THE MINERAL INDUSTRY OF KENTUCKY

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 Kentucky Geological Survey for collecting information on all nonfuel minerals.

Kentucky ranked 31st among the 50 States in 1995 in total nonfuel mineral production value,[1] according to the U.S. Geological Survey (USGS). This is a drop from 28th place in 1994. The estimated value for 1995 was $401 million, a 6% decrease from that of 1994. This followed a 10.6% increase from 1993 to 1994 (based on final 1994 data). In 1995, Kentucky surpassed the $400 million mark for the third time in the last 4 years after having reached the highest nonfuel mineral value reported in the State's history in 1994. The State accounted for about 1% of the U.S. total nonfuel mineral production value.

The decrease in value in 1995 resulted mostly from the drop in crushed stone plus a smaller decrease in gemstones. A moderate increase in the value of lime somewhat mitigated the overall decrease. In 1995, crushed stone was the State's leading commodity, accounting for an estimated 57% of nonfuel mineral production value. Kentucky has been entirely an industrial mineral-producing State in recent years. The last year in which metals were mined in the State was 1990, when small quantities of zinc were mined. Compared with 1994, the value of lime increased. Decreases occurred in crushed stone, portland cement, construction sand and gravel, masonry cement, common clays, and gemstones.

Compared USGS estimates of the quantities produced in the other 49 States during 1995, Kentucky remained 3d in ball clays and one of the top six lime-producing States, whereas it dropped from 8th to 11th in the production of crushed stone. The State's mines and plants continued to produce significant quantities of construction sand and gravel, masonry cement, and common clays. Primary aluminum and raw steel were produced from materials obtained from other domestic and foreign sources. Kentucky remained the Nation's second leading producer of primary aluminum with an increase in production of more than 2% from that of 1994.

According to the Kentucky Geological Survey (KGS),[2] the main target for exploratory drilling in 1995 was mineralization in western Kentucky's fluorspar district. Orbex Resources, Inc. completed renovation of USX, Corp.'s mill in Salem, which is in the State's western district. In 1994, Orbex screened and dried fluorspar purchased from the National Defense Stockpile for resale. Silverspar Minerals Inc., Orbex's parent company, was seeking financing to purchase the Salem mine and mill properties from USX. No exploration activity was reported from the State's central and south-central mineral districts.

The Black River Division of Dravo Lime Co. completed most of the expansion of its Carntown lime plant in Pendleton County during 1995. The 630,000-metric-ton-per-year[3] (700,000-short-ton-per-year) expansion more than doubled existing production capacity. The project was undertaken in response to an increased demand for lime for flue gas desulfurization. Additionally, the company announced plans to add a new kiln and increase mine production at its Maysville Division Cabin Creek facility. As reported in the USGS annual lime plant directory, the Maysville Division facility was second in lime production in the United States in 1994 and the Black River operation ranked seventh.

The KGS reported that the Vulcan Materials Co. Reed quarry in western Kentucky continued to maintain its position in 1994 as the largest producer of crushed stone in the United States, based on a published trade journal report. Production that year was 9 million tons (10 million short tons). The Reed quarry ships about 80% of its production by barge and 10% each by rail and truck. The company's principal markets are in States in the lower Mississippi River Valley.

Gallatin Steel Co. began production at its minimill in

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN KENTUCKY[1 2]

Mineral		1993		1994		1995[p]	
		Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays[3]	thousand metric tons	768	$3,060	820	$3,460	784	$2,590
Sand and gravel (construction)	do.	[e]7,700	[e]29,900	9,140	32,200	8,500	30,600
Stone (crushed)	do.	[4]49,000	[4]226,000	56,300	259,000	49,500	230,000
Combined value of cement, clays (ball), gemstones, lime, and stone (crushed sandstone (1993)		XX	128,000	XX	134,000	XX	137,000
Total		XX	388,000	XX	428,000	XX	401,000

[e]Estimated. [p]Preliminary. XX Not applicable.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Data are rounded to three significant digits; may not add to totals shown.
[3]Excludes certain clays; kind and value included with "Combined value" data.
[4]Excludes certain stones; kind and value included with "Combined value" data.

Carroll County on the Ohio River. Annual capacity of the new plant was reported at 1.08 million tons (1.2 million short tons). Kentucky Electric Steel, Inc.'s project to increase the capacity of its Boyd County mill was in process.

[1]The 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 published in this chapter are estimated as of Dec. 1995. Estimates for some commodities, e.g., construction sand and gravel, crushed stone, and portland cement, are periodically updated. To obtain the most recent 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 # 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.

[2]The remaining narrative portion of this report was based on information provided by the KGS.

[3]All tons are metric tons unless otherwise specified.

TABLE 2

KENTUCKY: CRUSHED STONE[1] SOLD OR USED BY PRODUCERS IN 1994, BY USE[2]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	672	$2,680	$3.99
Riprap and jetty stone	4,110	17,100	4.15
Filter stone	1,060	4,980	4.71
Other coarse aggregate	849	3,280	3.86
Coarse aggregate, graded:			
Concrete aggregate, coarse	3,410	16,600	4.86
Bituminous aggregate, coarse	4,420	22,600	5.11
Bituminous surface-treatment aggregate	1,690	8,740	5.18
Railroad ballast	599	2,760	4.61
Other graded coarse aggregate	1,250	4,120	3.28
Fine aggregate (-3/8 inch):			
Stone sand, concrete	388	2,090	5.37
Stone sand, bituminous mix or seal	1,950	9,310	4.77
Screening, undesignated	963	4,830	5.01
Other fine aggregate	W	W	3.87
Coarse and fine aggregate:			
Graded road base or subbase	7,970	36,000	4.52
Unpaved road surfacing	2,200	11,500	5.23
Terrazzo and exposed aggregate	W	W	4.96
Crusher run or fill or waste	2,640	10,600	4.00
Other coarse and fine aggregate	2,280	6,520	2.86
Other construction materials[3]	271	1,090	4.03
Agricultural:			
Agricultural limestone[4]	1,530	7,280	4.75
Other agricultural uses	2	25	12.50
Chemical and metallurgical[5]	3,920	15,900	4.07
Special:			
Mine dusting or acid water treatment	81	1,100	13.60
Other fillers or extenders	47	431	9.17
Unspecified:[6]			
Actual	10,400	50,700	4.90
Estimated	3,610	18,900	5.23
Total	56,300	259,000	4.61

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."
[1]Includes limestone, limestone-dolomite, and sandstone.
[2]Data are rounded to three significant digits; may not add to totals shown.
[3]Includes pipe bedding.
[4]Includes poultry grit and mineral food.
[5]Includes cement manufacture, lime manufacture, and sulfur oxide removal.
[6]Includes production reported without a breakdown by end use and estimates for norespondents.

TABLE 3

KENTUCKY: CRUSHED STONE SOLD OR USED BY PRODUCERS, BY KIND[1]

Kind	1993[2]				1994			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	86	49,000	$226,000	$4.61	88	53,600	$246,000	$4.15
Granite	1	8	11	1.37	—	—	—	—
Total	XX	49,000	226,000	4.61	XX	[3]53,600	[3]259,000	[3]4.61

XX Not applicable.
[1]Data are rounded to three significant digits; may not add to totals shown.
[2]Excludes sandstone from State total to avoid disclosing company proprietary data.
[3]Includes "Limestone-dolomite," reported with no distinction between the two, and sandstone.

TABLE 4

KENTUCKY: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1994, BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch)[2]	W	W	325	1,430	W	W	1,130	5,640
Coarse aggregate, graded[3]	2,700	10,300	2,300	11,200	3,420	19,400	2,930	13,900
Fine aggregate (-3/8 inch)[4]	W	W	664	3,720	W	W	922	4,460
Coarse and fine aggregate[5]	5,140	16,900	2,520	11,400	4,620	22,700	2,820	13,700
Other construction materials[6]	5,730	—	6	33	1,470	7,520	2	4
Agricultural[7]	607	2,690	487	2,460	287	1,470	156	694
Chemical and metallurgical[8]	([9])	([9])	([9])	([9])	([9])	([9])	([9])	([9])
Special[10]	([9])	([9])	—	—	—	—	([9])	([9])
Unspecified:[11]								
Actual	—	—	([9])	([9])	([9])	([9])	1,220	5,930
Estimated	77	372	235	1,140	2,990	15,700	308	1,650
Total	15,100	56,800	10,700	49,400	20,800	106,000	9,630	46,600

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."
[1]Data are rounded to three significant digits; may not add to totals shown.
[2]Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregate.
[3]Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.
[4]Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.
[5]Includes graded road base or subbase, terrazzo and exposed aggregate, unpaved road surfacing, crusher run (select material or fill), and other coarse and fine aggregates.
[6]Includes pipe bedding.
[7]Includes agricultural limestone, poultry grit and material food, and other agricultural uses.
[8]Includes cement manufacture, lime manufacture, and sulfur oxide removal.
[9]Withheld to avoid disclosing company proprietary data; included with "Total."
[10]Includes mine dusting or acid water treatment and other fillers or extenders.
[11]Includes production reported without a breakdown by end use and estimates for nonrespondents.

TABLE 5

KENTUCKY: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1994, BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	1,410	$4,710	$3.33
Concrete products (blocks, brick, pipe, decorative, etc.)	93	377	4.05
Asphaltic concrete aggregates and other bituminous mixtures	519	1,570	3.03
Road base and coverings[2]	138	477	3.46
Fill	471	1,280	2.72
Unspecified:[3]			
Actual	5,960	21,300	3.57
Estimated	554	2,530	4.57
Total or average	9,140	32,200	3.52

[1]Data are rounded to three significant digits; may not add to totals shown.
[2]Includes snow and ice control.
[3]Includes production reported without a breakdown by end use and estimates for nonrespondents.

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