2009 Minerals Yearbook

SOUTH DAKOTA [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

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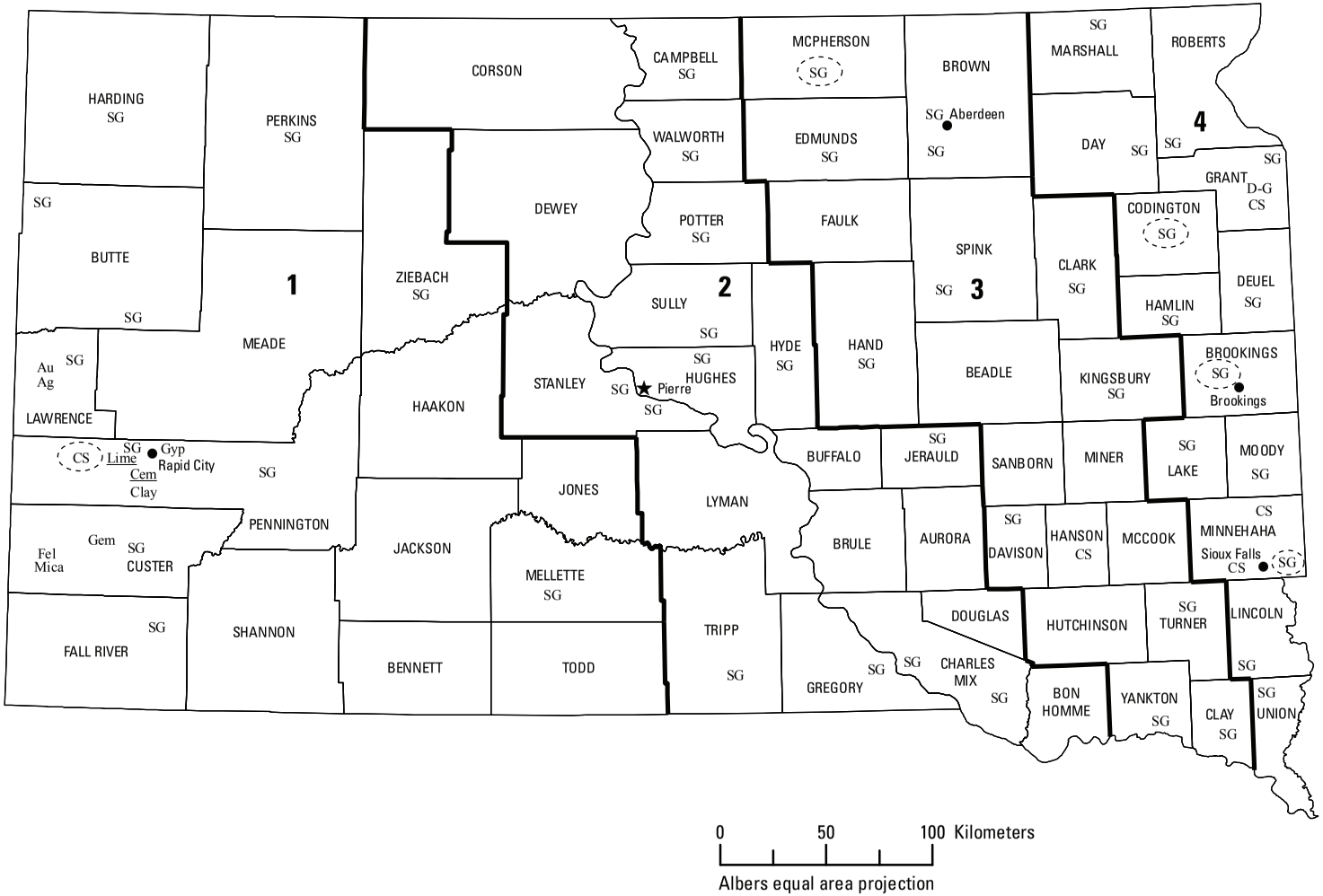
SOUTH DAKOTA



0 50 100 Kilometers

Albers equal area projection

LEGEND

County boundary

★ Capital

● City

1 Crushed stone/sand and gravel district boundary

MINERAL SYMBOLS
(Principal producing areas)

Ag	Silver
Au	Gold
Cem	Cement plant
Clay	Common clay
CS	Crushed stone
D-G	Dimension granite
Fel	Feldspar
Gem	Gemstones
Gyp	Gypsum
Lime	Lime plant
Mica	Mica
SG	Construction sand and gravel

Concentration of mineral operations

Source: South Dakota Geological Survey/U.S. Geological Survey (2009).

THE MINERAL INDUSTRY OF SOUTH DAKOTA

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

In 2009, South Dakota's nonfuel raw mineral production[1] was valued at $230 million, based upon annual U.S. Geological Survey (USGS) data. This was a $16.6 million, or 6.7%, decrease from the State's total nonfuel mineral production value for 2008, which decreased by $16.5 million, or 6.3%, from 2007 to 2008. The State remained 39th among the 50 States in total nonfuel mineral production value. The State rose to 12th from 13th in the Nation for the per capita production value of its nonfuel mineral industry; with a population of about 812,000, the production value per capita was about $283.

In 2009, the State's leading mineral commodity, by production value, was gold. This was the first time gold had been the State's leading mineral commodity since 2002, when it was second to portland cement. Prior to 2002, gold had been the State's leading mineral commodity for more than four decades. In descending order of production value, the State's top four mineral commodities were gold, portland cement, construction sand and gravel, and crushed stone.

The State's largest increase in production value took place in gold, up by more than 20%. Smaller, yet significant, increases also took place in dimension stone, lime, and iron ore (for use in cement manufacture). The most significant decline in production value took place in portland cement (actual data withheld—company proprietary data), followed by smaller decreases in construction sand and gravel, down by more than $10 million, and crushed stone, down by about $5 million.

Gold was the only mineral commodity to see a significant increase in production quantity, up by more than 10%. Significant decreases in production quantity took place in three of the State's highest producing mineral commodities—portland cement, down by more than 25%; crushed stone, down by 17%; and construction sand and gravel, down by 16%. Significant decreases in production quantity also took place in crude mica, down by about 47%, and crude gypsum, down by about 40%.

South Dakota continued to lead the Nation in the production quantity of crude mica among four producing States. The State continued to be ranked 3d in the production of iron ore among 4 producing States; ranked 7th in the production of feldspar and gold among 7 and 11 producing States, respectively; and ranked 25th in the production of gemstones (gemstones based on production value) among 50 producing States. The State rose in rank to 13th from 15th in the production of dimension stone, to 22d from 24th in the production of common clays, and to 22d from 25th in the production of lime. The State ranked seventh in the production of silver.

[1]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 2009 USGS mineral production data published in this chapter are those available as of September 2011. All USGS Mineral Industry Surveys and USGS Minerals Yearbook chapters—mineral commodity, State, and country—can be retrieved over the Internet at http://minerals.usgs.gov/minerals.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN SOUTH DAKOTA[1, 2]

(Thousand metric tons and thousand dollars)

Mineral		2007 Quantity	2007 Value	2008 Quantity	2008 Value	2009 Quantity	2009 Value
Clays, common		151	W	155	W	W	W
Sand and gravel, construction		14,300 r	52,000 r	12,500 r	48,000 r	10,500	37,900
Silver	kilograms	--	--	--	--	8,570	4,040
Stone, crushed		5,430	36,600	5,390	34,300	4,450	29,300
Combined values of cement (portland), feldspar, gemstones (natural), gold, gypsum (crude), iron ore (usable shipped), lime, mica (crude), stone (dimension granite), and values indicated by symbol W		XX	175,000	XX	165,000 r	XX	159,000
Total		XX	263,000 r	XX	247,000 r	XX	230,000

[r]Revised. W Withheld to avoid disclosing company proprietary data. Withheld values included in "Combined values" data. XX Not applicable. -- Zero.
[1]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[2]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2
SOUTH DAKOTA: CRUSHED STONE SOLD OR USED, BY TYPE[1]

Type	2008 Number of quarries	2008 Quantity (thousand metric tons)	2008 Value (thousands)	2009 Number of quarries	2009 Quantity (thousand metric tons)	2009 Value (thousands)
Limestone	4	2,830	$12,800	4	2,470	$14,200
Granite	-- r	-- r	-- r	--	--	--
Sandstone and quartzite	3	2,120	19,300	3	1,970	15,000
Slate	-- r	-- r	-- r	--	--	--
Miscellaneous stone	3	446	2,210	1	3	20
Total	XX	5,390	34,300	XX	4,450	29,300

[r]Revised. XX Not applicable. -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 3
SOUTH DAKOTA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2009, BY USE[1]

(Thousand metric tons and thousand dollars)

Use	Quantity	Value
Chemical and metallurgical, cement manufacture	(2)	(2)
Unspecified:[3]		
Reported	2,780	18,300
Estimated	1,670	11,000
Total	4,450	29,300

[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Withheld to avoid disclosing company proprietary data; included with "Unspecirfied: Reported."
[3]Reported and estimated production without a breakdown by end use.

TABLE 4
SOUTH DAKOTA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2009, BY USE AND DISTRICT[1, 2]

(Thousand metric tons and thousand dollars)

Use	District 1 Quantity	District 1 Value	District 3 Quantity	District 3 Value	District 4 Quantity	District 4 Value
Chemical and metallurgical[3]	(4)	(4)	--	--	--	--
Unspecified:[5]						
Reported	1,230	6,060	443	4,510	1,110	7,740
Estimated	1,250	8,190	--	--	422	2,780
Total	2,480	14,300	443	4,510	1,530	10,500

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]No production for District 2.
[3]Includes cement manufacture.
[4]Withheld to avoid disclosing company proprietary data; included with "Unspecified: Reported."
[5]Reported and estimated production without a breakdown by end use.

TABLE 5
SOUTH DAKOTA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2009,
BY MAJOR USE CATEGORY[1]

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregate (including concrete sand)[2]	544	$3,330	$6.12
Asphaltic concrete aggregates and other bituminous mixtures	227	778	3.43
Road base and coverings[3]	2,950	7,960	2.69
Fill	124	261	2.10
Other miscellaneous uses[4]	60	428	7.13
Unspecified:[5]			
Reported	758	3,880	5.12
Estimated	5,870	21,200	3.62
Total or average	10,500	37,900	3.59

[1]Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Includes filtration and snow and ice control.
[5]Reported and estimated production without a breakdown by end use.

TABLE 6
SOUTH DAKOTA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2009,
BY USE AND DISTRICT[1]

(Thousand metric tons and thousand dollars)

Use	Districts 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)[2]	W	W	160	883	W	W
Asphaltic concrete aggregates and road base materials[3]	240	973	240	830	336	825
Fill	--	--	11	18	35	94
Other miscellaneous uses[4]	34	364	(5)	2	22	158
Unspecified:[6]						
Reported	97	422	87	989	86	309
Estimated	1,230	4,270	1,750	6,140	1,230	4,310
Total	1,600	6,030	2,250	8,860	1,710	5,690

	District 4		Unspecified districts	
	Quantity	Value	Quantity	Value
Concrete aggregate (including concrete sand)[2]	369	2,320	--	--
Asphaltic concrete aggregates and road base materials[3]	2,150	5,520	217	588
Fill	78	149	--	--
Other miscellaneous uses[4]	19	32	--	--
Unspecified:[6]				
Reported	489	2,160	--	--
Estimated	1,660	6,520	--	--
Total	4,760	16,700	217	588

W Withheld to avoid disclosing company proprietary data; included in "Other miscellaneous uses." -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Includes plaster and gunite sands.
[3]Includes road and other stabilization (cement and lime).
[4]Includes filtration and snow and ice control.
[5]Less than ½ unit.
[6]Reported and estimated production without a breakdown by end use.