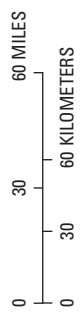
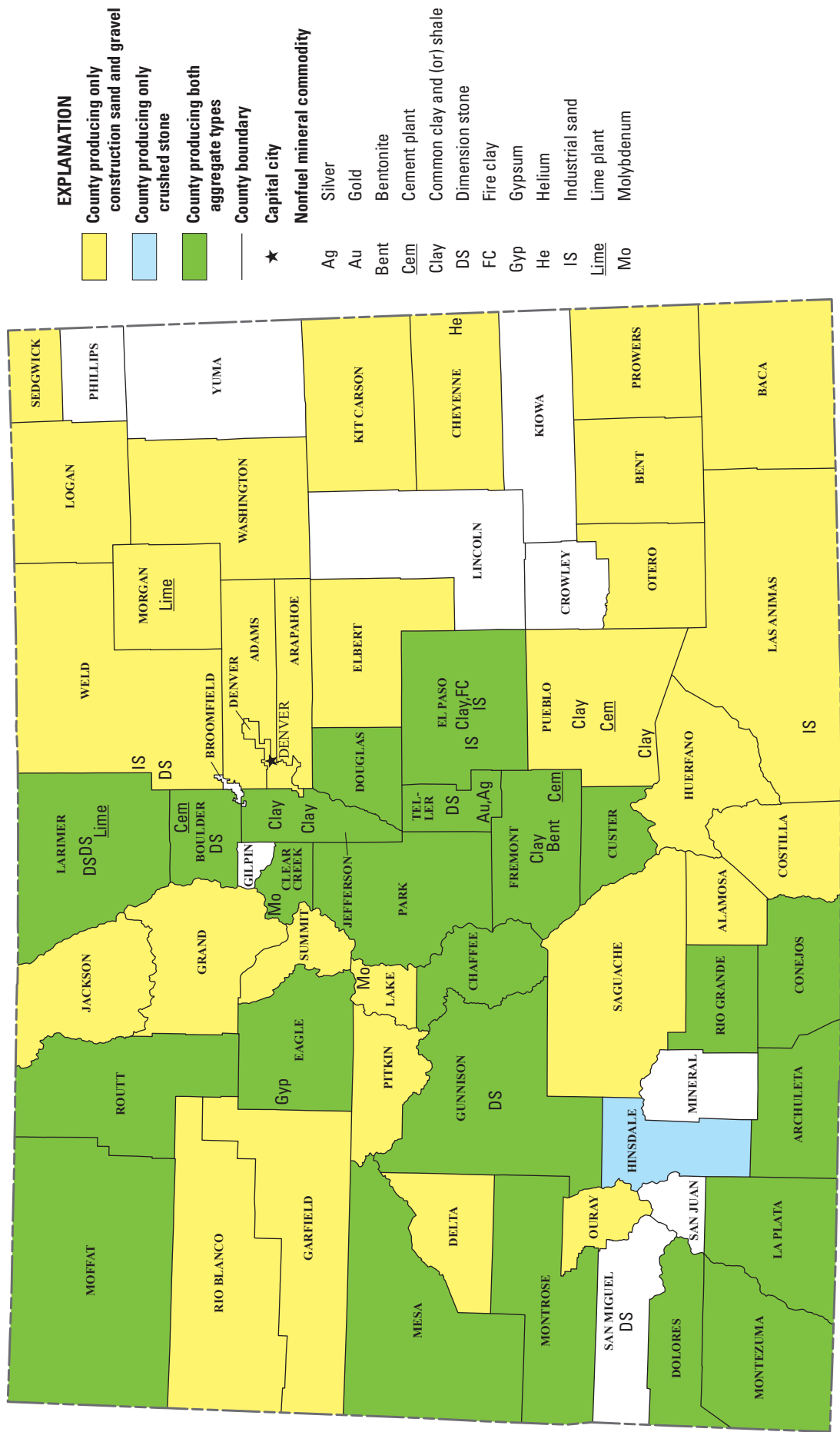




2014 Minerals Yearbook

COLORADO [ADVANCE RELEASE]



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

Figure 1. Map showing major nonfuel-mineral-producing areas in Colorado in 2014. Sources: Colorado Geological Survey and U.S. Geological Survey.

THE MINERAL INDUSTRY OF COLORADO

By Madan M. Singh

This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Colorado Geological Survey for collecting information on all nonfuel minerals.

In 2014, in the State of Colorado (fig. 1), the value of nonfuel mineral production¹ was \$2.26 billion. This was a 10.3% increase from the State's revised nonfuel mineral production value of \$2.04 billion in 2013 (table 1). Nonfuel mineral production in the State surpassed \$2 billion in value in 2007–8; it fell below that figure in 2009–12 but has been above that in 2013 and 2014 (fig. 2). Colorado accounted for approximately 2.8% of the total U.S. nonfuel mineral production value in 2014, which ranked it 13th among the 50 States. On a per capita basis, Colorado's nonfuel mineral production value was \$422 in 2014 compared with the national average of \$252. In 2014, the number of nonfuel mineral mines and mine employment both decreased with respect to the prior year (table 2).

In 2014, the top leading minerals in the State (by value of production), in alphabetical order, were construction sand and gravel, crushed stone, gold, molybdenum concentrates, and portland cement. Gemstones mined in Colorado included amazonite (with smoky quartz), fluorite, goethite-iron, topaz, and turquoise. Colorado had 11,206 active claims on Federal lands at the end of fiscal year 2014, which covered 96,460 hectares (238,355 acres) (Bureau of Land Management, 2015, p. 140).

Events, Trends, and Issues

In 2014, two mines produced molybdenum—Climax in Lake County and Henderson in Clear Creek County—making Colorado the leading producer of this metal in the United States.

¹The 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 6, 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>.

Only one mine, the Cripple Creek mine operated by Cripple Creek & Victor Gold Mining Co., a subsidiary of AngloGold Ashanti Ltd., reported producing gold. The company was planning a major expansion over the next several years and planned to shift a portion of the mine to a new underground operation. The Revenue Mine (Ouray County) initiated production at the end of 2014 and sent its first shipment of ore to a Canadian smelter. Primarily, the Revenue Mine produced silver, but gold, lead, and zinc were byproducts. There were a small number of gold placers that did not report production. DCP Midstream, LLC produced a minimal amount of Grade-A helium in 2014, and Air Products and Chemicals, Inc. was constructing a new facility in Dolores County (Guilinger and Keller, 2015, p. 23, 31).

In 2014, the production quantity of construction sand and gravel increased by 9.1% and crushed stone increased by 23.7% from the previous year (table 1).

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

- Bureau of Land Management, 2015, Public land statistics, 2014: Bureau of Land Management, v. 199, May, 269 p. (Accessed May 23, 2018, at <https://www.blm.gov/sites/blm.gov/files/pls2014.pdf>.)
- Guilinger, J.R., and Keller, J.W., 2015, Colorado mineral and energy industry activities 2014–15: Golden, CO, Colorado Geological Survey, Mineral and Energy Industry Information Series 78, 36 p. (Accessed May 22, 2018, at <https://store.coloradogeologicalsurvey.org/product/colorado-mineral-energy-industry-activities-2014-15/is-78-cover-sq-1200/>.)

TABLE 1
NONFUEL MINERAL PRODUCTION IN COLORADO^{1,2,3}

(Thousand metric tons and thousand dollars)

Mineral	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common clay	235	5,000	187 ^r	4,820 ^r	179	4,510
Gemstones, natural ^c	NA	438	NA	447	NA	451
Sand and gravel, construction	28,300 ^r	213,000 ^r	31,200 ^r	222,000 ^r	34,000	237,000
Stone:						
Crushed	8,980 ^r	68,900 ^r	10,400 ^r	81,200 ^r	12,900	106,000
Dimension	23	10,200	18	7,270	17	6,230
Combined values of cement, clays (bentonite and fire clay), gold, gypsum (crude), helium (Grade-A), lime, molybdenum concentrates, sand and gravel (industrial), silver	XX	1,650,000	XX	1,730,000	XX	1,900,000
Total	XX	1,940,000 ^r	XX	2,040,000 ^r	XX	2,260,000

^cEstimated. ^rRevised. NA Not available. XX Not applicable.

¹Includes data available through June 2017.

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

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

TABLE 2
MINING ACTIVITY IN COLORADO¹

Mining activity	2012	2013	2014
State rank	12	12	13
Employment, number: ²			
Nonfuel mineral mines	2,537	2,486	2,473
Mills and plants	720	738	798
Number of nonfuel mineral mines ²	352	345	331
Number of mills and plants ²	23	21	23
Average annual wage, all mining ³	dollars per year	85,021	82,819
Average annual wage, all industries ³	do.	50,916	51,124
Per capita value	dollars per person	374	388
National per capita value	do.	241	236

do. Ditto.

¹Data rounded to no more than three significant digits for "Per capita value" and "National per capita value."

²Source: U.S. Mine Safety and Health Administration.

³Source: National Mining Association.

TABLE 3
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN COLORADO

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

Commodity	Company	County
Cement	CEMEX Inc. (Lyons plant)	Boulder
Do.	GCC Rio Grande Inc. (Pueblo plant)	Pueblo
Do.	Holcim (US) Inc. (Florence plant)	Fremont
Clays:		
Bentonite	First Bentonite	Fremont
Common clay	Denver Brick Co.	Jefferson
Do.	Lakewood Brick & Tile Co.	Do.
Do.	Robinson Brick & Tile Co.	El Paso
Do.	Summit Brick And Tile Co.	Freemont
Do.	do.	Pueblo
Do.	Trinity LW, LLC	Do.
Fire clay	Robinson Brick & Tile Co.	El Paso
Gemstones: ¹		
Amazonite (with smoky quartz)	Joseph Dorris Crystal Park	Teller
Goethite-iron	The Crystal Palace	Park
Topaz	Topaz Mountain - Glacier Peak	Do.
Turquoise	Lick Skillet Turquoise Mine	Conejos
Gold	Various placers	Various
Gold and silver	AngloGold Ashanti Ltd. (Newmont Mining Corp.) ²	Teller
Gypsum	American Gypsum Co.	Eagle
Helium	DCP Midstream, LLC	Cheyenne
Lime	Pete Lien & Sons, Inc.	Larimer
Do.	Western Sugar Cooperative Inc.	Morgan
Molybdenum concentrates	Freeport McMoRan Inc.	Clear Creek and Lake
Sand and gravel, industrial	Carmeuse Industrial Sands	El Paso
Do.	Pioneer Natural Resources Co.	El Paso and Las Animas
Do.	Unimin Corp.	Weld
Stone, dimension	Colorado Stone Quarries Inc.	Gunnison and Teller
Do.	Hankins Stone Co., Inc.	San Miguel
Do.	Loukonen Bros. Stone Co.	Boulder and Larimer
Do.	Masonville Stone Quarry	Larimer
Do.	Phillips Stone Co Inc.	Weld

Do., do. Ditto.

¹Most natural gemstone producers in the United States are small businesses that are widely dispersed and operate independently.

²Newmont Mining Corp. purchased the Cripple Creek and Victor Gold Mine in 2015.

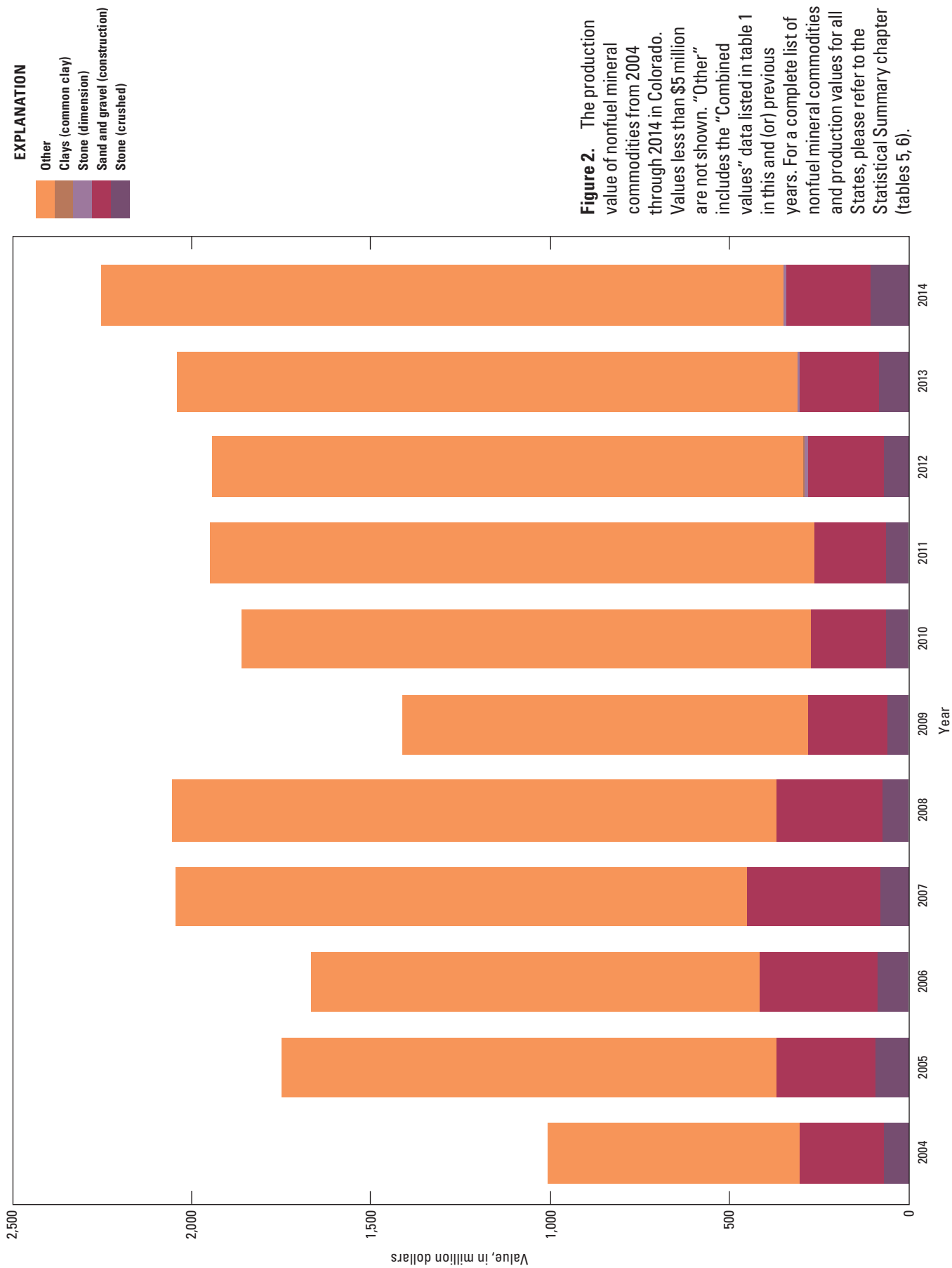


Figure 2. The production value of nonfuel mineral commodities from 2004 through 2014 in Colorado. Values less than \$5 million are not shown. "Other" includes the "Combined values" data listed in table 1 in this and (or) previous years. For a complete list of nonfuel mineral commodities and production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