

THE MINERAL INDUSTRY OF KANSAS

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the Kansas Geological Survey for collecting information on all nonfuel minerals.

Kansas remained 25th in 1995 among the 50 States in total nonfuel mineral production value,¹ according to the U.S. Geological Survey (USGS). The estimated value for 1995 was \$486 million, a 2% decrease from that of 1994. This followed a more than 12% increase from 1993 to 1994 (based on final data). The State accounted for more than 1% of the U.S. total nonfuel mineral production value.

Grade-A helium and salt were Kansas' leading nonfuel mineral commodities accounting for 22% and 21%, respectively, of the State's total nonfuel mineral production value. Portland cement and crushed stone followed close behind with about 20% of the value each. In 1995, most of Kansas' decrease in nonfuel mineral value resulted from small drops in salt and crushed stone values. In contrast, in 1994, one-half of the year's \$55 million increase in value (see table 1) was accounted for by a 36% increase in the value of portland cement. Nonfuel mineral values that increased from 1995 were as follows: grade-A helium, crude helium, crude gypsum, industrial sand and gravel, bentonite clays, and pumice and pumicite. Other nonfuel mineral commodities that decreased in value were: salt, portland cement, construction sand and gravel, masonry

cement, common clays, dimension stone, and gemstones.

Production of nonfuel minerals in Kansas consisted entirely of industrial minerals; no metals were mined in the State. Based on USGS estimates of the quantities produced in 1995 in the 50 States, Kansas continued as the Nation's leading producer of crude and grade-A helium. The State remained fifth in salt production and sixth of the six pumice-producing States, while it increased from eighth to seventh in gypsum production. Significant quantities of portland cement, construction sand and gravel, common clays, and dimension stone also were produced in the State. Additionally, bentonite mining resumed in 1995.

The Kansas Geological Survey (KGS)² reported that most of the State's industrial minerals producers experienced a good year in 1995 as a result of a relatively strong State and National economy. Cement occasionally was in short supply as a result of fairly robust construction activity.

A request to dredge sand on the Kansas River between Lawrence and Topeka generated considerable discussion concerning the advantages and disadvantages to the communities along the river. Because the proposed site was near an old landfill, concern was expressed about possible

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN KANSAS^{1 2}

Mineral	1993		1994		1995 ^p		
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)	
Cement:							
Masonry	metric tons	35,400	\$2,410	24,000	\$2,090	20,200	\$1,760
Portland	do.	1,380,000	73,900	1,640,000	101,000	1,620,000	99,700
Clays	thousand metric tons	³ 513	³ 1,970	³ 556	³ 2,150	656	3,810
Helium:							
Crude	million cubic meters	23	20,400	32	31,400	33	32,700
Grade-A	do.	52	104,000	53	105,000	55	108,000
Salt	thousand metric tons	⁴ 2,320	⁴ 103,000	2,660	108,000	2,740	103,000
Sand and gravel (construction)	do.	^e 11,900	^e 30,700	11,200	29,600	10,400	28,000
Stone:							
Crushed	do.	⁵ 18,800	⁵ 90,700	21,500	103,000	20,000	97,000
Dimension ⁵	metric tons	24,700	2,540	23,700	1,730	20,000	1,340
Combined value of clays [fuller's earth 1993-94], gemstones, gypsum (crude), pumice and pumicite, salt [brine (1993)], sand and gravel (industrial), and stone [crushed sandstone (1993), dimension sandstone (1993-94)]							
		XX	12,600	XX	11,900	XX	10,400
Total		XX	442,000	XX	497,000	XX	486,000

^pEstimated. ^pPreliminary. XX Not applicable.

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

²Data are rounded to three significant digits; may not add to totals shown.

³Excludes certain clays; kind and value included with "Combined value" figure.

⁴Excludes salts in brines; value included with "Combined value" figure.

⁵Excludes certain stones; kind and value included with "Combined value" figure.

river encroachment into the landfill area. Many environmental and recreation advocates opposed dredging on this portion of the river because of its relatively pristine condition and because it is host to the bald eagle. Other opponents claimed that such dredging causes accelerated erosion along the river banks.

Proponents of the dredging operation noted that the proposed site is near the Topeka-Kansas City metropolitan area, a populous region requiring large amounts of sand and gravel for construction. They think a properly planned operation would not affect bank erosion. River dredging is generally considered the most economical way to obtain sand because there is no overburden to strip. Additionally, there are negatives to dredging on the floodplain. It often removes productive farmland, leaves a pit that may require reclamation, and has a limited productive lifetime. Unlike a river, there is no recharge of readily usable material in floodplain deposits. These deposits commonly change in character and quality, making them uneconomical for sand production. These issues were brought before a State legislative committee.

Dredging permits and production limits along the lower Kansas River are currently determined by the U.S. Army Corps of Engineers to control the degree of river bed lowering and related damage to structures, such as pipelines. The production limits were established only a few years ago. The floods of 1993, along with increased flows from the reservoir system along the river's tributaries resulting from these floods were thought to affect recharge rates. At yearend 1995, the subject was still being debated, in part because of the difficulty in determining whether the Corps' limits are accurate in achieving a steady river bed level.

In other developments, Hunt-Midwest Corp., a crushed stone producer in Kansas and Missouri, acquired Killough Quarries, Inc., another long-time major crushed stone producer with operations in eastern Kansas. Hunt-Midwest will continue to operate the former Killough quarry operations except for Dunbar Trucking and Excavating Co., which was sold to Lawrence Ready-Mix Corp.

In 1994, the Kansas Legislature, for the first time, established procedures for mine permitting and reclamation. The Legislature named the State Conservation Commission as the organization responsible for implementing the new rules. Previous to this action, such matters were under the jurisdiction of the respective county governments. The Commission now maintains a list of all mineral operations in the State, except for river dredges and small operators whose combined operations are less than 0.8 hectares (2 acres).

The KGS released two recently completed maps; map M-39 shows the locations of active pits and quarries and map M-40 shows locations of abandoned pits and quarries in the State. Both are available through the Survey's Sales and Publications Division.

¹The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending on 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 1995 USGS mineral production data are estimates, as of Dec. 1995. For some commodities, especially 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. Call MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset and request Document No. 1000 for a telephone listing of all mineral commodity specialists or call USGS information at (703) 648-4000 for the specialist's name and number.

²This report includes information provided by the KGS.

TABLE 2
KANSAS: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE²

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	25	\$113	\$4.52
Riprap and jetty stone	146	1,110	7.58
Filter stone	369	1,970	5.34
Other coarse aggregate	W	W	6.18
Coarse aggregate, graded:			
Concrete aggregate, coarse	944	5,460	5.78
Bituminous aggregate, coarse	988	6,270	6.34
Bituminous surface-treatment aggregate	158	1,000	6.35
Railroad ballast	W	W	7.40
Other graded coarse aggregate	11	60	5.45
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	4.99
Stone sand, bituminous mix or seal	77	273	3.55
Screening, undesignated	310	1,220	3.95
Coarse and fine aggregate:			
Graded road base or subbase	1,570	6,890	4.39
Unpaved road surfacing	1,200	5,520	4.59
Crusher run or fill or waste	859	4,400	5.12
Other coarse and fine aggregate	153	1,020	6.65
Other construction materials ³	547	3,220	5.88
Agricultural:			
Agricultural limestone	208	927	4.46
Other agricultural uses	1	4	4.00
Chemical and metallurgical: Cement manufacture	1,910	7,430	3.88
Unspecified:⁴			
Actual	7,110	31,700	4.46
Estimated	4,890	24,900	5.09
Total	21,500	103,000	4.82

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

¹Includes limestone, limestone-dolomite, and sandstone and quartzite.

²Data are rounded to three significant digits; may not add to totals shown.

³Includes drain fields, roofing granules, and waste material.

⁴Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 3
KANSAS: CRUSHED STONE SOLD OR USED, BY KIND¹

Kind	1993				1994			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	127	¹ 18,800	\$90,700	\$4.81	² 113	² 20,600	² \$98,500	² \$4.79
Sandstone and quartzite	(³)	(³)	(³)	(³)	3	919	4,920	5.4
Total	XX	18,800	90,700	4.81	XX	21,500	103,000	4.8

¹Revised. XX Not applicable.

²Data are rounded to three significant digits.

³Includes "Limestone-dolomite," reported with no distinction between the two.

⁴Excludes sandstone from State total to avoid disclosing company proprietary data.

TABLE 4
KANSAS: CRUSHED STONE¹ SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT²

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) ³	238	1,550	140	747	—	—
Coarse aggregate, graded ⁴	W	W	549	W	—	—
Fine aggregate (-3/8 inch) ⁵	W	W	W	W	—	—
Coarse and fine aggregate ⁶	1,350	7,140	W	W	123	212
Other construction materials ⁷	795	5,200	1,010	8,330	—	—
Agricultural ⁸	41	(⁹)	70	(⁹)	—	—
Chemical and metallurgical ¹⁰	—	—	—	—	—	—
Unspecified:¹¹						
Actual	3,440	(⁹)	1,740	(⁹)	—	—
Estimated	2,930	16,100	—	—	—	—
Total	8,790	48,600	3,520	15,600	123	212
	District 5		District 6			
	Quantity	Value	Quantity	Value		
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) ³	W	W	W	W		
Coarse aggregate, graded ⁴	—	—	826	W		
Fine aggregate (-3/8 inch) ⁵	W	W	W	W		
Coarse and fine aggregate ⁶	W	W	1,180	5,030		
Other construction materials ⁷	441	2,690	708	7,630		
Agricultural ⁸	(⁹)	(⁹)	(⁹)	(⁹)		
Chemical and metallurgical ¹⁰	—	—	1,910	7,430		
Unspecified:¹¹						
Actual	(⁹)	(⁹)	(⁹)	(⁹)		
Estimated	—	—	1,960	8,710		
Total	1,050	4,000	8,000	35,000		

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

¹There was no crushed stone produced in District 4.

²Data are rounded to three significant digits; may not add to totals shown.

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

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

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

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

⁷Includes drain fields, roofing granules, and waste material.

⁸Includes agricultural limestone and other agricultural uses.

⁹Withheld to avoid disclosing company proprietary data; included in "Total."

¹⁰Includes cement manufacture.

¹¹Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY¹

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	2,880	\$8,070	\$2.80
Plaster and gunite sands	170	408	2.40
Concrete products (blocks, brick, pipe, decorative, etc.)	154	609	3.95
Asphaltic concrete aggregates and other bituminous mixtures	1,710	5,620	3.28
Road base and coverings ²	2,800	6,620	2.36
Fill	1,290	2,180	1.69
Snow and ice control	93	282	3.03
Other ³	69	245	3.55
Unspecified: ⁴			
Actual	684	1,800	2.63
Estimated	1,350	3,750	2.78
Total or average	11,200	29,600	2.64

¹Data are rounded to three significant digits; may not add to totals shown.

²Includes road and other stabilization (cement and lime).

³Includes filtration, railroad ballast, and roofing granules.

⁴Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 6
KANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY USE AND DISTRICT¹

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ²	831	2,430	477	1,620	(3)	(3)
Asphaltic concrete aggregates and road base materials ⁴	752	2,140	757	1,870	780	1,530
Other miscellaneous uses ⁶	39	111	65	200	(3)	(3)
Unspecified: ⁷						
Actual	156	296	4	46	1	3
Estimated	757	2,020	152	499	13	33
Total	2,540	7,000	1,460	4,240	850	1,760
Use	District 4		District 5		District 6	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate and concrete products ²	(3)	(3)	1,490	3,910	—	—
Asphaltic concrete aggregates and road base materials ⁴	1,400	4,070	2,060	4,650	561	156
Other miscellaneous uses ⁶	(3)	(3)	38	124	—	—
Unspecified: ⁷						
Actual	6	13	516	1,440	—	—
Estimated	—	—	426	1,200	—	—
Total	1,760	5,120	4,530	11,300	561	156

¹Data are rounded to three significant digits; may not add to totals shown.

²Includes plaster and gunite sands.

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

⁴Includes fill and road and other stabilization (cement and lime).

⁵Includes unspecified within all districts.

⁶Includes filtration, railroad ballast, roofing granules, and snow and ice control.

⁷Includes production reported without a breakdown by end use and estimates for nonrespondents.



U. S. Geological Survey Minerals Information

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