



2008 Minerals Yearbook

KANSAS

THE MINERAL INDUSTRY OF KANSAS

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

In 2008, Kansas' nonfuel raw mineral production¹ was valued at \$1.12 billion, based upon annual U.S. Geological Survey (USGS) data. This represented an increase of \$43.5 million, or 4%, from the State's total nonfuel mineral production value of 2007, following a \$98 million, or 10%, increase from 2006 to 2007. The State rose to 22d from 23rd in rank among the 50 States in total nonfuel mineral production value, of which Kansas accounted for nearly 1.6% of the U.S. total.

Grade-A helium remained Kansas' leading mineral commodity by value in 2008, accounting for more than 34% of the State's total nonfuel mineral value. The four leading mineral commodities by value, Grade-A helium, portland cement, crushed stone, and salt (in order of decreasing value), accounted for more than 88% of the total mineral production value. The increase in total mineral production value in 2008 was led by a \$68 million increase in the value of Grade-A helium. As raw material, energy, and distribution costs rose in 2008, helium suppliers increased the price of helium owing to their increased production costs, accounting for the 21.6% increase in production value. With a greater than 10% decrease in quantity produced, Grade-A helium's unit value increase by 35%. The unit price of crude helium increased drastically, further explaining the increase in the price of Grade-A helium (data withheld—company proprietary data), as Grade-A is produced from processed crude helium. The production value of salt increase by more than \$20 million and increases in values took place in crude helium, dimension stone, fuller's earth clay, Grade-A helium, industrial sand and gravel, masonry cement, and pumice and pumicite.

In 2008, decreases in production value took place in crude helium, common clays (down by 25%) and portland cement (down by 13%). Smaller, yet significant, decreases in production value took place in crushed stone and construction sand and gravel as well (table 1). All mineral commodities that decreased in 2008 are heavily consumed in housing and construction markets, thus, as the U.S. housing and construction markets faltered in 2008, so did the production of these commodities.

Kansas continued to lead the Nation in helium production, in crude (of two producing States) and Grade-A (of seven producing States) helium. In fact, the State produced 61% of the total amount of Grade-A helium in the United States. In 2008, Kansas remained 5th in salt production, 7th in pumice and pumicite production, and 12th in the production of crude

gypsum. The State rose in rank from 10th to 9th in fuller's earth clay, from 14th to 12th in common clay, and climbed three ranks in crushed stone production. Furthermore, Kansas dropped in rank from 12th to 13th in the quantity of portland cement produced in 2008 and from 19th to 22d in dimension stone production. In 2008, Kansas continued to solely produce industrial minerals, as it has since 1970.

The following narrative information was provided by the Kansas Geological Survey (KGS)².

Mine Development, Employment, and Reclamation Awards

During 2008 there were a total of 1,136 mining sites in Kansas for nonfuel minerals, with 137 private companies operating at 479 sites, and 59 county government operations operating at 657 sites. This represented an increase of private operators from 2007 of 3 operators and 15 mining sites, while the same number of county governments (59) had mining operations in 2008 as existed in 2007, with an increase of 6 mining locations.

Mining of nonfuel minerals during 2008 resulted in 312 hectares (ha) mined and 170 ha that were reclaimed during the year. Since the State nonfuel mining reclamation program under State control was started in on July 1, 1994, there have been a total of 1,980 ha of mined land reclaimed and released from regulatory review (Dennis Baker, Land Reclamation Program Manager, Kansas Conservation Commission, written commun., March 23, 2009).

Data concerning employment in the Kansas mining industry has been provided by the Labor Market Information Services of the Kansas Department of Labor. During 2008, the mining industry totaled 1,199 employees, having an average annual salary of \$41,807. These figures represented an increase in average annual salary of 4.0%, and an increase of 1.4% in the total number of mining employees in the State from the equivalent 2007 numbers.

The recipient of the "Kansas Governor's Mined Land Reclamation Award" for 2008 was Midwest Minerals, Inc., for reclamation operations at its Plant #5 in Pittsburg, KS. Bayer Construction Company, Inc., of Manhattan, KS, recipient of the 2007 award, went on to win the national "Non-coal Reclamation Award" in 2008, given by the National Association of State Land Reclamationists, for reclamation operations at its Moore Quarry in Riley County.

Government Activities

The 2008 Kansas Geological Survey Field Conference, which is designed to give policymakers a broader, more-informed

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 2008 USGS mineral production data published in this chapter are those available as of August, 2010. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

²Daniel R. Suchy, a geologist at the Kansas Geological Survey, authored the text of the State's mineral industry information provided by that agency.

perspective of natural resource issues useful in formulating policies, was organized and led primarily by members of the Kansas Geological Survey and cosponsored with several other State agencies. The conference's theme centered around natural resource and environmental issues in north-central Kansas, including, aggregate resources, conservation easements, road and bridge construction, water supply issues and controversies, and wind farms. Information on the field conference, including background material, is available from the Kansas Geological Survey (Lyle and others, 2008).

A major geologic mapping program by the KGS and supported in part by the STATEMAP program of the National Cooperative Geologic Mapping Program (NCGMP) continued during 2008. Geologic mapping in 2008 was conducted in Dickinson, McPherson, Morris, and Reno Counties, with a new mapping project started in Harvey County. Additional geologic mapping in the EDMAP program of the NCGMP was conducted in Doniphan and Republic Counties by the University of Kansas

in cooperation with the KGS. New geologic maps published by the KGS in 2008 include a map of Crawford County (West and others, 2008) and a new geologic map of Kansas, which, in part, used data compiled from county maps developed under the STATEMAP program (Kansas Geological Survey, 2008). Several additional county geologic maps for which field geologic mapping has been completed were in various stages of preparation and review during the year.

References Cited

- Kansas Geological Survey, 2008, Surficial geology of Kansas: Kansas Geological Survey, Map M-118, scale 1:500,000, size 173 x 99 centimeters.
 Lyle, S.A., Buchanan, R.C., Evans, C.S., and Sawin, R.S., 2008, Kansas field conference, field guide, 2008 field conference, Smoky Hill and Republican River Valleys, water, wind, and economic development: Kansas Geological Survey Open-file Report 2008-07, variously paginated.
 West, R.R., Sawin, R.S., and Brady, L.L., 2008, Surficial geology of Crawford County, Kansas: Kansas Geological Survey, Map M-120, scale 1:50,000, size 145 x 94 centimeters.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2006		2007		2008	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	3,000	286,000 ^e	2,760	282,000 ^e	2,400	246,000 ^e
Clays, common	697	7,440	563	3,830	548	2,840
Gemstones, natural	NA	1	NA	1	NA	1
Helium, Grade-A million cubic meters	85	245,000	88	316,000	79	384,000
Salt	2,600	144,000	2,870	158,000	3,010	178,000
Sand and gravel, construction	12,100	50,000	10,700	49,600	9,930	49,000
Stone:						
Crushed	23,300	181,000	23,400 ^r	199,000 ^r	23,000	180,000
Dimension	13 ^r	1,930 ^r	14 ^r	1,990 ^r	20	2,560
Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude), pumice and pumicite, sand and gravel (industrial)	XX	63,100	XX	67,200	XX	78,400
Total	XX	979,000 ^r	XX	1,080,000 ^r	XX	1,120,000

^eEstimated. ^rRevised. NA Not available. 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.

TABLE 2
KANSAS: CRUSHED STONE SOLD OR USED, BY TYPE¹

Type	2007			2008		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone	129 ^r	22,800 ^r	\$193,000 ^r	127	21,700	\$171,000
Miscellaneous stone	2	603	5,460	3	1,370	8,620
Total	XX	23,400 ^r	199,000 ^r	XX	23,000	180,000

^rRevised. XX Not applicable.

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

TABLE 3
KANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, BY USE¹

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Construction:		
Coarse aggregate (+1½ inch):		
Riprap and jetty stone	46	444
Filter stone	W	W
Other coarse aggregate	106	533
Coarse aggregate, graded:		
Concrete aggregate, coarse	W	W
Bituminous aggregate, coarse	W	W
Railroad ballast	W	W
Other graded coarse aggregate	2,810	17,100
Fine aggregate (-¾ inch):		
Stone sand, bituminous mix or seal	W	W
Screening, undesignated	91	628
Other fine aggregate	3	18
Coarse and fine aggregates:		
Graded road base or subbase	1,250	9,410
Unpaved road surfacing	W	W
Crusher run or fill or waste	W	W
Other coarse and fine aggregates	313	2,280
Other construction materials	34	123
Agricultural:		
Limestone	W	W
Other agricultural uses	W	W
Chemical and metallurgical, cement manufacture	W	W
Unspecified: ²		
Reported	7,450	63,400
Estimated	8,200	66,000
Total	23,000	180,000

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

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

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

TABLE 4
KANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2008, BY USE AND DISTRICT^{1,2}

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1½ inch) ³	W	W	14	150	W	W
Coarse aggregate, graded ⁴	W	W	W	W	W	W
Fine aggregate (-¾ inch) ⁵	67	438	W	W	W	W
Coarse and fine aggregate ⁶	W	W	611	4,260	W	W
Other construction materials	32	106	--	--	--	--
Agricultural ⁷	228	671	240	1,260	W	W
Chemical and metallurgical ⁸	--	--	--	--	--	--
Unspecified: ⁹						
Reported	2,990	25,100	1,700	14,200	--	--
Estimated	3,400	27,000	241	1,900	--	--
Total	7,850	60,600	4,300	31,000	202	1,090
Districts 5 and 6 ¹⁰						
	Quantity	Value				
Construction:						
Coarse aggregate (+1½ inch) ³	144	845				
Coarse aggregate, graded ⁴	W	W				
Fine aggregate (-¾ inch) ⁵	W	W				
Coarse and fine aggregate ⁶	1,040	7,170				
Other construction materials	2	17				
Agricultural ⁷	W	W				
Chemical and metallurgical ⁸	W	W				
Unspecified: ⁹						
Reported	2,760	24,100				
Estimated	4,600	37,000				
Total	10,700	87,100				

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

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

²No production for District 4.

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

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

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

⁶Includes crusher run or fill or waste, graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

⁷Includes agricultural limestone and other agricultural uses.

⁸Includes cement manufacture.

⁹Reported and estimated production without a breakdown by end use.

¹⁰Specified districts are combined to avoid disclosing company proprietary data.

