

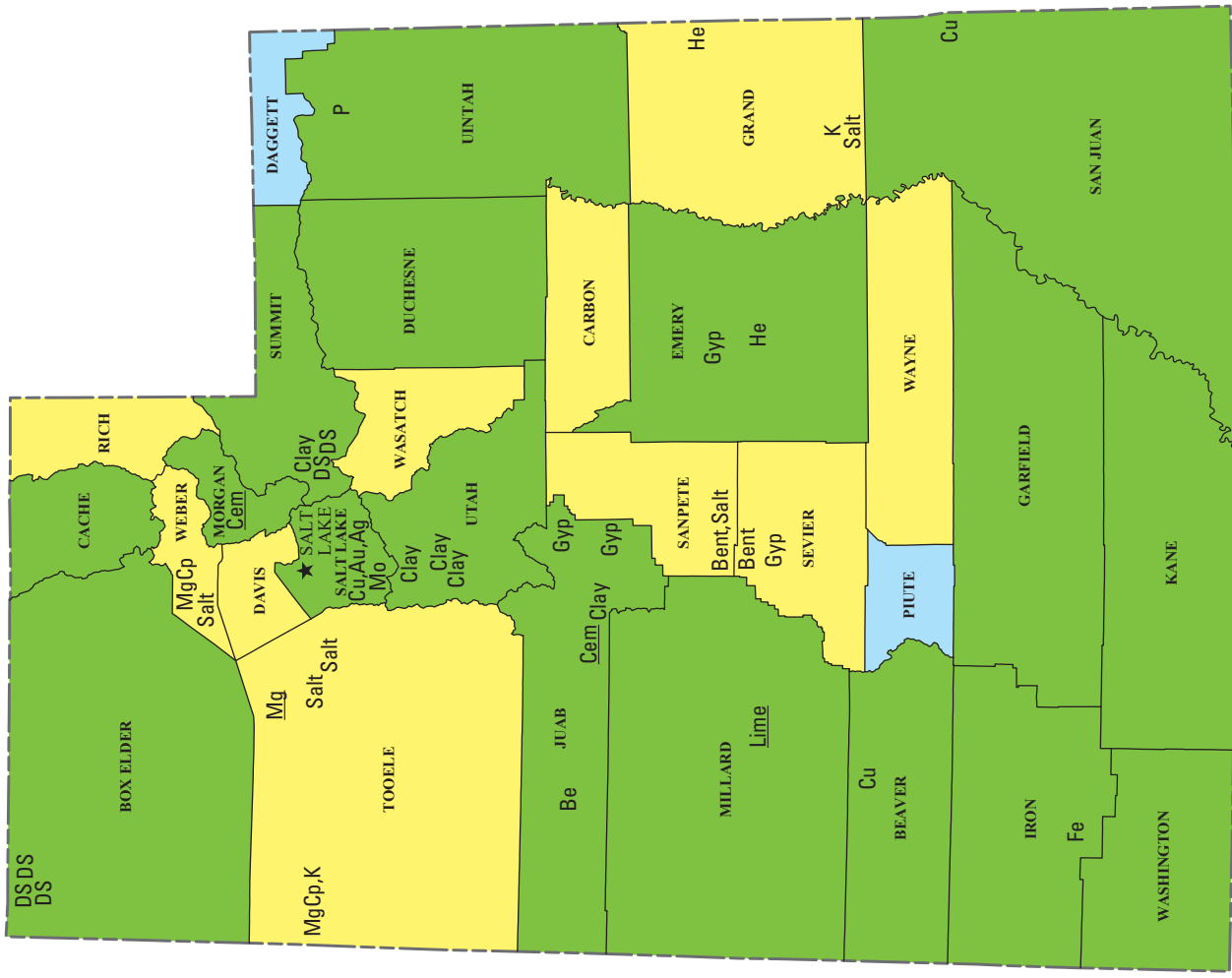


# 2014 Minerals Yearbook

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**UTAH [ADVANCE RELEASE]**

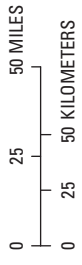
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**EXPLANATION**

- 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
  - Be Beryllium
  - Bent Bentonite
  - Cem Cement plant
  - Clay Common clay and (or) shale
  - Cu Copper
  - DS Dimension stone
  - Fe Iron
  - Gyp Gypsum
  - He Helium
  - K Potash
  - Lime Lime plant
  - Mg Magnesium metal plant
  - MgCp Magnesium compounds
  - Mo Molybdenum
  - P Phosphate rock
  - Salt Salt



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

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

# THE MINERAL INDUSTRY OF UTAH

By Robert M. Callaghan

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

In 2014, the value of the nonfuel mineral production<sup>1</sup> in the State of Utah (fig. 1) was \$3.86 billion, an 8% increase from the revised total of \$3.58 billion in 2013 (table 1). Leading mineral commodities included copper, gold, magnesium metal, molybdenum, and potash. Mining companies active in Utah included the only beryllium concentrate producer and the only magnesium metal producer in the United States (table 3). The State ranked second in the Nation for production of bentonite, copper, and magnesium compounds. In total value, Utah ranked fifth in the Nation and, on a per capita basis, had a value of \$1,310 compared with the national average of \$252. Employment decreased at mines but increased at mills and plants in 2014 compared with 2013 (table 2).

## Events, Trends, and Issues

Metals production remained the largest contributor to the State's nonfuel mineral commodity value. The second largest copper mine in the United States, Bingham Canyon Mine (Kennecott Utah Copper LLC, a subsidiary of Rio Tinto plc), was the major source of the State's copper, gold, molybdenum, and silver. In 2014, the mine continued recovery efforts after a large rock slide in 2013 and there was a planned 65-day smelter shutdown. Production of copper in 2014 was slightly less than in 2013 but still 25% more than in 2012, and molybdenum production more than doubled in 2014 compared with 2013 (Rio Tinto plc, 2015, p. 30, 197; Polyak, 2016). Although gold was considered a byproduct, Bingham Canyon was ranked ninth of 29 gold mining operations in the United States in 2014 (George, 2016, p. 31.9).

The decline in base metal prices caused a shift in exploration from copper and iron ore to gold, phosphate rock, and potash, according to the Utah Geological Survey. New unpatented mining claims increased to more than 3,000 from 2,000 claims filed in 2013 with the Bureau of Land Management, with most activity in Garfield, Iron, Juab, Tooele, and Washington Counties for gold and associated metals, despite the decreasing gold prices. The Utah School and Institutional Trust Lands Administration managed State land, and in 2014 issued new leases on 56 mineral tracts, almost one-half of which were for metalliferous minerals and the remainder mainly industrial

minerals. Falling iron prices caused the CML Metals Corp. iron ore mine to close in 2014. The mine had been expected to approach a shipping capacity of 1.8 million metric tons per year (2 million short tons per year) in 2014 after improvements to the concentrator and produced 1.22 million metric tons (1.35 million short tons) before closing in October (Boden and others, 2015, p. 5, 12).

The construction-related mineral commodities—construction sand and gravel and crushed stone—account for a relatively small part of Utah's nonfuel mineral value. These commodities were among those most affected by the recession of 2007–09. Owing to higher metal prices in 2010 and 2011, the State's total nonfuel mineral production value was not affected as much as those States that are predominantly industrial minerals producers (fig. 2).

## 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

- Boden, Taylor, Krahulec, Ken, Tabet, David, Rupke, Andrew, and Vanden Berg, M.D., 2015, Utah's extractive resource industries 2014: Utah Geological Survey Circular 120, 29 p. (Accessed November 20, 2017, at <http://files.geology.utah.gov/online/c/c-120.pdf>.)
- George, M.W., 2016, Gold [advance release], *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2014, v. I, p. 31.1–31.16. (Accessed May 10, 2018, at <https://minerals.usgs.gov/minerals/pubs/commodity/gold/myb1-2014-gold.pdf>.)
- Polyak, D.E., 2016, Molybdenum [advance release], *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2014, v. I, p. 50.1–50.12. (Accessed November 20, 2018, at <https://minerals.usgs.gov/minerals/pubs/commodity/molybdenum/myb1-2014-molyb.pdf>.)
- Rio Tinto plc, 2015, 2014 annual report: London, United Kingdom, Rio Tinto plc, 228 p. (Accessed November 20, 2017, at [http://www.riotinto.com/documents/RT\\_Annual\\_report\\_2014.pdf](http://www.riotinto.com/documents/RT_Annual_report_2014.pdf).)

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<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>.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		2012		2013		2014	
		Quantity	Value	Quantity	Value	Quantity	Value
Beryllium concentrates <sup>4</sup>	metric tons	225	W	235	W	270	W
Clays, common clay		332	12,100	W	W	W	W
Gemstones, natural <sup>c</sup>		NA	879	NA	857	NA	860
Iron ore		1,440 <sup>r</sup>	158,000 <sup>r</sup>	1,270 <sup>r</sup>	103,000 <sup>r</sup>	998	83,000
Salt		1,380	99,600	2,040	157,000 <sup>r</sup>	2,360	194,000
Sand and gravel, construction		24,300 <sup>r</sup>	176,000 <sup>r</sup>	25,100 <sup>r</sup>	181,000 <sup>r</sup>	25,300	188,000
Stone, crushed		7,370	56,900	7,260	59,300	8,250	65,900
Vanadium <sup>5</sup>	metric tons	106	1,520	591	7,870	--	--
Combined values of cement, clays (bentonite), copper, gold, gypsum (crude), lime, magnesium compounds, magnesium metal, molybdenum concentrates, phosphate rock, potash, rhenium, <sup>6</sup> silver, stone (dimension), and values indicated by symbol W		XX	2,970,000 <sup>r</sup>	XX	3,070,000 <sup>r</sup>	XX	3,330,000
Total		XX	3,470,000 <sup>r</sup>	XX	3,580,000 <sup>r</sup>	XX	3,860,000

<sup>c</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. -- Zero.

<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>Mine shipments of beryllium-containing ores. Calculated based on 4% beryllium content.

<sup>5</sup>Recoverable content of ore.

<sup>6</sup>Rhenium contained in molybdenite concentrates.

TABLE 2  
MINING ACTIVITY IN UTAH

Mining activity	2012	2013	2014	
State rank <sup>1</sup>	6	6	5	
Employment, number: <sup>2</sup>				
Nonfuel mineral mines	2,800	2,736	2,638	
Mills and plants	1,127	1,061	1,104	
Number of nonfuel mineral mines <sup>2</sup>	284	268	261	
Number of mills and plants <sup>2</sup>	32	33	36	
Average annual wage, all mining <sup>3</sup>	dollars per year	66,988	68,406	69,593
Average annual wage, all industries <sup>3</sup>	do.	41,159	41,702	42,996
Per capita value <sup>1,4</sup>	dollars per person	1,220	1,230	1,310
National per capita value <sup>1</sup>	do.	241	236	252
do. Ditto.				

<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.

<sup>4</sup>Data rounded to no more than three significant digits.

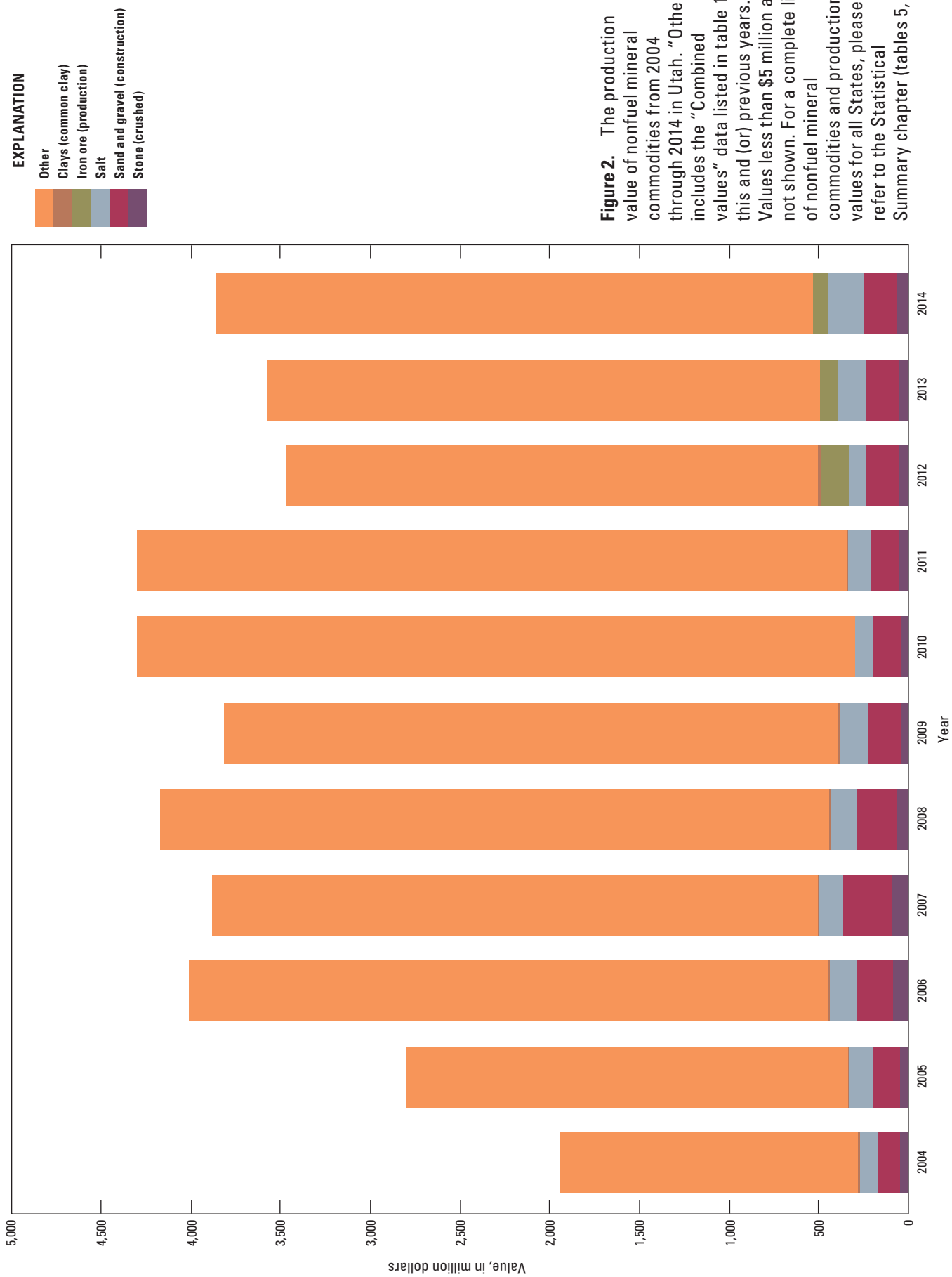
TABLE 3  
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN UTAH

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

Commodity	Company	County
Beryllium	Materion Corp.	Juab
Cement	Ash Grove Cement Co.	Do.
Do.	Holcim (US) Inc	Morgan
Clays:		
Bentonite	Redmond Clay & Salt Co Inc.	Sanpete
Do.	Western Clay Co.	Sevier
Common clay and (or) shale	Ash Grove Cement Co.	Juab
Do.	Interstate Brick Co. (several locations)	Utah
Do.	Utelite Corp.	Summit
Copper	CS Mining, LLC.	Beaver
Do.	Lisbon Valley Mining Co	San Juan
Copper, gold, molybdenum, silver	Rio Tinto plc (Bingham Canyon Mine)	Salt Lake
Gemstones <sup>1</sup>	Various	Various
Gypsum	Diamond K Gypsum Inc.	Emery
Do.	Sunroc Corp.	Juab
Do.	The Gardner Gypsum Co.	Do.
Do.	USG Corp.	Sevier
Helium	IACX Energy	Emery and Grand
Iron ore	CML Metals Corp.	Iron
Lime	Graymont Western U.S. Inc.	Millard
Magnesium compounds	Great Salt Lakes Minerals Corp.	Weber
Do.	Intrepid Wendover-Potash LLC	Tooele
Magnesium metal	US Magnesium LLC	Do.
Phosphate rock	JR Simplot Co.	Uintah
Potash	Intrepid Potash Inc.	Grand
Do.	Intrepid Wendover-Potash LLC	Tooele
Salt	Cargill Inc.	Do.
Do.	Moab Salt Inc.	Grand
Do.	Morton International Inc.	Tooele
Do.	North American Salt Co.	Weber
Do.	Redmond Clay & Salt Co Inc.	Sanpete
Stone, dimension	Bonneville Quarries Inc.	Box Elder
Do.	Castle Valley Stone, LLC	Summit
Do.	Mountain Valley Stone	Do.
Do.	Oakley Mountain Corp.	Box Elder
Do.	Sawtooth Stone LLC	Do.
Do.	Star Stone Quarries Inc.	Do.

Do. Ditto.

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



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