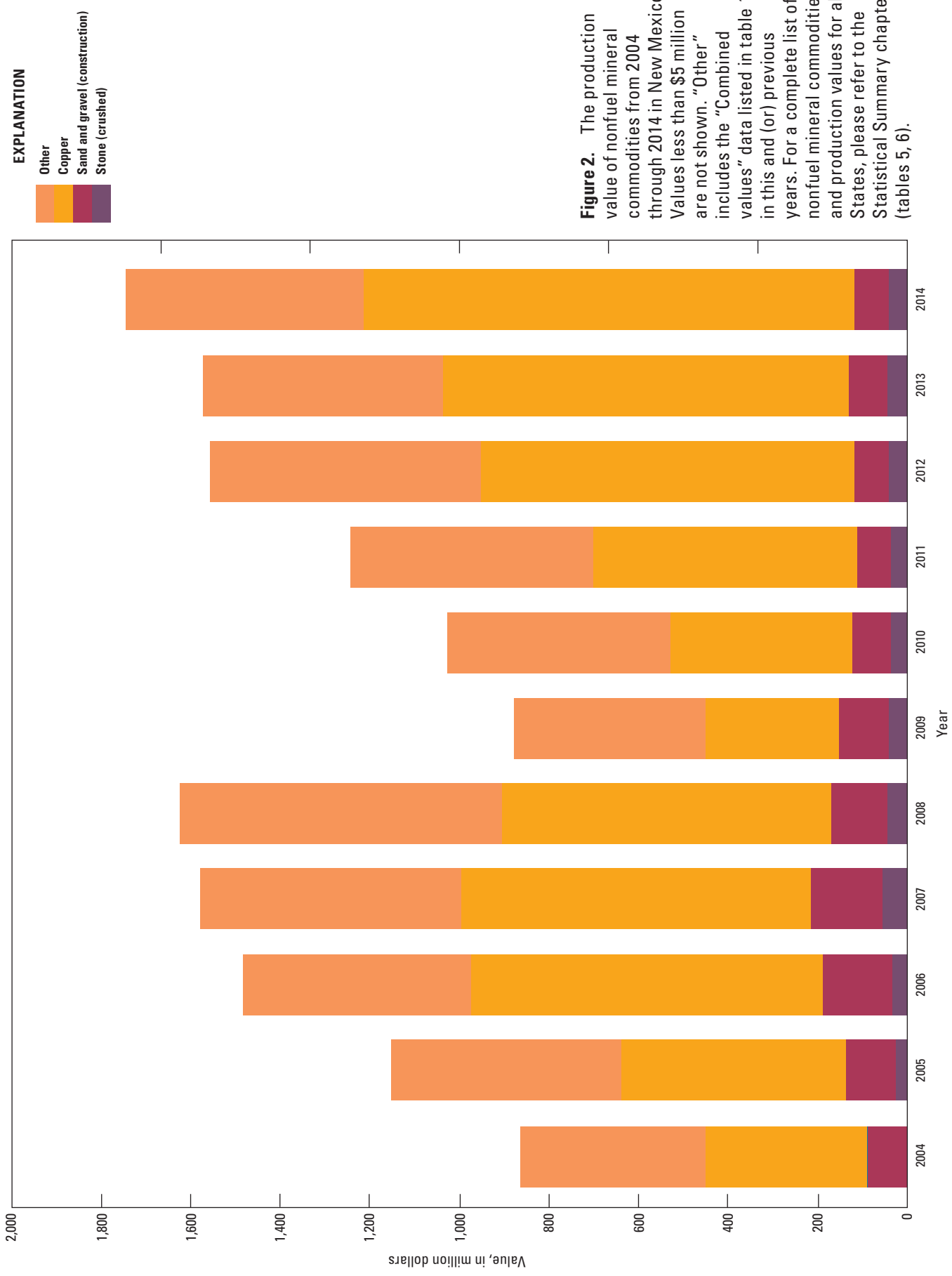
<sup>2</sup>Source: U.S. Mine Safety and Health Administration.

<sup>3</sup>Source: National Mining Association.

TABLE 3  
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN NEW MEXICO

(Nonfuel-mineral-producing companies, not including aggregate producers)

Commodity	Company	County
Cement	GCC Rio Grande (Tijeras plant)	Bernalillo
Clays, common clay	American Eagle Brick Co.	Dona Ana
Do.	Kinney Brick Co., Inc.	Bernalillo and Santa Fe
Copper	Freeport-McMoRan Inc. (Tyrone Mine)	Do.
Copper, gold, molybdenum, rhenium, silver	Freeport-McMoRan Inc. (Chino Mine)	Grant
Gemstones	Various	Various
Gold and silver	Santa Fe Gold Corp. (Summit Mine)	Santa Fe
Gypsum	American Gypsum Co., LLC	Sandoval
Do.	Eagle Materials, Inc. (White Mesa Mine)	Do.
Lime	Lhoist North America (Belen)	Bernalillo
Molybdenum	Chevron Mining, Inc. (Questa Mine)	Taos
Perlite	Grefco Minerals Inc.	Rio Arriba and Socorro
Do.	Imerys S.A.	Taos
Potash	Intrepid Potash LLC	Eddy
Do.	Mosaic Co.	Do.
Pumice and pumicite	Copar Pumice Co., Inc. (El Cajete Mine)	Sandoval
Do.	Copar Pumice Co., Inc. (San Ysidro Mine)	Do.
Do.	CR Minerals Co. (Rocky Mountain Mine)	Rio Arriba
Salt	New Mexico Salt and Minerals Corp.	Eddy
Do.	United Salt Corp. (Lake Mine)	Do.
Stone, dimension	New Mexico Travertine Inc.	Socorro
Do.	Rocky Mountain Stone Co., Inc.	Valencia
Zeolites	St. Cloud Mining Co. (Imagin Minerals, Inc.)	Sierra
Do. Ditto.		



**Figure 2.** The production value of nonfuel mineral commodities from 2004 through 2014 in New Mexico. Values less than \$5 million are not shown. "Other" includes the "Combined values" data listed in table 1 in this and (or) previous years. For a complete list of nonfuel mineral commodities and production values for all States, please refer to the Statistical Summary chapter (tables 5, 6).