

THE MINERAL INDUSTRY OF OKLAHOMA

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

In 1999, the preliminary estimated value¹ of nonfuel mineral production for Oklahoma was \$477 million, according to the U.S. Geological Survey (USGS). This was a 4% increase from that of 1998,² following nearly an 18% increase from 1997 to 1998. The State remained 31st in rank among the 50 States in total nonfuel mineral production value, of which Oklahoma accounted for about 1% of the U.S. total.

In 1999, crushed stone and portland cement were Oklahoma's

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or 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 1999 USGS mineral production data published in this chapter are preliminary estimates as of May 2000, and are expected to change. For some mineral commodities, such as, construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. A telephone listing for the specialists may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>, by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists), or by calling USGS information at (703) 648-4000 for the specialist's name and number. All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>; facsimile copies may be obtained from MINES FaxBack.

²Values, percentage calculations, and rankings for 1998 may vary from the Minerals Yearbook, Area Reports: Domestic 1998, Volume II, owing to the revision of preliminary 1998 to final 1998 data. Data for 1999 are preliminary and are expected to change; related rankings may also be subject to change.

leading nonfuel mineral commodities, accounting for 34% and 29%, respectively, of the State's total nonfuel mineral value. The combined values of construction materials—crushed stone, cement (portland and masonry), construction sand and gravel, gypsum, and common clay, in descending order of value—accounted for almost 77% of the total value. Oklahoma's increase in 1999 mostly resulted from the higher values of crushed stone, construction sand and gravel, and portland cement, in descending order of change (table 1). Smaller yet significant increases also occurred in Grade-A helium, iodine, and salt. Only crude helium had much of a decrease, dropping by more than \$5 million. In 1998, increases in crushed stone, Grade-A helium (up more than \$19 million), construction sand and gravel, crude helium, crude iodine, and gypsum led the State's increase in value; several nonfuel minerals had decreases in value but these were small and had little effect on the overall net result (table 1).

Oklahoma's mines exclusively produced industrial minerals; no metals were mined in the State. Based upon USGS estimates of the quantities produced in the 50 States during 1999, Oklahoma remained the only State that produced iodine, first in gypsum, second of four States that produce tripoli, third in Grade-A helium and third of three States in crude helium, fifth in feldspar, and eighth in industrial sand and gravel. Additionally, significant quantities of crushed stone, portland and masonry cements, common clays, and gemstones (descending order of value) were produced in the State.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN OKLAHOMA 1/ 2/
(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1997		1998		1999 p/	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement:						
Masonry	89	6,500 e/	96	7,140 e/	98	7,000 e/
Portland	1,900	132,000 e/	1,830	132,000 e/	1,880	136,000 e/
Clays: Common	653	4,430	658	4,450	662	4,330
Gemstones	NA	354	NA	53	NA	224
Gypsum, crude	3,100	17,500	3,020	19,500	3,090	19,900
Iodine, crude metric tons	1,320	19,600	1,490	22,700	1,630	24,600
Sand and gravel:						
Construction	8,250	29,000	9,000	35,900	9,950	40,500
Industrial	1,380	28,200	1,380	29,600	1,380	29,600
Stone:						
Crushed	31,400 r/ 3/	108,000 r/ 3/	38,500	152,000	39,400	160,000
Dimension metric tons	5,770	995	3,480	635	1,580	578
Combined values of feldspar, helium, lime, salt, stone [crushed shell, traprock, and miscellaneous (1997)], tripoli, and values indicated by symbol W	XX	38,600	XX	55,600	XX	54,600
Total	XX	384,000 r/	XX	460,000	XX	477,000

e/ Estimated. p/ Preliminary. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data. XX Not applicable.

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

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

3/ Excludes certain stones; kind and value included with "Combined values" data.

TABLE 2
OKLAHOMA: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1997				1998			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	41 r/	25,800 r/	\$79,500 r/	\$3.08 r/	44	27,500	\$108,000	\$3.93
Dolomite	3 r/	1,790 r/	7,950 r/	4.43 r/	3	1,570	6,570	4.20
Granite	3	W	W	5.48 r/	3	6,720	25,700	3.83
Sandstone	7 r/	2,490 r/	13,100 r/	5.28 r/	6	1,210	4,450	3.69
Shell	1 r/	W	W	W	--	--	--	--
Miscellaneous stone	3 r/	(2/)	(2/)	(2/)	3	1,500	7,130	4.76
Total or average	XX	31,400 r/	108,000 r/	3.43 r/	XX	38,500	152,000	3.95

r/ Revised. W Withheld to avoid disclosing proprietary data; included in "Total." XX Not applicable. -- Zero.

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

2/ Withheld to avoid disclosing company proprietary data; excluded from "Total."

TABLE 3
OKLAHOMA: CRUSHED STONE SOLD OR USED BY PRODUCERS
IN 1998, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousand)	Unit Value
Coarse aggregate (+1 1/2 inch):			
Riprap and jetty stone	276	\$1,660	\$6.00
Filter stone	66	386	5.84
Other coarse aggregate	62	324	5.23
Coarse aggregate, graded:			
Concrete aggregate, coarse	5,990	26,800	4.48
Bituminous aggregate, coarse	363	1,880	5.16
Bituminous surface-treatment aggregate	699	3,330	4.76
Railroad ballast	W	W	3.91
Other graded coarse aggregate	9,110	37,400	4.49
Fine aggregate (-3/8 inch):			
Stone sand, concrete	468	1,650	3.52
Stone sand, bituminous mix or seal	169	702	4.15
Screening, undesignated	1,160	4,560	3.92
Other fine aggregate	752	2,840	3.77
Coarse and fine aggregates:			
Graded road base or subbase	1,880	8,240	4.37
Unpaved road surfacing	W	W	3.85
Crusher run or fill or waste	2,410	8,680	3.60
Other coarse and fine aggregates	407	1,564	3.84
Other construction materials	220	1,050	4.77
Agricultural limestone	(3/)	(3/)	3.87
Chemical and metallurgical: Cement manufacture	2,090	10,100	4.82
Special: Other fillers or extenders	(3/)	(3/)	6.61
Unspecified: 4/			
Actual	9,360	30,200	3.23
Estimated	2,440	7,720	3.17
Total or average	38,500	152,000	3.95

W Withheld to avoid disclosing company proprietary data; included with "Other."

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

2/ Includes dolomite, granite, limestone, miscellaneous stone, sandstone, and shell.

3/ Withheld to avoid disclosing company proprietary data; included in "Total."

4/ Reported and estimated production without a breakdown by end use.

TABLE 4
OKLAHOMA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1998, BY USE AND DISTRICT 1/ 2/

(Thousand metric tons and thousand dollars)

Use	District 2		District 3		District 4		District 5	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch) 3/	223	1,490	85	448	W	W	W	W
Coarse aggregate, graded 4/	4,570	22,200	502	2,540	9,610	38,400	1,480	6,310
Fine aggregate (-3/8 inch) 5/	676	2,670	W	W	W	W	324	1,300
Coarse and fine aggregate 6/	2,090	8,670	1,040	3,850	772	2,680	1,080	4,380
Other construction materials	--	--	220	1,050	--	--	--	--
Agricultural 7/	W	W	W	W	--	--	W	W
Chemical and metallurgical 8/	1,050	4,610	--	--	1,040	5,460	--	--
Special 9/	--	--	--	--	W	W	--	--
Unspecified: 10/								
Actual	W	W	W	W	W	W	--	--
Estimated	W	W	325	1,020	650	2,130	W	W
Total	10,100	44,000	3,880	14,600	20,200	77,000	4,300	16,400

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

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

2/ No production reported in District 1.

3/ Includes filter stone, riprap and jetty stone, and other coarse aggregate.

4/ Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.

5/ Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.

6/ Includes crusher run (select material or fill), graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

7/ Includes agricultural limestone.

8/ Includes cement manufacture.

9/ Includes other fillers or extenders.

10/ Reported and estimated production without a breakdown by end use.

TABLE 5
OKLAHOMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1998,
BY MAJOR USE CATEGORY 1/

Use	Quantity	Value (thousands)	Unit value
	(thousand metric tons)		
Concrete aggregate	3,980	\$18,000	\$4.53
Plaster and gunite sands	199	977	4.91
Concrete products (blocks, bricks, pipe, decorative, etc.)	54	280	5.19
Asphaltic concrete aggregates and other bituminous mixtures	197	559	2.84
Road base and coverings	267	851	3.19
Fill	843	1,490	1.77
Other miscellaneous uses	3	29	9.67
Unspecified: 2/			
Actual	1,650	6,990	4.23
Estimated	1,810	6,770	3.74
Total or average	9,000	35,900	3.99

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

2/ Reported and estimated production without a breakdown by end use.

TABLE 6
OKLAHOMA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1998,
BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	632	2,840	1,260	4,870
Asphaltic concrete aggregates and road base materials	185	597	158	582
Fill	133	209	479	943
Other miscellaneous uses	3	29	--	--
Unspecified 3/	472	3,030	1,110	3,070
Total	1,420	6,700	3,010	9,460
	District 4		Districts 3 and 5 4/	
	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products 2/	1,420	6,680	912	4,880
Asphaltic concrete aggregates and road base materials	W	W	W	W
Fill	149	221	81	120
Unspecified 3/	W	W	W	W
Total	2,550	11,500	1,230	6,430

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

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

2/ Includes plaster and gunite sands.

3/ Reported and estimated production without a breakdown by end use.

4/ Districts 3 and 5 are combined to avoid disclosing company proprietary data.