



# 2014 Minerals Yearbook

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**STATISTICAL SUMMARY [ADVANCE RELEASE]**

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# STATISTICAL SUMMARY

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**The world production table was prepared by Glenn J. Wallace, international data coordinator.**

This annual report summarizes data on nonfuel mineral production<sup>1</sup> for the United States, its island possessions, and the Commonwealth of Puerto Rico.

Although nonfuel mineral production may be measured at any stage of extraction and processing, the stage of measurement used most commonly in this annual report is what is termed “mine output.” This term refers to minerals or ores in the form in which they are first extracted from the ground, but customarily may include the output from auxiliary processing at or near the mines.

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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 2014 U.S. Geological Survey (USGS) mineral production data published in this chapter are as of June 6, 2017. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information is available on the Internet at <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). Minerals Yearbook chapters (for mineral commodities, States, and countries) and Mineral Industry Surveys are also available on the Internet at <http://minerals.usgs.gov/minerals>.

For copper, gold, lead, silver, and zinc, the quantities listed are recorded on a mine basis (as the recoverable content of ore sold or treated). The values assigned to the quantities, however, are based on the average selling price of refined metal, not the value of the mined material.

The total value of all nonfuel mineral production in the United States in 2014 increased to \$80.1 billion compared with \$74.5 billion for 2013; metals decreased by 2.8% to \$30.8 billion; and industrial minerals increased by 15.1% to \$49.4 billion (table 1).

In 2014, 13 mineral commodities had production values greater than \$1 billion. They were, in descending order of value, crushed stone, copper, gold, industrial sand and gravel, portland cement, construction sand and gravel, iron ore, molybdenum concentrates, lime, salt, marketable phosphate rock, zinc, and soda ash. The production of these mineral commodities accounted for 89.8% of the U.S. total production value (table 1).

In 2014, the top 10 States, in descending order of value of nonfuel mineral production, were Arizona, Nevada, Texas, Minnesota, Utah, Alaska, Wisconsin, California, Florida, and Missouri. The mineral production of these States accounted for 55.7% of the U.S. total production value (table 3).

TABLE 1  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Metals:</b>						
Beryllium <sup>4</sup> metric tons	225	W	235	W	270	W
Cobalt <sup>e,5</sup> do.	--	--	--	--	120	W
Copper <sup>6</sup>	1,170	9,450,000	1,250	9,360,000	1,360	9,510,000
Gold <sup>6</sup> kilograms	235,000	12,600,000	230,000	10,400,000	210,000	8,570,000
Iron ore <sup>7</sup>	54,700 <sup>r</sup>	5,080,000 <sup>r</sup>	52,800 <sup>r</sup>	4,610,000 <sup>r</sup>	56,100	4,730,000
Lead <sup>6</sup> metric tons	336,000	845,000	331,000	837,000	368,000	860,000
Molybdenum concentrates <sup>6</sup> do.	61,500	3,090,000	61,000 <sup>r</sup>	3,070,000 <sup>r</sup>	68,200	3,460,000
Nickel <sup>8</sup> do.	--	--	--	--	4,300	W
Palladium <sup>6</sup> kilograms	12,300	257,000	12,600	295,000	12,400	324,000
Platinum <sup>6</sup> do.	3,670	184,000	3,720	178,000	3,660	163,000
Rare earths <sup>e,9</sup> metric tons	3,000	W	5,500	W	5,400	W
Rhenium <sup>10</sup> kilograms	7,910	NA	7,110	NA	8,510	NA
Silver <sup>6</sup> do.	1,060,000	1,060,000	1,040,000	793,000	1,180,000	737,000
Vanadium <sup>6</sup> metric tons	106	1,520	591	7,870	--	--
Zinc <sup>6</sup> do.	713,000	1,510,000	758,000	1,600,000	803,000	1,900,000
Combined values of cadmium, magnesium metal, titanium mineral concentrates, tungsten, zircon concentrates, and values indicated by symbol W	XX	534,000 <sup>r</sup>	XX	456,000 <sup>r</sup>	XX	496,000
Total	XX	34,600,000 <sup>r</sup>	XX	31,700,000 <sup>r</sup>	XX	30,800,000
<b>Industrial minerals, excluding fuels:<sup>11</sup></b>						
Barite	666	74,500 <sup>e</sup>	723	81,900 <sup>e</sup>	663	88,600 <sup>e</sup>
Cement: <sup>7</sup>						
Masonry	1,930	259,000 <sup>e</sup>	2,120	303,000 <sup>e</sup>	2,290	332,000 <sup>e</sup>
Portland	72,200	6,390,000 <sup>e</sup>	74,700	6,980,000 <sup>e</sup>	80,300	7,980,000 <sup>e</sup>
Clays:						
Ball	973	45,100	1,000	42,800	1,030	45,200
Bentonite	4,980	311,000	4,350	282,000	4,800	329,000
Common	11,900	139,000	11,000 <sup>r</sup>	128,000 <sup>r</sup>	11,600	129,000
Fire	183	4,870	194 <sup>r</sup>	3,460 <sup>r</sup>	222	3,880
Fuller's earth <sup>12</sup>	1,980	182,000	1,990	175,000 <sup>r</sup>	1,980	169,000
Kaolin	5,900	881,000	6,140 <sup>r</sup>	896,000 <sup>r</sup>	6,250	901,000
Diatomite	735	210,000	782	229,000	901	269,000
Feldspar <sup>e,7</sup> metric tons	560,000 <sup>13</sup>	36,500	550,000 <sup>13</sup>	40,100	530,000 <sup>13</sup>	34,800
Garnet, industrial <sup>7,14</sup> do.	38,700 <sup>r</sup>	5,920 <sup>r</sup>	51,600 <sup>r</sup>	7,500 <sup>r</sup>	44,200	6,540
Gemstones, natural <sup>e,7</sup>	NA	11,300	NA	9,570	NA	9,490
Gypsum, crude <sup>7</sup>	9,140 <sup>r</sup>	72,100 <sup>r</sup>	10,600 <sup>r</sup>	96,500 <sup>r</sup>	11,000	98,000
Helium:						
Crude million cubic meters	44	126,000	28	85,100	27	93,100
Grade-A do.	128	784,000	118	807,000	102	904,000
Kyanite <sup>15</sup> metric tons	98,500	31,000 <sup>e</sup>	100,000 <sup>r</sup>	35,000 <sup>r,e</sup>	110,000	38,000 <sup>e</sup>
Lime <sup>16</sup>	18,800	2,230,000	19,200	2,320,000	19,500	2,380,000
Lithium carbonate metric tons	(17)	W	870 <sup>18</sup>	11,200	(17)	W
Mica, crude do.	47,500	6,070	48,100	5,940	46,000	5,510
Peat	484	11,800	453	11,500	479	12,000
Perlite, crude metric tons	393,000	20,400	419,000	23,100	451,000	25,600
Phosphate rock, marketable <sup>7</sup>	30,100	3,080,000	31,200	2,850,000	25,300	1,990,000
Potash, K <sub>2</sub> O equivalent <sup>13</sup>	980	750,000	880	630,000	930	680,000
Pumice and pumicite metric tons	338,000	10,800	269,000	9,320	278,000	9,020
Salt	34,900	1,460,000	43,100 <sup>r</sup>	1,980,000 <sup>r</sup>	46,000	2,220,000
Sand and gravel:						
Construction	812,000 <sup>r</sup>	6,220,000 <sup>r</sup>	817,000 <sup>r</sup>	6,350,000 <sup>r</sup>	819,000	6,570,000
Industrial	50,600	2,670,000	62,100	3,470,000	110,000	8,250,000

See footnotes at end of table.

TABLE 1—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Industrial minerals, excluding fuels—Continued: <sup>11</sup>						
Special silica stone metric tons	156	39	146 <sup>e</sup>	36 <sup>e</sup>	146 <sup>e</sup>	36 <sup>e</sup>
Soda ash <sup>7</sup>	11,100	1,740,000	11,500	1,680,000	11,700	1,740,000
Stone:						
Crushed <sup>19</sup>	1,180,000 <sup>r</sup>	11,500,000 <sup>r</sup>	1,180,000	11,700,000 <sup>r</sup>	1,250,000	12,600,000
Dimension	2,150	452,000	2,280 <sup>r</sup>	459,000 <sup>r</sup>	2,470 <sup>e</sup>	470,000 <sup>e</sup>
Talc, crude <sup>7</sup>	515	17,100	542	20,800	610	23,800
Tripoli <sup>7</sup> metric tons	120,000	18,900	110,000	17,600	93,100	19,500
Vermiculite, concentrate <sup>e</sup>	100 <sup>20</sup>	W	100 <sup>20</sup>	W	100 <sup>20</sup>	W
Zeolites <sup>7</sup> metric tons	74,000	W	69,500	W	64,100	W
Combined values of andalusite, bauxite, boron minerals, bromine, clays (fuller's earth), emery, iodine (crude), iron oxide pigments (crude), magnesite, magnesium compounds, olivine (2012), pyrophyllite (crude), staurolite, wollastonite, and values indicated by symbol W	XX	1,280,000 <sup>r</sup>	XX	1,150,000	XX	897,000
Total	XX	41,000,000	XX	42,900,000 <sup>r</sup>	XX	49,400,000
Grand total	XX	75,600,000 <sup>r</sup>	XX	74,500,000 <sup>r</sup>	XX	80,100,000

<sup>e</sup>Estimated. <sup>r</sup>Revised. do. Ditto. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined values." XX Not applicable. -- Zero.

<sup>1</sup>Summary data from the chapters of the 2014 Minerals Yearbook as they were completed and released through June 6, 2017.

<sup>2</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>3</sup>Data are rounded to no more than three significant digits, unless otherwise specified; may not add to totals shown.

<sup>4</sup>Mine shipments of beryllium-containing ores. Calculated based on 4% metal content.

<sup>5</sup>Cobalt content of concentrate.

<sup>6</sup>Recoverable content of ores and concentrates. Table 9 reports total content for lead and zinc.

<sup>7</sup>Production.

<sup>8</sup>Recoverable content of nickel sulfide concentrate.

<sup>9</sup>Rare-earth oxide (REO) basis.

<sup>10</sup>Rhenium contained in molybdenite concentrates, based on calculations by the U.S. Geological Survey.

<sup>11</sup>Sold or used unless otherwise specified.

<sup>12</sup>Excludes attapulgite, which is included in "Combined values."

<sup>13</sup>Data are rounded to no more than two significant digits.

<sup>14</sup>Crude garnet production.

<sup>15</sup>Production based on publicly available data; refer to the 2014 Minerals Yearbook kyanite chapter for the source of these data.

<sup>16</sup>Includes Puerto Rico.

<sup>17</sup>Withheld to avoid disclosing company proprietary data.

<sup>18</sup>Contained lithium. Source: Rockwood Holdings, Inc., 2013 annual report, p. 16.

<sup>19</sup>Excludes abrasive stone and bituminous limestone and sandstone; all included elsewhere in table.

<sup>20</sup>Data are rounded to no more than one significant digit.

TABLE 2  
NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2014<sup>1</sup>

Commodity <sup>2</sup>	Principal States <sup>3</sup>	Other States <sup>4</sup>
Andalusite	NC	
Barite	NV and GA	
Beryllium concentrates	UT	
Boron minerals	CA	
Bromine	AR	
Cement	TX, CA, FL, AL, PA	All other States, except AK, CT, DE, HI, LA, MA, MN, MS, NC, ND, NH, NJ, RI, VT, WI.
Clays:		
Ball	TN, TX, MS, KY, IN	
Bentonite	WY, UT, MT, AL, CA	CO, MS, NV, OR, TX
Common	TX, AL, OK, NC, OR	All other States, except AK, DE, FL, HI, ID, ME, NH, NJ, NV, RI, VT, WA, WI.
Fire	MO, WA, TX, CO	
Fuller's earth	GA, MO, VA, MS, FL	CA, IL, KS, NV, TN, TX.
Kaolin	GA, SC, AL, AR, TX	CA, FL, NC, NV.
Cobalt	MI	
Copper <sup>5</sup>	AZ, UT, NM, NV, MT	ID, MI, MO.
Diatomite	CA, NV, OR, WA	
Emery	OR	
Feldspar	NC, ID, CA, VA, OK	GA and SD.
Garnet, industrial	NY, MT, ID	
Gemstones, natural <sup>6</sup>	AZ, CA, OR, UT, MT	All other States.
Gold <sup>5</sup>	NV, AK, UT, CO, CA	AZ, MT, NM, SD, WA.
Gypsum, crude	OK, TX, NV, KS, IA	AR, AZ, CA, CO, IN, LA, MI, NM, SD, UT, WY.
Helium:		
Crude	KS and TX	
Grade-A	KS, WY, OK, CO	
Iodine, crude	OK and MT	
Iron ore	MN, MI, UT	
Iron oxide pigments, crude	GA and AL	
Kyanite	VA	
Lead <sup>5</sup>	MO, AK, ID, WA	
Lime	MO, AL, KY, OH, TX	All other States, except AK, CT, DE, HI, IL, KS, MD, ME, MS, NC, NH, NJ, NM, NY, RI, SC, VT.
Lithium carbonate	NV	
Magnesite	NV	
Magnesium compounds	MI, UT, DE, CA	
Magnesium metal	UT	
Mica, crude	SD, GA, NC, VA	
Molybdenum, concentrates	CO, AZ, UT, ID, MT	NM and NV.
Nickel	MI	
Palladium <sup>5</sup>	MT	
Peat	FL, MN, IL, ME, MI	IA, IN, NJ, NY, OH, PA, WA.
Perlite, crude	NM, OR, AZ, ID, NV	
Phosphate rock	FL, NC, ID, UT	
Platinum <sup>5</sup>	MT	
Potash	NM and UT	MI.
Pumice and pumicite	OR, ID, CA, NM, KS	OK.
Pyrophyllite, crude	NC	
Rare earths <sup>7</sup>	CA	
Salt	LA, TX, NY, OH, KS	AL, AZ, CA, MI, NM, NV, OK, TN, UT, VA, WV.
Sand and gravel:		
Construction	CA, TX, MN, AZ, MI	All other States.
Industrial	WI, TX, IL, MN, MO	All other States, except AK, CT, DE, HI, ID, KS, MA, MD, ME, MT, NH, NM, OR, UT, VT, WY.
Silica stone <sup>8</sup>	AR	
Silver <sup>5</sup>	AK, NV, ID, AZ, UT	CA, CO, MO, MT, NM, SD.
Soda ash	WY and CA	
Staurolite	FL	
Stone:		
Crushed	TX, PA, MO, FL, OH	All other States.
Dimension	TX, IN, WI, MA, GA	All other States, except AK, DE, FL, HI, IA, KY, LA, MS, ND, NE, NJ, OR, RI, WA, WV, WY.
Talc, crude	MT, TX, VT, VA	

See footnotes at end of table.

TABLE 2—Continued  
 NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2014<sup>1</sup>

Commodity <sup>2</sup>	Principal States <sup>3</sup>	Other States <sup>4</sup>
Titanium mineral concentrates,		
ilmenite	VA and FL	
Tripoli	MO, IL, AR	
Tungsten	CA	
Vermiculite, crude	SC and VA	
Wollastonite	NY	
Zeolites	NM, TX, ID, CA, OR	AZ.
Zinc <sup>5</sup>	AK, TN, MO, ID, WA	
Zircon concentrates	FL and VA	

<sup>1</sup>Includes data available through June 6, 2017.

<sup>2</sup>In addition to the commodities listed, bauxite was produced in Alabama, Arkansas, and Georgia; cadmium was recovered as a byproduct from zinc concentrates in Tennessee; and rhenium was recovered as a byproduct from molybdenite concentrates from Arizona, Montana, New Mexico, and Utah.

<sup>3</sup>Listed in order of quantity unless otherwise noted.

<sup>4</sup>Listed in alphabetical order by abbreviation.

<sup>5</sup>Recoverable content of ores and concentrates.

<sup>6</sup>Principal States listed in order of value.

<sup>7</sup>Rare-earth oxide (REO) basis.

<sup>8</sup>Grindstones, pulpstones, and sharpening stones; does not include mill liners and grinding pebbles.

TABLE 3

VALUE OF NONFUEL MINERAL PRODUCTION IN THE UNITED STATES AND PRINCIPAL NONFUEL MINERALS PRODUCED IN 2014<sup>1,2</sup>

State	Value (thousands)	Rank <sup>3</sup>	Percent of total	Principal minerals, in order of value
Alabama	\$1,240,000	21	1.55	Cement (portland), stone (crushed), lime, sand and gravel (construction), sand and gravel (industrial).
Alaska	3,600,000	6	4.49	Zinc, gold, lead, silver, sand and gravel (construction).
Arizona	7,960,000	1	9.93	Copper, molybdenum concentrates, sand and gravel (construction), cement (portland), stone (crushed).
Arkansas	915,000	26	1.14	Sand and gravel (industrial), bromine, stone (crushed), cement (portland), sand and gravel (construction).
California	3,150,000	8	3.93	Sand and gravel (construction), cement (portland), boron minerals, stone (crushed), gold.
Colorado	2,260,000	13	2.81	Molybdenum concentrates, cement (portland), gold, sand and gravel (construction), stone (crushed).
Connecticut <sup>4</sup>	195,000	42	0.24	Stone (crushed), sand and gravel (construction), clays (common), stone (dimension).
Delaware <sup>4</sup>	16,100	50	0.02	Sand and gravel (construction), stone (crushed), magnesium compounds.
Florida	2,890,000	9	3.61	Phosphate rock, stone (crushed), cement (portland), sand and gravel (construction), cement (masonry).
Georgia	1,630,000	16	2.03	Clays (kaolin), stone (crushed), cement (portland), clays (fuller's earth), sand and gravel (construction).
Hawaii	115,000	47	0.14	Stone (crushed), sand and gravel (construction).
Idaho	912,000	27	1.14	Molybdenum concentrates, phosphate rock, silver, sand and gravel (construction), lead.
Illinois <sup>4</sup>	2,050,000	14	2.56	Sand and gravel (industrial), stone (crushed), cement (portland), sand and gravel (construction), tripoli.
Indiana	874,000	28	1.09	Stone (crushed), cement (portland), sand and gravel (construction), lime, stone (dimension).
Iowa <sup>4</sup>	390,000	32	0.49	Stone (crushed), cement (portland), sand and gravel (industrial), sand and gravel (construction), lime.
Kansas <sup>4</sup>	584,000	22	0.73	Helium (Grade-A), cement (portland), salt, stone (crushed), helium (crude).
Kentucky <sup>4</sup>	516,000	29	0.64	Stone (crushed), lime, cement (portland), sand and gravel (construction), sand and gravel (industrial).
Louisiana <sup>4</sup>	706,000	31	0.88	Salt, sand and gravel (construction), sand and gravel (industrial), stone (crushed), lime.
Maine <sup>4</sup>	87,200	45	0.11	Sand and gravel (construction), cement (portland), stone (crushed), stone (dimension), peat.
Maryland <sup>4</sup>	313,000	35	0.39	Cement (portland), stone (crushed), sand and gravel (construction), cement (masonry), stone (dimension).
Massachusetts <sup>4</sup>	274,000	41	0.34	Stone (crushed), sand and gravel (construction), stone (dimension), lime, clays (common).
Michigan	2,650,000	11	3.31	Iron ore, cement (portland), salt, sand and gravel (construction), stone (crushed).
Minnesota <sup>4</sup>	4,300,000	4	5.37	Iron ore, sand and gravel (industrial), sand and gravel (construction), stone (crushed), stone (dimension).
Mississippi <sup>4</sup>	145,000	43	0.18	Sand and gravel (construction), stone (crushed), clays (fuller's earth), clays (ball), sand and gravel (industrial).
Missouri	2,650,000	10	3.31	Cement (portland), stone (crushed), lead, lime, sand and gravel (industrial).
Montana	1,300,000	20	1.62	Palladium metal, copper, molybdenum concentrates, platinum metal, gold.
Nebraska <sup>4</sup>	169,000	37	0.21	Sand and gravel (industrial), cement (portland), stone (crushed), sand and gravel (construction), lime.
Nevada	7,520,000	2	9.38	Gold, copper, silver, lime, diatomite.
New Hampshire	99,600	48	0.12	Sand and gravel (construction), stone (crushed), stone (dimension).
New Jersey	290,000	40	0.36	Stone (crushed), sand and gravel (construction), sand and gravel (industrial), peat.
New Mexico	1,750,000	15	2.18	Copper, potash, sand and gravel (construction), stone (crushed), salt.
New York <sup>4</sup>	1,280,000	19	1.60	Salt, stone (crushed), sand and gravel (construction), cement (portland), wollastonite.
North Carolina <sup>4</sup>	857,000	23	1.07	Stone (crushed), phosphate rock, sand and gravel (construction), sand and gravel (industrial), stone (dimension).
North Dakota <sup>4</sup>	157,000	44	0.20	Sand and gravel (construction), lime, stone (crushed), clays (common), sand and gravel (industrial).
Ohio <sup>4</sup>	1,270,000	18	1.58	Stone (crushed), salt, lime, sand and gravel (construction), sand and gravel (industrial).
Oklahoma	794,000	30	0.99	Stone (crushed), cement (portland), sand and gravel (industrial), sand and gravel (construction), Helium (Grade-A).
Oregon	363,000	38	0.45	Stone (crushed), sand and gravel (construction), cement (portland), diatomite, perlite (crude).
Pennsylvania <sup>4</sup>	1,570,000	17	1.96	Stone (crushed), cement (portland), lime, sand and gravel (construction), sand and gravel (industrial).
Rhode Island <sup>4</sup>	49,600	49	0.06	Sand and gravel (construction), stone (crushed), sand and gravel (industrial).
South Carolina <sup>4</sup>	608,000	34	0.76	Cement (portland), stone (crushed), sand and gravel (construction), clays (kaolin), sand and gravel (industrial).
South Dakota	327,000	39	0.41	Gold, cement (portland), sand and gravel (construction), stone (crushed), lime.
Tennessee	1,040,000	25	1.30	Stone (crushed), zinc, cement (portland), sand and gravel (industrial), sand and gravel (construction).
Texas	5,110,000	3	6.37	Stone (crushed), sand and gravel (industrial), cement (portland), sand and gravel (construction), salt.
Utah	3,860,000	5	4.82	Copper, molybdenum concentrates, gold, magnesium metal, potash.
Vermont <sup>4</sup>	120,000	46	0.15	Stone (crushed), sand and gravel (construction), stone (dimension), talc (crude).
Virginia	1,080,000	24	1.35	Stone (crushed), cement (portland), sand and gravel (construction), lime, kyanite.
Washington	711,000	33	0.89	Sand and gravel (construction), stone (crushed), gold, cement (portland), diatomite.
West Virginia <sup>4</sup>	202,000	36	0.25	Stone (crushed), cement (portland), lime, sand and gravel (industrial), cement (masonry).
Wisconsin <sup>4</sup>	3,470,000	7	4.33	Sand and gravel (industrial), sand and gravel (construction), stone (crushed), lime, stone (dimension).
Wyoming	2,520,000	12	3.15	Soda ash, helium (Grade-A), clays (bentonite), sand and gravel (construction), cement (portland).
Undistributed	3,210,000	XX	4.01	
Total	80,100,000	XX	100.00	

XX Not applicable.

<sup>1</sup>Includes data available through June 6, 2017.<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.<sup>3</sup>Rank based on total, unadjusted, State values.<sup>4</sup>Partial total; excludes values that must be withheld to avoid disclosing company proprietary data, which are included with "Undistributed."

TABLE 4

VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2014, BY STATE<sup>1,2</sup>

State	Land area <sup>3</sup> (square kilometers)	Population <sup>3</sup> (thousands)	Value of nonfuel mineral production				
			Total (thousands)	Per capita		Per square kilometer	
				Dollars	Rank <sup>4</sup>	Dollars	Rank <sup>4</sup>
Alabama	131,171	4,843	\$1,240,000	256	17	9,460	22
Alaska	1,477,953	737	3,600,000	4,880	1	2,430	44
Arizona	294,207	6,720	7,960,000	1,180	6	27,100	1
Arkansas	134,771	2,967	915,000	308	15	6,790	32
California	403,466	38,681	3,150,000	81	41	7,800	28
Colorado	268,431	5,350	2,260,000	422	12	8,400	25
Connecticut	12,542	3,592	195,000 <sup>5</sup>	54	47	15,500	10
Delaware	5,047	935	16,100 <sup>5</sup>	17	49	3,200	33
Florida	138,887	19,889	2,890,000	145	30	20,800	7
Georgia	148,959	10,087	1,630,000	161	28	10,900	18
Hawaii	16,635	1,416	115,000	81	42	6,910	31
Idaho	214,045	1,634	912,000	558	10	4,260	41
Illinois	143,793	12,868	2,050,000 <sup>5</sup>	160	27	14,300	14
Indiana	92,789	6,595	874,000	133	32	9,420	23
Iowa	144,669	3,108	390,000 <sup>5</sup>	126	18	2,700	37
Kansas	211,754	2,899	584,000 <sup>5</sup>	201	13	2,760	36
Kentucky	102,269	4,413	516,000 <sup>5</sup>	117	24	5,050	26
Louisiana	111,898	4,648	706,000 <sup>5</sup>	152	26	6,310	30
Maine	79,883	1,331	87,200 <sup>5</sup>	66	38	1,090	46
Maryland	25,142	5,967	313,000 <sup>5</sup>	53	39	12,500	4
Massachusetts	20,202	6,750	274,000 <sup>5</sup>	41	48	13,600	15
Michigan	146,435	9,916	2,650,000	267	16	18,100	9
Minnesota	206,232	5,453	4,300,000 <sup>5</sup>	788	8	20,800	6
Mississippi	121,531	2,992	145,000 <sup>5</sup>	49	45	1,200	48
Missouri	178,040	6,061	2,650,000	438	11	14,900	13
Montana	376,962	1,023	1,300,000	1,270	5	3,440	43
Nebraska	198,974	1,881	169,000 <sup>5</sup>	90	22	849	45
Nevada	284,332	2,833	7,520,000	2,650	3	26,400	2
New Hampshire	23,187	1,329	99,600	75	43	4,290	40
New Jersey	19,047	8,925	290,000	32	50	15,200	11
New Mexico	314,161	2,083	1,750,000	839	7	5,560	35
New York	122,057	19,719	1,280,000 <sup>5</sup>	65	44	10,500	17
North Carolina	125,920	9,934	857,000 <sup>5</sup>	86	36	6,810	24
North Dakota	178,711	740	157,000 <sup>5</sup>	212	19	877	50
Ohio	105,829	11,594	1,270,000 <sup>5</sup>	109	31	12,000	12
Oklahoma	177,660	3,877	794,000	205	21	4,470	39
Oregon	248,608	3,968	363,000	91	40	1,460	49
Pennsylvania	115,883	12,791	1,570,000 <sup>5</sup>	123	35	13,500	16
Rhode Island	2,678	1,054	49,600 <sup>5</sup>	47	46	18,500	5
South Carolina	77,857	4,828	608,000 <sup>5</sup>	126	34	7,810	27
South Dakota	196,350	853	327,000	384	14	1,670	47
Tennessee	106,798	6,545	1,040,000	159	29	9,720	21
Texas	676,587	26,945	5,110,000	189	25	7,550	29
Utah	212,818	2,942	3,860,000	1,310	4	18,100	8
Vermont	23,871	627	120,000 <sup>5</sup>	191	23	5,030	38
Virginia	102,279	8,317	1,080,000	130	33	10,600	19
Washington	172,119	7,054	711,000	101	37	4,130	42
West Virginia	62,259	1,849	202,000 <sup>5</sup>	110	20	3,250	34
Wisconsin	140,268	5,758	3,470,000 <sup>5</sup>	602	9	24,700	3
Wyoming	251,470	584	2,520,000	4,320	2	10,000	20
Undistributed	XX	XX	3,210,000	XX	XX	XX	XX
Total or average	9,147,436 <sup>6</sup>	317,904 <sup>6</sup>	80,100,000	252	XX	8,760	XX

XX Not applicable.

<sup>1</sup>Includes data available through June 6, 2017.<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.<sup>3</sup>Source: U.S. Census Bureau.<sup>4</sup>Rank based on total, unadjusted, State values.



TABLE 4—Continued

VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2014, BY STATE<sup>1,2</sup>

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<sup>5</sup>Partial total; excludes values that must be concealed to avoid disclosing company proprietary data. Concealed values included with “Undistributed.”

<sup>6</sup>Excludes Washington, DC (which has no mineral production), with an area of 158 square kilometers and a population of 659,000.

TABLE 5  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1, 2, 3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Alabama:</b>						
Clays, common	1,210	9,070	1,190 <sup>r</sup>	8,630 <sup>r</sup>	1,260	9,140
Gemstones, natural <sup>c</sup>	NA	7	NA	7	NA	7
Lime	2,240	287,000	2,270	289,000	2,280	294,000
Sand and gravel:						
Construction	8,440 <sup>r</sup>	50,700 <sup>r</sup>	9,210 <sup>r</sup>	61,700 <sup>r</sup>	8,700	59,700
Industrial	401	13,200	334	14,900	1,180	42,400
Stone, crushed	36,900 <sup>r</sup>	347,000 <sup>r</sup>	36,400 <sup>r</sup>	359,000 <sup>r</sup>	36,800	390,000
Combined values of bauxite, cement, clays (bentonite and kaolin), iron oxide pigments (crude), salt, stone (dimension)	XX	327,000	XX	365,000	XX	446,000
Total	XX	1,030,000 <sup>r</sup>	XX	1,100,000 <sup>r</sup>	XX	1,240,000
<b>Alaska:</b>						
Copper <sup>4</sup>	(5)	(6)	--	--	--	--
Gemstones, natural <sup>c</sup>	NA	70	NA	70	NA	60
Gold <sup>4</sup> kilograms	27,700	1,490,000	32,200	1,470,000	31,400	1,280,000
Lead <sup>4</sup> metric tons	151,000	381,000	143,000	362,000	166,000	388,000
Sand and gravel, construction	6,550 <sup>r</sup>	44,900 <sup>r</sup>	9,800 <sup>r</sup>	65,800 <sup>r</sup>	8,270	62,500
Silver <sup>4</sup> kilograms	510,000	512,000	476,000	364,000	481,000	299,000
Stone, crushed	2,540	22,700	952 <sup>r</sup>	12,000 <sup>r</sup>	851	9,230
Zinc <sup>4</sup> metric tons	583,000	1,230,000	609,000	1,280,000	659,000	1,560,000
Total	XX	3,680,000 <sup>r</sup>	XX	3,550,000	XX	3,600,000
<b>Arizona:</b>						
Copper <sup>4</sup>	763	6,180,000	795	5,960,000	893	6,260,000
Gemstones, natural <sup>c</sup>	NA	2,500	NA	2,360	NA	2,370
Sand and gravel, construction	33,900 <sup>r</sup>	300,000 <sup>r</sup>	35,100 <sup>r</sup>	306,000 <sup>r</sup>	35,500	306,000
Stone:						
Crushed	6,810	60,100	8,270 <sup>r</sup>	73,100 <sup>r</sup>	8,750	74,900
Dimension, sandstone	46	5,570	57	6,420	55	6,080
Combined values of cement, clays [bentonite (2012) and common], gold, gypsum (crude), lime, molybdenum concentrates, perlite (crude), rhenium, salt, sand and gravel (industrial), silver, zeolites	XX	1,400,000	XX	1,210,000	XX	1,310,000
Total	XX	7,940,000 <sup>r</sup>	XX	7,550,000 <sup>r</sup>	XX	7,960,000
<b>Arkansas:</b>						
Clays, common	384	1,400	(5)	W	(5)	W
Gemstones, natural <sup>c</sup>	NA	388	NA	413	NA	429
Sand and gravel:						
Construction	7,980	68,200	8,010 <sup>r</sup>	68,200 <sup>r</sup>	8,020	69,500
Industrial	2,800	211,000	2,130	133,000	3,180	248,000
Special silica stone metric tons	156	39	146 <sup>e</sup>	36 <sup>e</sup>	146 <sup>e</sup>	36 <sup>e</sup>
Stone:						
Crushed	24,100	188,000	25,100 <sup>r</sup>	197,000	26,300	214,000
Dimension	10	1,160	10	1,320	10	1,290
Combined values of bauxite, bromine, cement, clays (kaolin), gypsum (crude), lime, tripoli, and values indicated by symbol W	XX	336,000 <sup>r</sup>	XX	302,000 <sup>r</sup>	XX	382,000
Total	XX	807,000 <sup>r</sup>	XX	702,000 <sup>r</sup>	XX	915,000
<b>California:</b>						
Cement:						
Masonry	152	15,900 <sup>e</sup>	178	19,600 <sup>e</sup>	186	20,100 <sup>e</sup>
Portland	8,400	621,000 <sup>e</sup>	9,260	714,000 <sup>e</sup>	9,810	829,000 <sup>e</sup>
Clays, bentonite	50	4,290	(5)	W	(5)	W
Gemstones, natural <sup>c</sup>	NA	966	NA	1,220	NA	1,210
Gypsum, crude	705 <sup>r</sup>	4,940 <sup>r</sup>	892 <sup>r</sup>	15,400 <sup>r</sup>	689	6,030
Rare earths <sup>e, 7</sup> metric tons	3,000	W	5,500	W	5,400	W

See footnotes at end of table.

TABLE 5—Continued  
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
California—Continued:						
Sand and gravel:						
Construction	79,700 <sup>r</sup>	870,000 <sup>r</sup>	85,600 <sup>r</sup>	954,000 <sup>r</sup>	84,400	1,010,000
Industrial	1,010	37,600	863	42,500	1,520	52,500
Stone:						
Crushed	31,900 <sup>r</sup>	308,000 <sup>r</sup>	33,600 <sup>r</sup>	320,000 <sup>r</sup>	35,800	314,000
Dimension	23	9,200	24	9,210	23	9,170
Combined values of boron minerals, clays (common, fuller's earth, kaolin), diatomite, feldspar, gold, lime, magnesium compounds, perlite [crude (2013)], pumice and pumicite, salt, silver, soda ash, tungsten, zeolites, and values indicated by symbol W						
	XX	1,390,000	XX	1,270,000	XX	906,000
Total	XX	3,260,000 <sup>r</sup>	XX	3,350,000 <sup>r</sup>	XX	3,150,000
Colorado:						
Clays, common	235	5,000	187 <sup>r</sup>	4,820 <sup>r</sup>	179	4,510
Gemstones, natural <sup>e</sup>	NA	438	NA	447	NA	451
Sand and gravel, construction	28,300 <sup>r</sup>	213,000 <sup>r</sup>	31,200 <sup>r</sup>	222,000 <sup>r</sup>	34,000	237,000
Stone:						
Crushed	8,980 <sup>r</sup>	68,900 <sup>r</sup>	10,400 <sup>r</sup>	81,200 <sup>r</sup>	12,900	106,000
Dimension	23	10,200	18	7,270	17	6,230
Combined values of cement, clays (bentonite and fire), gold, gypsum (crude), helium (Grade-A), lime, molybdenum concentrates, sand and gravel (industrial), silver						
	XX	1,650,000	XX	1,730,000	XX	1,900,000
Total	XX	1,940,000 <sup>r</sup>	XX	2,040,000 <sup>r</sup>	XX	2,260,000
Connecticut:						
Clays, common	(5)	(8)	(5)	(8)	(5)	(8)
Gemstones, natural <sup>e</sup>	NA	7	NA	7	NA	7
Sand and gravel, construction	5,460 <sup>r</sup>	51,300 <sup>r</sup>	5,100 <sup>r</sup>	47,200 <sup>r</sup>	5,360	53,100
Stone:						
Crushed	8,350 <sup>r</sup>	120,000 <sup>r</sup>	8,740 <sup>r</sup>	129,000 <sup>r</sup>	9,050	142,000
Dimension	--	--	(5)	(8)	(5)	(8)
Total	XX	172,000 <sup>r</sup>	XX	176,000 <sup>r</sup>	XX	195,000
Delaware:						
Gemstones, natural <sup>e</sup>	NA	1	NA	1	NA	1
Magnesium compounds	(5)	(8)	(5)	(8)	(5)	(8)
Sand and gravel, construction	1,460 <sup>r</sup>	12,400 <sup>r</sup>	1,690 <sup>r</sup>	13,200 <sup>r</sup>	1,690	16,100
Stone, crushed	(5)	(8)	(5)	(8)	(5)	(8)
Total	XX	12,400 <sup>r</sup>	XX	13,200 <sup>r</sup>	XX	16,100
Florida:						
Cement:						
Masonry	225	25,500 <sup>c</sup>	342	42,500 <sup>c</sup>	365	47,700 <sup>c</sup>
Portland	3,790	313,000 <sup>c</sup>	4,680	402,000 <sup>c</sup>	4,990	453,000 <sup>c</sup>
Clays, common	2	W	--	--	--	--
Gemstones, natural <sup>e</sup>	NA	1	NA	1	NA	2
Peat	356	7,270	338	6,800	370	7,340
Sand and gravel:						
Construction	13,700	111,000	14,700 <sup>r</sup>	133,000 <sup>r</sup>	16,000	152,000
Industrial	195	5,800	200	10,300	219	12,100
Stone, crushed	48,200 <sup>r</sup>	578,000 <sup>r</sup>	53,900 <sup>r</sup>	632,000 <sup>r</sup>	57,200	681,000
Combined values of clays (fuller's earth and kaolin), lime, phosphate rock, staurolite, titanium mineral concentrates (ilmenite), zircon concentrates, and value indicated by symbol W						
	XX	2,780,000	XX	2,370,000	XX	1,540,000
Total	XX	3,820,000 <sup>r</sup>	XX	3,590,000	XX	2,890,000

See footnotes at end of table.

TABLE 5—Continued  
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Georgia:</b>						
Barite	7	1,350 <sup>e</sup>	7	1,350 <sup>e</sup>	14	2,800 <sup>e</sup>
Clays:						
Common	687	3,770	(5)	W	(5)	W
Kaolin	5,410	844,000	5,580 <sup>r</sup>	852,000 <sup>r</sup>	5,660	853,000
Gemstones, natural <sup>e</sup>	NA	103	NA	103	NA	103
Sand and gravel:						
Construction	5,210 <sup>r</sup>	32,500 <sup>r</sup>	5,090 <sup>r</sup>	33,000 <sup>r</sup>	5,490	37,500
Industrial	585	16,500	596	15,800	520	18,000
Stone:						
Crushed	37,300 <sup>r</sup>	446,000 <sup>r</sup>	40,400 <sup>r</sup>	494,000 <sup>r</sup>	43,500	549,000
Dimension	142	16,800	145	17,200	152	15,500
Combined values of bauxite, cement, clays (fuller's earth), feldspar, iron oxide pigments (crude), lime, mica (crude), and values indicated by symbol W	XX	119,000	XX	137,000	XX	150,000
Total	XX	1,480,000 <sup>r</sup>	XX	1,550,000 <sup>r</sup>	XX	1,630,000
<b>Hawaii:</b>						
Gemstones, natural <sup>e</sup>	NA	151	NA	139	NA	136
Sand and gravel, construction	786	15,000	658 <sup>r</sup>	10,100 <sup>r</sup>	492	7,830
Stone, crushed	4,990	93,100	5,420 <sup>r</sup>	92,300 <sup>r</sup>	5,650	107,000
Total	XX	108,000	XX	102,000 <sup>r</sup>	XX	115,000
<b>Idaho:</b>						
Gemstones, natural <sup>e</sup>	NA	370	NA	371	NA	399
Sand and gravel, construction	10,100 <sup>r</sup>	74,600 <sup>r</sup>	11,400 <sup>r</sup>	68,800 <sup>r</sup>	13,400	80,000
Stone:						
Crushed	4,590	30,900	3,820	24,000	4,380	28,200
Dimension	30	5,370	32	5,840	64	8,640
Combined values of cement, copper, feldspar, garnet (industrial), lead, lime, molybdenum concentrates, perlite (crude), phosphate rock, pumice and pumicite, silver, zeolites, zinc (2013–14)	XX	703,000 <sup>r</sup>	XX	889,000 <sup>r</sup>	XX	794,000
Total	XX	814,000 <sup>r</sup>	XX	988,000 <sup>r</sup>	XX	912,000
<b>Illinois:</b>						
Cement, portland	1,150	95,700 <sup>e</sup>	1,100	106,000 <sup>e</sup>	1,220	126,000 <sup>e</sup>
Gemstones, natural <sup>e</sup>	NA	10	NA	10	NA	10
Sand and gravel:						
Construction	17,100 <sup>r</sup>	116,000 <sup>r</sup>	17,100 <sup>r</sup>	119,000 <sup>r</sup>	18,200	123,000
Industrial	7,440	504,000	9,850	501,000	13,500	1,290,000
Stone, crushed	49,300 <sup>r</sup>	483,000 <sup>r</sup>	45,800 <sup>r</sup>	472,000 <sup>r</sup>	52,000	515,000
Combined values of cement (masonry), clays (common and fuller's earth), peat, stone (dimension), tripoli	XX	(8)	XX	(8)	XX	(8)
Total	XX	1,200,000 <sup>r</sup>	XX	1,200,000 <sup>r</sup>	XX	2,050,000
<b>Indiana:</b>						
Cement, portland	2,390	193,000 <sup>e</sup>	2,280	191,000 <sup>e</sup>	2,400	208,000 <sup>e</sup>
Clays, common	369	6,240	294	6,490	287	6,510
Gemstones, natural <sup>e</sup>	NA	4	NA	4	NA	4
Sand and gravel, construction	18,500	107,000	18,300 <sup>r</sup>	132,000 <sup>r</sup>	17,600	132,000
Stone:						
Crushed	42,700	304,000	41,000	304,000	44,100	337,000
Dimension	186	32,000	150	26,200	200	34,400
Combined values of cement (masonry), clays (ball), gypsum (crude), lime, peat, sand and gravel (industrial)	XX	159,000 <sup>r</sup>	XX	153,000 <sup>r</sup>	XX	156,000
Total	XX	801,000 <sup>r</sup>	XX	813,000	XX	874,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Iowa:						
Gemstones, natural <sup>c</sup>	NA	3	NA	3	NA	3
Sand and gravel, construction	13,900 <sup>r</sup>	91,100 <sup>r</sup>	13,400 <sup>r</sup>	84,100 <sup>r</sup>	13,400	92,000
Stone, crushed	32,900 <sup>r</sup>	306,000 <sup>r</sup>	31,300 <sup>r</sup>	290,000 <sup>r</sup>	31,700	298,000
Combined values of cement, clays (common), gypsum (crude), lime, peat, sand and gravel (industrial)	XX	270,000 <sup>r</sup>	XX	326,000 <sup>r</sup>	XX	(8)
Total	XX	667,000 <sup>r</sup>	XX	700,000	XX	390,000
Kansas:						
Cement, portland	1,730	169,000 <sup>e</sup>	1,780	178,000 <sup>e</sup>	2,010	202,000 <sup>e</sup>
Clays, common	296	1,750	309	1,800	364	1,860
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Salt	2,570	175,000	2,650	174,000	2,930	194,000
Sand and gravel, construction	9,780 <sup>r</sup>	53,100 <sup>r</sup>	8,700 <sup>r</sup>	48,700 <sup>r</sup>	8,540	48,700
Stone:						
Crushed	15,900	134,000 <sup>r</sup>	15,400	131,000 <sup>r</sup>	16,000	136,000
Dimension	49	4,700	43	5,610	14	1,330
Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude and Grade-A), pumice and pumicite	XX	(8)	XX	(8)	XX	(8)
Total	XX	538,000 <sup>r</sup>	XX	540,000 <sup>r</sup>	XX	584,000
Kentucky:						
Clays, common	271	4,390	(5)	(8)	(5)	(8)
Gemstones, natural <sup>c</sup>	NA	11	NA	11	NA	11
Sand and gravel, construction	7,560 <sup>r</sup>	37,000 <sup>r</sup>	8,350 <sup>r</sup>	43,700 <sup>r</sup>	8,510	41,500
Stone, crushed	44,500 <sup>r</sup>	449,000 <sup>r</sup>	48,700 <sup>r</sup>	453,000 <sup>r</sup>	51,500	474,000
Combined values of cement, clays (ball), lime, sand and gravel [industrial (2013–14)]	XX	(8)	XX	(8)	XX	(8)
Total	XX	490,000 <sup>r</sup>	XX	497,000 <sup>r</sup>	XX	516,000
Louisiana:						
Clays, common	145	1,330	(5)	(8)	(5)	(8)
Gemstones, natural <sup>c</sup>	NA	7	NA	7	NA	7
Salt	11,600	172,000	14,300	318,000	14,800	344,000
Sand and gravel:						
Construction	18,800	208,000	18,600 <sup>r</sup>	190,000 <sup>r</sup>	17,100	215,000
Industrial	512	21,800	709	36,200	2,140	147,000
Combined values of gypsum (crude), lime, stone (crushed)	XX	(8)	XX	(8)	XX	(8)
Total	XX	403,000	XX	544,000 <sup>r</sup>	XX	706,000
Maine:						
Gemstones, natural <sup>c</sup>	NA	358	NA	364	NA	370
Sand and gravel, construction	8,500	62,700	7,490 <sup>r</sup>	52,000 <sup>r</sup>	7,050	52,600
Stone:						
Crushed	3,840	31,500	3,690	30,800 <sup>r</sup>	3,830	31,500
Dimension	7	4,150	5	2,770	5	2,820
Combined values of cement, clays [common (2012)], peat	XX	(8)	XX	(8)	XX	(8)
Total	XX	98,600	XX	86,000 <sup>r</sup>	XX	87,200
Maryland:						
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Sand and gravel, construction	7,730	90,700	6,540 <sup>r</sup>	76,900 <sup>r</sup>	7,110	91,900
Stone:						
Crushed	20,300	188,000	19,700	186,000 <sup>r</sup>	22,500	221,000
Dimension	4	1,120	2	687	3	723
Combined values of cement and clays (common)	XX	(8)	XX	(8)	XX	(8)
Total	XX	280,000	XX	263,000 <sup>r</sup>	XX	313,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Massachusetts:</b>						
Clays, common	18	180 <sup>r</sup>	(5)	(8)	(5)	(8)
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Lime	(5)	(8)	(5)	(8)	(5)	(8)
Sand and gravel, construction	9,960 <sup>r</sup>	92,400 <sup>r</sup>	11,700 <sup>r</sup>	106,000 <sup>r</sup>	10,800	82,700
<b>Stone:</b>						
Crushed	10,800	131,000	10,100	130,000	10,700	148,000
Dimension	145	34,200	148	43,500	165	43,100
Total	XX	258,000 <sup>r</sup>	XX	280,000 <sup>r</sup>	XX	274,000
<b>Michigan:</b>						
<b>Cement:</b>						
Masonry	73	9,540 <sup>c</sup>	61	8,500 <sup>c</sup>	43	6,100 <sup>c</sup>
Portland	3,890	346,000 <sup>c</sup>	3,860	370,000 <sup>c</sup>	3,950	399,000 <sup>c</sup>
Cobalt <sup>e,9</sup> metric tons	--	--	--	--	120	W
Gemstones, natural <sup>c</sup>	NA	2	NA	2	NA	2
Gypsum, crude	192 <sup>r</sup>	1,340 <sup>r</sup>	233 <sup>r</sup>	1,930 <sup>r</sup>	233	2,050
Iron ore <sup>10</sup>	11,000 <sup>r</sup>	1,240,000	10,700 <sup>r</sup>	1,390,000	12,100	1,240,000
Lime	526	62,300	524	64,700	526	65,400
Nickel <sup>11</sup> metric tons	--	--	--	--	4,300	W
<b>Sand and gravel:</b>						
Construction	32,500 <sup>r</sup>	178,000 <sup>r</sup>	31,800 <sup>r</sup>	167,000 <sup>r</sup>	35,400	200,000
Industrial	1,450	59,100	1,230	49,000	1,590	112,000
Stone, crushed	25,300 <sup>r</sup>	171,000 <sup>r</sup>	27,100 <sup>r</sup>	193,000	26,900	199,000
Combined values of clays (common), copper (2014), magnesium compounds, peat, potash, salt, stone (dimension) and values indicated by symbol W	XX	237,000 <sup>r</sup>	XX	324,000 <sup>r</sup>	XX	427,000
Total	XX	2,300,000 <sup>r</sup>	XX	2,560,000 <sup>r</sup>	XX	2,650,000
<b>Minnesota:</b>						
Clays, common	--	--	(5)	(8)	(5)	(8)
Gemstones, natural <sup>c</sup>	NA	7	NA	7	NA	7
Iron ore	42,300 <sup>r</sup>	3,680,000	40,800 <sup>r</sup>	3,120,000	43,000	3,410,000
Lime	(5)	(8)	(5)	(8)	(5)	(8)
Peat	56	2,880	55	2,980	48	2,740
<b>Sand and gravel:</b>						
Construction	43,600 <sup>r</sup>	217,000 <sup>r</sup>	40,900 <sup>r</sup>	191,000 <sup>r</sup>	41,000	184,000
Industrial	(5)	(8)	4,140	271,000	7,220	574,000
<b>Stone:</b>						
Crushed	8,070 <sup>r</sup>	96,900 <sup>r</sup>	8,160 <sup>r</sup>	94,300 <sup>r</sup>	8,960	103,000
Dimension	65	27,200	59	24,300	51	21,000
Total	XX	4,020,000 <sup>r</sup>	XX	3,710,000 <sup>r</sup>	XX	4,300,000
<b>Mississippi:</b>						
Clays, common	221	1,330	(5)	(8)	(5)	(8)
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
<b>Sand and gravel:</b>						
Construction	11,400 <sup>r</sup>	89,700 <sup>r</sup>	10,300 <sup>r</sup>	76,400 <sup>r</sup>	10,500	79,300
Industrial	--	--	--	--	373	5,520
Stone, crushed	2,120	53,100	1,920	52,200	2,140	60,600
Combined values clays [ball, bentonite, common (2013–14), fuller's earth]	XX	(8)	XX	(8)	XX	(8)
Total	XX	144,000 <sup>r</sup>	XX	129,000 <sup>r</sup>	XX	145,000
<b>Missouri:</b>						
Cement, portland	7,950	635,000 <sup>c</sup>	8,220	703,000 <sup>c</sup>	8,780	844,000 <sup>c</sup>
Clays, common	409	3,190	(5)	W	(5)	W
<b>Sand and gravel:</b>						
Construction	10,500 <sup>r</sup>	69,600 <sup>r</sup>	11,200 <sup>r</sup>	78,200 <sup>r</sup>	10,500	66,900
Industrial	1,390	76,000	1,990	127,000	4,290	289,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Missouri—Continued:						
Stone, crushed	68,100 <sup>r</sup>	570,000 <sup>r</sup>	68,800 <sup>r</sup>	527,000 <sup>r</sup>	68,800	550,000
Combined values of cement (masonry), clays (fire and fuller's earth), copper, gemstones (natural), lead, lime, silver, stone (dimension), tripoli, zinc, and values indicated by symbol W	XX	913,000	XX	898,000 <sup>r</sup>	XX	903,000
Total	XX	2,270,000 <sup>r</sup>	XX	2,330,000 <sup>r</sup>	XX	2,650,000
Montana:						
Gemstones, natural <sup>c</sup>	NA	532	NA	539	NA	544
Palladium <sup>4</sup> kilograms	12,300	257,000	12,600	295,000	12,400	324,000
Platinum <sup>4</sup> do.	3,670	184,000	3,720	178,000	3,660	163,000
Sand and gravel, construction	12,500 <sup>r</sup>	93,100 <sup>r</sup>	12,700 <sup>r</sup>	96,300 <sup>r</sup>	10,500	86,700
Stone:						
Crushed	2,810 <sup>r</sup>	30,300 <sup>r</sup>	2,690	26,000 <sup>r</sup>	2,910	26,100
Dimension	14	1,360	31	1,590	28	1,970
Combined values of cement, clays (bentonite and common), copper, garnet (industrial), gold, iodine, lime, molybdenum concentrates, rhenium, silver, talc (crude), tungsten (2012)	XX	889,000	XX	710,000 <sup>r</sup>	XX	693,000
Total	XX	1,460,000 <sup>r</sup>	XX	1,310,000	XX	1,300,000
Nebraska:						
Gemstones, natural <sup>c</sup>	NA	4	NA	4	NA	4
Sand and gravel, construction	13,300 <sup>r</sup>	87,600 <sup>r</sup>	12,600 <sup>r</sup>	88,100 <sup>r</sup>	11,600	83,800
Stone, crushed	6,650	74,900 <sup>r</sup>	6,590	76,400 <sup>r</sup>	7,470	85,200
Combined values of cement, clays (common), lime, sand and gravel [industrial]	XX	(8)	XX	(8)	XX	(8)
Total	XX	162,000 <sup>r</sup>	XX	164,000 <sup>r</sup>	XX	169,000
Nevada:						
Barite	659	73,200	717	80,500	649	85,800
Gold <sup>4</sup> kilograms	175,000	9,440,000	170,000	7,720,000	151,000	6,160,000
Lithium carbonate metric tons	(5)	W	870 <sup>12</sup>	11,200	(5)	W
Sand and gravel, construction	12,100 <sup>r</sup>	78,200 <sup>r</sup>	12,700 <sup>r</sup>	87,800 <sup>r</sup>	13,400	88,700
Silver <sup>4</sup> kilograms	250,000	251,000	255,000	195,000	326,000	203,000
Stone, crushed	8,350	80,900	7,840 <sup>r</sup>	74,900 <sup>r</sup>	8,550	76,200
Combined values of cement, clays (bentonite, fuller's earth, kaolin), copper, diatomite, gemstones (natural), gypsum (crude), lime, magnesite, molybdenum concentrates, perlite (crude), salt, sand and gravel (industrial), stone (dimension), and values indicated by symbol W	XX	1,110,000	XX	1,040,000 <sup>r</sup>	XX	908,000
Total	XX	11,000,000	XX	9,210,000 <sup>r</sup>	XX	7,520,000
New Hampshire:						
Gemstones, natural <sup>c</sup>	NA	7	NA	7	NA	7
Sand and gravel, construction	7,150 <sup>r</sup>	51,500 <sup>r</sup>	6,200 <sup>r</sup>	46,700 <sup>r</sup>	6,250	51,800
Stone:						
Crushed	4,630	39,800	4,890	43,300	5,130	44,300
Dimension	32	4,370	34	4,510	28	3,460
Total	XX	95,700 <sup>r</sup>	XX	94,500 <sup>r</sup>	XX	99,600
New Jersey:						
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Peat	(5)	(6)	(5)	(6)	(5)	(6)
Sand and gravel:						
Construction	11,200 <sup>r</sup>	98,100 <sup>r</sup>	11,000 <sup>r</sup>	94,000 <sup>r</sup>	12,100	99,000
Industrial	773	32,100	882	28,200	961	37,200
Stone, crushed	14,800	124,000	17,200	144,000	16,900	154,000
Total	XX	254,000	XX	266,000 <sup>r</sup>	XX	290,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
New Mexico:						
Clays, common	8	48	(5)	W	(5)	W
Copper <sup>4,13</sup>	103	834,000 <sup>r</sup>	121	908,000 <sup>r</sup>	156	1,090,000
Gemstones, natural <sup>e</sup>	NA	17	NA	17	NA	18
Sand and gravel, construction	9,660 <sup>r</sup>	77,800 <sup>r</sup>	9,110 <sup>r</sup>	81,900 <sup>r</sup>	7,720	77,800
Stone, crushed	4,950	41,400	5,040	46,900 <sup>r</sup>	4,720	42,000
Combined values of cement, gold, gypsum (crude), molybdenum concentrates, perlite (crude), potash, pumice and pumicite, rhenium, salt, silver, stone (dimension), zeolites, and values indicated by symbol W	XX	607,000 <sup>r</sup>	XX	537,000	XX	533,000
Total	XX	1,560,000 <sup>r</sup>	XX	1,570,000 <sup>r</sup>	XX	1,750,000
New York:						
Clays, common	425	19,000	548 <sup>r</sup>	24,900 <sup>r</sup>	513	22,200
Gemstones, natural <sup>e</sup>	NA	98	NA	99	NA	104
Salt	4,800	383,000	7,120 <sup>r</sup>	502,000 <sup>r</sup>	7,740	577,000
Sand and gravel, construction	29,100 <sup>r</sup>	256,000 <sup>r</sup>	28,600 <sup>r</sup>	248,000 <sup>r</sup>	27,200	245,000
Stone:						
Crushed	35,200	376,000	34,700 <sup>r</sup>	355,000 <sup>r</sup>	37,500	418,000
Dimension	99	18,400	120	17,300	126	17,600
Combined values of cement, garnet (industrial), peat, sand and gravel (industrial), wollastonite	XX	(8)	XX	(8)	XX	(8)
Total	XX	1,050,000 <sup>r</sup>	XX	1,150,000 <sup>r</sup>	XX	1,280,000
North Carolina:						
Clays, common	732	20,100	727	20,000	799	17,500
Gemstones, natural <sup>e</sup>	NA	2,060	NA	371	NA	235
Sand and gravel:						
Construction	7,310 <sup>r</sup>	43,600 <sup>r</sup>	7,390 <sup>r</sup>	49,900 <sup>r</sup>	7,340	48,800
Industrial	1,230	30,400	1,290	30,700	2,730	42,300
Stone:						
Crushed	41,100	615,000	46,600	715,000	46,200	727,000
Dimension	53	8,480	47	19,600	44	20,700
Combined values of andalusite, clays (kaolin), feldspar, mica (crude), phosphate rock, pyrophyllite (crude)	XX	(8)	XX	(8)	XX	(8)
Total	XX	720,000 <sup>r</sup>	XX	835,000 <sup>r</sup>	XX	857,000
North Dakota:						
Clays, common	(5)	(8)	(5)	(8)	(5)	(8)
Gemstones, natural <sup>e</sup>	NA	4	NA	4	NA	4
Lime	(5)	(8)	(5)	(8)	(5)	(8)
Sand and gravel:						
Construction	26,900 <sup>r</sup>	191,000 <sup>r</sup>	25,300 <sup>r</sup>	182,000 <sup>r</sup>	20,000	143,000
Industrial	(5)	(8)	(5)	(8)	(5)	(8)
Stone, crushed	1,700 <sup>r</sup>	10,500 <sup>r</sup>	1,260 <sup>r</sup>	13,000 <sup>r</sup>	1,410	14,000
Total	XX	202,000 <sup>r</sup>	XX	195,000 <sup>r</sup>	XX	157,000
Ohio:						
Cement:						
Masonry	(5)	(8)	(5)	(8)	(5)	(8)
Portland	797	72,100 <sup>c</sup>	829	79,000 <sup>c</sup>	864	90,000 <sup>c</sup>
Clays, common	693	13,900	602 <sup>r</sup>	9,100 <sup>r</sup>	643	9,980
Gemstones, natural <sup>e</sup>	NA	4	NA	4	NA	4
Lime	1,650	209,000	1,780	229,000	1,800	234,000
Peat	(5)	(8)	(5)	(8)	(5)	(8)
Salt	(5)	(8)	(5)	(8)	(5)	(8)
Sand and gravel:						
Construction	29,300 <sup>r</sup>	232,000 <sup>r</sup>	28,700 <sup>r</sup>	224,000 <sup>r</sup>	31,000	232,000
Industrial	1,160	34,500	1,230	61,100	2,850	211,000

See footnotes at end of table.



TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Ohio—Continued:						
Stone:						
Crushed	54,600 <sup>r</sup>	442,000 <sup>r</sup>	52,900 <sup>r</sup>	433,000 <sup>r</sup>	54,800	485,000
Dimension	25	5,700	27	6,610	21	5,150
Total	XX	1,010,000	XX	1,040,000 <sup>r</sup>	XX	1,270,000
Oklahoma:						
Clays, common	638	3,010	925 <sup>r</sup>	3,160 <sup>r</sup>	906	3,020
Gemstones, natural <sup>c</sup>	NA	4	NA	4	NA	4
Sand and gravel:						
Construction	11,300 <sup>r</sup>	70,100 <sup>r</sup>	11,100 <sup>r</sup>	76,600 <sup>r</sup>	11,900	89,300
Industrial	2,850	112,000	2,120	89,100	3,340	122,000
Stone:						
Crushed	39,900	303,000	39,800	304,000 <sup>r</sup>	39,700	317,000
Dimension	53	7,420	43	7,880	62	5,240
Combined values of cement, feldspar, gypsum (crude), helium (Grade-A), iodine (crude), lime, pumice and pumicite (2013–14), salt	XX	213,000 <sup>r</sup>	XX	214,000 <sup>r</sup>	XX	258,000
Total	XX	708,000 <sup>r</sup>	XX	694,000 <sup>r</sup>	XX	794,000
Oregon:						
Gemstones, natural <sup>c</sup>	NA	1,150	NA	1,100	NA	1,090
Sand and gravel, construction	10,400	89,700 <sup>r</sup>	11,300 <sup>r</sup>	90,700 <sup>r</sup>	10,900	94,300
Stone, crushed	15,800 <sup>r</sup>	116,000 <sup>r</sup>	16,900 <sup>r</sup>	132,000 <sup>r</sup>	17,300	134,000
Combined values of cement, clays (bentonite and common), diatomite, emery (crude), lime, perlite (crude), pumice and pumicite, sand and gravel [industrial (2014)], zeolites	XX	93,600	XX	118,000	XX	133,000
Total	XX	300,000 <sup>r</sup>	XX	342,000 <sup>r</sup>	XX	363,000
Pennsylvania:						
Cement:						
Masonry	147	7,010 <sup>e</sup>	143	7,500 <sup>e</sup>	217	31,400 <sup>e</sup>
Portland	3,360	308,000 <sup>e</sup>	3,620	353,000 <sup>e</sup>	3,830	352,000 <sup>e</sup>
Clays, common	(5)	(8)	236	2,150 <sup>r</sup>	229	2,070
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Lime	1,090	151,000	1,090	151,000	1,080	148,000
Peat	(5)	(8)	(5)	(8)	(5)	(8)
Sand and gravel:						
Construction	11,500 <sup>r</sup>	102,000 <sup>r</sup>	10,500 <sup>r</sup>	94,800 <sup>r</sup>	9,700	94,400
Industrial	(5)	(8)	(5)	(8)	(5)	(8)
Stone:						
Crushed	82,300 <sup>r</sup>	894,000 <sup>r</sup>	78,800 <sup>r</sup>	888,000 <sup>r</sup>	81,100	937,000
Dimension	25	6,540	25	5,890	51	5,720
Total	XX	1,470,000	XX	1,500,000 <sup>r</sup>	XX	1,570,000
Rhode Island:						
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	2,500	28,400	2,410 <sup>r</sup>	30,000 <sup>r</sup>	2,580	31,200
Industrial	(5)	(8)	(5)	(8)	(5)	(8)
Stone, crushed	1,480	16,300	1,640 <sup>r</sup>	17,600 <sup>r</sup>	1,700	18,400
Total	XX	44,700	XX	47,600 <sup>r</sup>	XX	49,600
South Carolina:						
Cement:						
Masonry	158	20,800 <sup>e</sup>	155	22,000 <sup>e</sup>	160	23,700 <sup>e</sup>
Portland	2,770	222,000 <sup>e</sup>	2,780	236,000 <sup>e</sup>	2,890	273,000 <sup>e</sup>
Clays:						
Common	197	1,120	(5)	(8)	(5)	(8)
Kaolin	256	20,600	313 <sup>r</sup>	27,100 <sup>r</sup>	345	30,200
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1, 2, 3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
South Carolina—Continued:						
Sand and gravel:						
Construction	6,380	36,300	6,510 <sup>r</sup>	37,300 <sup>r</sup>	8,080	42,100
Industrial	483	20,300	521	23,600	589	26,800
Stone:						
Crushed	19,400 <sup>r</sup>	190,000 <sup>r</sup>	20,000 <sup>r</sup>	207,000 <sup>r</sup>	20,200	212,000
Dimension	(5)	(8)	(5)	(8)	(5)	(8)
Vermiculite	(5)	(8)	(5)	(8)	(5)	(8)
Total	XX	512,000 <sup>r</sup>	XX	553,000 <sup>r</sup>	XX	608,000
South Dakota:						
Sand and gravel, construction	13,200 <sup>r</sup>	63,400 <sup>r</sup>	11,800 <sup>r</sup>	53,000 <sup>r</sup>	11,800	58,500
Stone, crushed	5,520 <sup>r</sup>	40,300 <sup>r</sup>	6,300 <sup>r</sup>	44,700 <sup>r</sup>	6,450	47,200
Combined values of cement, clays (common), 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 <sup>r</sup>	XX	285,000 <sup>r</sup>	XX	327,000
Tennessee:						
Clays:						
Ball	(5)	W	623	28,500	648	27,400
Common	114	817	(5)	W	(5)	W
Sand and gravel:						
Construction	6,110	47,500	6,060 <sup>r</sup>	48,300 <sup>r</sup>	5,870	40,100
Industrial	1,040	26,600	1,090	35,600	1,490	60,500
Stone:						
Crushed	38,800	476,000	38,200	474,000	39,200	493,000
Dimension	32	7,210	32	6,140	51	11,000
Combined values of cadmium, cement, clays (fuller's earth), gemstones (natural), lime, salt, zinc, and values indicated by symbol W	XX	377,000	XX	378,000 <sup>r</sup>	XX	407,000
Total	XX	935,000	XX	971,000 <sup>r</sup>	XX	1,040,000
Texas:						
Cement:						
Masonry	215	31,900 <sup>e</sup>	238	37,300 <sup>e</sup>	277	43,300 <sup>e</sup>
Portland	10,000	937,000 <sup>e</sup>	10,100	995,000 <sup>e</sup>	11,000	1,170,000 <sup>e</sup>
Clays:						
Bentonite	57	9,730	55 <sup>r</sup>	9,990	59	10,400
Common	1,940	13,400	1,520	12,100	1,740	14,400
Gemstones, natural <sup>e</sup>	NA	203	NA	172	NA	170
Lime	1,360	154,000	1,360	154,000	1,490	171,000
Salt	7,790	161,000	7,770	166,000	8,010	182,000
Sand and gravel:						
Construction	75,600 <sup>r</sup>	559,000 <sup>r</sup>	77,000 <sup>r</sup>	622,000 <sup>r</sup>	76,000	671,000
Industrial	7,010	357,000	7,080	434,000	16,500	1,300,000
Stone:						
Crushed	133,000 <sup>r</sup>	1,010,000 <sup>r</sup>	134,000 <sup>r</sup>	1,080,000 <sup>r</sup>	152,000	1,320,000
Dimension	766	151,000	905	151,000	922	159,000
Combined values of clays (ball, fire, fuller's earth, kaolin), gypsum (crude), helium [crude and Grade-A (2012)], talc (crude), zeolites	XX	62,800 <sup>r</sup>	XX	57,800 <sup>r</sup>	XX	58,000
Total	XX	3,450,000 <sup>r</sup>	XX	3,720,000 <sup>r</sup>	XX	5,110,000
Utah:						
Beryllium concentrates <sup>14</sup>	225	W	235	W	270	W
Clays, common	332	12,100	(5)	W	(5)	W
Gemstones, natural <sup>e</sup>	NA	879	NA	857	NA	860
Iron ore	1,440 <sup>r</sup>	158,000 <sup>r</sup>	1,270 <sup>r</sup>	103,000 <sup>r</sup>	998	83,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1, 2, 3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Utah—Continued:						
Salt	1,380	99,600	2,040	157,000 <sup>r</sup>	2,360	194,000
Sand and gravel, construction	24,300 <sup>r</sup>	176,000 <sup>r</sup>	25,100 <sup>r</sup>	181,000 <sup>r</sup>	25,300	188,000
Stone, crushed	7,370	56,900	7,260	59,300	8,250	65,900
Vanadium <sup>4</sup> metric tons	106	1,520	591	7,870	--	--
Combined values of cement, clays (bentonite), copper, gold, gypsum (crude), lime, magnesium compounds, magnesium metal, molybdenum concentrates, phosphate rock, potash, rhenium, silver, stone (dimension), and values indicated by symbol W	XX	2,970,000 <sup>r</sup>	XX	3,070,000 <sup>r</sup>	XX	3,330,000
Total	XX	3,470,000 <sup>r</sup>	XX	3,580,000 <sup>r</sup>	XX	3,860,000
Vermont:						
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Sand and gravel, construction	4,880 <sup>r</sup>	39,700 <sup>r</sup>	4,850 <sup>r</sup>	36,200 <sup>r</sup>	4,750	32,600
Stone:						
Crushed	6,190	62,200	6,500 <sup>r</sup>	64,100 <sup>r</sup>	6,520	63,400
Dimension	75	24,900	80	25,200	92	24,100
Talc, crude	(5)	(8)	(5)	(8)	(5)	(8)
Total	XX	127,000 <sup>r</sup>	XX	126,000	XX	120,000
Virginia:						
Kyanite metric tons	98,500	31,000 <sup>e</sup>	100,000 <sup>r</sup>	35,000 <sup>r, e</sup>	110,000	38,000 <sup>e</sup>
Sand and gravel, construction	6,650 <sup>r</sup>	75,700 <sup>r</sup>	6,820 <sup>r</sup>	75,000 <sup>r</sup>	7,120	82,200
Stone:						
Crushed	44,300 <sup>r</sup>	667,000 <sup>r</sup>	41,900 <sup>r</sup>	631,000 <sup>r</sup>	43,700 <sup>r</sup>	669,000 <sup>r</sup>
Dimension	13	8,110	12	7,590	13	7,730
Combined values of cement, clays (common and fuller's earth), feldspar, gemstones (natural), iron oxide pigments [crude (2012–13)], lime, mica [crude (2013–14)], salt, sand and gravel (industrial), talc (crude), titanium mineral concentrates (ilmenite), vermiculite (crude), zircon concentrates	XX	401,000	XX	325,000	XX	285,000
Total	XX	1,180,000	XX	1,070,000	XX	1,080,000
Washington:						
Gemstones, natural <sup>c</sup>	NA	57	NA	58	NA	59
Sand and gravel, construction	28,500 <sup>r</sup>	217,000 <sup>r</sup>	31,000 <sup>r</sup>	234,000 <sup>r</sup>	31,700	236,000
Stone, crushed	15,700 <sup>r</sup>	190,000 <sup>r</sup>	14,600 <sup>r</sup>	189,000 <sup>r</sup>	14,300	191,000
Combined values of cement, clays [common (2012) and fire (2013–14)], diatomite, gold, lime, olivine (2012), peat, sand and gravel (industrial), zinc (2014)	XX	362,000	XX	328,000	XX	284,000
Total	XX	770,000 <sup>r</sup>	XX	750,000 <sup>r</sup>	XX	711,000
West Virginia:						
Gemstones, natural <sup>c</sup>	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	578	4,890	487	4,130	618	5,240
Industrial	312	16,000	429	21,900	536	29,500
Stone, crushed	15,700	152,000	14,800	156,000 <sup>r</sup>	14,900	168,000
Combined values of cement, clays (common), lime, salt	XX	(8)	XX	(8)	XX	(8)
Total	XX	173,000 <sup>r</sup>	XX	182,000 <sup>r</sup>	XX	202,000
Wisconsin:						
Gemstones, natural <sup>c</sup>	NA	7	NA	7	NA	7
Lime	924	102,000	(5)	(8)	(5)	(8)
Peat	(5)	(6)	--	--	--	--
Sand and gravel:						
Construction	28,200 <sup>r</sup>	142,000 <sup>r</sup>	24,600 <sup>r</sup>	127,000 <sup>r</sup>	25,500	143,000
Industrial	10,700	611,000	19,800	1,210,000	38,300	3,150,000

See footnotes at end of table.

TABLE 5—Continued  
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE<sup>1,2,3</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Wisconsin—Continued:						
Stone:						
Crushed	22,300	135,000	20,300 <sup>r</sup>	129,000	20,800	134,000
Dimension	158	37,900	156	37,200	190	40,200
Total	XX	1,030,000 <sup>r</sup>	XX	1,500,000 <sup>r</sup>	XX	3,470,000
Wyoming:						
Clays:						
Bentonite	4,500	267,000	4,000	253,000	4,340	289,000
Common	31	114	(5)	W	(5)	W
Gemstones, natural <sup>c</sup>	NA	19	NA	18	NA	18
Sand and gravel, construction	11,800	98,600 <sup>r</sup>	11,300 <sup>r</sup>	91,100 <sup>r</sup>	12,600	107,000
Stone, crushed	11,400	50,500	9,380	41,400 <sup>r</sup>	11,000	51,500
Combined values of cement, gypsum (crude), helium (Grade-A), lime, soda ash, stone [dimension (2012)], and values indicated by symbol W	XX	1,910,000 <sup>r</sup>	XX	1,880,000 <sup>r</sup>	XX	2,070,000
Total	XX	2,330,000	XX	2,260,000	XX	2,520,000
Undistributed:						
Connecticut, Delaware, Illinois, Iowa (2014), Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, New York, North Carolina, North Dakota, Ohio, Pennsylvania, Rhode Island, South Carolina, Vermont, West Virginia, Wisconsin (2013–14)	XX	2,690,000 <sup>r</sup>	XX	2,750,000 <sup>r</sup>	XX	3,210,000

<sup>6</sup>Estimated. <sup>r</sup>Revised. do. Ditto. NA Not available. W Withheld to avoid disclosing company proprietary data; included in “Combined values” data for each State. XX Not applicable. -- Zero.

<sup>1</sup>Includes data available through June 6, 2017.

<sup>2</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>3</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>4</sup>Recoverable content of ores and concentrates.

<sup>5</sup>Withheld to avoid disclosing company proprietary data.

<sup>6</sup>Withheld to avoid disclosing company proprietary data; included in “Total” for each State.

<sup>7</sup>Rare-earth oxide (REO) basis.

<sup>8</sup>Withheld to avoid disclosing company proprietary data; included in “Undistributed.”

<sup>9</sup>Cobalt content of concentrate.

<sup>10</sup>Production based on publically available data; refer to the 2014 Minerals Yearbook iron ore chapter and Cliffs annual reports.

<sup>11</sup>Recoverable content of nickel sulfide concentrate.

<sup>12</sup>Contained lithium.

<sup>13</sup>Production based on publically available data; refer to the 2014 Minerals Yearbook copper chapter and the Freeport-McMoRan Inc. Securities and Exchange Commission Form 10-K.

<sup>14</sup>Beryllium metal content.

TABLE 6  
NONFUEL RAW MINERAL PRODUCTION IN THE COMMONWEALTH OF PUERTO RICO AND ISLANDS ADMINISTERED  
BY THE UNITED STATES<sup>1, 2, 3, 4</sup>

(Thousand metric tons and thousand dollars)

Commodity	2012		2013		2014	
	Quantity	Value	Quantity	Value	Quantity	Value
Puerto Rico:						
Cement:						
Masonry	(5)	W	(5)	W	--	--
Portland	783	W	610	W	588	W
Clays, common <sup>e</sup>	55	328	58 <sup>r</sup>	320 <sup>r</sup>	58	320
Lime	W	3,760 <sup>e</sup>	W	3,760 <sup>e</sup>	W	3,760 <sup>e</sup>
Salt <sup>e</sup>	45	1,500	45	1,500	45	1,720
Stone, crushed	7,410 <sup>r</sup>	74,300 <sup>r</sup>	5,990 <sup>r</sup>	61,000 <sup>r</sup>	5,410	54,500
Total	XX	79,900 <sup>r</sup>	XX	66,500 <sup>r</sup>	XX	60,200

<sup>e</sup>Estimated. <sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; excluded from "Total." XX Not applicable. -- Zero.

<sup>1</sup>Includes data available through June 6, 2017.

<sup>2</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>3</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>4</sup>The Administered Islands American Samoa, Guam, and the Virgin Islands data for crushed stone are withheld to avoid disclosing company proprietary data.

<sup>5</sup>Less than ½ unit.

TABLE 7  
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value	Quantity	Value	
<b>Metals:</b>					
<b>Aluminum:</b>					
Crude and semicrude	metric tons	3,390,000	9,530,000	3,230,000	9,200,000
Manufactures	do.	114,000	494,000	110,000	484,000
<b>Antimony:</b>					
Metal, alloys, waste and scrap	do.	1,550	5,540	1,570	5,920
Oxide, Sb content	do.	2,420	14,200	1,670	11,000
Arsenic metal, As content	do.	1,630	NA	2,950	NA
<b>Bauxite and alumina:</b>					
Alumina, calcined equivalent		2,250 <sup>r</sup>	955,000 <sup>r</sup>	2,130	961,000
<b>Bauxite:</b>					
Calcined, refractory and other grade		10	1,410	8	1,740
Crude and dried		4	110	3	80
Beryllium, unwrought, and waste and scrap, other including articles not elsewhere specified, Be content	kilograms	35,200	19,100	26,400	21,000
Bismuth, metal, alloys, waste and scrap, Bi content	do.	816,000	9,040	567,000	6,300
<b>Cadmium:</b>					
Metal	do.	266,000	629	NA	NA
Sulfide, gross weight	do.	5,710	3	3,000	712
Unwrought metal and powders	do.	131,000	327	198,000	509
Waste and scrap	do.	20,400	43	--	--
<b>Chromium:</b>					
Ores and concentrate	metric tons	8,530	3,040	6,060	4,150
<b>Metals and alloys:</b>					
Metal, unwrought powders, waste and scrap, other	do.	856	19,000	658	17,900
Ferroalloys, high-carbon, low-carbon, ferrochromium-silicon	do.	4,850	7,300	4,730	8,060
<b>Chemicals:</b>					
Oxides, trioxide, other	do.	20,600	85,700	19,800	91,200
Sulfates	do.	128	701	207	1,100
Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other	do.	15,100	29,900	13,800	27,200
Pigments and preparations	do.	649	6,090	430	3,170
<b>Cobalt:</b>					
Acetates	do.	236	2,050	181	3,380
Chlorides	do.	6	98	3	44
Oxides and hydroxides	do.	409	4,250	536	5,720
Metal, unwrought, powders, waste and scrap, mattes, other intermediate products of metallurgy	do.	3,500	97,000	4,070	102,000
<b>Copper:</b>					
Unmanufactured, does not include unalloyed scrap, Cu content	do.	501,000 <sup>r</sup>	3,240,000 <sup>r</sup>	571,000	3,900,000
Semimanufactures	do.	256,000	2,090,000	247,000	1,980,000
Scrap, unalloyed	do.	449,000	2,220,000	430,000	1,930,000
<b>Ferroalloys not listed elsewhere:</b>					
Ferrophosphorous	do.	619	1,310	544	993
Other	do.	2,120	5,730	7,390	15,700
<b>Gold:</b>					
Ores and concentrates	kilograms	7,210	316,000	4,340	178,000
Dore and precipitates	do.	195,000	8,390,000	117,000	4,790,000
Bullion, refined	do.	489,000	22,800,000	379,000	15,200,000
Waste and scrap	do.	128,000	951,000	146,000	802,000
Metal powder	do.	269	8,650	1,170	44,200
Compounds	do.	1,170,000	92,100	12,800	99,200
<b>Iron and steel:</b>					
Steel mill products		11,500	NA	10,900	NA
Fabricated steel products		1,880	NA	2,060	NA
Cast iron and steel products		283	NA	342	NA

See footnotes at end of table.

TABLE 7—Continued  
 U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014	
	Quantity	Value	Quantity	Value
Metals—Continued:				
Iron and steel scrap:				
Ferrous, includes tinplate and terneplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping	18,500	7,570,000	15,300	6,160,000
Pig iron, all grades metric tons	18,000	4,440	6,770	2,290
Direct-reduced iron, steelmaking grade do.	265	29	1,110	132
Ships, boats, and other vessels for scrapping	7	1,030	7	1,300
Used rails for rerolling and other uses, includes mixed (used plus new) rails	37	34,900 <sup>r</sup>	41	38,100
Iron ore	11,000	1,480,000	12,100	1,320,000
Lead:				
Base bullion, Pb content metric tons	349	1,300	964	2,830
Ore and concentrates, Pb content do.	215,000	386,000	356,000	582,000
Unwrought and alloys, Pb content do.	41,600	62,700	55,300	63,800
Wrought and alloys, Pb content do.	6,610	10,800	5,020	10,100
Scrap, gross weight do.	34,900	45,400	36,400	51,300
Magnesium:				
Waste and scrap, Mg content do.	471	1,420	923	2,460
Metal, Mg content do.	5,790	17,600	6,010	21,900
Alloys, gross weight do.	8,240	37,200	8,900	35,200
Powder, sheets, tubing, ribbons, wire, other forms, gross weight do.	1,600	55,100	1,160	54,800
Manganese, gross weight:				
Ores and concentrates with 20% or more manganese do.	628	1,350	858	2,250
Ferromanganese, all grades do.	1,970	3,300	5,540	8,620
Silicomanganese do.	5,890	6,500	3,320	3,820
Metal, including alloys and waste and scrap do.	1,680	5,770	3,470	7,290
Dioxide do.	6,530	14,500	3,820	7,870
Mercury:				
Metal do.	(3)	10	--	--
Amalgams of precious metals whether or not chemically defined do.	153	361,000	107	474,000
Molybdenum:				
Ore and concentrates, including roasted and other, Mo content do.	48,600	1,030,000	60,500	1,240,000
Chemicals:				
Oxides and hydroxides, gross weight do.	1,320	26,400	1,740	33,500
Molybdates, all, gross weight do.	1,740	31,200	1,600	21,900
Ferromolybdenum, Mo content do.	862	22,900	569	18,400
Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight do.	1,060	78,700	1,320	98,000
Nickel, Ni content:				
Primary, unwrought and chemicals do.	10,600	397,000	10,400	466,000
Secondary, stainless steel scrap and waste and scrap do.	61,200	853,000	56,400	799,000
Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes do.	728	25,000	680	23,900
Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles, gross weight do.	42,400	1,760,000	45,200	1,810,000
Niobium (columbium) and tantalum:				
Niobium:				
Ores and concentrates kilograms	111,000	1,430	59,600	772
Ferroniobium do.	588,000	7,280	1,620,000	22,900
Tantalum:				
Ores and concentrates, includes synthetic do.	XX	4,730	XX	8,230
Unwrought powders do.	146,000	75,700	206,000	100,000
Unwrought, alloys and metal do.	15,000	8,000	40,200	9,740
Waste and scrap do.	521,000	67,800	325,000	49,300
Wrought do.	54,200	36,400	56,900	36,100

See footnotes at end of table.

TABLE 7—Continued  
 U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value	Quantity	Value	
Metals—Continued:					
Platinum-group metals:					
Palladium, Pd content	kilograms	25,900	452,000	22,500	460,000
Platinum, includes waste and scrap and metal, Pt content	do.	375,000	1,560,000	269,000	1,660,000
Iridium, osmium, ruthenium, gross weight	do.	1,320	21,200	901	13,200
Rhodium, Rh content	do.	1,220	46,100 <sup>r</sup>	428	17,000
Rare earths, estimated rare-earth oxide content:					
Compounds:					
Cerium compounds	do.	734,000	12,400	608,000	7,210
Other	do.	5,570,000	49,700	3,800,000	43,700
Metals:					
Ferrocerium and other pyrophoric alloys	do.	1,420,000	14,600	1,630,000	18,000
Other, metals and alloys	do.	1,040,000	9,600	140,000	3,490
Selenium and tellurium:					
Selenium, Se content	do.	648,000	13,000	521,000	9,620
Tellurium, Te content	do.	42,300	2,670	27,900	1,920
Silicon, gross weight:					
Ferrosilicon	metric tons	17,300	31,800	15,900	27,900
Metal	do.	38,300	1,350,000	45,400	1,670,000
Silver:					
Bullion, Ag content	kilograms	347,000	258,000	345,000	253,000
Dore, Ag content	do.	48,000	39,400	31,400	19,500
Metal powder, gross weight	do.	660,000	551,000	731,000	511,000
Nitrate, gross weight	do.	39,800	4,370	33,000	3,770
Ores and concentrates, Ag content	do.	13,800	31,300	5,740	17,900
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	741,000	535,000	489,000	334,000
Waste and scrap, gross weight	do.	19,300,000	1,570,000	15,700,000	1,570,000
Unwrought, other, gross weight	do.	120,000	116,000	102,000	99,900
Thorium and thorium-bearing materials, compounds	metric tons	1	523	15	1,900
Tin:					
Ingots and pigs	do.	5,870	38,400	5,700	45,400
Tin scrap and other tin bearing material, except tinplate scrap, includes rods, profiles, wire, powders, flakes, tubes, pipes	do.	10,700	59,000	127,000	58,400
Tinplate and terneplate	do.	135,000	109,000	148,000	116,000
Titanium:					
Metal, waste and scrap, unwrought, wrought products and castings, ferrotitanium and ferrosilicon titanium	do.	39,000	1,460,000	36,500	157,000
Ores and concentrates	do.	11,500	22,700	2,240	5,400
Pigment, dioxide and oxide	do.	671,000 <sup>r</sup>	1,800,000	685,000	1,790,000
Tungsten, W content:					
Ammonium paratungstate	do.	1,600	31,400	653	9,140
Carbide powder	do.	901	46,700	993	58,800
Metal powders	do.	455	38,600	448	33,300
Miscellaneous tungsten-bearing materials, ferrotungsten, ferrosilicon tungsten, unwrought, waste and scrap, wrought, compounds	do.	3,710	68,800	3,330	56,400
Ores and concentrates	do.	1,060	33,600	1,230	34,700
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	347,000 <sup>r</sup>	9,800 <sup>r</sup>	443,000	12,400
Ferrovandium, V content	do.	299,000 <sup>r</sup>	8,790 <sup>r</sup>	253,000	7,510
Metal, including waste and scrap, gross weight	do.	57,500 <sup>r</sup>	1,700 <sup>r</sup>	31,900	1,150
Pentoxide, anhydride, V content	do.	89,600 <sup>r</sup>	1,340 <sup>r</sup>	201,000	2,910
Other oxides and hydroxides, V content	do.	427,000 <sup>r</sup>	4,670 <sup>r</sup>	350,000	4,800

See footnotes at end of table.



TABLE 7—Continued  
 U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value	Quantity	Value	
<b>Metals—Continued:</b>					
Zinc:					
Compounds, chloride, chromates of zinc or of lead, compounds n.s.p.f., <sup>4</sup> lithopone, oxide, sulfate, sulfide	metric tons	XX	54,800 <sup>†</sup>	XX	46,700
Ores and concentrates, Zn content	do.	669,000	868,000	644,000	1,120,000
Refined	do.	11,500	11,000	19,800	NA
Zirconium:					
Ferrozirconium	do.	1,960 <sup>†</sup>	4,960 <sup>†</sup>	1,600	3,930
Ores and concentrates	do.	29,200	43,300	7,460	18,000
Oxide, includes germanium oxides and zirconium dioxides	do.	7,000	NA	7,380	NA
Unwrought, including powders	do.	431 <sup>†</sup>	19,100	325	12,200
Waste and scrap	do.	1,310	130,000	1,120	97,500
Total		XX	77,500,000 <sup>†</sup>	XX	64,000,000
<b>Industrial Minerals:</b>					
Abrasives, manufactured:					
Aluminum oxide, crude	do.	24,500 <sup>†</sup>	74,000 <sup>†</sup>	19,500	69,000
Metallic abrasives	do.	35,900	51,100	41,000	61,400
Silicon carbide, crude, ground and refined	do.	18,400	35,100 <sup>†</sup>	22,300	41,800
Asbestos, includes reexports:					
Manufactured		NA	33,400	NA	29,700
Unmanufactured	metric tons	27	48	279	54
Barite, natural barium sulfate	do.	199,000	58,900	153,000	41,800
Boron minerals and compounds:					
Boric acid, includes orthoboric and anhydrous	do.	232,000	211,000	225,000	178,000
Sodium borates		489 <sup>†</sup>	287,000	584	304,000
Bromine:					
Compounds, includes methyl bromine and ethylene dibromide, Br content	do.	2,440	13,100	3,980	18,700
Elemental, gross weight	do.	5,420 <sup>†</sup>	10,000 <sup>†</sup>	3,420	8,890
Cement, hydraulic and clinker <sup>5</sup>		1,670	230,000	1,400	223,000
Clays:					
Ball		52	6,610	33	7,530
Bentonite		890	157,000	901	178,000
Fire		268	41,100	237	52,700
Fuller's earth		86	29,100	92	34,900
Kaolin		2,540	577,000	2,640	596,000
Other, n.e.c. <sup>6</sup>		304	81,200	282	72,000
Diamond:					
Exclusive of industrial diamond, including reexports	thousand carats	14,800	19,400,000	14,500	21,300,000
Industrial including exports and reexports:					
Unworked, reexports	do.	739 <sup>†</sup>	22,500 <sup>†</sup>	826	23,300
Powder, dust and grit, natural and synthetic	do.	155,000 <sup>†</sup>	77,600 <sup>†</sup>	164,000	78,300
Diatomite		92	48,700	82	44,200
Feldspar	metric tons	17,700	5,300 <sup>†</sup>	16,000	5,880
Fluorspar	do.	16,000	2,520	13,400	2,300
Garnet, industrial	do.	14,400	16,000	15,400	12,800
Graphite, natural and artificial	do.	38,100 <sup>†</sup>	224,000	43,700	237,000
Gypsum and gypsum products:					
Crude		142	25,100	67	29,900
Plasters		121	44,100	101	45,800
Boards		834	150,000	829	150,000
Other		XX	60,300	XX	73,100
Helium, Grade-A	million cubic meters	81 <sup>†</sup>	NA	68	NA
Iodine:					
Crude, resublimed	metric tons	1,150	33,200	1,240	36,200
Potassium iodide	do.	276	5,320	255	5,610

See footnotes at end of table.

TABLE 7—Continued  
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value	Quantity	Value	
Industrial Minerals—Continued:					
Iron oxide pigments and hydroxides:					
Pigment grade	metric tons	8,170	13,400	8,790	16,000
Other grade	do.	58,500	34,900	60,600	32,400
Kyanite and related materials	do.	42,400	13,100	40,000	13,600
Lime		270	48,200	319	57,500
Lithium chemicals:					
Carbonate	metric tons	1,010	5,870	904	5,630
Hydroxide	do.	5,850	43,500	7,510	55,600
Magnesium compounds:					
Compounds, chlorides, hydroxide and peroxide, sulfates	do.	XX	28,300	XX	32,400
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	1,470	872	3,130	2,010
Dead-burned and fused magnesia	do.	18,900	13,200	20,800	15,000
Other magnesia	do.	14,000	15,300	14,500	16,000
Crude	do.	881	992	770	995
Mica:					
Scrap and flake:					
Powder	do.	6,110	8,360	8,020	12,000
Waste	do.	265 <sup>r</sup>	299 <sup>r</sup>	58	41
Sheet:					
Unworked	do.	75 <sup>r</sup>	355 <sup>r</sup>	168	575
Worked	do.	1,080	19,700	865	18,700
Nitrogen, major compounds, N content		1,520 <sup>r</sup>	NA	1,370	NA
Peat		41	NA	29	NA
Perlite, crude <sup>e</sup>	metric tons	51,000	NA	45,000	NA
Phosphate rock:					
Diammonium phosphate		3,200 <sup>r</sup>	1,390,000	2,500	1,090,000
Elemental phosphorus		20	62,000 <sup>r</sup>	20	60,800
Monoammonium phosphate		1,910 <sup>r</sup>	928,000 <sup>r</sup>	2,160	1,010,000
Phosphoric acid		827 <sup>r</sup>	262,000 <sup>r</sup>	623	201,000
Potash, gross weight:					
Potassium chloride	metric tons	284,000 <sup>r</sup>	NA	73,400	NA
Potassium sulfates, all grades	do.	313,000 <sup>r</sup>	NA	210,000	NA
Potassium nitrate	do.	13,900	NA	8,690	NA
Pumice and pumicite		13 <sup>r</sup>	NA	14	NA
Salt		525	88,800	940	139,000
Sand and gravel:					
Construction:					
Sand		48 <sup>r</sup>	9,640 <sup>r</sup>	79	17,800
Gravel		10	6,120 <sup>r</sup>	8	3,920
Industrial		2,960	352,000	4,450	461,000
Soda ash		6,470	1,210,000	6,670	1,300,000
Stone:					
Crushed		404	55,100	460	50,500
Dimension		NA	60,800 <sup>r</sup>	NA	70,300
Strontium carbonate, precipitated	kilograms	62,600	84	174,000	186
Sulfur:					
Elemental		1,770 <sup>r</sup>	235,000 <sup>r</sup>	2,000	314,000
Sulfuric acid, 100% H <sub>2</sub> SO <sub>4</sub>		165	30,100	158	21,800
Talc, excludes powders-talcum (in package), face, compact	metric tons	196,000 <sup>r</sup>	56,900 <sup>r</sup>	186,000	52,000
Vermiculite		2	NA	3	NA
Wollastonite <sup>e</sup>	metric tons	10,000	3,270	<10,000	NA
Zeolites <sup>e</sup>	do.	100–300	NA	75–275	NA
Total		XX	27,000,000 <sup>r</sup>	XX	29,000,000
Grand total		XX	104,000,000 <sup>r</sup>	XX	93,000,000

See footnotes at end of table.

TABLE 7—Continued  
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

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<sup>6</sup>Estimated. <sup>7</sup>Revised. do. Ditto. NA Not available. XX Not applicable. -- Zero.

<sup>1</sup>Includes data available through June 6, 2017.

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

<sup>3</sup>Less than ½ unit.

<sup>4</sup>Not specifically provided for.

<sup>5</sup>Excludes Puerto Rico.

<sup>6</sup>Not elsewhere classified.

TABLE 8  
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	
<b>Metals:</b>					
<b>Aluminum:</b>					
Crude and semicrude	metric tons	4,720,000	11,200,000	4,850,000	12,100,000
Manufactures	do.	381,000	1,250,000	409,000	1,340,000
<b>Antimony:</b>					
Metal	do.	6,170	58,300	6,210	49,300
Ore and concentrate, Sb content	do.	342	3,790	365	4,070
Oxide, Sb content	do.	18,200	156,000	17,600	138,000
<b>Arsenic:</b>					
Acid	do.	2	16	--	--
Metal	do.	514	1,880	688	2,210
Trioxide	do.	8,310	4,470	6,940	4,000
<b>Bauxite and alumina:</b>					
Alumina, calcined equivalent		2,050	842,000	1,630	727,000
<b>Bauxite:</b>					
Calcined, refractory and other grade		582 <sup>r</sup>	84,900	601	71,600
Crude and dried		9,830	386,000 <sup>4</sup>	10,800	406,000 <sup>4</sup>
<b>Beryllium, ore, concentrates, oxide, hydroxide, unwrought including powders, waste and scrap, other, beryllium-copper master alloys, beryllium-copper plates, sheets, strip, Be content</b>					
	kilograms	57,000	19,000	68,500	18,800
Bismuth, metallic	do.	1,710,000	33,600	2,270,000	52,700
<b>Cadmium:</b>					
Metal	do.	104,000	391	NA	NA
Sulfide, gross weight	do.	6,860	1,270	9,000	1,680
Unwrought metal and powders	do.	284,000	739	133,000	399
Waste and scrap	do.	16	33	--	--
<b>Chromium:</b>					
Chromite ore	metric tons	173,000	53,600	169,000	41,100
<b>Metals and alloys:</b>					
Ferroalloys, high-carbon, low-carbon, ferrochromium-silicon	do.	478,000	580,000	673,000	837,000
Metal, unwrought powders, waste and scrap, other	do.	13,700	152,000	17,400	192,000
<b>Chemicals:</b>					
Oxides, hydroxides, trioxide and other	do.	9,900	36,000	10,200	35,800
Sulfates	do.	490	547	303	321
Salts of oxometallic or peroxometallic acids, zinc and lead chromate, sodium dichromate, potassium dichromate, other	do.	962	3,530	1,040	3,990
Carbide	do.	132	3,280	238	5,040
Pigments and preparations based on chromium	do.	1,390	9,800	1,250	8,560
<b>Cobalt:</b>					
Metal, unwrought, excluding alloys and waste and scrap, includes cathode and metal powder, may include intermediate products of cobalt metallurgy	do.	8,230	222,000	9,020	270,000
Oxide and hydroxides, Co content	do.	1,740	53,600	1,740	57,700
Other forms, includes acetates, carbonates, chlorides, sulfates, Co content	do.	472	16,000	593	19,500
<b>Copper:</b>					
Unmanufactured, does not include unalloyed scrap, Cu content	do.	739,000	5,580,000	622,000	4,360,000
Semimanufactures	do.	242,000	1,830,000	257,000	1,830,000
Scrap, unalloyed, Cu content	do.	29,100	163,000	31,000	166,000
<b>Ferroalloys not listed elsewhere:</b>					
Ferrophosphorus	do.	8,740	4,580	8,060	4,740
Other	do.	8,600	30,600	9,710	32,300
<b>Gallium:</b>					
Unwrought and waste and scrap	kilograms	35,400	10,900 <sup>r</sup>	53,900	13,600
Gallium arsenide wafers, doped and undoped	do.	635,000	214,000	311,000	187,000
Germanium, wrought, unwrought, waste and scrap, gross weight	do.	34,200 <sup>r</sup>	49,500 <sup>r</sup>	23,700	40,300

See footnotes at end of table.

TABLE 8—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	
Metals—Continued:					
Gold:					
Ores and concentrates	kilograms	369	18,200	510	16,500
Dore and precipitates	do.	216,000	9,610,000	186,000	7,740,000
Bullion, refined	do.	98,600	4,430,000	121,000	5,010,000
Waste and scrap	do.	286,000	1,220,000	53,800	965,000
Metal powder	do.	4,050	9,550	596	7,210
Compounds	do.	17,100	1,080	1,810	4,090
Indium, unwrought metal and powders	do.	97,200	53,400	123,000	80,800
Iron and steel:					
Steel mill products		29,200	NA	40,200	NA
Fabricated steel products		4,740	NA	5,160	NA
Cast iron and steel products		491	NA	523	NA
Stainless steel	metric tons	935,000	NA	1,050,000	NA
Iron and steel scrap:					
Ferrous, includes tinplate and terneplate, excludes used rails for rerolling and other uses and ships, boats, and other vessels for scrapping		3,930	1,470,000	4,260	1,720,000
Pig iron, all grades		4,120	1,640,000	4,600	1,850,000
Direct-reduced iron, steelmaking grade		2,240	775,000	2,390	854,000
Ships, boats, and other vessels for scrapping		(5)	446	(5)	451
Used rails for rerolling and other uses, includes mixed (used plus new) rails		86	40,200 <sup>r</sup>	73	33,300
Iron ore		3,250	426,000	5,140	676,000
Lead:					
Base bullion	metric tons	1,900	3,680	1,080	1,900
Pigs and bars, Pb content	do.	500,000	1,040,000	593,000	1,220,000
Pigments and compounds, Pb content	do.	33,500	65,100	34,600	66,900
Scrap, reclaimed, includes ash and residues, Pb content	do.	15,600 <sup>r</sup>	10,600 <sup>r</sup>	11,400	15,200
Wrought, all forms, including wire and powders, gross weight	do.	1,440	6,140	1,600	6,680
Magnesium:					
Waste and scrap, gross weight	do.	17,500	43,300	19,000	43,800
Metal, gross weight	do.	15,200	60,100	16,200	64,300
Alloys, Mg content	do.	12,400	60,200	15,600	70,100
Powder, sheets, tubing, ribbons, wire, other forms, Mg content	do.	836	9,200	1,200	11,100
Manganese:					
Ores and concentrates with 20% or more manganese, Mn content	do.	263,000 <sup>r</sup>	126,000 <sup>r</sup>	192,000	88,300
Ferromanganese, all grades, Mn content	do.	257,000	355,000	282,000	395,000
Silicomanganese, Mn content	do.	223,000	339,000	298,000	485,000
Metal, unwrought, other wrought, waste and scrap, gross weight	do.	40,600	102,000	38,400	91,500
Chemicals, gross weight:					
Manganese dioxide	do.	19,900	42,200	13,800	28,200
Potassium permanganate	do.	1,320	3,820	1,610	4,530
Mercury:					
Metal	do.	38	885	49	1,280
Amalgams of precious metals whether or not chemically defined	do.	22 <sup>r</sup>	57,100 <sup>r</sup>	22	56,300
Molybdenum:					
Ores and concentrates, including roasted and other, Mo content	do.	13,100	297,000	15,800	399,000
Chemicals, gross weight:					
Oxides and hydroxides	do.	284 <sup>r</sup>	5,390	448	8,410
Molybdates, all, Mo content	do.	611 <sup>r</sup>	17,100 <sup>r</sup>	670	20,700
Orange	do.	273 <sup>r</sup>	2,430	431	3,010
Ferromolybdenum, Mo content	do.	4,090	108,000	5,110	147,000
Other, includes powders, unwrought, bars and rods, waste and scrap, wire, other, gross weight	do.	2,270	84,300	3,330	119,000

See footnotes at end of table.

TABLE 8—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	
Metals—Continued:					
Nickel, Ni content:					
Primary, unwrought and chemicals	metric tons	126,000	2,090,000	156,000	2,690,000
Secondary, stainless steel scrap and waste and scrap	do.	26,300	359,000	38,900	642,000
Wrought, not alloyed, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes	do.	859	25,700	726	20,900
Alloyed, unwrought ingot, bars, rods, profiles, wire, sheets, strip, foil, tubes, pipes, other alloyed articles	do.	27,900	892,000	33,100	910,000
Niobium (columbium) and tantalum:					
Niobium:					
Ores and concentrates	kilograms	8,470	600	2,000	148
Oxide	do.	1,430,000	62,000	1,460,000	55,000
Ferriobium	do.	9,450,000	267,000	12,500,000	341,000
Unwrought powders	do.	1,360,000	77,600	1,870,000	95,800
Tantalum:					
Ores and concentrates, includes synthetic concentrates	do.	653,000	54,000	899,000	71,600
Unwrought powders	do.	113,000	51,900	114,000	50,600
Unwrought, alloys and metal	do.	197,000	73,000	178,000	68,900
Waste and scrap	do.	527,000	63,000	624,000	72,600
Wrought	do.	67,700	41,100	43,800	25,900
Platinum-group metals, metal content:					
Platinum, grains and nuggets, sponge, other unwrought, other, waste and scrap, coins	do.	116,000	2,730,000	141,000	3,080,000
Palladium, unwrought and other	do.	83,100	1,920,000	92,400	2,370,000
Iridium, unwrought and other forms	do.	1,720	43,200	1,990	33,900
Osmium, unwrought	do.	77	444	322	1,670
Ruthenium, unwrought	do.	15,300	36,200	11,100	24,600
Rhodium, unwrought and other forms	do.	11,100	367,000	11,100	408,000
Rare earths, estimated equivalent rare-earth oxide (REO) content:					
Cerium compounds, including oxides	do.	1,110,000	19,300 <sup>r</sup>	1,440,000	24,500
Other rare-earth compounds:					
Scandium or yttrium compounds	do.	115,000 <sup>r</sup>	19,100	364,000	29,800
Carbonates, lanthanum and other	do.	641,000	6,640	597,000	5,450
Chlorides	do.	357,000	14,100	165,000	4,130
Oxides, except cerium oxide	do.	2,390,000	31,000	4,910,000	40,300
Unspecified	do.	3,830,000 <sup>r</sup>	148,000 <sup>r</sup>	3,280,000	69,900
Metals and alloys:					
Cesium, unalloyed	do.	91,100	990	134,000	947
Lanthanum, unalloyed	do.	29,300	275	60,800	626
Neodymium, unalloyed	do.	14,100	785	2,760	869
Other, unalloyed	do.	17,300	582	30,100	772
Other, alloys	do.	42,900	1,530	120,000	2,350
Unspecified metals and alloys	do.	199,000	5,460	XX	XX
Rhenium:					
Metal	do.	22,700	59,500	17,500	45,100
Ammonium perrhenate	do.	7,030 <sup>r</sup>	12,800 <sup>r</sup>	10,600	17,900
Selenium and tellurium:					
Selenium, Se content:					
Selenium	do.	425,000 <sup>r</sup>	32,800 <sup>r</sup>	467,000	26,200
Dioxide	do.	14,000	841	10,900	528
Tellurium, Te content	do.	65,300 <sup>r</sup>	6,860 <sup>r</sup>	111,000	6,290
Silicon, gross weight:					
Ferrosilicon	metric tons	254,000	343,000	270,000	398,000
Metal	do.	119,000	415,000	141,000	453,000

See footnotes at end of table.

TABLE 8—Continued  
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity		2013		2014	
		Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>
Metals—Continued:					
Silver:					
Ash and residues, ores and concentrates, Ag content	kilograms	56,600 <sup>r</sup>	22,700 <sup>r</sup>	59	12
Bullion, Ag content	do.	3,830,000	3,020,000	3,900,000	2,420,000
Dore, Ag content	do.	1,190,000	1,390,000	1,070,000	958,000
Metal powder, gross weight	do.	742,000	385,000	799,000	323,000
Nitrate, gross weight	do.	1,860	537	2,330	544
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	1,300,000	986,000	895,000	509,000
Waste and scrap, gross weight	do.	8,480,000	443,000	6,310,000	279,000
Unwrought, other, gross weight	do.	194,000	159,000	246,000	125,000
Thorium and thorium-bearing materials, compounds	metric tons	3	184	11	761
Tin, gross weight:					
Compounds	do.	257	5,230	412	8,300
Dross, skimmings, scrap, residues, alloys, n.s.p.f. <sup>6</sup>	do.	64,300	36,100	50,600	38,100
Metal, unwrought	do.	34,900	771,000	35,600	787,000
Miscellaneous, includes tin foil, tin powder, flitters, metallics, manufactures, n.s.p.f. <sup>6</sup>	do.	XX	33,900	XX	38,200
Tinplate and terneplate	do.	488,000	546,000	634,000	696,000
Tinplate scrap	do.	59,700	21,400	78,900	24,500
Titanium:					
Concentrate:					
Ilmenite	do.	389,000	90,600	355,000	61,100
Rutile, natural and synthetic	do.	406,000	436,000	340,000	267,000
Metal:					
Waste and scrap	do.	12,700	63,600 <sup>r</sup>	19,300	101,000
Unwrought:					
Sponge	metric tons	19,900	230,000	17,700	193,000
Ingots	do.	883	14,100	700	15,600
Powder	do.	89 <sup>r</sup>	4,410	120	6,670
Other	do.	775	24,600	1,510	44,000
Wrought products and castings, includes bar, castings, foil, pipe, plate, profile, rod, sheet, strip, tube, wire, other	do.	6,570 <sup>r</sup>	304,000 <sup>r</sup>	6,280	324,000
Ferrotitanium and ferrosilicon titanium	do.	1,680	7,260	2,210	9,290
Pigment, dioxide and oxide	do.	213,000	638,000	224,000	627,000
Titaniferous iron ore	do.	13,800	1,460	138	62
Titaniferous slag	do.	681,000 <sup>r</sup>	461,000 <sup>r</sup>	678,000	455,000
Tungsten, W content:					
Ammonium paratungstate	do.	2,220	84,200	1,780	66,800
Ferrotungsten and ferrosilicon tungsten	do.	470	19,200	454	18,800
Miscellaneous tungsten-bearing materials, metal powders, carbide powder, unwrought, waste and scrap, wrought, oxides, calcium tungstate, other tungstates, other compounds	do.	5,790	295,000	6,480	325,000
Ores and concentrates	do.	3,690	123,000	4,080	138,000
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	167,000 <sup>r</sup>	4,660 <sup>r</sup>	431,000	9,820
Ferrovandium, V content	do.	3,710,000	89,800	3,230,000	94,500
Metal, including waste and scrap, gross weight	do.	35,300	1,310	161,000	3,860
Miscellaneous chemicals, sulfates and vanadates, V content	do.	305,000	6,010	215,000	4,320
Pentoxide, anhydride, V content	do.	2,040,000	29,900	3,410,000	46,300
Vanadium-bearing ash and residues from the manufacture of iron and steel, V <sub>2</sub> O <sub>5</sub> content	do.	4,190,000	22,500	6,160,000	37,900
Other oxides and hydroxides, V content	do.	205,000	2,560	104,000	1,950
Zinc:					
Compounds, chloride, chromates of zinc or of lead, compounds n.s.p.f., <sup>6</sup> lithopone, oxide, sulfate, sulfide, gross weight	metric tons	XX	250,000 <sup>r</sup>	XX	346,000
Ores and concentrates, Zn content	do.	2,550	4,420	2	4
Refined	do.	713,000	NA	805,000	NA

See footnotes at end of table.

TABLE 8—Continued  
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	
<b>Metals—Continued:</b>					
<b>Zirconium and hafnium:</b>					
Hafnium, unwrought, including powders	metric tons	10	5,030	21	10,800
<b>Zirconium:</b>					
Ferrozirconium	do.	4	44	131	774
Ores and concentrates	do.	12,400	15,500	50,400	60,800
Oxide	do.	3,170 <sup>r</sup>	NA	4,240	NA
Unwrought, including powder	do.	188 <sup>r</sup>	7,110 <sup>r</sup>	570	26,500
Waste and scrap	do.	529 <sup>r</sup>	58,500	528	52,100
Total		XX	67,000,000 <sup>r</sup>	XX	67,000,000
<b>Industrial minerals:</b>					
<b>Abrasives, manufactured:</b>					
Aluminum oxide, crude, ground and refined	do.	209,000 <sup>r</sup>	165,000 <sup>r</sup>	198,000	172,000
Metallic abrasives	do.	23,900 <sup>r</sup>	24,700 <sup>r</sup>	23,500	24,000
Silicon carbide, crude, ground and refined	do.	119,000	114,000 <sup>r</sup>	130,000	118,000
<b>Asbestos:</b>					
Chrysotile and other unspecified type	do.	772	1,160	406	741
Products with basis of asbestos, cellulose, or other minerals		NA	6,100	NA	6,370
<b>Barite:</b>					
Chloride, oxide, hydroxide, peroxide, precipitated carbonate		XX	12,900 <sup>r</sup>	XX	11,300
Crude	metric tons	557,000	80,900	971,000	135,000
Ground	do.	1,680,000 <sup>r</sup>	248,000	1,720,000	228,000
Other sulfates	do.	15,800	23,300	16,400	24,100
<b>Boron minerals and compounds:</b>					
Borax		127 <sup>r</sup>	45,300 <sup>r</sup>	152	52,400
Boric acid	metric tons	53,700 <sup>r</sup>	36,400 <sup>r</sup>	56,600	37,600
Colemanite		38 <sup>r</sup>	12,400 <sup>r</sup>	45	14,500
Ulexite		-- <sup>r</sup>	-- <sup>r</sup>	34	2,840
<b>Bromine:</b>					
Compounds, Br content	metric tons	42,900 <sup>r</sup>	80,900 <sup>r</sup>	57,800	117,000
Elemental	do.	2,600	7,850	2,050	6,160
Cement, hydraulic and clinker <sup>7</sup>		7,100	530,000	8,300	617,000
<b>Clays:</b>					
China clay or kaolin		467 <sup>r</sup>	56,000	518	54,400
Fire clay		3	1,150 <sup>r</sup>	6	2,510
Ball clay		(5)	174	1	173
Bentonite		16 <sup>r</sup>	15,000 <sup>r</sup>	22	25,600
Fuller's earth		8	434	4	183
Chamotte or dina's earth		(5)	127 <sup>r</sup>	(5)	124
Artificially activated clay and earth		24 <sup>r</sup>	14,000 <sup>r</sup>	26	14,000
<b>Diamond, industrial:</b>					
Diamond stones, natural industrial and miners', natural and synthetic	thousand carats	1,940	30,000	2,160	31,200
Powder, dust and grit, natural and synthetic	do.	729,000 <sup>r</sup>	79,800	682,000	76,700
<b>Feldspar and nepheline syenite:</b>					
Feldspar	metric tons	4,310	1,110	7,910	3,120
Nepheline syenite	do.	491,000	59,300	503,000	64,100
<b>Fluorspar:</b>					
Aluminum fluoride	do.	43,400	58,100	38,400	50,700
Cryolite	do.	18,900	12,600	16,200	13,800
Fluorspar	do.	643,000	147,000	414,000	105,000
Hydrofluoric acid	do.	119,000	199,000	125,000	213,000
Garnet, industrial	do.	148,000	34,000	213,000	44,600
Gemstones	thousand carats	2,590,000	24,700,000	3,250,000	26,400,000

See footnotes at end of table.



TABLE 8—Continued  
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014		
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>	
Industrial minerals—Continued:					
Graphite:					
Natural	metric tons	61,300	70,500	64,200	72,300
Synthetic	do.	59,100	130,000	60,700	134,000
Electric furnace electrodes	do.	51,300 <sup>r</sup>	213,000 <sup>r</sup>	83,400	282,000
Gypsum:					
Crude		3,290	42,600	3,720	56,800
Plasters		16	5,830	20	7,620
Boards		327	66,800	362	84,000
Other		XX	33,300	XX	37,300
Iodine:					
Crude	metric tons	5,960	255,000 <sup>r</sup>	5,360	198,000
Potassium iodide	do.	341 <sup>r</sup>	6,200 <sup>r</sup>	283	5,200
Iron oxide pigments:					
Natural	do.	3,350 <sup>r</sup>	2,310	3,510	2,780
Synthetic	do.	162,000	188,000	171,000	205,000
Kyanite and related materials	do.	4,110	1,610	4,020	1,550
Lime		394	64,100 <sup>4</sup>	414	67,700 <sup>4</sup>
Lithium chemicals:					
Carbonate	metric tons	10,500	45,300	9,560	42,200
Hydroxide	do.	1,340	7,790	1,920	12,200
Magnesium compounds:					
Compounds, chlorides, hydroxide, peroxide, sulfates	do.	XX	48,400	XX	65,600
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	133,000	41,600	151,000	48,100
Dead-burned and fused magnesia	do.	215,000	145,000	241,000	148,000
Other magnesia	do.	25,900	19,100	35,600	23,200
Crude	do.	11,300	4,790	18,400	3,790
Mica:					
Scrap and flake:					
Powder	do.	27,400	16,200	27,900	19,400
Waste	do.	3,460	2,090	4,850	2,700
Sheet:					
Unworked	do.	72	203	109	175
Worked	do.	1,840	16,200	2,360	19,900
Nitrogen, major compounds, N content		9,300	8,030,000	7,240	6,060,000
Peat	metric tons	915,000	247,000	984,000	267,000
Perlite, processed crude	do.	187,000	NA	141,000	NA
Phosphate rock and phosphatic materials:					
Phosphate rock:					
Unground		2,690	325,000 <sup>r,4</sup>	2,120	193,000 <sup>4</sup>
Ground		476	57,500 <sup>r,4</sup>	268	45,400 <sup>4</sup>
Dicalcium phosphate		10	18,200 <sup>4</sup>	11	13,800 <sup>4</sup>
Elemental phosphorus		15	54,000 <sup>4</sup>	16	59,400 <sup>4</sup>
Normal superphosphate		1	460 <sup>4</sup>	3	1,070 <sup>4</sup>
Triple superphosphate		236	105,000 <sup>4</sup>	432	180,000 <sup>4</sup>
Diammonium phosphate		142	74,600 <sup>4</sup>	404	198,000 <sup>4</sup>
Monoammonium phosphate		669	342,000 <sup>4</sup>	959	467,000 <sup>4</sup>
Fertilizer containing nitrates and phosphates		10	1,270 <sup>4</sup>	21	11,900 <sup>4</sup>
Phosphoric acid		2	548 <sup>4</sup>	1	263 <sup>4</sup>
Potash, gross weight, chloride, sulfate, nitrate, sodium nitrate mixtures		7,660	2,640,000	8,200	1,960,000
Pumice:					
Crude or unmanufactured	metric tons	71,800	1,410	60,000	1,380
Wholly or partially manufactured	do.	806	713	162	433
Salt		11,900	348,000	20,100	588,000

See footnotes at end of table.

TABLE 8—Continued  
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS<sup>1,2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Commodity	2013		2014	
	Quantity	Value <sup>3</sup>	Quantity	Value <sup>3</sup>
<b>Industrial minerals—Continued:</b>				
<b>Sand and gravel:</b>				
Construction	4,230	50,100 <sup>r,4</sup>	4,310	64,200 <sup>4</sup>
Industrial	160	11,700	244	20,400
Soda ash	13	3,470	39	6,960
<b>Stone:</b>				
Crushed, chips, calcium carbonate fines, excludes precipitated carbonates	17,700	218,000 <sup>4</sup>	19,900	251,000 <sup>4</sup>
Dimension	XX	2,100,000	XX	2,240,000
<b>Strontium:</b>				
Carbonate	kilograms	9,730,000	8,000	10,800,000
Celestite	do.	49,800,000	2,490	55,100,000
Metal	do.	124,000	1,020	88,500
Nitrate	do.	3,050,000	3,660	2,720,000
Oxide, hydroxide, peroxide	do.	42,800	70	225
<b>Sulfur:</b>				
Elemental <sup>8</sup>		2,990 <sup>e</sup>	202,000	2,370 <sup>e</sup>
Sulfuric acid, 100% H <sub>2</sub> SO <sub>4</sub>		2,970	211,000	3,240
Talc, unmanufactured	metric tons	275,000 <sup>r</sup>	111,000	327,000
Vermiculite		36	NA	42
Wollastonite <sup>e</sup>	metric tons	4,000	566	<4,000
Zeolites <sup>e</sup>	do.	<5 <sup>r</sup>	NA	<25
Total		XX	43,400,000 <sup>r</sup>	XX
Grand total		XX	110,000,000 <sup>r</sup>	XX

<sup>e</sup>Estimated. <sup>r</sup>Revised. do. Ditto. NA Not available. XX Not applicable. -- Zero.

<sup>1</sup>Includes data available through June 6, 2017.

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

<sup>3</sup>Customs value unless otherwise specified.

<sup>4</sup>Cost, insurance, and freight value.

<sup>5</sup>Less than ½ unit.

<sup>6</sup>Not specifically provided for.

<sup>7</sup>Excludes Puerto Rico.

<sup>8</sup>General imports.

TABLE 9  
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity		World total					United States	
		2010	2011	2012	2013	2014	2014	Percent of world total
<b>METALS</b>								
Alumina, calcined equivalent <sup>2</sup>		86,000 <sup>r</sup>	92,500 <sup>r</sup>	97,700 <sup>r</sup>	104,000 <sup>r</sup>	108,000 <sup>c</sup>	4,390	4.1
Aluminum, primary <sup>3</sup>		41,800 <sup>r</sup>	44,900 <sup>r</sup>	46,100 <sup>r</sup>	47,800 <sup>r</sup>	50,500 <sup>c</sup>	1,710	3.4
Antimony, Sb content	metric tons	181,000 <sup>r</sup>	185,000 <sup>r</sup>	178,000 <sup>r</sup>	160,000 <sup>r,c</sup>	156,000 <sup>c</sup>	--	--
Arsenic trioxide <sup>e,4</sup>	do.	41,400 <sup>r</sup>	35,800 <sup>r</sup>	37,500 <sup>r</sup>	36,600 <sup>r</sup>	36,400	--	--
Bauxite <sup>5</sup>		236,000 <sup>r</sup>	254,000 <sup>r</sup>	253,000 <sup>r</sup>	282,000 <sup>r</sup>	245,000 <sup>c</sup>	W	NA
Beryl, gross weight <sup>6</sup>	metric tons	5,080 <sup>r</sup>	6,540	6,140 <sup>r</sup>	6,540 <sup>r</sup>	7,500 <sup>c</sup>	6,900 <sup>7</sup>	91.9
Bismuth, refinery <sup>8</sup>	do.	16,000	17,000	16,000 <sup>r</sup>	17,000	17,000	--	--
Cadmium, refinery <sup>5,9</sup>	do.	23,700 <sup>r</sup>	21,300 <sup>r</sup>	22,400 <sup>r</sup>	22,100 <sup>r</sup>	22,400 <sup>c</sup>	W	NA
Chromite, marketable output, gross weight		25,200 <sup>r</sup>	27,200 <sup>r</sup>	26,000 <sup>r</sup>	28,700 <sup>r</sup>	27,300	--	--
Cobalt, Co content:								
Mine <sup>10</sup>	metric tons	110,000 <sup>r</sup>	111,000 <sup>r</sup>	104,000 <sup>r</sup>	114,000 <sup>r</sup>	123,000 <sup>c</sup>	120 <sup>11</sup>	0.1
Refinery <sup>12</sup>	do.	79,500	82,400	78,100	86,100 <sup>r</sup>	91,300	--	--
Copper:								
Mine, recoverable, Cu content <sup>13</sup>		16,100	16,100	16,900	18,200 <sup>r</sup>	18,500	1,360	7.3
Smelter, gross weight <sup>14</sup>		15,600	15,900	16,100 <sup>r</sup>	17,100	17,900	522	2.9
Refinery <sup>15</sup>		19,100	19,700	20,200	21,000	22,200	1,090	4.9
Gold, mine	metric tons	2,600 <sup>r</sup>	2,670 <sup>r</sup>	2,750 <sup>r</sup>	2,920 <sup>r</sup>	3,010 <sup>c</sup>	210	7.0
Indium, refinery <sup>c</sup>	kilograms	644,000	720,000 <sup>r</sup>	784,000 <sup>r</sup>	819,000 <sup>r</sup>	881,000	--	--
Iron ore <sup>16</sup>		1,870,000 <sup>r</sup>	2,030,000 <sup>r</sup>	2,070,000 <sup>r</sup>	2,230,000 <sup>r</sup>	2,330,000 <sup>c</sup>	56,100	2.4
Iron and steel:								
Direct-reduced iron <sup>17</sup>		69,200	68,600 <sup>r</sup>	68,200	66,900	71,300	1,300	1.8
Pig iron <sup>18</sup>		1,040,000	1,110,000	1,130,000 <sup>r</sup>	1,180,000	1,190,000	29,400	2.5
Raw steel <sup>18,19</sup>		1,430,000	1,520,000	1,510,000 <sup>r</sup>	1,620,000	1,670,000	88,200	5.3
Lead:								
Mine, concentrates, Pb content		4,170 <sup>r</sup>	4,750 <sup>r</sup>	5,160 <sup>r</sup>	5,370 <sup>r,c</sup>	4,910 <sup>c</sup>	379 <sup>20</sup>	7.7
Refinery <sup>21</sup>		9,610 <sup>r</sup>	10,300 <sup>r</sup>	10,500 <sup>r</sup>	10,600 <sup>r,c</sup>	10,600 <sup>c</sup>	1,020	9.6
Magnesium, primary <sup>c,5</sup>	metric tons	737,000 <sup>r</sup>	766,000 <sup>r</sup>	795,000 <sup>r</sup>	873,000 <sup>r</sup>	973,000	W	NA
Manganese ore, gross weight <sup>22</sup>		44,000	46,200 <sup>r</sup>	46,900 <sup>r</sup>	51,300	52,300	--	--
Mercury, mine <sup>5</sup>	metric tons	2,180 <sup>r</sup>	1,980 <sup>r</sup>	1,930 <sup>r</sup>	2,400 <sup>r</sup>	2,350 <sup>c</sup>	NA	NA
Molybdenum, mine, Mo content	do.	246,000 <sup>r</sup>	266,000 <sup>r</sup>	256,000 <sup>r</sup>	258,000	281,000 <sup>c</sup>	68,200	24.3
Nickel, Ni content:								
Mine, recoverable	do.	1,690,000 <sup>r</sup>	2,180,000 <sup>r</sup>	2,420,000 <sup>r</sup>	2,790,000 <sup>r</sup>	2,260,000	4,300 <sup>23</sup>	0.2
Plant	do.	1,470,000	1,630,000	1,800,000	1,980,000 <sup>r</sup>	1,950,000	--	--
Niobium (columbium) concentrates, Nb content	do.	49,000 <sup>r</sup>	50,100 <sup>r</sup>	62,700 <sup>r</sup>	57,000 <sup>r,c</sup>	55,900 <sup>c</sup>	--	--
Platinum-group metals:								
Palladium	kilograms	208,000	216,000	206,000	203,000	193,000	12,400 <sup>24</sup>	6.5
Platinum	do.	193,000	202,000	181,000	185,000 <sup>r</sup>	146,000	3,660 <sup>24</sup>	2.5
Other <sup>c</sup>	do.	71,500	72,700	36,000	67,700	53,600	--	--
Rare earths, REO equivalent <sup>c</sup>	metric tons	99,500 <sup>r</sup>	104,000 <sup>r</sup>	105,000 <sup>r</sup>	107,000 <sup>r</sup>	125,000	5,400	4.3
Rhenium	kilograms	41,600 <sup>r,c</sup>	44,600 <sup>r,c</sup>	48,700 <sup>r,c</sup>	44,300 <sup>r,c</sup>	44,700 <sup>c</sup>	8,500 <sup>25</sup>	19.0
Selenium, refinery, Se content <sup>5</sup>	metric tons	2,150	2,170	2,250 <sup>r</sup>	2,250 <sup>r,c</sup>	2,310 <sup>c</sup>	W	NA
Silver, mine <sup>26</sup>	do.	23,300 <sup>r</sup>	23,200 <sup>r</sup>	24,400 <sup>r</sup>	25,800 <sup>r</sup>	26,800 <sup>c</sup>	1,180	4.4
Tantalum concentrates, Ta content	kilograms	922,000	1,000,000	1,110,000	1,210,000 <sup>c</sup>	1,200,000 <sup>c</sup>	--	--
Tin, Sn content:								
Mine <sup>26</sup>	metric tons	266,000 <sup>r</sup>	268,000 <sup>r</sup>	254,000 <sup>r</sup>	244,000 <sup>r</sup>	261,000	--	--
Smelter <sup>27</sup>	do.	348,000 <sup>r</sup>	344,000 <sup>r</sup>	338,000 <sup>r</sup>	334,000 <sup>r</sup>	382,000 <sup>c</sup>	10,600 <sup>c</sup>	2.8
Titanium mineral concentrates:								
Ilmenite and leucoxene <sup>28</sup>		7,760 <sup>r</sup>	7,610 <sup>r</sup>	7,560 <sup>r</sup>	8,040 <sup>r</sup>	7,500 <sup>c</sup>	200 <sup>c</sup>	2.7
Rutile <sup>5</sup>	metric tons	729,000 <sup>r</sup>	801,000 <sup>r</sup>	790,000 <sup>r</sup>	632,000 <sup>r</sup>	527,000 <sup>c</sup>	W	NA
Tungsten, W content <sup>5</sup>	do.	68,400	73,900	76,500 <sup>r</sup>	83,300 <sup>r</sup>	86,800 <sup>c</sup>	NA	NA

See footnotes at end of table.

TABLE 9—Continued  
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity		World total					United States	
		2010	2011	2012	2013	2014	2014	Percent of world total
METALS—Continued:								
Vanadium, V content <sup>e, 29</sup>	do.	71,100 <sup>r</sup>	71,500 <sup>r</sup>	74,900 <sup>r</sup>	80,400 <sup>r</sup>	82,200	--	--
Zinc:								
Mine, Zn content of concentrate and direct shipping ore		12,300	12,500	12,900 <sup>r</sup>	13,100 <sup>r</sup>	13,300 <sup>e</sup>	832 <sup>20</sup>	6.2
Smelter		12,900 <sup>r</sup>	13,100	12,300 <sup>r</sup>	12,800 <sup>r</sup>	13,200 <sup>e</sup>	180 <sup>e</sup>	1.4
Zirconium mineral concentrates <sup>5</sup>		1,280 <sup>r</sup>	1,680	1,470 <sup>r</sup>	1,070 <sup>r</sup>	1,450 <sup>e</sup>	W	NA
INDUSTRIAL MINERALS								
Asbestos, marketable fiber		2,010	2,050	2,020 <sup>r</sup>	2,050 <sup>r</sup>	2,020	--	--
Barite <sup>e</sup>		7,700 <sup>r</sup>	8,490 <sup>r</sup>	9,250 <sup>r</sup>	8,590 <sup>r</sup>	9,150	663 <sup>30, 31</sup>	7.2
Boron minerals <sup>5</sup>		7,640 <sup>r</sup>	7,880 <sup>r</sup>	5,700 <sup>r</sup>	5,830 <sup>r</sup>	5,860 <sup>e</sup>	W	NA
Bromine <sup>e, 5</sup>	metric tons	371,000	389,000	370,000	416,000 <sup>r</sup>	441,000	W	NA
Celestite	do.	325,000	381,000	378,000	351,000	343,000 <sup>e</sup>	--	--
Cement, hydraulic <sup>e, 32</sup>		3,280,000 <sup>r</sup>	3,630,000 <sup>r</sup>	3,820,000	4,070,000	4,180,000	83,188 <sup>30, 33</sup>	2.0
Clays:								
Bentonite		15,800 <sup>r</sup>	15,800 <sup>r</sup>	17,400 <sup>r</sup>	16,100 <sup>r</sup>	16,800	4,800	28.6
Fuller's earth		3,400 <sup>r</sup>	3,130 <sup>r</sup>	3,330 <sup>r</sup>	3,450 <sup>r</sup>	3,360	1,980 <sup>34</sup>	59.0
Kaolin		30,800 <sup>r</sup>	33,200 <sup>r</sup>	32,600 <sup>r</sup>	34,000 <sup>r</sup>	36,500	6,250	17.1
Diamond, natural <sup>35</sup>	thousand carats	128,000	123,000	128,000	130,000	125,000	--	--
Diatomite <sup>e, 36</sup>		1,690 <sup>r</sup>	1,990 <sup>r</sup>	2,230 <sup>r</sup>	2,140 <sup>r</sup>	2,260	901 <sup>30, 31</sup>	40.0
Feldspar		21,900 <sup>r</sup>	21,200 <sup>r</sup>	20,700 <sup>r</sup>	21,900 <sup>r</sup>	22,900 <sup>e</sup>	530 <sup>e, 8, 37</sup>	2.3
Fluorspar <sup>e, 38</sup>		7,040 <sup>r</sup>	9,080 <sup>r</sup>	6,880 <sup>r</sup>	6,380 <sup>r</sup>	6,390	--	--
Graphite, natural <sup>e</sup>		1,040 <sup>r</sup>	1,180	1,210 <sup>r</sup>	1,150 <sup>r</sup>	1,160	--	--
Gypsum		230,000 <sup>r</sup>	237,000	237,000 <sup>r</sup>	245,000 <sup>r</sup>	253,000 <sup>e</sup>	11,000 <sup>39</sup>	4.4
Iodine, crude <sup>e, 5</sup>	metric tons	26,000 <sup>r</sup>	26,200 <sup>r</sup>	27,800 <sup>r</sup>	30,800 <sup>r</sup>	30,300	W	NA
Kyanite and related minerals <sup>e</sup>	do.	344,000 <sup>r</sup>	357,000 <sup>r</sup>	333,000 <sup>r</sup>	360,000 <sup>r</sup>	403,000	110,000 <sup>40</sup>	27.3
Lime <sup>41</sup>		310,000 <sup>r</sup>	320,000 <sup>r</sup>	340,000 <sup>r</sup>	350,000 <sup>r</sup>	360,000 <sup>e</sup>	19,500 <sup>33</sup>	5.5
Magnesite <sup>e, 5, 42</sup>		21,600 <sup>r</sup>	27,800 <sup>r</sup>	24,200 <sup>r</sup>	28,300 <sup>r</sup>	29,300	W	NA
Mica	metric tons	1,110,000	1,100,000	1,080,000 <sup>r</sup>	1,130,000 <sup>r, e</sup>	1,130,000 <sup>e</sup>	46,000 <sup>43</sup>	4.1
Monazite concentrates, gross weight	do.	15,800	10,900 <sup>r</sup>	10,100 <sup>r</sup>	2,680 <sup>r</sup>	2,700 <sup>e</sup>	--	--
Nitrogen, N content of ammonia <sup>e</sup>		132,000 <sup>r</sup>	139,000 <sup>r</sup>	142,000	144,000	145,000	9,330 <sup>30, 44</sup>	6.4
Peat		30,800 <sup>r</sup>	29,900 <sup>r</sup>	27,400 <sup>r</sup>	28,300 <sup>r</sup>	27,300 <sup>e</sup>	468	1.7
Perlite, processed ore	metric tons	1,890,000 <sup>r</sup>	2,080,000 <sup>r</sup>	2,290,000 <sup>r</sup>	2,530,000 <sup>r</sup>	2,480,000 <sup>e</sup>	451,000 <sup>31</sup>	18.2
Phosphate rock, gross weight		183,000 <sup>r</sup>	200,000 <sup>r</sup>	215,000 <sup>r</sup>	226,000 <sup>r, e</sup>	218,000 <sup>e</sup>	25,300	11.6
Potash, marketable, K <sub>2</sub> O equivalent		33,900 <sup>r</sup>	35,700 <sup>r</sup>	32,700 <sup>r</sup>	35,600 <sup>r</sup>	40,600	850 <sup>8</sup>	2.1
Pumice and related materials		16,600	19,200	18,400	18,600 <sup>e</sup>	16,800 <sup>e</sup>	278 <sup>31</sup>	1.7
Salt, all forms		269,000 <sup>r</sup>	272,000 <sup>r</sup>	259,000 <sup>r</sup>	273,000 <sup>r</sup>	272,000	45,300 <sup>e, 33, 45</sup>	16.6
Sand and gravel, industrial, silica		113,000	126,000	130,000	147,000 <sup>r, e</sup>	195,000 <sup>e</sup>	110,000 <sup>31</sup>	56.5
Soda ash, natural and manufactured <sup>e</sup>		46,700 <sup>r</sup>	49,800 <sup>r</sup>	51,500 <sup>r</sup>	51,200 <sup>r</sup>	51,300	11,700 <sup>30, 46</sup>	22.7
Sulfur, all forms <sup>47</sup>		69,600 <sup>r</sup>	70,600 <sup>r</sup>	70,000 <sup>r</sup>	68,300 <sup>r</sup>	69,100	9,630	13.9
Talc and pyrophyllite		7,280 <sup>r</sup>	7,610 <sup>r</sup>	7,210 <sup>r</sup>	7,330 <sup>r</sup>	7,230 <sup>e</sup>	610	8.4
Vermiculite <sup>e</sup>	metric tons	427,000 <sup>r</sup>	403,000 <sup>r</sup>	380,000 <sup>r</sup>	364,000 <sup>r</sup>	381,000	100,000 <sup>31, 48</sup>	26.2

<sup>e</sup>Estimated. <sup>r</sup>Revised. do. Ditto. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in "World total." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits, unless otherwise specified.

<sup>2</sup>Calcined alumina or the total of calcined alumina plus the calcined equivalent of hydrate.

<sup>3</sup>Primary aluminum is defined as "The weight of liquid aluminum as tapped from pots, excluding the weight of any alloying materials as well as that of any metal produced from either returned scrap of remelted material."

<sup>4</sup>Includes calculated arsenic trioxide equivalent of output of elemental arsenic compounds other than arsenic trioxide; inclusion of such materials would not duplicate reported arsenic trioxide production.

<sup>5</sup>"World totals" do not include U.S. production.

<sup>6</sup>Beryl ore for the production of beryllium and exclude gem-quality beryl.

<sup>7</sup>Mine shipments. Includes bertrandite ore, calculated as equivalent to beryl containing 11% beryllium oxide.

<sup>8</sup>Rounded to no more than two significant digits.

<sup>9</sup>Includes unwrought production from ores, concentrates, flue dusts, and other materials of both domestic and imported origin.

TABLE 9—Continued  
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

- 
- <sup>10</sup>Recoverable cobalt content of ores, concentrates, or intermediate products from cobalt, copper, nickel, platinum, or zinc operations.
- <sup>11</sup>Cobalt content of concentrates.
- <sup>12</sup>Cobalt refined from ores, concentrates, or intermediate products and do not include production of downstream products from refined cobalt.
- <sup>13</sup>Copper content of concentrates produced (includes cement copper). U.S. production includes concentrates and electrowon leaching.
- <sup>14</sup>Includes total production of smelted copper metal, including low-grade cathode produced by electrowinning methods. The smelter feed may be derived from ore, concentrates, copper precipitate or matte (primary), and (or) scrap (secondary). U.S. production is primary only.
- <sup>15</sup>Includes total production of refined copper whether produced by pyrometallurgical or electrolytic refining methods and whether derived from primary unrefined copper or from scrap. Copper cathode derived from electrowinning processing is also included. U.S. production is secondary only.
- <sup>16</sup>Production of usable ore represents total for all iron ore products used in steelmaking.
- <sup>17</sup>Sources: Midrex Technologies, Inc., governments, and companies.
- <sup>18</sup>Source: American Iron and Steel Institute (AISI).
- <sup>19</sup>Raw steel is defined by AISI as steel formed in solid state after melting, suitable for further processing or sale.
- <sup>20</sup>Total content of ores and concentrates. Table 1 reports recoverable content for lead and zinc.
- <sup>21</sup>Total output of refined lead whether derived from ores and concentrates (primary) or scrap (secondary), and include the lead content of antimonial lead but does not include, to the extent possible, simple remelting of scrap.
- <sup>22</sup>Mostly concentrates or comparable shipping product.
- <sup>23</sup>Concentrate.
- <sup>24</sup>Byproduct platinum and palladium produced from gold-copper ores were excluded.
- <sup>25</sup>Calculated rhenium contained in molybdenite concentrates.
- <sup>26</sup>Recoverable content of ores and concentrates.
- <sup>27</sup>Includes primary production (from ores and concentrates) and secondary production (recovered from scrap). U.S. production is secondary only.
- <sup>28</sup>Includes U.S. production, rounded to one significant digit, of ilmenite, leucoxene, and rutile to avoid disclosing company proprietary data.
- <sup>29</sup>Production from ores, concentrates, and slag.
- <sup>30</sup>Reported figure.
- <sup>31</sup>Sold or used by producers and (or) marketable production.
- <sup>32</sup>Portland and masonry cements only. Includes a small (less than 0.3% per year) component of double-counting where portland cement (not clinker) is consumed to make masonry cement; the precise amount of double-counting cannot be determined because of the involvement of portland cement stockpiles.
- <sup>33</sup>Includes Puerto Rico.
- <sup>34</sup>Does not include attapulgitite.
- <sup>35</sup>Includes gem and industrial. Source: Kimberley Process Certification Scheme.
- <sup>36</sup>Purity and moisture content are generally not reported or estimated.
- <sup>37</sup>Includes hand-cobbed feldspar, flotation-concentrate feldspar, feldspar in feldspar-quartz mixtures, and aplite; predominantly in the production of ceramics and glass.
- <sup>38</sup>Includes production by grade (acid, ceramic, and metallurgical).
- <sup>39</sup>Does not include byproduct gypsum.
- <sup>40</sup>Does not include synthetic mullite. Estimated using several prior-years' output as reported to the Virginia Department of Mines.
- <sup>41</sup>Quicklime, hydrated lime, and dead-burned dolomite. Totals are rounded to no more than two significant digits, except for U.S. production, which is to no more than three significant digits.
- <sup>42</sup>Crude salable magnesite.
- <sup>43</sup>Includes scrap and flake. Does not include, if any, U.S. production of low-quality sericite and sheet mica.
- <sup>44</sup>Synthetic anhydrous ammonia; does not include coke oven byproduct ammonia.
- <sup>45</sup>Includes brine, rock, solar, and vacuum and open pans.
- <sup>46</sup>U.S. production is natural only.
- <sup>47</sup>Byproduct. Includes Frasch, metallurgy, native, natural gas, oil sands, petroleum, and pyrites.
- <sup>48</sup>Rounded to one significant digit.