



# 2005 Minerals Yearbook

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## ARKANSAS

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# THE MINERAL INDUSTRY OF ARKANSAS

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

In 2005, Arkansas' nonfuel raw mineral production was valued<sup>1</sup> at \$591 million based upon annual U.S. Geological Survey (USGS) data. This was an 11.3% increase from the State's total value of \$531 million of 2004, which followed a 17% increase from 2003 to 2004. The State was 32d in rank among the 50 States in total nonfuel mineral production value in 2005 and accounted for more than 1% of the U.S. total. Yet, per capita, the State ranked 16th in the Nation in its minerals industry's value of nonfuel mineral production; with a population of about 2.8 million, the value of production was about \$210 per capita.

In 2005, crushed stone, followed by bromine, cement (portland and masonry), and construction sand and gravel, were Arkansas' leading nonfuel minerals by value; altogether these commodities accounted for 90% of the State's total nonfuel mineral value. For nearly four decades, bromine and crushed stone, by value, have been the State's two leading nonfuel minerals, bromine leading in value from 1969 up to 1996 when crushed stone went from second to first. Since then the two have exchanged rank several times; crushed stone was first in 1996-98, in 2001-03, and again in 2005, and bromine in the intervening years. For more than a decade, cement has ranked third and construction sand and gravel has ranked fourth. Actual production data for bromine and cement have been withheld (company proprietary data).

In 2005, with a modest 4% increase in production, crushed stone value rose nearly 30%, up \$50 million, followed by significant increases in cement, construction sand and gravel (up \$8.5 million), and gypsum. The value of gemstones was up about 20%. The only decreases in production value took place in bromine (small increase in tons produced), silica stone, and tripoli, the most substantial being that of bromine (table 1).

Arkansas continued to be the leading bromine-producing State and accounted for most U.S. production in 2005. Michigan was the only other State that produced bromine. Mining operations in both States extracted subsurface, bromine-rich natural brines by submersible pump for subsequent processing. Arkansas continued to be the only State that produced silica stone and third in the quantities of tripoli of four producing States. Even with a 50% increase in gypsum production, the State remained sixth in rank among other producing States. Arkansas rose to fifth from eighth in gemstones (based upon value) and to sixth from seventh in the production of common clays. Additionally, significant quantities of crushed stone, construction sand and

gravel, lime, and industrial sand and gravel were produced in the State.

Metals that were produced in the State—for the most part raw steel—were processed from materials acquired from other domestic and foreign sources. The principal steel mills in the State were Quanex Corp. in Sebastian County and Nucor-Yamato Steel Co. and Nucor Corp. in Mississippi County. The mills have a combined capacity of 4.9 million metric tons per day. Strategic Minerals Corp., or Stratcor, continued operation of the mill facility at Potash Sulphur Springs in Garland County; the mill extracts vanadium pentoxide from recycled out-of-State vanadium-bearing feed.

The Arkansas Geological Commission<sup>2</sup> (AGC) provided the following narrative information.

## Exploration and Development

Numerous companies were actively involved in exploring for construction sand and gravel and crushed stone, especially in the western, northwestern, and central portions of the State. Arkhola Sand and Gravel Co. continued to explore for additional quarry sites in the western portion of the Arkansas River Valley, and Duffield Stone and Gravel Co. also continued its exploration program in the Arkansas River Valley. Granite Mountain Quarries, Inc. continued evaluating two western Arkansas sites—one in the lower Atoka Formation west of Boles in southern Scott County and another in the Hartshorne Sandstone west of Greenwood in Sebastian County. Martin Marietta Co. acquired new leases for properties east of the company's Hatton Quarry in southern Polk County in the direction of and near to the Cossatot River. Texas Industries Group continued to evaluate tuff deposits on leases in southern Polk County. McClinton-Anchor, Inc. continued to explore for new aggregate quarry sites in the limestone-bearing region of northwest Arkansas. Rogers Group Inc. was also evaluating new quarry sites in northwest Arkansas in the Boone Formation and Pitkin Formation (both Mississippian age). Vulcan Materials Co. continued aggregate exploration, focusing mainly on Morrowan age and Atokan age sandstones in White County and Cleburne County, north of central Arkansas.

For construction sand and gravel operations alone, 29 quarry notifications of intent were on file by yearend 2005. The majority of these operations were in the southeastern part of the State in the Gulf Coastal Plain.

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<sup>1</sup>The 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 2005 USGS mineral production data published in this chapter are those available as of December 2006. 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>.

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<sup>2</sup>J. Michael Howard, Geology Supervisor/Mineralogist, authored the text of the State mineral industry information provided by the Arkansas Geological Commission.

## Commodity Review

### *Industrial Minerals*

**Bromine.**—Albermarle Corp. and Chemtura Corp., formerly Great Lakes Chemical Corp., continued operations at their bromine extraction and production plants in Columbia and Union Counties, respectively. Prices for bromine-based products steadily increased worldwide during the year. Chemtura secured a long-term supply of chlorine by partnering with ASHTA Chemicals Inc., which plans to build a new chloralkali production facility adjacent to Chemtura's central plant in El Dorado, AR. The agreement will supply Chemtura with a long-term, steady supply of chlorine for use primarily in the production of bromine at its three El Dorado facilities. Expansion of the elemental bromine and PBS (polydibromostyrene) flame retardant facilities was completed during the first quarter of 2005. Chemtura Corp. was formed in July, when Great Lakes Chemical Corp. merged with Crompton Corp.

**Cement.**—Ash Grove Cement Co., which was the sole producer of cement in the State, operated the Foreman plant in Little River County using chalk from the Annona Formation and silica from the Marlbrook Formation (both Cretaceous). Arkansas Lime Co. of Batesville, Independence County, produced quicklime, hydrated lime, and pulverized limestone for glass manufacturing and agriculture lime. Their quarry is in a section of the Boone Formation (Mississippian) that is high purity, being low in silica (chert).

**Common Clays.**—Acme Brick Co., owned by Berkshire-Hathaway, is near Malvern in Hot Spring County. Acme continued operation of its Wilcox Group (Eocene) clay mines for brick production at Perla. McGeorge Construction Company began custom mining of bauxite for a customer on ALCOA property in Saline County.

**Construction Sand and Gravel.**—In 2005, eight new sand and gravel operations were permitted by the Surface Mining and Reclamation Division of the Arkansas Department of Environmental Quality, bringing the total number to 113. In 2005, Ouachita Builders opened a new gravel operation near Norman in Montgomery County from which the company produced Quaternary age novaculite and chert gravel.

**Crushed Stone.**—Arkholia Sand and Gravel produced road aggregates and asphalt mix at the Preston Quarry near Van Buren in Crawford County. Arkholia continued to work a quarry in the Hartshorne Sandstone near the Jenny Lind Mine in Sebastian County. Bobby Plant Asphalt Co., based in Murfreesboro, Pike County, produced crushed stone from its quarry in the Jackfork Sandstone Formation.

Duffield Stone and Gravel operated two Pennsylvanian age sandstone aggregate quarries in Pope County—one in the Hartshorne Sandstone at Russellville, and the other in the Gumlog Quarry, in the upper Atoka Formation. Pyramid Co. produced aggregate from the middle Atoka Formation (Pennsylvanian age) north of Greenbriar in Faulkner County. Granite Mountain produced aggregate from nepheline syenite at two quarries in Pulaski County and from the Granite Mountain No. 3 Quarry near Bryant in Saline County. Martin Marietta

Co. actively quarried the Hatton Tuff lentil of the Stanley Group (Mississippian age) at the Hatton Quarry in southern Polk County, and the company made plans for the installation of a third crusher and processing unit at this site. Martin Marietta continued operations at the Jones Mill Quarry near Magnet Cove in Hot Spring County and produced from both the hornfels and quartzite alteration zone in the Stanley Group adjacent to the Cretaceous igneous intrusion and the intrusive. The company operated an asphalt plant at this site.

The Rogers Group continued sandstone aggregate operations at its Greenbriar Quarry in the middle Atoka Formation in Faulkner County, at its Conway County Quarry in the upper Atoka Formation south of Solgohachia, about 80 kilometers northwest of Little Rock, and at its Lowell Quarry in the limestone of the Boone Formation (Mississippian age) in southern Benton County. Schwartz Stone Co. quarried sandstone from the Hartshorne Sandstone for aggregate and dimension stone north of Midway in Logan County. McGeorge Sand and Gravel Co. continued riprap barge operations along the Arkansas River from its River Mountain Quarry in the Hartshorne Sandstone area north of New Blaine in eastern Logan County. Chrisman Co. mined sandstone aggregate in the Hartshorne Sandstone area near Hunt in Johnson County and from the Savanna Formation near Ratcliffe in Franklin County.

Vulcan Materials Co., based in Birmingham, AL, produced aggregate from its upper Morrowan age sandstone operations at Judsonia and middle Atokan age sandstones at Floyd, both sites in White County. Vulcan also produced dolomitic limestone from lower Ordovician age units near Black Rock in Lawrence County. The company also closed its sandstone aggregate operation at Heber Springs in Cleburne County. Webco Mining produced crushed stone from its quarry in the middle Atoka Formation near El Paso in White County. Quality Stone Co. continued operation at the Lonestar Quarry (opened in 2004) in south Cleburne County north of Rosebud community. The company produced sandstone aggregate from the Atoka Formation (Pennsylvanian age). Midwest Lime Co. produced aggregate from middle and upper Ordovician-age limestones near Batesville, Independence County. Limestone Specialties, Inc. shipped by rail the aggregate that it produced from upper Ordovician units in Independence County.

**Dimension Stone.**—Oran McBride Stone Co. of Batesville in Independence County continued production of interior and exterior structural and architectural stone at its plant in Bethesda. Polished, cut, and rough surface marble, limestone, and sandstone were quarried from Ordovician and Mississippian-age formations and processed. Bennett Brothers Stone Co., Inc. obtained building stone materials from deposits in Franklin, Logan, Garland, and other counties, principally from Pennsylvanian age formations.

**Gypsum.**—In 2005, BPB Gypsum Inc., which is near Nashville in Howard County, continued to be the world's largest wallboard manufacturing plant, with a capacity of 130 million square meters per year. Altogether, the plant and mines employed about 200 people in 2005. The principal markets for the wallboard were in the eastern United States; the wallboard was shipped by rail and truck.

**Industrial Sand and Gravel.**—Industrial sand was produced by Unimin Corp. from their mine and facility in IZARD County. The source unit is the Ordovician St. Peter Sandstone and markets which include glass and foundry uses.

**Nepheline Syenite.**—Minnesota Mining and Manufacturing Co. mined nepheline syenite from its Big Rock Arch Street Quarry to supply its roofing granule plant in Sweet Home, Pulaski County. Martin Marietta abandoned concurrent mining of syenite dike rock for aggregate in this quarry.

**Other Industrial Minerals.**—Mark Wallis Whetstones, Inc. continued sporadic operation of a whetstone-grade novaculite mine south of Lonsdale near the Saline-Hot Spring County line. Smith Whetstone, Inc. of Hot Springs in Garland County manufactured a variety of grades of oilstones (whetstones) from its Arkansas Novaculite (Mississippian-Devonian age) quarry operations. Dan's Whetstones Company, Inc. also of Hot Springs, continued mining, processing, and marketing whetstone products from the company's quarry operation in the Arkansas Novaculite. Martin Marietta obtained control of the Butterfield Quarry in Hot Spring County, formerly operated by Ouachita Gravel Company, Inc. in 2004, but the whetstone-grade novaculite quarry was inactive during 2005. Martin Marietta also produced high-silica novaculite as well as aggregate from a quarry near Glen Rose in Hot Spring County.

Malvern Minerals Co. of Hot Springs, Garland County, produced tripoli from its mine in the Bigfork Chert (Middle and Late Ordovician age).

Certain-Teed Co. continued mining and processing of slaty shale from the Mississippian Stanley Formation north of Glenwood in Pike County, producing black roofing granules.

## Environmental Issues and Mine Reclamation

Alcoa Inc. was essentially finished with a 20-year land reclamation project of former bauxite properties adjacent to the community of Bauxite in Saline County. Alcoa's last 81 hectares (ha) of permitted land was taken over by McGeorge Contracting Company, Inc. under a new permit to mine additional bauxite. Umetco, Inc. continued the reclamation of the Wilson Springs vanadium mines area in Garland County that began in 1997 with work on the Lecroy Spoil area. The Black Lick diamond property, which was reclaimed in 2004 by Star Resources Corp. of Houston, TX, is northeast of the Crater of Diamonds State Park in Pike County; at yearend, Star Resources was awaiting release of its bond money.

## Government Legislation, Programs, and Activities

During 2005, 204 noncoal mine sites were active, permitted, or authorized in Arkansas. The total noncoal area under permit was nearly 5,000 ha, and 3,606 ha under bond. There were 178 ha of reclaimed land released from 2 permitted sites during 2005. During the 2005 State legislative session, Act 855 of 2005 was passed that gave the Arkansas Department of Environmental Quality the authority to develop and issue general permits under the Non-Coal Program. Regulation 15 was modified to incorporate the new legislation and it was promulgated on May 28, 2006.

Crater of Diamonds State Park in southwest Arkansas near Murfreesboro is the world's only diamond-bearing site that is open to the public. Diamonds that visitors find are the finders to keep; on average about two are found per day. In 2005, 536 diamonds were recovered at the park. The total carat weight of the stones was 103.43, with an average weight of 0.19 carats. Of these 536 diamonds, 19 weighed more than 1 carat. Diamonds recovered included white—310, brown—137, and yellow—89. The largest diamond recovered in 2005 was a lemon-yellow, gem-quality stone that weighed 3.36 carats. More than 25,000 diamonds have been recovered since this property became a State park in 1972. Plans for the park include a new museum. In 2005, a small area of new ground was opened to collecting, bringing the total search area to about 16.2 ha.

Operators of 27 quartz contracts with the U.S. Department of Agriculture's Forest Service on the Ouachita National Forest in Arkansas generated about \$13,500 in revenue and approximately \$5,000 more on three producing leases.

The AGC Web site at <http://www.state.ar.us/agc/agc.htm> hosted more than 131,000 visitors in 2005, its 7th year of online operation; the number of visitors represented a 34% increase compared with that of 2004. Information posted on the Web site included AGC agency services; Arkansas Board of Registration for Professional Geologists; news items; publications and map ordering information; State resource data; State stratigraphic, geologic and geohazard data; and USGS annual nonfuel mineral production data. The site included links to State agency services, Federal agencies, geology Web sites, organizations, and universities.

The AGC staff also continued preparation of a spreadsheet database that contains all identified sites of mineral extraction in the State, excluding petroleum and natural gas. By the close of 2005, more than 7,300 entries had been made. Approximately 45% of those entries remained to be field checked. Sites are located by latitude and longitude and by general land office survey techniques. Fieldwork began in October to check data on a county-by-county basis.

The AGC has been an active participant in the STATEMAP program since 1995. STATEMAP is a component of the congressionally mandated National Cooperative Geologic Mapping Program (NCGMP), through which the USGS distributes Federal funds to support geologic mapping efforts through a competitive funding process. The NCGMP has three primary components: (1) FEDMAP, which funds Federal geologic mapping projects, (2) STATEMAP, which is a matching-funds grant program with State geological surveys, and (3) EDMAP, a matching-funds grant program with universities that has a goal to train the next generation of geologic mappers. During 2005, three digitized 7.5-minute USGS topographic geologic maps were completed under the STATEMAP cooperative agreement, and three additional maps were started. Staff cartographers completed the digitization of an additional nine USGS 7.5-minute topographic geologic maps, primarily in southwestern Arkansas, with legends. An effort has been undertaken to digitize all or part of 10 USGS topographic geologic maps scaled 1:100,000 in west-central Arkansas. Additional information about the STATEMAP geologic mapping program in Arkansas can be found on the AGC Web

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN ARKANSAS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2003		2004		2005	
	Quantity	Value	Quantity	Value	Quantity	Value
Clays, common	897	1,410	1,150	1,510	1,210	1,900
Gemstones	NA	477	NA	590	NA	711
Sand and gravel, construction	9,720	52,100	9,370	53,500	10,600	62,000
Silica stone <sup>3</sup> metric tons	513	3,630	655	3,660	576	2,290
Stone, crushed	29,700	145,000	34,100 <sup>r,4</sup>	173,000 <sup>r,4</sup>	35,400 <sup>4</sup>	223,000 <sup>4</sup>
Combined values of bromine, cement, clays (kaolin), gypsum (crude), lime, sand and gravel (industrial), stone (crushed slate [2004-05], dimension limestone and sandstone), tripoli	XX	252,000	XX	299,000 <sup>r</sup>	XX	302,000
Total	XX	454,000	XX	531,000 <sup>r</sup>	XX	591,000

<sup>r</sup>Revised. NA Not available. XX Not applicable.

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

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

<sup>3</sup>Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

<sup>4</sup>Excludes certain stones; kind and value included with "Combined values" data.

TABLE 2  
ARKANSAS: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>

Kind	2004			2005		
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Number of quarries	Quantity (thousand metric tons)	Value (thousands)
Limestone	27	11,900 <sup>r</sup>	\$54,200 <sup>r</sup>	27	13,500	\$81,700
Dolomite	2	1,290	8,080	1	W	W
Granite	5	9,620	48,600 <sup>r</sup>	4	9,320	59,600
Sandstone and quartzite	19	10,500	58,100 <sup>r</sup>	18	10,500	67,400
Slate	1	W	W	1	W	W
Miscellaneous stone	3	801	3,980	3	676	4,140
Total	XX	34,100 <sup>r</sup>	173,000 <sup>r</sup>	XX	35,400	223,000

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

TABLE 3  
ARKANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS  
IN 2005, BY USE<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
<b>Construction:</b>		
<b>Coarse aggregate (+1½ inch):</b>		
Riprap and jetty stone	204	1,410
Filter stone	137	913
Other coarse aggregate	176	955
Total	517	3,280
<b>Coarse aggregate, graded:</b>		
Concrete aggregate, coarse	1,470	11,500
Bituminous aggregate, coarse	493	4,180
Bituminous surface-treatment aggregate	376	3,800
Railroad ballast	20	89
Other graded coarse aggregate	478	3,520
Total	2,830	23,100
<b>Fine aggregate (-¾ inch):</b>		
Stone sand, concrete	W	W
Stone sand, bituminous mix or seal	62	426
Screening, undesignated	698	3,250
Other fine aggregate	213	1,410
Total	973	5,080
<b>Coarse and fine aggregates:</b>		
Graded road base or subbase	2,960	18,800
Unpaved road surfacing	630	4,250
Crusher run or fill or waste	215	790
Other coarse and fine aggregates	1,850	11,600
Total	5,660	35,400
Other construction materials	77	338
<b>Agricultural:</b>		
Limestone	179	1,130
Poultry grit and mineral food	(2)	(2)
Other agricultural uses	62	879
Total	241	2,010
<b>Chemical and metallurgical:</b>		
Cement manufacture	(3)	(3)
Lime manufacture	(3)	(3)
Glass manufacture	(3)	(3)
<b>Special:</b>		
Asphalt fillers or extenders	(3)	(3)
Other fillers or extenders	(3)	(3)
Other miscellaneous uses; waste material	(4)	(4)
<b>Unspecified:<sup>5</sup></b>		
Reported	13,100	85,700
Estimated	9,700	59,000
Total	22,700	145,000
Grand total	35,400	223,000

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

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

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

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total."

<sup>4</sup>Withheld to avoid disclosing company proprietary data; included with "Unspecified: Reported."

<sup>5</sup>Reported and estimated production without a breakdown by end use.

TABLE 4  
 ARKANSAS: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2005,  
 BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Construction:</b>						
Coarse aggregate (+1½ inch) <sup>2</sup>	516	3,270	W	W	W	W
Coarse aggregate, graded <sup>3</sup>	2,810	22,900	W	W	W	W
Fine aggregate (-¾ inch) <sup>4</sup>	W	W	--	--	W	W
Coarse and fine aggregates <sup>5</sup>	5,560	34,700	W	W	W	W
Other construction materials	77	338	--	--	--	--
Agricultural <sup>6</sup>	241	2,010	--	--	--	--
Chemical and metallurgical <sup>7</sup>	W	W	W	W	--	--
Special <sup>8</sup>	W	W	W	W	--	--
Other miscellaneous uses <sup>9</sup>	--	--	(10)	(10)	--	--
Unspecified: <sup>11</sup>						
Reported	6,920	43,800	6,140	41,900	--	--
Estimated	3,900	24,000	5,700	35,000	--	--
Total	21,800	142,000	13,500	80,300	36	423

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

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

<sup>2</sup>Includes filter stone, riprap and jetty stone, and other coarse aggregate.

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

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

<sup>5</sup>Includes crusher run or fill or waste, graded road base or subbase, unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

<sup>7</sup>Includes cement, lime, and glass manufacture.

<sup>8</sup>Includes asphalt fillers or extenders and other fillers or extenders.

<sup>9</sup>Includes waste material.

<sup>10</sup>Withheld to avoid disclosing company proprietary data; included with "Unspecified: Reported."

<sup>11</sup>Reported and estimated production without a breakdown by end use.

TABLE 5  
 ARKANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2005,  
 BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity	Value	Unit
	(thousand metric tons)	(thousands)	value
Concrete aggregate and concrete products	2,850	\$17,300	\$6.07
Asphaltic concrete aggregates and other bituminous mixtures	943	6,540	6.94
Road base and coverings	316	1,500	4.73
Fill	277	1,860	6.69
Snow and ice control	15	118	8.09
Other miscellaneous uses	37	1,100	29.78
Unspecified: <sup>2</sup>			
Reported	4,490	24,200	5.40
Estimated	1,670	9,380	5.62
Total	10,600	62,000	5.85

<sup>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

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



TABLE 6  
 ARKANSAS: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2005, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates and concrete products	379	2,980	1,420	7,880	1,050	6,450
Asphaltic concrete aggregates and other bituminous mixtures	W	W	W	W	W	W
Road base and coverings	--	--	163	976	153	519
Fill	70	671	206	1,180	1	3
Other miscellaneous uses <sup>2</sup>	47	450	793	5,570	155	1,540
Unspecified: <sup>3</sup>						
Reported	1,860	10,300	1,580	7,930	995	5,650
Estimated	710	3,990	822	4,620	137	768
Total	3,070	18,400	4,980	28,400	2,490	14,900
	Unspecified district					
	Quantity	Value				
Concrete aggregates and concrete products	--	--				
Asphaltic concrete aggregates and other bituminous mixtures	--	--				
Road base and coverings	--	--				
Fill	--	--				
Other miscellaneous uses <sup>2</sup>	--	--				
Unspecified: <sup>3</sup>						
Reported	54	336				
Estimated	--	--				
Total	54	336				

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses." -- Zero.

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

<sup>2</sup>Includes snow and ice control.

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