



# 2014 Minerals Yearbook

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**TEXAS [ADVANCE RELEASE]**

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# THE MINERAL INDUSTRY OF TEXAS

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**This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Texas Bureau of Economic Geology at the University of Texas at Austin for collecting information on all nonfuel minerals.**

In 2014, the value of the nonfuel mineral production<sup>1</sup> in the State of Texas (fig. 1) was \$5.11 billion, nearly a 40% increase from the revised 2013 value (table 1). Leading commodities included crushed stone, industrial sand and gravel, cement, construction sand and gravel, and salt, in decreasing order of value. On the basis of quantity, Texas was the leading U.S. producer of common clay, crushed stone, dimension stone, and portland cement. The State ranked second in production of ball clay, construction sand and gravel, gypsum, industrial sand and gravel, salt, talc, and zeolites. About 90% of the crushed stone and 79% of the dimension stone produced in the State consisted of limestone. Lime, produced from some of the limestone, was also an important mineral commodity. A variety of specialty clays—including bentonite, fire clay, fuller's earth, and kaolin—were produced. The Texas State gemstone is blue topaz; these and other gemstones were mined in Texas. The State ranked 3d in the United States in total nonfuel mineral production value, although, on a per capita basis, it ranked 25th with a value of \$189 compared with the national average of \$252. Mine employment and the number of active mines increased in 2014 from 2013 (table 2).

## Events, Trends, and Issues

Since the recession of 2007–09, the value of nonfuel mineral production in Texas has increased annually, surpassing the former record set in 2013, and increased substantially in 2014 (fig. 2). The increase in 2014 was caused primarily by a large increase in industrial sand and gravel production quantity and unit prices and an increase in the production values of crushed stone and cement. An increase in drilling activity in the oil industry was responsible for the increased consumption and production. Texas was home to the Eagle Ford shale play, a major resource being developed using hydraulic fracturing technology, which required large amounts of industrial sand as proppants. Oil production rose from an average of 407 million barrels per year from 2000 to 2010 to reach 1.16 billion barrels in 2014 (U.S. Energy Information Administration, 2018). Cement was also used in the oil industry. In 2014, shipments to Texas consumers reached 2.1 million metric tons of cement—an amount almost twice that of 2010—in the “oil well, mining, and waste stabilization” category of end use. Within this category in 2014, this was about half the cement consumed in the entire

<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>.

United States, with about 15% of total cement shipments to Texas destinations (van Oss, 2016, p. 16.21).

Construction activity, a major end use for crushed stone as well as cement, also increased. In part, this was in support of oil field infrastructure development. Housing, another component of the construction industry, also expanded. Housing completions in Texas increased to 166,982 in 2014 from 147,460 in 2013, rising from a recent low of 84,440 in 2008 (U.S. Census Bureau, undated). In 2014, crushed stone production reached a level only slightly below the prerecession peak in 2007, after 5 years of increases.

Although Texas had a wide variety of active industrial minerals producers in counties across Texas (table 3), no metals were mined in Texas in 2014. Aurcana Resource's Shafter silver mine had been placed on care-and-maintenance status at the end of 2013 owing to low silver prices. Texas Rare Earth Resources Corp., which had published a revised Preliminary Economic Assessment of the Round Top project in Hudspeth County, TX, in December 2013, responded to a downturn in the rare-earths market by planning a lower volume, staged development of the project. In 2014, the company secured options to purchase surface rights covering the potential Round Top project mine and plant areas from the Texas General Land Office (Texas Rare Earth Resources Corp., 2014, p. 5).

## 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

- Texas Rare Earth Resources Corp., 2014, Form 10–K—Fiscal year ended August 31, 2014: U.S. Securities and Exchange Commission, 55 p. (Accessed July 9, 2018, at <https://www.sec.gov/Archives/edgar/data/1445942/000121478214000142/trer10k083114.htm>.)
- U.S. Census Bureau, [undated], Number of new residential housing units by State (total): U.S. Census Bureau, 5 p. (Accessed July 16, 2017, at <http://www.census.gov/construction/bps/xls/annualhistorybystatebystructure.xls>.)
- U.S. Energy Information Administration, [2018], Texas field production of crude oil (thousand barrels): U.S. Energy Administration Agency. (Accessed March 9, 2018, at <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPTX1&f=M>.)
- van Oss, H.G., 2016, Cement [advance release], in *Metals and minerals: U.S. Geological Survey Minerals Yearbook 2014*, v. I, p. 16.1–16.33. (Accessed March 9, 2018, at <https://minerals.usgs.gov/minerals/pubs/commodity/cement/myb1-2014-cemen.pdf>.)

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

(Thousand metric tons and thousand dollars)

Mineral	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Cement:</b>						
Masonry	215	31,900 <sup>e</sup>	238	37,300 <sup>e</sup>	277	43,300 <sup>e</sup>
Portland	10,000	937,000 <sup>e</sup>	10,100	995,000 <sup>e</sup>	11,000	1,170,000 <sup>e</sup>
<b>Clays:</b>						
Bentonite	57	9,730	55 <sup>r</sup>	9,990	59	10,400
Common clay	1,940	13,400	1,520	12,100	1,740	14,400
Gemstones, natural <sup>e</sup>	NA	203	NA	172	NA	170
Lime	1,360	154,000	1,360	154,000	1,490	171,000
Salt	7,790	161,000	7,770	166,000	8,010	182,000
<b>Sand and gravel:</b>						
Construction	75,600 <sup>r</sup>	559,000 <sup>r</sup>	77,000 <sup>r</sup>	622,000 <sup>r</sup>	76,000	671,000
Industrial	7,010	357,000	7,080	434,000	16,500	1,300,000
<b>Stone:</b>						
Crushed	133,000 <sup>r</sup>	1,010,000 <sup>r</sup>	134,000 <sup>r</sup>	1,080,000 <sup>r</sup>	152,000	1,320,000
Dimension	766	151,000	905	151,000	922	159,000
Combined values of clays (ball clay, fire clay, fuller's earth, kaolin), gypsum (crude), helium [crude (2012–14) and Grade-A (2012)], talc, (crude), zeolites						
	XX	62,800 <sup>r</sup>	XX	57,800 <sup>r</sup>	XX	58,000
Total	XX	3,450,000 <sup>r</sup>	XX	3,720,000 <sup>r</sup>	XX	5,110,000

<sup>e</sup>Estimated. <sup>r</sup>Revised. NA Not available. 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.

TABLE 2  
MINING ACTIVITY IN TEXAS

Mining activity	2012	2013	2014
State rank <sup>1</sup>	7	4	3
<b>Employment, number:<sup>2</sup></b>			
Nonfuel mineral mines	6,081	6,275	6,715
Mills and plants	4,049	4,253	4,283
Number of nonfuel mineral mines <sup>2</sup>	727	721	727
Number of mills and plants <sup>2</sup>	107	110	106
Average annual wage, all mining <sup>3</sup>	dollars per year	62,201	62,733
Average annual wage, all industries <sup>3</sup>	do.	51,590	52,146
Per capita value <sup>1</sup>	dollars per person	132	140
National per capita value <sup>1</sup>	do.	241	236

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.

TABLE 3  
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN TEXAS

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

Commodity	Company	County
Cement	Alamo Cement Co.	Bexar
Do.	Ash Grove Cement Co.	Ellis
Do.	Buzzi Unicem USA Inc.	Nolan
Do.	Capitol Aggregates Inc.	Bexar
Do.	CEMEX	Comal and Ector
Do.	Holcim (US) Inc.	Ellis
Do.	Lehigh Cement Co.	McLennan
Do.	Martin Marietta Materials Inc.	Comal and Ellis
Do.	Texas Lehigh Cement Co. LP	Hays
Clays:		
Ball clay	Unimin Corp.	Cherokee
Bentonite	BYK Additives Inc.	Gonzales
Do.	Cowboy Mining Co.	Brewster
Do.	Mid-Tex Minerals Inc.	Fayette
Do.	Texas Sodium Bentonite Inc.	Brewster
Common clay and (or) shale	Acme Brick Co.	Austin, Bastrop, Denton, Henderson, Parker
Do.	Ash Grove Cement Co.	Ellis
Do.	Cemex	Guadalupe
Do.	D'Hanis Brick & Tile Co.	Medina
Do.	Forterra Brick, LLC	Henderson
Do.	Hanson Brick	Bastrop and Palo Pinto
Do.	Lehigh Cement Co.	McLennan
Do.	Martin Marietta Materials Inc.	Comal and Ellis
Do.	Red Dog Tracks Inc.	Parker
Do.	Trinity Industries Inc.	Navarro
Fire clay	Elgin-Butler Brick Co.	Bastrop
Fuller's earth	Balcones Minerals Corp.	Fayette
Kaolin	U.S. Silica Co.	Limestone
Gemstones <sup>1</sup>	Various	Various
Gypsum	ACG Materials	Wheeler
Do.	Galmors Inc.	Do.
Do.	Georgia-Pacific LLC	Gillespie, Hardeman, Nolan
Do.	National Gypsum Co.	Kimble and Stonewall
Do.	USG Corp.	Nolan
Helium	Air Products Corporation, Inc.	Hansford
Do.	DCP Midstream, LLC	Do.
Do.	do.	Hutchinson
Do.	Eagle Rock Energy	Moore
Do.	Pioneer Natural Resources Co.	Potter
Lime	Austin White Lime Co.	Travis
Do.	Lhoist North America	Bosque, Burnet, Comal
Do.	US Lime & Minerals Inc.	Johnson
Salt	Corpus Christi Brine Services Inc.	Duval
Do.	Morton International Inc.	Van Zandt
Do.	Olin Corp.	Brazoria
Do.	Texas Brine Corp.	Chambers, Harris, Jefferson, Matagorda
Do.	United Salt Corp.	Chambers and Harris

See footnotes at end of table.

TABLE 3—Continued  
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN TEXAS

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

Commodity	Company	County
Sand and gravel, industrial	16 Sand LLC	Atascosa
Do.	Barry Industrial Sand Inc.	Orange
Do.	Cleveland Sand & Gravel	Liberty
Do.	Dolen Specialty Sand Products LLC	Do.
Do.	Eagle Materials Inc.	Nueces
Do.	EOG Resources Inc.	Hood
Do.	Erna Frac Sand LC	Mason
Do.	Espey Silica Sand Co., Inc.	Atascosa
Do.	Fairmont Santrol	McCulloch
Do.	Industrial Sand Products LLC	Harris
Do.	Liberty Materials Inc.	Liberty and Montgomery
Do.	McCraw Materials	Fannin
Do.	NBR Sand LLC	Smith
Do.	Palo Alto Silica Sand Co Inc.	Atascosa
Do.	Permian Frac Sand LLC	McCulloch
Do.	Premier Silica LLC	Do.
Do.	Specialty Sand Co.	Colorado, Harris, Newman
Do.	Superior Silica Sands LLC	Limestone
Do.	Unimin Corp.	McCulloch and Somervell
Do.	U.S. Silica Co.	Limestone and McCulloch
Do.	Vista Proppants and Logistics	Hood
Stone, dimension	A J Brauer Stone Inc.	Williamson
Do.	Aguado Stone Inc.	Mills, Shackelford, Williamson
Do.	Alkusari Texas Limestone Corp.	Shackelford
Do.	Apache Stone Quarry LLC	Bell
Do.	Arnold Stone Inc.	Erath
Do.	Brister Stone Inc.	San Saba
Do.	Capitol Area Resources	Williamson
Do.	Carroll Stone And Rock Inc.	Parker
Do.	Champion Stone Co. LLC	Shackelford and Williamson
Do.	Cobra Stone Inc.	Hood, San Saba, Shackelford, Williamson
Do.	Cold Spring Granite Co.	Burnet and Gillespie
Do.	Continental Cream Quarries LLC	Williamson
Do.	Continental Quarries Inc	Shackelford
Do.	Cooper Stone Co., Inc.	Williamson
Do.	Culp And Son Quarry LLC	Do.
Do.	Davis Limestone Inc	Jones
Do.	El Mezquital Trucking And Rock LLC	El Paso
Do.	Ervin Masonry LLC	Gillespie
Do.	Escondido Stone	San Saba
Do.	Espinoza Stone Inc.	Shackelford and Williamson
Do.	Garza Masonry Stone Inc.	Gillespie
Do.	Gordon Stone Co.	Erath
Do.	Greater Texas Stone LLC	San Saba
Do.	Hernandez Rock	Somervell
Do.	Hill Stone Inc.	Williamson
Do.	Howard Pierce & Sons Stone Co., Inc.	San Saba and Williamson
Do.	J And J Stone Co.	Williamson
Do.	J B Stone Co.	Do.
Do.	J C Building Stone	Kendall
Do.	Jacobs Stone Products Inc.	San Saba
Do.	Juarez Stone Inc.	Williamson
Do.	Kirby Stone Co. LLC	Bell and Lampass
Do.	Limestone Connection	Gillespie
Do.	Mendoza Stone LLC	Mills
Do.	Mezger Enterprises	Shackelford
Do.	Millsap Materials LLC	Palo Pinto

See footnotes at end of table.

TABLE 3—Continued  
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN TEXAS

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

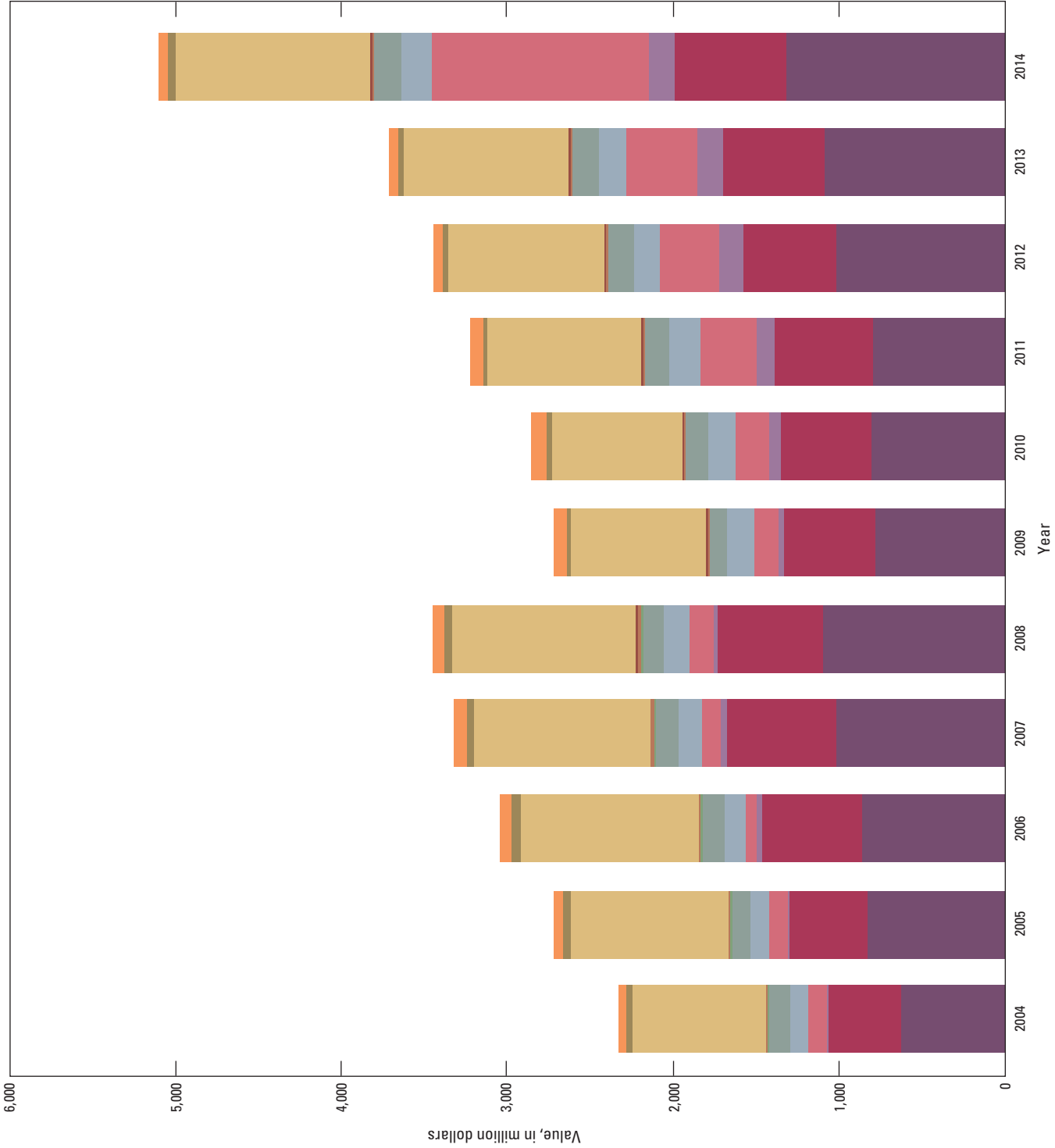
Commodity	Company	County
Stone, dimension—Continued		
Do.	Natural Building Stone Co.	Hood
Do.	Olalde Stone Co.	Bell
Do.	Quality Stone Co.	Williamson
Do.	RLF Salado Quarries LLC	Lampasas, Shackelford, Williamson
Do.	Rockwall Materials Center LLC	El Paso
Do.	RS Materials Group LLC	Bell
Do.	San Felipe Stone Inc.	Haskell and Hood
Do.	Scott Stone Supply	Hood
Do.	Soto's Rock LLC	El Paso
Do.	Stonezone Quarries LLC	Haskell
Do.	Sunset Stone LLC	Palo Pinto
Do.	Superior Stone Inc.	Bell
Do.	Texastone Quarries	Glasscock
Do.	True Limestone Inc.	Jones
Do.	Unger Texas Stone	Shackelford
Do.	Valle Stone LLC	San Saba
Do.	Westex Stone Inc.	Haskell
Talc	American Talc Co. Inc.	Hudspeth
Zeolites	Zeotech Corp.	McMullen

Do., do. Ditto.

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

**EXPLANATION**

- Other
- Cement (masonry)
- Cement (portland)
- Clays (bentonite)
- Clays (common clay)
- Gypsum (crude)
- Lime
- Salt
- Sand and gravel (industrial)
- Stone dimension
- Sand and gravel (construction)
- Stone (crushed)



**Figure 2.** The production value of nonfuel mineral commodities from 2004 through 2014 in Texas. "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).