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2014 Minerals Yearbook

SOUTH DAKOTA [ADVANCE RELEASE]

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

September 2019

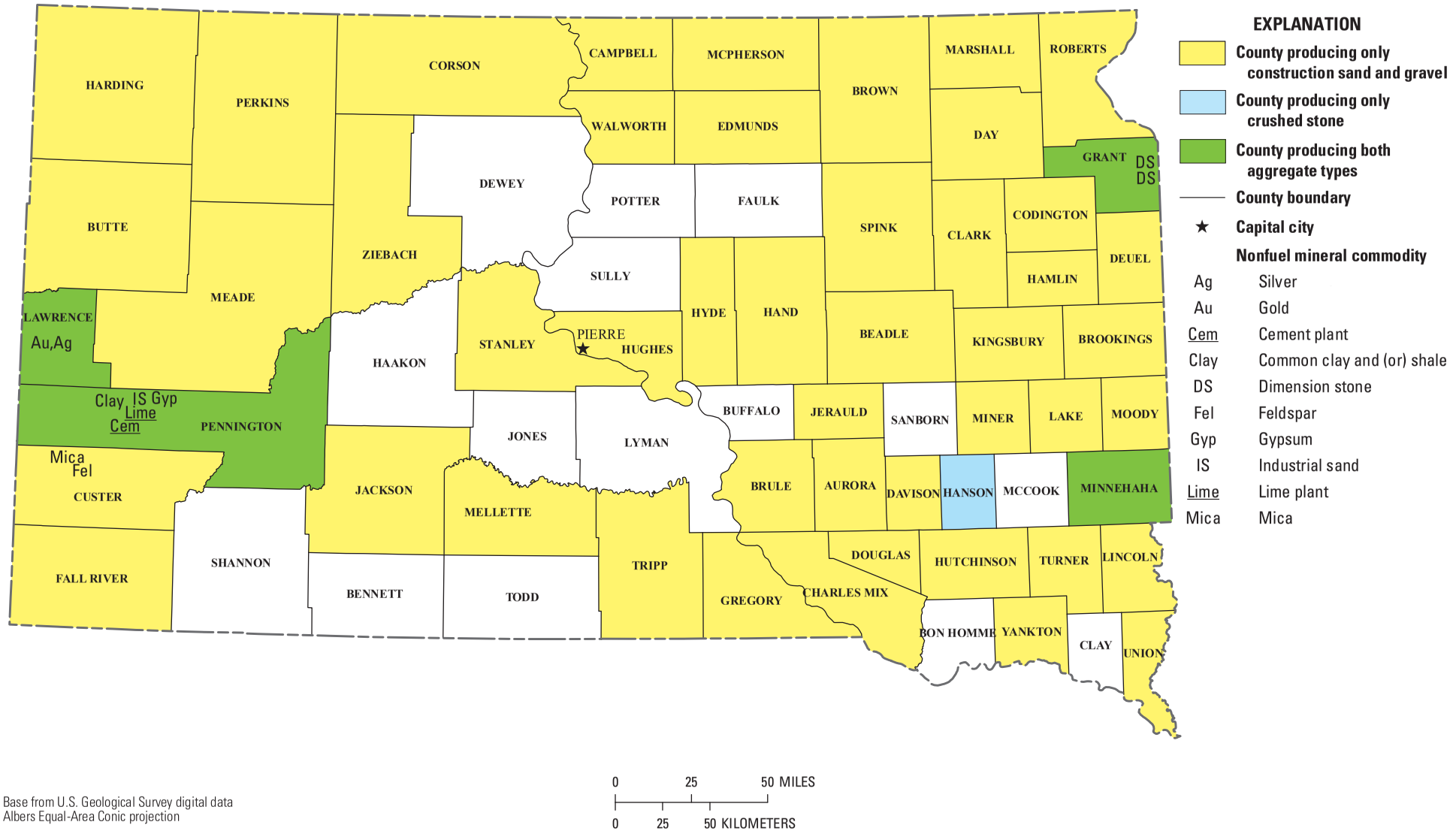

Figure 1. Map showing major nonfuel-mineral-producing areas in South Dakota in 2014. Sources: South Dakota Geological Survey and U.S. Geological Survey.

The Mineral Industry of South Dakota

By Robert M. Callaghan

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 2014, the nonfuel mineral production[1] value in the State of South Dakota (fig. 1) increased to $327 million, a 15% increase from the State's revised nonfuel mineral production value of $285 million in 2013. South Dakota produced a variety of industrial minerals and metals but owing to the small number of companies actively producing each of the State's mineral commodities (table 3), data for most were combined to avoid disclosing individual company proprietary data (table 1). The State was eighth in the Nation for gold production, the State's most valuable mineral commodity. South Dakota was the leading producer of scrap and flake mica of four producing States. Clay and gypsum were mined mainly for use in the State's cement industry, another of the leading mineral commodities produced in the State. Aggregates—construction sand and gravel, followed by crushed stone—were also top commodities produced. There were 246 active construction sand and gravel pits and 15 crushed stone quarries. About 53% of South Dakota's crushed stone quantity in 2014 consisted of sandstone, and 35% was classified as limestone. Employment at mines and processing plants increased in 2014 from 2013, and the average wage in the industry increased more than that of the average of all industries. Though the State ranked 39th in the Nation in total nonfuel mineral production, the State ranked 14th on a per capita basis, with a value of $384 compared with the national average of $252 (table 2).

Events, Trends, and Issues

Gold was historically a leading mineral commodity in South Dakota, and despite the second year of decreasing gold prices, with an average price in 2014 that was 28% below the record-high average in 2012, gold remained the State's leading mineral commodity by value. South Dakota was unusual among the States in that its total nonfuel mineral commodity value increased rapidly after the recession of 2007–09 beyond the prerecession peak (fig. 2). This was in part because of the large increases in gold value for several years until 2012. Wharf Resources (USA) Inc., the operator of the State's major gold mine, Goldcorp Inc.'s Wharf Mine, began mining a portion of the reclaimed Golden Reward Mine in 2014 as part of an expansion project approved by the Board of Minerals and Environment in 2011 (South Dakota Department of Mines and Mineral Resources, undated). Increasing production value of aggregates also contributed to the increasing nonfuel mineral value, though aggregates production quantity remained below prerecession levels.

The United States Nuclear Regulatory Commission (NRC) issued an operating license for the Powertech in situ uranium recovery project in Custer and Fall River Counties of South Dakota, which was expected to also produce vanadium. However, after several public comment sessions and a formal hearing, the decisions by the Licensing Board on legal challenges to the license were delayed (South Dakota Department of Mines and Mineral Resources, 2014). In addition, other permits would be needed at the local, State, and Federal levels before mining could begin. The issuance of a large-scale mine permit from the South Dakota Board of Minerals and Environment was delayed until the NRC, U.S. Environmental Protection Agency, and South Dakota Water Management Board licenses and permits were obtained (South Dakota Department of Environment and Natural Resources, undated). The United States was 100% import reliant for vanadium, used mainly in ferroalloys, in 2014.

Aggregates by State and End Use

A companion dataset, "Aggregates by State and End Use," replaces the discrete aggregate tables that were included in the individual State chapters prior to 2014 and is available on the State Minerals Statistics and Information web page at https://minerals.usgs.gov/minerals/pubs/state/. This dataset is updated annually.

References Cited

South Dakota Department of Environment and Natural Resources, [2014], History of mining regulation in South Dakota—2014: South Dakota Department of Environmental and Natural Resources Minerals and Mining Program. (Accessed August 11, 2017, at https://denr.sd.gov/des/mm/History.aspx#H2014.)

South Dakota Department of Environment and Natural Resources, [undated], Powertech (USA), Inc.—Exploration and mine permits: South Dakota Department of Environmental and Natural Resources Minerals and Mining Program. (Accessed April 2, 2018, at https://denr.sd.gov/des/mm/powertechpage.aspx.)

[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 USGS mineral production data published in this chapter are those available as of June 2017. 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 MINERAL PRODUCTION IN SOUTH DAKOTA[1, 2, 3]

(Thousand metric tons and thousand dollars)

Mineral	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Sand and gravel, construction	13,200 r	63,400 r	11,800 r	53,000 r	11,800	58,500
Stone, crushed	5,520 r	40,300 r	6,300 r	44,700 r	6,450	47,200
Combined values of cement, clays (common clay), feldspar, gemstones (natural), gold, gypsum (crude), lime, mica (crude), sand and gravel (industrial), silver, stone (dimension)	XX	230,000	XX	187,000	XX	221,000
Total	XX	334,000 r	XX	285,000 r	XX	327,000

rRevised. XX Not applicable.
[1]Includes data available through June 2017.
[2]Production as measured by mine shipments, sales, or marketable production (including consumption by producers).
[3]Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 2
MINING ACTIVITY IN SOUTH DAKOTA

Mining activity		2012	2013	2014
State rank[1]		36	40	39
Employment, number:[2]				
Nonfuel mineral mines		782	744	751
Mills and plants		247	258	281
Number of nonfuel mineral mines[2]		101	103	102
Number of mills and plants[2]		31	31	33
Average annual wage, all mining[3]	dollars per year	53,391	54,103	57,138
Average annual wage, all industries[3]	do.	36,305	37,086	38,625
Per capita value[1]	dollars per person	400	337	384
National per capita value[1]	do.	241	236	252

do. Ditto.
[1]Based on unadjusted State total value.
[2]Source: U.S. Mine Safety and Health Administration.
[3]Source: National Mining Association.

TABLE 3
STRUCTURE OF THE NONFUEL MINERAL INDUSTRY IN SOUTH DAKOTA

(Nonfuel-mineral-producing companies, not including aggregate producers)

Commodity	Company	County
Cement	GCC Dacotah Inc.	Pennington
Clays, common clay and (or) shale	do.	Do.
Feldspar	Pacer Corp.	Custer
Gemstones[1]	Various	Various
Gold and silver	Goldcorp Inc. (Wharf Mine)	Lawrence
Gypsum	GCC Dacotah Inc.	Pennington
Lime	Pete Lien & Sons Inc.	Do.
Mica	Pacer Corp.	Custer
Sand and gravel, industrial	GCC Dacotah Inc.	Pennington
Stone, dimension	Cold Spring Granite Co.	Grant
Do.	Dakota Granite Co.	Do.

Do., do. Ditto.
[1]Most natural gemstone producers in the United States are small businesses that are widely dispersed and operate independently.

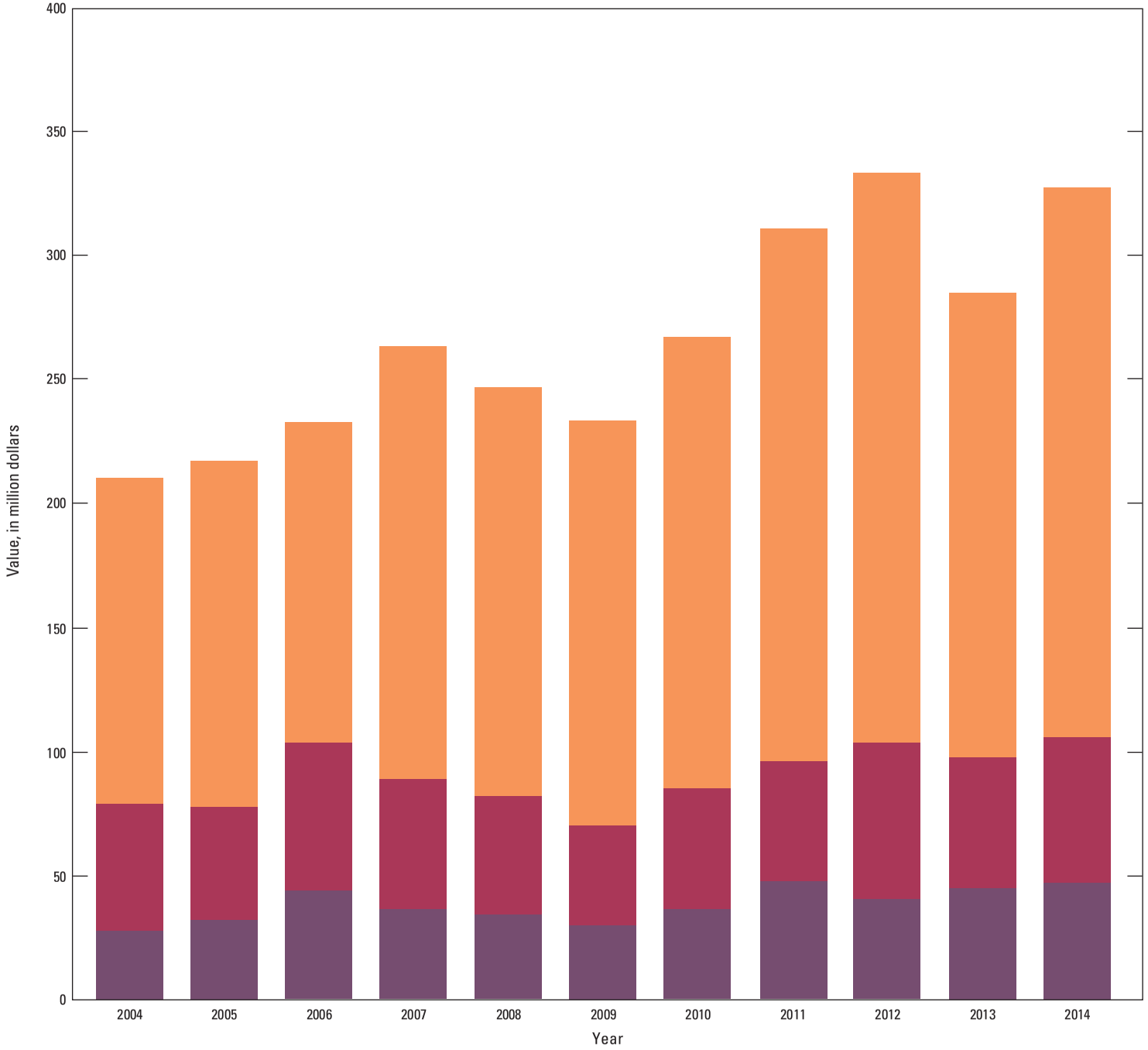

Figure 2. The production value of nonfuel mineral commodities from 2004 through 2014 in South Dakota. "Other" includes the "Combined values" data listed in table 1 in this and (or) previous years. Values less than $5 million are not shown. For a complete list of nonfuel mineral commodities and production values for all States, please refer to the Statistical Summary chapter (tables 5, 6).