

# THE MINERAL INDUSTRY OF GEORGIA

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 Georgia Geologic Survey, Environmental Protection Division, Georgia Department of Natural Resources, for collecting information on all nonfuel minerals.

Georgia ranked fifth nationally in total nonfuel mineral value<sup>1</sup> in 1994, up from sixth in 1993, according to the U.S. Bureau of Mines. The estimated value was more than \$1.5 billion, an increase of more than 7% compared with that of 1993. This followed more than 6% growth in 1993 compared with that of 1992. The State accounted for almost 5% of the U.S. total. The value of kaolin clay, which was primarily responsible for both yearly total increases, remained Georgia's foremost mineral, accounting for more than 64% of the State's estimated nonfuel mineral value. Kaolin clay production was up about 10% in 1994, following a 32% jump the year before. Crushed stone, representing almost 21% of the State's value, also had a significant impact on overall output, rising 20% in value in 1993 and 21% in 1994. In estimated mineral production for 1994, Georgia remained 1st among the 50 States in fuller's earth and kaolin clays and dimension stone, 2d in barite and 2d of only two bauxite-producing States, 3d in iron oxide pigments, and 5th in feldspar. The State rose from third to second in the production of mica and from sixth to fifth in common clays. Compared with 1993, the value of kaolin clays, crushed stone, dimension stone, construction sand and gravel, masonry cement, industrial sand and gravel, iron oxide pigments, mica, and bauxite

increased. Decreases occurred in fuller's earth clays, portland cement, barite, common clays, and feldspar.

According to the Georgia Geologic Survey, 1994 generally was a good year for the Georgia mining industry. Shipments of crushed stone were up about 10% from that of 1993 and quarries operated with fewer lost-work-time accidents. Due to construction associated with the 1996 Summer Olympics in Atlanta, the outlook for stone production for 1995 was good. The dimension stone industry was experiencing increased competition from foreign producers—especially Canada and India—in addition to South America and China. The imports included significant increases in finished monumental products that were shipped directly to memorialists, thus bypassing local suppliers. A significant increase occurred in the use of diamond wire contour saws for cutting intricate profiles on monumental stone. Manufactured in Italy and Germany, these machines replace time consuming and expensive hand labor methods. In a separate development, the Georgia Legislature considered a severance tax on all mineral production; however, an economic study by the Georgia Institute of Technology indicated that it would be a regressive form of taxation and no bill was reported out of committee.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN GEORGIA<sup>1</sup>

Mineral	1992		1993		1994 <sup>a</sup>	
	Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays thousand metric tons	28,962	<sup>2</sup> \$970,905	29,759	<sup>2</sup> \$995,013	10,400	\$1,080,000
Gemstones	NA	645	NA	51	NA	44
Sand and gravel:						
Construction thousand metric tons	4,409	15,581	4,600	<sup>6</sup> 16,600	4,800	17,800
Industrial do.	533	8,783	491	7,941	W	W
Stone:						
Crushed do.	<sup>3</sup> 39,916	<sup>3</sup> 244,200	49,353	292,144	<sup>6</sup> 53,000	<sup>6</sup> 318,000
Dimension metric tons	<sup>3</sup> 144,327	<sup>3</sup> 13,138	<sup>3</sup> 176,291	<sup>3</sup> 18,746	<sup>6</sup> 157,000	31,000
Combined value of barite, bauxite, cement, clays [fire (1992-93)], feldspar, iron oxide pigments (crude), mica (scrap), stone [crushed marl, marble, and miscellaneous (1992), dimension marble (1992-93)], and value indicated by symbol W						
	XX	93,002	XX	101,223	XX	92,600
Total	XX	1,346,254	XX	1,431,718	XX	<sup>4</sup> 1,540,000

<sup>a</sup>Estimated. <sup>b</sup>Preliminary. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data. XX Not applicable.

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

<sup>2</sup>Excludes certain clays; kind and value included with "Combined value" data.

<sup>3</sup>Excludes certain stones; kind and value included with "Combined value" data.

<sup>4</sup>Data do not add to total shown because of independent rounding.

<sup>1</sup>The term value means the total monetary value as represented by either mine

shipments, mineral commodity sales, or marketable production as is applicable to the individual mineral commodities.

TABLE 2  
**GEORGIA: CRUSHED STONE<sup>1</sup> SOLD OR USED BY PRODUCERS IN 1993, BY USE**

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
<b>Coarse aggregate (+1 1/2 inch):</b>			
Riprap and jetty stone	654	\$5,187	\$7.93
Filter stone	W	W	5.83
Other coarse aggregate	9	50	5.56
<b>Coarse aggregate, graded:</b>			
Concrete aggregate, coarse	7,440	45,740	6.15
Bituminous aggregate, coarse	4,694	28,778	6.13
Bituminous surface-treatment aggregate	W	W	7.43
Railroad ballast	866	5,669	6.55
Other graded coarse aggregate	W	W	6.19
<b>Fine aggregate (-3/8 inch):</b>			
Stone sand, concrete	1,729	9,491	5.49
Stone sand, bituminous mix or seal	1,387	7,147	5.15
Screening, undesignated	2,578	13,438	5.21
Other fine aggregate	W	W	5.82
<b>Coarse and fine aggregates:</b>			
Graded road base or subbase	6,690	33,747	5.04
Unpaved road surfacing	W	W	6.16
Terrazzo and exposed aggregate	W	W	5.92
Crusher run or fill or waste	1,267	6,753	5.33
Other coarse and fine aggregates	W	W	6.16
Other construction material	3,943	23,374	5.93
Agricultural: Agricultural limestone	( <sup>2</sup> )	( <sup>2</sup> )	8.10
Chemical and metallurgical: Cement manufacture	( <sup>2</sup> )	( <sup>2</sup> )	4.92
<b>Special:</b>			
Asphalt fillers or extenders	( <sup>2</sup> )	( <sup>2</sup> )	4.62
Other fillers or extenders	227	1,750	7.71
Other specified uses not listed	2,681	13,232	4.94
<b>Unspecified:<sup>3</sup></b>			
Actual	14,492	93,254	6.43
Estimated	695	4,535	6.53
Total <sup>4</sup>	49,353	292,144	5.92
Total <sup>5 6</sup>	54,402	292,144	5.37

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

<sup>1</sup>Includes dolomite, granite, limestone, marble, calcareous marl, and quartzite.

<sup>2</sup>Withheld to avoid disclosing company proprietary data; included with "Other specified uses not listed."

<sup>3</sup>Includes production reported without a breakdown by use and estimates for respondents.

<sup>4</sup>Data may not add to totals shown because of independent rounding.

<sup>5</sup>One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

<sup>6</sup>Total shown in thousand short tons and thousand dollars.

TABLE 3  
**GEORGIA: CRUSHED STONE SOLD OR USED, BY KIND**

Kind	1991				1993			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone	'13	'3,857	r\$27,579	'\$7.15	12	4,875	\$29,451	\$6.04
Dolomite	1	163	1,040	6.38	1	W	W	6.50
Marble	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	7	W	W	7.20
Calcareous marl	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	1	W	W	4.00
Granite	'54	'33,224	'192,748	'5.80	52	41,582	245,179	5.90
Quartzite	3	258	1,533	5.94	3	357	2,103	5.89
Total <sup>2</sup>	XX	'37,502	'222,901	5.94	XX	49,353	292,144	5.92
Total <sup>3,4</sup>	XX	41,339	'222,901	5.39	XX	54,402	292,144	5.37

<sup>1</sup>Revised. W Withheld to avoid disclosing company proprietary data; included with "Total." XX Not applicable.

<sup>2</sup>Excludes marble and calcareous marl from State total to avoid disclosing company proprietary data.

<sup>3</sup>Data may not add to totals shown because of independent rounding.

<sup>4</sup>One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

<sup>5</sup>Total shown in thousand short tons and thousand dollars.

TABLE 4  
**GEORGIA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1993, BY DISTRICT AND USE**

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Construction aggregates:</b>						
Coarse aggregate (+1 1/2 inch) <sup>1</sup>	111	794	W	W	( <sup>2</sup> )	( <sup>2</sup> )
Coarse aggregate, graded <sup>3</sup>	W	W	8,597	54,108	( <sup>2</sup> )	( <sup>2</sup> )
Fine aggregate (-3/8 inch) <sup>4</sup>	1,367	8,560	W	W	( <sup>2</sup> )	( <sup>2</sup> )
Coarse and fine aggregate <sup>5</sup>	W	W	5,611	27,012	( <sup>2</sup> )	( <sup>2</sup> )
Other construction materials	7,512	46,164	6,620	35,503	—	—
Agricultural <sup>6</sup>	( <sup>2</sup> )	( <sup>2</sup> )	—	—	—	—
Chemical and metallurgical <sup>7</sup>	( <sup>2</sup> )	( <sup>2</sup> )	—	—	—	—
Special <sup>8</sup>	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	—	—
Other miscellaneous uses	1,726	9,264	( <sup>2</sup> )	( <sup>2</sup> )	—	—
Unspecified <sup>10</sup>						
Actual	3,606	24,014	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )
Estimated	695	4,535	—	—	—	—
Total <sup>11</sup>	15,018	93,332	22,556	125,638	11,779	73,174
Total <sup>12,13</sup>	16,555	93,332	24,864	125,638	12,984	73,174

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

<sup>1</sup>Includes filter stone, riprap and jetty stone, and other coarse aggregate.

<sup>2</sup>Withheld to avoid disclosing company proprietary data; included with "Total."

<sup>3</sup>Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.

<sup>4</sup>Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.

<sup>5</sup>Includes graded road base or subbase, unpaved road surfacing, terrazzo and exposed aggregate, and crusher run (select material or fill), and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone.

<sup>7</sup>Withheld to avoid disclosing company proprietary data; included with "Other miscellaneous uses."

<sup>8</sup>Includes cement manufacture.

<sup>9</sup>Includes asphalt fillers or extenders, and other fillers or extenders.

<sup>10</sup>Includes production reported without a breakdown by use and estimates for nonrespondents.

<sup>11</sup>Data may not add to totals shown because of independent rounding.

<sup>12</sup>One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.

<sup>13</sup>Total shown in thousand short tons and thousand dollars.