

STATISTICAL SUMMARY

By Stephen D. Smith

This annual report summarizes data on crude nonfuel mineral production¹ for the United States, its island possessions, and the Commonwealth of Puerto Rico.

Although crude mineral production may be measured at any of several stages of extraction and processing, the stage of measurement used 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.

¹The terms “nonfuel mineral production” and related “values” encompass variations in meaning, depending upon the minerals or 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 2001 USGS mineral production data published in this chapter are as of March 2003. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, data are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialist’s names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

Values, percentage calculations, and rankings for 2001 may differ from the Minerals Yearbook, Area Reports: Domestic 2001, volume II, owing to the revision of preliminary 2001 to final 2001 data.

Because of inadequacies in the statistics available, some series deviate from the foregoing definition. For copper, gold, lead, silver, and zinc, the quantities shown 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 mine value. Mercury is measured as recovered metal and valued at the average New York price for the metal. Values shown are in current dollars, with no adjustments made to compensate for changes in the purchasing power of the dollar.

The annual total value of all nonfuel mineral production in the United States decreased almost 2.4% to \$38.3 billion in 2001, with metals decreasing almost 15% to \$8.6 billion and industrial minerals increasing almost 2% to \$29.7 billion compared with those of 2000. Eight of the mineral commodities produced in the United States in 2001 had an individual total production value that was greater than \$1 billion. These commodities were, in descending order, stone (crushed), cement (portland), sand and gravel (construction), gold, copper, iron ore (usable), lime, and salt. They composed more than 77% of the U.S. total production value (table 1).

In 2001, 14 States produced nonfuel mineral commodities with individual total production values of greater than \$1 billion. These States were, in descending order, California, Nevada, Arizona, Texas, Florida, Michigan, Georgia, Utah, Missouri, Pennsylvania, Minnesota, Ohio, New York, and Wyoming. They composed more than 61% of the U.S. total production value (table 3).

TABLE 1
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001		
	Quantity	Value	Quantity	Value	Quantity	Value	
Metals:							
Antimony 3/	metric tons	450	W	W	W	--	--
Beryllium concentrates	do.	5,070	6	4,510	5	2,480	3
Copper 4/		1,600	2,680,000	1,450 r/	2,810,000	1,340	2,270,000
Gold 4/	kilograms	341,000	3,070,000	353,000	3,180,000	335,000	2,930,000
Iron ore, usable		58,500	1,550,000	61,000	1,560,000	50,600	1,210,000
Iron oxide pigments, crude	metric tons	44,100	7,740	57,100	4,470	61,500	3,460
Lead 4/	do.	503,000	485,000	449,000 r/	431,000 r/	454,000	437,000
Molybdenum concentrates 3/	do.	42,800	251,000	40,900 r/	W	37,600	W
Palladium 3/	kilograms	9,800	114,000	10,300	228,000	12,100	237,000
Platinum 3/	do.	2,920	35,600	3,110	54,900 r/	3,610	61,900
Rare-earth metal concentrates e/ 3/	metric tons	5,000	14,400	5,000	W	5,000	27,600
Silver 4/	do.	1,950	329,000	1,980 r/	318,000 r/	1,740	245,000
Zinc 4/	do.	771,000	909,000	805,000 r/	987,000 r/	799,000	774,000
Combined value of magnesium metal, mercury, titanium concentrates, vanadium, zirconium concentrates and values indicated by symbol W		XX	368,000	XX	555,000 r/	XX	445,000
Total		XX	9,810,000	XX	10,100,000 r/	XX	8,640,000
Industrial minerals, excluding fuels:							
Asbestos	metric tons	7,190	W	5,260	W	5,260	W
Barite		434	11,100	392	9,840	400	11,000
Boron		1,220	630,000	1,070	557,000	1,050	506,000
Bromine	metric tons	239,000	213,000	228,000	206,000	212,000	159,000
Cement:							
Masonry		4,380	452,000 e/	4,330	461,000 r/ e/	4,450	477,000 e/
Portland		81,600	6,280,000 e/	83,500	6,440,000 e/	84,500	6,350,000 e/
Clays:							
Ball		1,200	48,000	1,140	48,400	1,100	45,200
Bentonite		4,070	176,000	3,760	155,000	4,290	187,000
Common		24,800	145,000	23,700	135,000	23,200	129,000
Fire		402	6,770	476	7,560	383	5,970
Fuller's earth		2,560	231,000	2,910	254,000	2,890	233,000
Kaolin		9,160	948,000	8,800	929,000	8,110	867,000
Diatomite		747	178,000	677	173,000	644	174,000
Feldspar	metric tons	875,000	42,700	790,000	44,500	800,000	44,100
Garnet, industrial	do.	60,700	6,170	60,200	7,060	52,700	6,430
Gemstones		NA	16,100	NA	17,200	NA	15,100
Gypsum, crude		22,400	157,000	19,500	165,000	16,300	119,000
Helium:							
Crude	million cubic meters	63	57,200	62	56,600	46	50,200
Grade-A	do.	117	233,000	127	251,000	132	262,000
Iodine	metric tons	1,620	23,800	1,470	21,500	1,290	18,400
Kyanite e/		90	12,700	90	13,400	90	13,400
Lime		19,600	1,180,000	19,600	1,180,000	18,900	1,160,000
Mica, crude		102	15,900	104	14,100	98	7,990
Peat		834	22,100	847	22,700	998	24,800
Perlite, crude	metric tons	711,000	23,800	672,000	22,700	588,000	21,300
Phosphate rock, marketable		40,600	1,240,000	38,600	932,000	31,900	856,000
Potash		2,500	280,000	2,600	290,000	2,400	260,000
Pumice and pumicite	metric tons	643,000	17,800	697,000	16,900	618,000	18,000
Salt		44,400	1,110,000	43,300	1,040,000	42,200	1,110,000
Sand and gravel:							
Construction		1,110,000	5,250,000	1,120,000	5,390,000	1,130,000	5,670,000
Industrial		28,900	538,000	28,400	556,000	27,900	576,000
Silica stone 5/	metric tons	475	3,060	312	4,610	393	4,040
Soda ash		10,200	779,000	10,200	748,000	10,300	773,000
Stone, crushed 6/		1,540,000	8,240,000	1,550,000 r/	8,290,000 r/	1,600,000	8,920,000
Tripoli	metric tons	84,900	20,200	72,000	15,900 e/	60,500	15,100
Vermiculite	do.	175,000 e/	W	150,000 e/	W	W	W
Zeolites	do.	40,100	NA	(7/)	NA	(7/)	NA

See footnotes at end of table.

TABLE 1--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Industrial minerals, excluding fuels--Continued:						
Combined value of brucite, emery, greensand marl, lithium, magnesite, magnesium compounds, olivine, pyrophyllite (crude), staurolite, stone (dimension), sulfur (Frasch), talc (crude), vermiculite (crude), wollastonite, and values indicated by symbol W	XX	684,000 r/	XX	619,000	XX	582,000
Total	XX	29,300,000	XX	29,100,000 r/	XX	29,700,000
Grand total	XX	39,100,000	XX	39,200,000 r/	XX	38,300,000

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

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

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Content of ore and concentrate.

4/ Recoverable content of ores, etc.

5/ Includes grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

6/ Excludes abrasive stone and bituminous limestone and sandstone; all included elsewhere in table.

7/ Withheld to avoid disclosing company proprietary data.

TABLE 2
NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2001

(Principal States based upon quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Asbestos	CA	
Barite	NV, GA, TN	
Beryllium concentrate	UT	
Boron	CA	
Bromine	AR and MI	
Brucite	NV and TX	
Cement:		
Masonry	CA, FL, SC, IN, AL	AZ, AR, CO, GA, HI, IA, KS, KY, ME, MD, MI, MO, MT, NE, NM, NY, OH, OK, PA, TN, TX, V. WV.
Portland	TX, CA, PA, MI, MO	All other States, except AK, CT, DE, LA, MA, MN, NH, NJ, NC, ND, RI, VT, WI.
Clays:		
Ball	TN, TX, KY, MS	
Bentonite	WY, MT, MS, AL, UT	AZ, CA, CO, GA, NV, OR, TX.
Common	NC, TX, AL, GA, OH	All other States, except AK, DE, HI, ID, NV, NH, RI, VT, WI.
Fire	MO, OH, SC, CA	
Fuller's earth	GA, MS, MO, IL, FL	CA, KS, NV, TN, TX, VA.
Kaolin	GA, AL, SC, CA, NC	AR, FL, NV, TN, TX.
Copper 1/	AZ, UT, NM, MO, NV	ID and AK.
Diatomite	CA, NV, OR, WA	
Feldspar	NC, VA, CA, GA, OK	ID and SD.
Garnet, industrial	ID, NY, MT	
Gemstones, natural 2/	TN, AZ, CA, OR, UT	All other States.
Gold 1/	NV, UT, AK, CA, SD	AZ, CO, ID, MT, NM, WA.
Greensand marl	NJ	
Gypsum, crude	OK, IA, NV, TX, CA	AZ, AR, CO, IN, KS, LA, MI, NM, NY, NC, OH, SD, UT, WY.
Helium:		
Crude	KS, TX, OK	
Grade-A	KS, WY, OK, TX, CO	UT.
Iodine	OK	
Iron ore, usable	MN, MI, NM, SD, CA	
Iron oxide pigments, crude	GA, MO, MI, AL, VA	
Kyanite	VA	
Lead 1/	MO, AK, ID, MT, NV	
Lime	MO, AL, OH, KY, TX	All other States, except AK, CT, DE, FL, HI, KS, ME, MD, MS, NH, NJ, NY, NC, RI, SC, VT.
Lithium carbonate	NV	
Magnesite	NV	
Magnesium compounds	MI, UT, FL, DE, CA	
Magnesium metal	WA and UT	
Mercury	(3/)	
Mica, crude	NC, GA, NM, SC, SD	
Molybdenum	AZ, CO, UT, ID, NM	
Olivine	NC and WA	
Palladium 1/	MT	
Peat	FL, MI, MN, IN, IL	IA, ME, MT, NJ, NY, NC, OH, PA, WA, WV, WI.
Perlite	NM, OR, AZ, UT, NV	CA and ID.
Phosphate rock	FL, ID, NC, UT	
Platinum 1/	MT	
Potash	NM, UT, MI	
Pumice and pumicite	OR, NM, CA, ID, AZ	KS.
Pyrophyllite, crude	NC	
Rare-earth metal concentrates	CA	
Salt	LA, TX, NY, OH, KS	AL, AZ, CA, MI, NV, NM, OK, TN, UT, WV.
Sand and gravel:		
Construction	CA, TX, MI, AZ, OH	All other States.
Industrial	IL, MI, TX, CA, WI	All other States, except AK, CT, DE, HI, KY, ME, MA, MT, NH, OR, SD, UT, VT, WY.
Silica stone 4/	AR	
Silver 1/	NV, AK, ID, MO, UT	AZ, CA, CO, MT, NM, SD, TN.
Soda ash	WY, CA, CO	
Staurolite	FL	
Stone:		
Crushed	TX, PA, FL, MO, IL	All other States, except DE.
Dimension	IN, GA, WI, VT, TX	All other States, except AK, DE, FL, HI, IL, IA, KY, LA, MS, NE, NV, NJ, ND, OR, RI, WY.

See footnotes at end of table.

TABLE 2--Continued
NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2001

(Principal States based upon quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Talc, crude	MT, TX, VT, NY, OR	
Titanium concentrates:		
Ilmenite	FL and VA	
Rutile	FL	
Tripoli	IL, OK, AR, PA	
Vermiculite, crude	SC and VA	
Wollastonite	NY	
Zeolites	NM, TX, OR, AZ, NV	ID and CA.
Zinc 1/	AK, TN, MO, NY, MT	ID.
Zirconium concentrates	FL and VA	

1/ Content of ores, etc.

2/ Principal producing States based on value.

3/ Not available.

4/ Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

TABLE 3
VALUE OF NONFUEL MINERAL PRODUCTION IN THE UNITED STATES AND PRINCIPAL NONFUEL MINERALS PRODUCED IN 2001 1/

State	Value (thousands)	Rank	Percent of U.S. total	Principal minerals, in order of value
Alabama	\$945,000	17	2.47	Cement (portland), stone (crushed), lime, sand and gravel (construction), cement (masonry).
Alaska	983,000	16	2.57	Zinc, gold, lead, silver, sand and gravel (construction).
Arizona	2,170,000	3	5.67	Copper, sand and gravel (construction), cement (portland), molybdenum concentrates, stone (crushed).
Arkansas	479,000	28	1.25	Stone (crushed), bromine, cement (portland), sand and gravel (construction), gypsum (crude).
California	3,300,000	1	8.60	Sand and gravel (construction), cement (portland), boron minerals, stone (crushed), gold.
Colorado	540,000	26	1.41	Sand and gravel (construction), cement (portland), stone (crushed), gold, molybdenum concentrates.
Connecticut 2/	128,000	42	0.33	Stone (crushed), sand and gravel (construction), stone (dimension), clays (common), gemstones.
Delaware 2/	19,300	50	0.05	Sand and gravel (construction), magnesium compounds, gemstones.
Florida	1,800,000	5	4.69	Phosphate rock, stone (crushed), cement (portland), sand and gravel (construction), cement (masonry).
Georgia	1,570,000	7	4.11	Clays (kaolin), stone (crushed), cement (portland), clays (fuller's earth), sand and gravel (construction).
Hawaii 2/	85,500	45	0.22	Stone (crushed), cement (portland), sand and gravel (construction), cement (masonry), gemstones.
Idaho	288,000	37	0.75	Phosphate rock, sand and gravel (construction), silver, stone (crushed), cement (portland).
Illinois	993,000	15	2.59	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), lime.
Indiana	738,000	18	1.93	Stone (crushed), cement (portland), sand and gravel (construction), cement (masonry), lime.
Iowa	466,000	30	1.22	Stone (crushed), cement (portland), sand and gravel (construction), gypsum (crude), lime.
Kansas	629,000	22	1.64	Helium (Grade-A), cement (portland), salt, stone (crushed), helium (crude).
Kentucky	588,000	24	1.54	Stone (crushed), lime, cement (portland), sand and gravel (construction), clays (ball).
Louisiana	309,000	35	0.81	Salt, sand and gravel (construction), stone (crushed), sand and gravel (industrial), lime.
Maine	102,000	43	0.27	Sand and gravel (construction), cement (portland), stone (crushed), cement (masonry), stone (dimension).
Maryland 2/	356,000	33	0.93	Stone (crushed), cement (portland), sand and gravel (construction), stone (dimension), cement (masonry).
Massachusetts 2/	221,000	39	0.58	Stone (crushed), sand and gravel (construction), lime, stone (dimension), clays (common).
Michigan	1,630,000	6	4.25	Cement (portland), iron ore (usable), sand and gravel (construction), stone (crushed), magnesium compounds.
Minnesota 2/	1,080,000	11	2.83	Iron ore (usable), sand and gravel (construction), stone (crushed), sand and gravel (industrial), stone (dimension).
Mississippi	177,000	41	0.46	Sand and gravel (construction), clays (fuller's earth), cement (portland), sand and gravel (crushed), sand and gravel (industrial).
Missouri	1,320,000	9	3.46	Stone (crushed), cement (portland), lead, lime, sand and gravel (construction).
Montana	575,000	25	1.50	Palladium, gold, sand and gravel (construction), platinum, cement (portland).
Nebraska 2/	90,400	44	0.24	Cement (portland), stone (crushed), sand and gravel (construction), lime, cement (masonry).
Nevada	2,760,000	2	7.21	Gold, sand and gravel (construction), silver, lime, cement (portland).
New Hampshire 2/	61,500	47	0.16	Sand and gravel (construction), stone (crushed), stone (dimension), gemstones.
New Jersey	321,000	34	0.84	Stone (crushed), sand and gravel (construction), sand and gravel (industrial), greensand marl, peat.
New Mexico	597,000	23	1.56	Copper, potash, sand and gravel (construction), cement (portland), stone (crushed).
New York	1,030,000	13	2.68	Stone (crushed), salt, cement (portland), sand and gravel (construction), wollastonite.
North Carolina	733,000	19	1.91	Stone (crushed), phosphate rock, sand and gravel (construction), sand and gravel (industrial), feldspar.
North Dakota	33,300	48	0.09	Sand and gravel (construction), lime, stone (crushed), clays (common), sand and gravel (industrial).
Ohio	1,040,000	12	2.71	Stone (crushed), sand and gravel (construction), salt, lime, cement (portland).
Oklahoma	478,000	29	1.25	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), gypsum (crude).
Oregon	305,000	36	0.80	Stone (crushed), sand and gravel (construction), cement (portland), diatomite, lime.
Pennsylvania 2/	1,290,000	10	3.38	Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry).
Rhode Island 2/	20,300	49	0.05	Stone (crushed), sand and gravel (construction), sand and gravel (industrial), gemstones.
South Carolina 2/	459,000	31	1.20	Cement (portland), stone (crushed), cement (masonry), sand and gravel (construction), clays (kaolin).
South Dakota	268,000	38	0.70	Gold, cement (portland), sand and gravel (construction), stone (crushed), stone (dimension).
Tennessee	709,000	21	1.85	Stone (crushed), zinc, cement (portland), sand and gravel (construction), clays (ball).
Texas	2,160,000	4	5.64	Cement (portland), stone (crushed), sand and gravel (construction), lime, salt.
Utah	1,360,000	8	3.56	Copper, gold, salt, cement (portland), sand and gravel (construction).
Vermont 2/	70,800	46	0.18	Stone (dimension), stone (crushed), sand and gravel (construction), talc (crude), gemstones.
Virginia	732,000	20	1.91	Stone (crushed), cement (portland), sand and gravel (construction), lime, clays (fuller's earth).
Washington	498,000	27	1.30	Sand and gravel (construction), cement (portland), stone (crushed), magnesium metal, gold.
West Virginia	177,000	40	0.46	Stone (crushed), cement (portland), sand and gravel (industrial), lime, salt.
Wisconsin 2/	365,000	32	0.95	Sand and gravel (construction), stone (crushed), lime, sand and gravel (industrial), stone (dimension).
Wyoming	1,010,000	14	2.65	Soda ash, clays (bentonite), helium (Grade-A), cement (portland), sand and gravel (construction).
Undistributed	231,000	XX	0.60	
Total	38,300,000	XX	100.00	

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Partial total; excludes values that must be concealed to avoid disclosing company proprietary data. Concealed values included with "Undistributed."

TABLE 4
 VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2001
 BY STATE 1/

State	Area (square kilometers)	Population (thousands)	Total value (thousands)	Per capita		Per square kilometer	
				Dollars	Rank	Dollars	Rank
Alabama	134,000	4,460	\$945,000	212	13	7,060	16
Alaska	1,530,000	635	983,000	1,550	2	642	48
Arizona	295,000	5,310	2,170,000	409	6	7,360	14
Arkansas	138,000	2,690	479,000	178	15	3,480	29
California	411,000	34,500	3,300,000	96	30	8,020	12
Colorado	270,000	4,420	540,000	122	21	2,000	40
Connecticut	13,000	3,430	128,000 2/	37	47	9,850	8
Delaware	5,290	796	19,300 2/	24	49	3,640	28
Florida	152,000	16,400	1,800,000	110	25	11,800	3
Georgia	153,000	8,380	1,570,000	188	14	10,300	7
Hawaii	16,800	1,220	85,500 2/	70	37	5,100	25
Idaho	216,000	1,320	288,000	218	11	1,330	45
Illinois	146,000	12,500	993,000	80	35	6,800	18
Indiana	93,700	6,110	738,000	121	22	7,870	13
Iowa	146,000	2,920	466,000	159	17	3,200	30
Kansas	213,000	2,690	629,000	233	10	2,950	32
Kentucky	105,000	4,070	588,000	145	18	5,620	23
Louisiana	124,000	4,470	309,000	69	38	2,500	39
Maine	86,200	1,290	102,000	79	36	1,180	47
Maryland	27,100	5,380	356,000 2/	66	40	13,100	2
Massachusetts	21,500	6,380	221,000 2/	35	48	10,300	6
Michigan	152,000	9,990	1,630,000	163	16	10,700	5
Minnesota	219,000	4,970	1,080,000 2/	218	12	4,960	26
Mississippi	124,000	2,860	177,000	62	41	1,430	43
Missouri	181,000	5,630	1,320,000	235	9	7,340	15
Montana	381,000	904	575,000	636	4	1,510	42
Nebraska	200,000	1,710	90,400 2/	53	43	451	49
Nevada	286,000	2,110	2,760,000	1,310	3	9,640	10
New Hampshire	24,000	1,260	61,500 2/	49	45	2,560	37
New Jersey	20,200	8,480	321,000	38	46	15,900	1
New Mexico	315,000	1,830	597,000	326	8	1,900	41
New York	127,000	19,000	1,030,000	54	42	8,080	11
North Carolina	136,000	8,190	733,000	90	32	5,380	24
North Dakota	183,000	634	33,300	52	44	182	50
Ohio	107,000	11,400	1,040,000	91	31	9,710	9
Oklahoma	181,000	3,460	478,000	138	19	2,640	36
Oregon	251,000	3,470	305,000	88	33	1,210	46
Pennsylvania	117,000	12,300	1,290,000 2/	105	26	11,000	4
Rhode Island	3,140	1,060	20,300 2/	19	50	6,480	20
South Carolina	80,600	4,060	459,000 2/	113	24	5,700	22
South Dakota	200,000	757	268,000	355	7	1,340	44
Tennessee	109,000	5,740	709,000	124	20	6,500	19
Texas	691,000	21,300	2,160,000	101	28	3,130	31
Utah	220,000	2,270	1,360,000	600	5	6,190	21
Vermont	24,900	613	70,800 2/	115	23	2,840	33
Virginia	106,000	7,190	732,000	102	27	6,930	17
Washington	176,000	5,990	498,000	83	34	2,820	34
West Virginia	62,800	1,800	177,000	98	29	2,820	35
Wisconsin	145,000	5,400	365,000 2/	68	39	2,510	38
Wyoming	253,000	494	1,010,000	2,050	1	4,000	27
Undistributed	XX	XX	231,000	XX	XX	XX	XX
Total or average	9,370,000 3/	284,000 3/	38,300,000	135	XX	4,090	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Partial total; excludes values that must be concealed to avoid disclosing company proprietary data. Concealed values included with "Undistributed."

3/ Excludes Washington, DC (which has no mineral production), with an area of 179 square kilometers and a population of 572,000.

Sources: U.S. Geological Survey and U.S. Census Bureau.

TABLE 5
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Alabama:						
Cement:						
Masonry		47,600 e/	401	45,600 e/	380	38,900 e/
Portland	4,300	349,000 e/	4,340	342,000 e/	4,480	352,000 e/
Clays:						
Bentonite	W	W	W	W	132	4,010
Common	2,320	23,700	2,090	23,200	2,050	24,800
Gemstones	NA	76	NA	108	NA	108
Lime	1,930	114,000	1,950	121,000	2,040	127,000
Sand and gravel:						
Construction	15,500	68,900	14,500	63,700	13,600	60,200
Industrial	687	9,780	731	10,100	743	9,420
Stone:						
Crushed	49,100	354,000	48,500 r/	296,000 r/	49,400	308,000
Dimension metric tons	7,210	2,380	W	W	W	W
Combined values of clays (kaolin), iron oxide pigments (crude), salt, and values indicated by symbol W	XX	20,400	XX	24,400	XX	20,100
Total	XX	990,000	XX	926,000 r/	XX	945,000
Alaska:						
Gemstones	NA	11	NA	11	NA	12
Gold 3/ 4/ kilograms	16,200	145,000 r/	15,600	140,000	16,700	146,000
Sand and gravel, construction	9,620	48,500	10,600	53,500	11,300	65,600
Stone, crushed	1,800 5/	9,900 5/	1,400	7,110	1,490 5/	8,140 5/
Combined values of copper, lead, silver, stone [crushed dolomite, limestone, shell, slate (1999), crushed dolomite, limestone, and slate (2001)], zinc	XX	880,000	XX	911,000 r/	XX	763,000
Total	XX	1,080,000 r/	XX	1,110,000 r/	XX	983,000
Arizona:						
Copper 3/	1,050	1,760,000	929 r/	1,810,000 r/	879	1,490,000
Gemstones	NA	1,950	NA	2,920	NA	1,610
Gold 3/ kilograms	786	7,070 r/	W	W	W	W
Molybdenum concentrates metric tons	15,700	W	W	W	W	W
Sand and gravel:						
Construction	54,500	296,000	59,400	304,000	52,900	288,000
Industrial	268	3,720	W	W	W	W
Silver 3/ metric tons	183	30,900	133 r/	21,400 r/	W	W
Stone, crushed	8,970	53,900	8,030	48,200	8,320	49,600
Zeolites metric tons	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of cement, clays (bentonite, common), gypsum (crude), iron oxide pigments [crude (1999-2000)], lime, mica (1999), perlite (crude), pumice and pumicite, salt, stone (dimension sandstone), and values indicated by symbol W	XX	334,000	XX	326,000 r/	XX	343,000
Total	XX	2,490,000	XX	2,510,000	XX	2,170,000
Arkansas:						
Clays, common	1,010	1,510	958	1,170	989	1,440
Gemstones	NA	731	NA	925	NA	686
Sand and gravel, construction	11,300	53,200	9,820	48,600	11,600	57,600
Silica stone 7/ metric tons	W	W	W	W	393	4,040
Stone, crushed	30,700	145,000	28,300	137,000	33,700	169,000
Combined values of bromine, cement, clays (kaolin), gypsum (crude), lime, sand and gravel (industrial), stone (dimension limestone, marble, sandstone), tripoli, and values indicated by symbol W	XX	296,000	XX	296,000	XX	246,000
Total	XX	497,000	XX	484,000	XX	479,000
California:						
Asbestos metric tons	7,190	W	5,260	W	5,260	W
Boron minerals	1,220	630,000	1,070	557,000	1,050	506,000
Cement:						
Masonry	466	38,300 e/	484	43,100 e/	564	51,400 e/
Portland	10,300	817,000 e/	10,900	821,000 e/	10,100	778,000 e/
Clays:						
Bentonite	23	2,110	21	2,160	W	W

See footnotes at end of table.

TABLE 5--Continued
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
California--Continued:						
Clays--Continued:						
Common	829	13,100	969	16,800	885	18,300
Gemstones	NA	1,100	NA	1,500	NA	1,280
Gold 3/ kilograms	17,500	157,000 r/	17,200	155,000	13,800	121,000
Rare-earth metal concentrates e/ metric tons	5,000	14,400	5,000	W	5,000	27,600
Sand and gravel:						
Construction	145,000	897,000	148,000	940,000	149,000	1,080,000
Industrial	1,790	43,700	1,810	45,200	1,840	47,700
Silver 3/ metric tons	8	1,290	8 r/	1,350 r/	8	1,070
Stone:						
Crushed	59,400	384,000	57,900 r/	360,000 r/	61,600	396,000
Dimension metric tons	29,400	4,930	33,300	5,790	40,200	9,540
Zeolites do.	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of clays (fire, fuller's earth, kaolin), diatomite, feldspar, gypsum (crude), iron ore [usable (1999, 2001)], lime, magnesium compounds, perlite (crude), pumice and pumicite, pyrophyllite (crude), salt, soda ash, talc [crude (1999)], and values indicated by symbol W						
	XX	310,000	XX	308,000	XX	256,000
Total	XX	3,310,000 r/	XX	3,260,000 r/	XX	3,300,000
Colorado:						
Clays:						
Bentonite	1	W	W	W	W	W
Common	373	2,530	296	2,000	254	1,500
Gemstones	NA	261	NA	277	NA	269
Gold 3/ kilograms	W	W	W	W	6,660	58,300
Lime	40	2,380	37	2,170	33	2,000
Sand and gravel:						
Construction	45,200	217,000	43,900	216,000	37,300	194,000
Industrial	W	W	65	W	W	W
Silver 3/ metric tons	W	W	W	W	3	399
Stone:						
Crushed	13,200	75,500	13,000	81,900	13,900	88,500
Dimension metric tons	14,700	3,430	W	W	10,800	2,130
Combined values of cement, clays [fire (2000)], gypsum (crude), helium (Grade-A), lead (1999), molybdenum concentrates, soda ash (2001), stone [dimension marble and sandstone (2000)], zinc (1999), and values indicated by symbol W						
	XX	282,000	XX	285,000 r/	XX	193,000
Total	XX	584,000	XX	588,000 r/	XX	540,000
Connecticut:						
Clays, common						
	55	183	55	183	55 e/	183 e/
Gemstones	NA	6	NA	6	NA	6
Sand and gravel, construction	6,510	32,400	8,010	46,900	7,670	44,700
Stone:						
Crushed	7,170	57,400	7,740	65,300	9,870	83,200
Dimension metric tons	W	(6/)	W	(6/)	W	(6/)
Total	XX	90,000	XX	112,000	XX	128,000
Delaware:						
Gemstones	NA	1	NA	1	NA	1
Magnesium compounds metric tons	W	(6/)	W	(6/)	W	(6/)
Sand and gravel, construction	2,100	10,800	2,330	12,400	3,370	19,300
Total	XX	10,800	XX	12,400	XX	19,300
Florida:						
Cement:						
Masonry	494	50,900 e/	546	64,900 e/	556	62,600 e/
Portland	3,500	260,000 e/	3,750	285,000 e/	4,060	294,000 e/
Clays:						
Common	W	W	W	W	94 e/	1,280 e/
Fuller's earth	W	W	W	W	334 e/	22,200 e/
Kaolin	35	3,830	33	3,420	32	3,380
Gemstones	NA	1	NA	1	NA	1
Peat	408	8,180	416	8,640	544	11,300

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Florida--Continued:						
Sand and gravel:						
Construction	27,200	114,000	24,500	107,000	24,800	109,000
Industrial	509	6,370	510	6,320	598	7,510
Stone, crushed	91,700	466,000	93,000	495,000	95,100	515,000
Combined values of magnesium compounds, phosphate rock, staurolite, titanium concentrates, zirconium concentrates, and values indicated by symbol W	XX	1,110,000	XX	848,000	XX	770,000
Total	XX	2,020,000	XX	1,820,000	XX	1,800,000
Georgia:						
Clays:						
Common	1,600	5,130	1,500	5,200	1,360	4,580
Fuller's earth	725	73,800	919	81,400	879	80,600
Kaolin	8,170	907,000	7,660	877,000	7,020	816,000
Gemstones	NA	9	NA	8	NA	8
Sand and gravel:						
Construction	7,200	30,100	6,940	28,700	7,060	28,800
Industrial	612	11,100	651	12,200	W	W
Stone:						
Crushed 5/	74,200	448,000	76,400 r/	452,000	77,300	467,000
Dimension metric tons	83,400	12,200	74,200	11,400	108,000	26,500
Combined values of barite, cement, clays [bentonite (2001)], feldspar, iron oxide pigments (crude), lime, mica (crude), stone (crushed marble), and value indicated by symbol W	XX	153,000	XX	151,000	XX	150,000
Total	XX	1,640,000	XX	1,620,000	XX	1,570,000
Hawaii:						
Cement:						
Masonry	3	298 e/	3	645 e/	W	(6/)
Portland	254	24,700 e/	286	26,800 e/	112	15,100 e/
Gemstones	NA	55	NA	(6/)	NA	85
Sand and gravel, construction	508	5,840	607	6,420	534	6,270
Stone, crushed	5,870	55,500	5,770	58,100	6,610	64,000
Total	XX	86,400	XX	92,000	XX	85,500
Idaho:						
Antimony metric tons	450	W	W	W	--	--
Gemstones	NA	368	NA	411	NA	665
Pumice and pumicite metric tons	98,600	917	W	W	W	W
Sand and gravel:						
Construction	15,500	48,200	17,500	55,700	15,000	52,400
Industrial	711	11,200	W	W	W	W
Silver 3/ metric tons	416	70,100	423 r/	68,000 r/	W	W
Stone:						
Crushed	4,090	18,500	3,500	14,800	5,250	22,500
Dimension metric tons	39,300	5,510	W	W	W	W
Zeolites do.	--	--	(6/)	NA	(6/)	NA
Combined values of cement (portland), copper, feldspar, garnet (industrial), gold, lead, lime, molybdenum concentrates, perlite (crude), phosphate rock, stone [dimension granite, quartz, sandstone (2000), dimension quartzite and sandstone (2001)], vanadium ore (1999), zinc, and values indicated by symbol W	XX	258,000 r/	XX	219,000 r/	XX	213,000
Total	XX	413,000 r/	XX	358,000	XX	288,000
Illinois:						
Cement, portland	2,940	215,000 e/	2,860	218,000 e/	2,870	214,000 e/
Clays:						
Common	134	616	200	905	198	972
Fuller's earth	W	W	W	W	367	34,200
Gemstones	NA	8	NA	8	NA	8
Sand and gravel:						
Construction	34,100	147,000	30,300	132,000	35,000	156,000
Industrial	4,460	71,100	4,430	71,600	4,460	72,100
Stone, crushed 5/	76,900	388,000	76,000	394,000	8,070	459,000

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Illinois--Continued:						
Combined values of lime, peat, stone (crushed sandstone), tripoli, and values indicated by symbol W	XX	77,000	XX	96,200	XX	57,400
Total	XX	899,000	XX	913,000	XX	993,000
Indiana:						
Cement, portland	2,510	178,000 e/	2,630	179,000 e/	2,900	195,000 e/
Clays, common	752	1,480	639	1,560	575	1,470
Gemstones	NA	3	NA	3	NA	3
Sand and gravel:						
Construction	29,500	126,000	27,900	121,000	29,000	124,000
Industrial	175	1,860	W	W	W	W
Stone:						
Crushed 5/	58,800	270,000	55,400	253,000	58,200	278,000
Dimension metric tons	255,000	33,500	235,000	32,400	184,000	35,300
Combined values of cement (masonry), gypsum (crude), lime, peat, and values indicated by symbol W	XX	106,000	XX	108,000 r/	XX	104,000
Total	XX	716,000	XX	695,000	XX	738,000
Iowa:						
Clays, common	302	1,040	306	1,060	274	836
Gemstones	NA	2	NA	2	NA	2
Sand and gravel:						
Construction	13,500	60,600	12,300	54,100	14,200	63,800
Industrial	W	W	29	W	35	1,590
Stone, crushed	40,200	203,000	40,000 r/	208,000 r/	35,600	189,000
Combined values of cement, gypsum (crude), lime, peat, and values indicated by symbol W	XX	216,000	XX	239,000	XX	211,000
Total	XX	481,000	XX	502,000 r/	XX	466,000
Kansas:						
Cement:						
Masonry	W	W	W	W	25	2,460 e/
Portland	1,970	149,000 e/	1,980	155,000 e/	1,830	140,000 e/
Clays, common	592	2,770	594	3,970	635	4,280
Gemstones	NA	21	NA	12	NA	3
Helium:						
Crude million cubic meters	W	W	W	W	36	39,400
Grade-A do.	61	121,000	77	153,000	82	163,000
Salt	2,780	115,000	2,770	114,000	3,130	122,000
Sand and gravel, construction	10,800	31,300	10,000	28,200	10,200	29,100
Stone:						
Crushed	23,700	116,000	23,300	113,000	22,800	110,000
Dimension metric tons	16,100	1,640	14,100	1,890	13,000	4,780
Combined values of clays (fuller's earth), gypsum (crude), pumice and pumicite, sand and gravel (industrial) and values indicated by symbol W	XX	63,700	XX	59,800	XX	14,300
Total	XX	601,000	XX	629,000	XX	629,000
Kentucky:						
Clays:						
Common	892	3,790	1,000	4,190	1,010	4,230
Fire	W	W	10	35	--	--
Gemstones	NA	292	NA	47	NA	64
Sand and gravel, construction	9,620	32,400	11,000	36,000	10,100	40,400
Stone, crushed	59,800	308,000	55,100 r/	294,000 r/	60,200	331,000
Combined values of cement, clays (ball), lime, and value indicated by symbol W	XX	158,000	XX	164,000	XX	213,000
Total	XX	502,000	XX	499,000 r/	XX	588,000
Louisiana:						
Clays, common	626	1,540	636	1,530	663	1,670
Gemstones	NA	7	NA	6	NA	6
Salt	16,500	193,000	13,400	124,000	13,100	139,000
Sand and gravel:						
Construction	16,500	81,700	14,900	76,900	18,100	85,100
Industrial	636	10,400	648	12,300	637	11,900

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Louisiana--Continued:						
Combined values of gypsum (crude), lime, stone [crushed limestone and sandstone (1999-2000), crushed limestone, sandstone, and miscellaneous (2001)], and sulfur [Frasch (1999-2000)]	XX	116,000	XX	110,000	XX	71,200
Total	XX	402,000	XX	325,000	XX	309,000
Maine:						
Clays, common	W	W	49 e/	125 e/	49 e/	125 e/
Gemstones	NA	229	NA	239	NA	245
Sand and gravel, construction	8,570	40,300	9,670	37,600	11,200	44,900
Stone, crushed	3,550	21,200	3,650	21,100	4,210	24,200
Combined values of cement, peat, stone (dimension granite), and value indicated by symbol W	XX	38,400	XX	36,500	XX	32,600
Total	XX	100,000	XX	95,500	XX	102,000
Maryland:						
Cement:						
Masonry	110	10,000 e/	78	7,140 e/	77	7,070 e/
Portland	1,730	124,000 e/	1,760	125,000 e/	1,720	124,000 e/
Clays, common	335	1,380	271	982	266	560
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	8,970	56,500	13,100	84,700	12,500	84,800
Stone:						
Crushed 5/	22,200	121,000	22,000 r/	123,000 r/	22,800	136,000
Dimension metric tons	26,000	3,160	28,700	3,560	27,500	3,440
Combined values of sand and gravel (industrial), and stone (crushed marble, shell, traprock)	XX	(6/)	XX	(6/)	XX	(6/)
Total	XX	316,000	XX	344,000 r/	XX	356,000
Massachusetts:						
Clays, common						
Clays, common	W	W	36 e/	321 e/	36 e/	321 e/
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	12,700	75,200	13,200	80,100	14,000	89,300
Stone:						
Crushed	11,600	89,900	13,400	103,000	14,500	121,000
Dimension metric tons	70,400	16,900	69,600	16,800	81,400	11,400
Combined values of lime, sand and gravel [industrial (1999)], and value indicated by symbol W	XX	10,800	XX	(6/)	XX	(6/)
Total	XX	193,000	XX	200,000	XX	221,000
Michigan:						
Cement:						
Masonry	283	28,100 e/	296	28,900 e/	290	28,900 e/
Portland	5,810	439,000 e/	5,790	450,000 e/	5,920	456,000 e/
Clays, common	615	3,550	594	3,210	595	2,280
Gemstones	NA	1	NA	1	NA	1
Gypsum, crude	2,170	15,700	1,980	19,800	929	10,600
Lime	781	43,900	W	W	W	W
Peat	195	4,520	207	5,750	208	4,750
Sand and gravel:						
Construction	70,200	245,000	75,600	269,000	76,300	266,000
Industrial	2,550	28,100	2,520	27,800	2,530	30,000
Stone, crushed 5/	41,200	140,000	42,200	148,000	43,200	160,000
Combined values of bromine, iron ore (usable), iron oxide pigments (crude), magnesium compounds, potash, salt, stone (crushed marl and miscellaneous, dimension dolomite and sandstone), and values indicated by symbol W	XX	625,000	XX	691,000	XX	669,000
Total	XX	1,570,000	XX	1,640,000	XX	1,630,000
Minnesota:						
Clays, common	W	W	14	15	14	15
Gemstones	NA	6	NA	6	NA	6
Iron ore, usable	43,800	1,150,000	46,700	1,180,000	37,300	856,000
Peat	W	W	75	5,100	83	4,430
Sand and gravel, construction	37,300	142,000	39,500	158,000	39,800	155,000

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Minnesota--Continued:						
Stone:						
Crushed	13,100	62,700	12,400	68,100	9,730	57,000
Dimension metric tons	42,700	20,700	W	W	15,700	11,800
Combined values of lime, sand and gravel (industrial), stone [dimension granite and limestone (2000)], and values indicated by symbol W	XX	35,200	XX	44,100	XX	25,900
Total	XX	1,410,000	XX	1,460,000	XX	1,110,000
Mississippi:						
Clays:						
Bentonite	W	W	W	W	155 e/	4,900 e/
Common	497	3,390	484	2,200	461	2,040
Fuller's earth	377	29,400	371	30,100	385	32,100
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	12,100	58,900	11,700 r/	60,900 r/	13,700	70,100
Stone, crushed 5/	1,760	15,900	2,530	23,700	2,140	21,500
Combined values of cement (portland), clays (ball), sand and gravel (industrial), stone (crushed marl), and values indicated by symbol W	XX	52,300	XX	51,700	XX	46,300
Total	XX	160,000	XX	169,000 r/	XX	177,000
Missouri:						
Cement:						
Masonry	W	W	W	W	111	9,680 e/
Portland	4,910	354,000 e/	4,880	372,000 e/	4,720	346,000 e/
Clays:						
Common	1,080	4,180	1,050	3,240	1,030	3,420
Fire	293	3,980	351	4,630	289	3,610
Copper 3/	W	W	W	W	4	7,490
Lead 3/ metric tons	W	W	W	W	281,000	270,000
Sand and gravel, construction	12,400	50,300	10,700 r/	41,700 r/	10,900	45,800
Silver 3/ metric tons	W	W	W	W	144	20,300
Stone, crushed	72,600	346,000	75,600 r/	365,000 r/	82,000	411,000
Zinc 3/ metric tons	W	W	W	W	43,600	42,300
Combined values of clays (fuller's earth), gemstones, iron ore [usable (1999)], iron oxide pigments (crude), lime, sand and gravel (industrial), stone (dimension granite), and values indicated by symbol W	XX	585,000	XX	516,000 r/	XX	165,000
Total	XX	1,340,000	XX	1,300,000 r/	XX	1,320,000
Montana:						
Clays, bentonite	W	W	W	W	252	16,200
Gemstones	NA	294	NA	267	NA	320
Gold 3/ kilograms	7,540	67,900 r/	9,310	83,800	W	W
Lead 3/ metric tons	7,950	7,660	W	W	7,290	7,020
Palladium 3/ kilograms	9,800	114,000	10,300	228,000	12,100	237,000
Platinum 3/ do.	2,920	35,600	3,110	54,900 r/	3,610	61,900
Sand and gravel, construction	12,000	50,700	9,950	40,600	14,600	67,200
Stone:						
Crushed	3,480	13,400	3,070	12,600	3,070	12,400
Dimension metric tons	9,500	1,440	W	W	8,990	2,400
Zinc 3/ do.	22,200	26,100	16,400 r/	20,200 r/	22,600	21,900
Combined values of cement [masonry (2000-2001), portland], clays (common), copper (1999-2000), garnet (industrial), iron ore [usable (1999)], lime, molybdenum concentrates (1999-2000), peat, silver, talc (crude), and values indicated by symbol W	XX	183,000	XX	140,000	XX	149,000
Total	XX	500,000 r/	XX	580,000 r/	XX	575,000
Nebraska:						
Cement:						
Masonry	W	(6/)	W	(6/)	W	(6/)
Portland	W	(6/)	W	(6/)	W	(6/)
Clays, common	133	(6/)	133	338	133 e/	338 e/
Gemstones	NA	3	NA	3	NA	3

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Nebraska--Continued:						
Lime	18	1,510	20	1,690	15	1,330
Sand and gravel:						
Construction	12,000	40,800	11,700	39,200	13,000	43,000
Industrial	W	(6/)	W	(6/)	W	(6/)
Stone, crushed	7,090	44,500	6,590	42,400	6,360	45,800
Total	XX	86,800	XX	83,700	XX	90,400
Nevada:						
Clays:						
Bentonite	6	W	6	804	5	758
Fuller's earth	25	3,580	28	3,870	28	3,870
Gemstones	NA	205	NA	W	NA	W
Gold 3/ kilograms	256,000	2,300,000 r/	268,000	2,410,000	253,000	2,220,000
Sand and gravel:						
Construction	31,700	142,000	36,800	172,000	34,000	173,000
Industrial	W	W	609	W	609	W
Silver 3/ metric tons	597	101,000	734 r/	118,000 r/	544	76,800
Stone, crushed	7,090	37,900	7,640	37,300	8,230	40,400
Zeolites metric tons	--	--	(6/)	NA	(6/)	NA
Combined values of barite, brucite, cement (portland), clays (kaolin), copper, diatomite, gypsum (crude), iron ore [usable (1999)], lead (2000-2001), lime, lithium carbonate, magnesite, mercury (1999-2000), perlite (crude), salt, and values indicated by symbol W						
	XX	286,000	XX	250,000	XX	248,000
Total	XX	2,870,000 r/	XX	2,990,000 r/	XX	2,760,000
New Hampshire:						
Gemstones	NA	6	NA	6	NA	8
Sand and gravel, construction	7,950	36,700	8,660	41,400	8,630	43,300
Stone, crushed 5/	4,290	19,700	3,740	15,700	4,230	18,200
Combined values of stone (crushed sandstone and dimension granite)						
	XX	(6/)	XX	(6/)	XX	(6/)
Total	XX	56,400	XX	57,100	XX	61,500
New Jersey:						
Clays, common						
	W	W	W	130	W	W
Gemstones						
	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	16,500	91,500	16,300	85,000	16,800	98,000
Industrial	1,580	32,100	1,690	35,700	1,580	34,800
Stone, crushed	24,500	160,000	24,900	170,000	26,400	184,000
Combined values of greensand marl, peat, and values indicated by symbol W						
	XX	3,200	XX	(6/)	XX	4,170
Total	XX	287,000	XX	291,000	XX	321,000
New Mexico:						
Clays:						
Common	W	W	34	256	35	205
Fire	1	W	--	--	--	--
Copper 3/	197	330,000	195	380,000	141	239,000
Gemstones	NA	13	NA	27	NA	33
Sand and gravel, construction	10,600	53,000	13,400	66,800	10,600	54,500
Stone:						
Crushed	3,710	22,200	3,690	22,400	4,230	26,100
Dimension metric tons	17,900	2,320	W	W	36,100	1,320
Zeolites do.	(6/)	NA	(6/)	NA	--	--
Combined values of cement, gold, gypsum (crude), iron ore (usable), lime (2000-2001), mica (crude), molybdenum concentrates, perlite (crude), potash, pumice and pumicite, salt, sand and gravel (industrial), silver, and values indicated by symbol W						
	XX	310,000 r/	XX	317,000	XX	276,000
Total	XX	717,000 r/	XX	786,000	XX	597,000
New York:						
Cement, portland	W	W	2,700	211,000 e/	W	W
Clays, common	W	W	630	7,820	647	7,960

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001		
	Quantity	Value	Quantity	Value	Quantity	Value	
New York--Continued:							
Gemstones	NA	68	NA	64	NA	64	
Salt	4,220	209,000	5,440	218,000	5,570	215,000	
Sand and gravel, construction	29,900	152,000	29,700	154,000	30,900	160,000	
Stone:							
Crushed	46,200	266,000	48,800	304,000	53,700	353,000	
Dimension	metric tons	49,300	8,940	62,200	5,780	47,000	9,040
Zeolites	do.	--	--	--	(6/)	NA	
Zinc 4/	do.	W	W	W	W	23,300	22,600
Combined values of cement (masonry), garnet (industrial), gypsum (crude), lead, peat, sand and gravel (industrial), silver (1999), talc (crude), wollastonite, zinc, and values indicated by symbol W	XX	358,000	XX	124,000 t/	XX	259,000	
Total	XX	994,000	XX	1,020,000	XX	1,030,000	
North Carolina:							
Clays:							
Common	2,430	18,700	2,430	18,600	2,340	11,100	
Kaolin	W	W	W	W	47 e/	517 e/	
Feldspar	metric tons	381,000	16,100	W	W	344,000	19,400
Gemstones	NA	2,860	NA	372	NA	284	
Gypsum, crude	--	--	--	--	71	788	
Mica, crude	W	W	W	W	51	3,890	
Sand and gravel:							
Construction	11,600	62,900	12,000	59,100	12,400	61,500	
Industrial	1,470	27,300	1,480	28,300	1,300	26,000	
Stone:							
Crushed	67,000	459,000	69,500	478,000	69,300	485,000	
Dimension	metric tons	54,700	17,700	40,500	16,800	41,500	18,200
Combined values of olivine, peat, phosphate rock, pyrophyllite (crude), and values indicated by symbol W	XX	138,000	XX	143,000	XX	106,000	
Total	XX	742,000	XX	744,000	XX	733,000	
North Dakota:							
Clays, common	54	W	79	W	68	W	
Gemstones	NA	3	NA	3	NA	3	
Lime	W	W	176	7,010	184	6,360	
Sand and gravel:							
Construction	11,700	33,000	10,600	27,800	10,300	26,300	
Industrial	W	W	1	W	W	W	
Combined values of peat (1999), stone (crushed limestone, volcanic cinder, and miscellaneous), and values indicated by symbol W	XX	7,580	XX	410	XX	623	
Total	XX	40,600	XX	35,200	XX	33,300	
Ohio:							
Cement:							
Masonry	W	W	92	11,000 e/	74	9,000 e/	
Portland	1,130	90,800 e/	1,030	83,300 e/	1,040	80,400 e/	
Clays, common	1,710	8,170	1,370	7,380	1,320	7,410	
Gemstones	NA	3	NA	3	NA	3	
Lime	1,820	105,000	1,850	106,000	1,900	114,000	
Sand and gravel:							
Construction	52,000	257,000	51,200	256,000	50,400	256,000	
Industrial	1,150	30,700	1,200	32,800	1,120	30,700	
Stone:							
Crushed	73,200	328,000	73,600	327,000	75,900	339,000	
Dimension	metric tons	25,600	2,390	34,500	3,050	30,700	5,150
Combined values of clays (fire), gypsum (crude), peat, salt, and value indicated by symbol W	XX	220,000	XX	172,000	XX	198,000	
Total	XX	1,040,000	XX	999,000	XX	1,040,000	
Oklahoma:							
Cement, masonry	W	W	109	9,990 e/	W	W	
Clays, common	757	2,050	757	2,060	783	1,910	
Gemstones	NA	268	NA	197	NA	197	

See footnotes at end of table.

TABLE 5--Continued
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Oklahoma--Continued:						
Gypsum, crude	3,510	20,100	2,830	23,500	2,630	21,300
Iodine, crude metric tons	1,620	23,800	1,470	21,500	1,290	18,400
Sand and gravel:						
Construction	10,200	41,200	9,210	35,500	11,000	43,700
Industrial	1,470	30,900	1,480	30,700	1,360	28,200
Stone:						
Crushed	36,200	145,000	39,300	168,000	41,600	179,000
Dimension metric tons	3,480	635	5,910	1,530	16,500	2,190
Tripoli do.	W	W	W	W	11,700	2,100
Combined values of cement (portland), feldspar, helium, lime, salt, and values indicated by symbol W	XX	177,000	XX	180,000	XX	181,000
Total	XX	441,000	XX	473,000	XX	478,000
Oregon:						
Clays, common	240	77	227	632	237	662
Gemstones	NA	949	NA	856	NA	1,170
Sand and gravel, construction	16,900	105,000	16,500	97,000	17,300	99,200
Stone, crushed	23,300	111,000	20,800	98,900	20,800	100,000
Zeolites metric tons	(6/)	NA	(6/)	NA	(6/)	NA
Combine value of cement (portland), clays (bentonite), diatomite, emery (1999), lime, perlite (crude), pumice and pumicite, and talc (crude)	XX	101,000	XX	102,000	XX	103,000
Total	XX	318,000	XX	299,000	XX	305,000
Pennsylvania:						
Cement:						
Masonry	330	35,800 e/	324	33,700 e/	329	38,500 e/
Portland	6,690	479,000 e/	6,640	475,000 e/	6,540	464,000 e/
Clays, common	816	1,760	840	1,870	758	2,320
Gemstones	NA	1	NA	1	NA	1
Lime	1,340	94,300	1,350	93,900	1,280	86,500
Peat	6	185	6	183	9	206
Sand and gravel:						
Construction	18,600	115,000	17,900	110,000	20,200	128,000
Industrial	W	(6/)	W	(6/)	W	(6/)
Stone:						
Crushed	91,300	485,000	97,900	520,000	101,000	564,000
Dimension metric tons	50,800	12,600	49,500	12,100	50,400	11,600
Tripoli	W	(6/)	W	(6/)	W	(6/)
Total	XX	1,220,000	XX	1,250,000	XX	1,290,000
Rhode Island:						
Gemstones	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	1,310	9,900	1,240	9,780	1,200	9,220
Industrial	W	(6/)	104	(6/)	138	(6/)
Stone, crushed	2,070	12,200	1,860	10,600	1,930	11,100
Total	XX	22,100	XX	20,300	XX	20,300
South Carolina:						
Cement:						
Masonry	421	49,400 e/	411	45,500 e/	487	52,600 e/
Portland	2,610	205,000 e/	2,910	210,000 e/	2,560	165,000 e/
Clays:						
Common	1,130	4,930	890	2,790	1,050	4,150
Fire	35	45	40	50	42	53
Kaolin	408	15,700	397	21,900	377	22,800
Gemstones	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	9,660	38,200	10,300	40,800	10,500	36,900
Industrial	769	18,400	755	18,600	694	15,900
Stone:						
Crushed	28,600	189,000	29,400	189,000	26,700	161,000
Dimension metric tons	9,230	855	W	W	9,230	855

See footnotes at end of table.

TABLE 5--Continued
 NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
South Carolina--Continued:						
Combined values of gold (1999), lime (1999-2000), mica (crude), silver (1999), vermiculite, and value indicated by symbol W	XX	41,800 r/	XX	21,900	XX	9,840
Total	XX	563,000 r/	XX	551,000	XX	469,000
South Dakota:						
Clays, common	183	W	191	W	200	W
Gemstones	NA	5	NA	W	NA	W
Gold 3/ kilograms	10,300	92,400 r/	8,230	74,200	W	W
Sand and gravel, construction	12,400	45,600	12,800	46,500	11,200	41,500
Silver 3/ metric tons	W	W	3 r/	403 r/	W	W
Stone, crushed	6,020	26,500	5,460	25,500	5,850	27,200
Combined values of cement [masonry (1999-2000), portland], feldspar, gypsum (crude), iron ore (usable), lime, mica (crude), stone (dimension granite), and values indicated by symbol W	XX	92,600	XX	86,400	XX	200,000
Total	XX	257,000 r/	XX	233,000	XX	268,000
Tennessee:						
Clays:						
Ball	725	30,100	685	29,300	680	28,800
Common	W	W	W	W	304	251
Sand and gravel:						
Construction	9,640	53,100	8,760	47,000	8,350	46,400
Industrial	W	W	W	W	W	22,900
Stone, crushed	63,100	382,000	60,100 r/	353,000 r/	58,600	344,000
Combined values of barite, cement, clays (fuller's earth, kaolin), copper (1999), gemstones, lead (1999), lime, salt, sand and gravel (industrial), silver (1999, 2001), stone (dimension marble), zinc, and values indicated by symbol W	XX	261,000	XX	298,000 r/	XX	266,000
Total	XX	726,000	XX	728,000 r/	XX	709,000
Texas:						
Cement:						
Masonry	261	29,400 e/	268	28,800 e/	291	32,700 e/
Portland	8,680	659,000 e/	9,270	683,000 e/	10,400	745,000 e/
Clays:						
Common	2,100	9,890	2,210	9,460	2,120	8,750
Fuller's earth	W	W	W	W	29 e/	2,270 e/
Gemstones	NA	11	NA	11	NA	12
Gypsum, crude	2,230	15,700	1,760	8,980	W	W
Helium, crude million cubic meters	W	W	W	W	9	9,320
Lime	1,670	111,000	1,600	105,000	1,610	108,000
Salt	10,200	97,500	10,800	104,000	9,370	104,000
Sand and gravel:						
Construction	77,100	373,000	80,800	408,000	82,900	405,000
Industrial	1,620	37,100	1,750	45,200	1,850	70,000
Stone:						
Crushed	108,000	447,000	121,000	496,000	130,000	624,000
Dimension metric tons	82,500	24,200	84,700	11,500	85,900	12,600
Talc, crude do.	220,000	5,000	212,000 r/	3,580 r/	224,000	4,070
Zeolites do.	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of brucite (2000-2001), clays (ball, bentonite, kaolin), helium, and sulfur [Frasch (1999)]	XX	58,400	XX	44,900	XX	35,100
Total	XX	1,870,000	XX	1,950,000	XX	2,160,000
Utah:						
Beryllium concentrates metric tons	5,070	6	4,510	5	2,480	3
Clays:						
Bentonite	W	W	W	W	51	W
Common	327	4,600	335	5,380	360	5,490
Gemstones	NA	1,040	NA	1,030	NA	1,020
Salt	1,890	92,000	2,110	108,000	2,300	121,000
Sand and gravel, construction	39,500	125,000	30,900	109,000	28,400	109,000
Stone, crushed	8,550 r/	44,400 r/	8,400 r/	40,700 r/	8,430	40,500

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Utah--Continued:						
Combined values of cement (portland), copper, gold, gypsum (crude), helium (Grade-A), lime, magnesium compounds, magnesium metal, molybdenum concentrates, perlite (crude), phosphate rock, potash, silver, and stone (dimension quartzite and sandstone, dimension sandstone)	XX	1,030,000 r/	XX	1,160,000 r/	XX	1,090,000
Total	XX	1,300,000 r/	XX	1,430,000	XX	1,360,000
Vermont:						
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	4,430	18,800	4,140	18,800	4,570	20,000
Stone:						
Crushed	5,400	22,800	5,210	21,500	4,950	24,300
Dimension metric tons	98,600	25,600	103,000	26,600	98,000	26,500
Talc, crude do.	W	(6/)	W	(6/)	W	(6/)
Total	XX	67,200	XX	66,900	XX	70,800
Virginia:						
Clays, common	881	3,240	1,010	2,380	937	1,840
Kyanite e/	90	12,700	90	13,400	90	13,400
Sand and gravel, construction	11,300	53,800	12,100	63,200	11,800	64,400
Stone:						
Crushed	66,400	389,000	67,600 r/	418,000 r/	69,100	446,000
Dimension metric tons	5,640	624	W	W	5,590	626
Combine values of cement, clays (fuller's earth), feldspar, gemstones, gypsum [crude (1999)], iron oxide pigments (crude), lime, sand and gravel (industrial), titanium (ilmenite), vermiculite, zirconium concentrates, and value indicated by symbol W	XX	190,000 r/	XX	207,000 r/	XX	206,000
Total	XX	650,000	XX	703,000 r/	XX	732,000
Washington:						
Clays, common	110	W	116	425	89	258
Gemstones	NA	34	NA	37	NA	25
Gold 3/ kilograms	3,250	29,200	2,930	26,400	1,700	14,900
Sand and gravel, construction	43,800	227,000	41,800	221,000	41,400	220,000
Silver 3/ metric tons	W	W	2	250	--	--
Stone, crushed	19,300	146,000	16,800 r/	114,000 r/	14,100	84,300
Combined values of cement (portland), diatomite, gypsum [crude (1999-2000)], lime, magnesium metal, olivine, peat, sand and gravel (industrial), stone (dimension miscellaneous), and values indicated by symbol W	XX	260,000	XX	237,000	XX	178,000
Total	XX	662,000	XX	599,000 r/	XX	498,000
West Virginia:						
Clays, common	336	813	199	560	167	462
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	1,850	9,030	1,980	9,800	1,820	9,260
Stone, crushed	12,500 5/	56,500 5/	14,100 r/ 5/	60,000 r/ 5/	15,300	65,700
Combined values of cement, lime, peat, salt, sand and gravel (industrial), stone [crushed dolomite (1999-2000), dimension sandstone]	XX	104,000	XX	109,000	XX	102,000
Total	XX	171,000	XX	179,000 r/	XX	177,000
Wisconsin:						
Gemstones	NA	6	NA	6	NA	6
Lime	618	37,000	619	37,000	617	36,900
Peat	W	(6/)	W	(6/)	W	(6/)
Sand and gravel:						
Construction	35,700	128,000	39,600	150,000	41,600	159,000
Industrial	1,730	32,000	1,790	36,200	1,710	(6/)
Silica stone 7/ metric tons	W	(6/)	W	(6/)	--	--
Stone:						
Crushed	33,800	135,000	35,100 r/	143,000 r/	36,600	150,000
Dimension metric tons	85,500	13,400	93,100	11,700	98,900	18,900
Total	XX	345,000	XX	378,000 r/	XX	365,000

See footnotes at end of table.

TABLE 5--Continued
NONFUEL MINERAL PRODUCTION IN THE UNITED STATES, BY STATE 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Wyoming:						
Clays:						
Bentonite	3,370	146,000	3,080	126,000	3,580	153,000
Common	W	W	W	W	11 e/	47 e/
Gemstones	NA	12	NA	12	NA	12
Sand and gravel, construction	4,410	17,200	6,340	23,800	7,200	35,100
Stone, crushed	6,970	27,600	6,250	26,100	4,370	20,400
Combined values of cement (portland), gypsum (crude), helium (Grade-A), lime, soda ash, and values indicated by symbol W	XX	814,000	XX	802,000	XX	806,000
Total	XX	1,000,000	XX	978,000	XX	1,010,000
Undistributed:						
Connecticut, Delaware, Hawaii (2000-2001), Maryland, Massachusetts (2000-2001), Minnesota, Nebraska, New Hampshire, New Jersey (2000), Pennsylvania, Rhode Island, South Carolina, Vermont, Wisconsin, and undistribute (2000)	XX	134,000 r/	XX	157,000	XX	231,000

e/ Estimated. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data, value included with "Combined value." XX Not applicable. -- Zero.

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

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

3/ Recoverable content of ores, etc.

4/ Data collected by State.

5/ Excludes certain stones; kind and value included with "Combined value."

6/ Withheld to avoid disclosing company proprietary data, values included with "Undistributed."

7/ Grindstones, pulpstones, and sharpening stones; excludes mill liners and grinding pebbles.

TABLE 6
NONFUEL RAW MINERAL PRODUCTION IN THE COMMONWEALTH OF PUERTO RICO AND ISLANDS ADMINISTERED BY THE UNITED STATES 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	1999		2000		2001	
	Quantity	Value	Quantity	Value	Quantity	Value
Puerto Rico:						
Cement, portland metric tons	W	W	1,660	W	1,550	W
Clays, common	159	W	141	458	132	351
Lime	27	3,770	16	2,750	11	2,250
Salt	45	1,500	45	1,500	45	1,500
Sand and gravel, industrial	W	W	W	W	32	1,200
Stone, crushed	13,200	56,800	10,800	51,000	8,000	38,000
Combined values of stone (dimension marble), and values indicated by symbol W	XX	178,000	XX	143,000 r/	XX	(3/)
Total	XX	240,000	XX	199,000 r/	XX	43,300
Administered islands:						
American Samoa, stone, crushed	W	(3/)	--	--	--	--
Guam, stone, crushed	1,740	11,800	121	856	477	1,900 e/
Virgin Islands, stone, crushed limestone and traprock	W	(3/)	W	(3/)	W	(3/)
Total	XX	11,800	XX	856	XX	1,900

e/ Estimated. r/ Revised. W Withheld to avoid disclosing company proprietary data; value included with "Combined values" data. XX Not applicable. -- Zero.

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

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Withheld to avoid disclosing company proprietary data.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Metals:					
Aluminum:					
Crude and semicrude	metric tons	1,760,000	3,880,000	1,590,000	3,390,000
Manufactures	do.	100,000	388,000	96,200	349,000
Antimony:					
Metal, alloys, waste and scrap	do.	1,080	2,890 r/	1,730	3,080
Oxide, antimony content	do.	6,040	14,200	5,880	14,300
Arsenic metal	do.	41	5,620	57	8,070
Bauxite and alumina:					
Alumina, calcined equivalent		1,090	452,000	1,250	424,000
Bauxite:					
Calcined, refractory and other grade		9	1,800	14	3,160
Crude and dried		133	8,950	67	4,930
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	32,800	29,200	42,300	32,500
Beryllium, alloys, wrought or unwrought, and waste and scrap	kilograms	33,900	5,410	60,600	7,190
Bismuth, metal, alloys, and waste and scrap, bismuth content	do.	491,000	4,840	541,000	3,500
Cadmium:					
Metal, includes cadmium in alloys and scrap	do.	314,000 r/	1,170 r/	272,000	2,560
Sulfide, gross weight	do.	1,110,000	607	52,400	31,700
Chromium:					
Chemicals	metric tons	37,200	60,400	30,500	55,800
Chromite ore and concentrate	do.	138,000	10,200	61,000	6,680
Metals, alloys, ferroalloys	do.	39,000	34,300	17,400	23,200
Pigments and preparations	do.	1,040	5,340	771	3,710
Cobalt:					
Metal:					
Unwrought, powders, waste and scrap, mattes, other intermediate products of metallurgy	do.	1,520	54,500	2,240	57,300
Wrought and cobalt articles	do.	971	37,800	741	25,500
Oxides and hydroxides	do.	1,320	11,700	1,260	10,200
Other forms, acetates and chlorides	do.	676	3,650	253	1,970
Columbium (niobium) and tantalum:					
Columbium:					
Ferrocolumbium	do.	60	526	109	1,260
Ores and concentrates	do.	55	830	15	246
Tantalum:					
Ores and concentrates, includes synthetic	do.	354	11,600	572	23,000
Unwrought, alloys, metal, powders, waste and scrap	do.	429	99,200	428	127,000
Wrought	do.	139	47,500	214	89,400
Copper:					
Scrap, alloyed and unalloyed	do.	486,000	536,000	534,000	538,000
Semimanufactures	do.	188,000	637,000 r/	171,000	514,000
Unmanufactured, does not include unalloyed scrap, copper content	do.	255,000	405,000 r/	118,000	180,000
Ferroalloys not listed elsewhere:					
Ferrophosphorous	do.	4,510	3,110	2,590	1,740
Ferrozirconium	do.	213	482	251	462
Ferroalloys, other	do.	3,020	6,380	6,270	10,200
Gold:					
Bullion, refined	kilograms	440,000	4,030,000	395,000	3,300,000
Compounds	do.	1,390,000	15,300	492,000	13,000
Doré and precipitates	do.	106,000	924,000	93,900	804,000
Metal powder	do.	1,130	10,700	11,600	127,000
Ores and concentrates	do.	745	9,680	361	4,670
Waste and scrap	do.	64,100	700,000	40,100	468,000
Indium e/	metric tons	15	3,300	10	1,030
Iron and steel:					
Cast iron and steel products		202	465,000 r/	191	439,000 e/
Fabricated steel products		1,050	3,910,000 r/	923	3,440,000 e/
Steel mill products		5,920	4,710,000 r/	5,570	4,440,000 e/

See footnotes at end of table.

TABLE 7--Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001	
	Quantity	Value	Quantity	Value
Metals--Continued:				
Iron and steel scrap:				
Direct-reduced iron, steelmaking grade	2	241	1	83
Ferrous, includes tinplate and ternplate, excludes used rails for rerolling and other uses, ships, boats, other vessels for scrapping	5,760	1,000,000	7,440	1,130,000
Pig iron, all grades	72	9,620	44	5,580
Ships, boats, other vessels for scrapping	11	153	49	2,750
Used rails for rerolling and other uses, includes mixed (new plus used) rails	40	15,600	36	14,400
Iron ore	6,150	246,000	5,610	229,000
Lead, lead content:				
Ash and residues metric tons	11,300	18,400	14,200	2,640
Base bullion do.	32,100	75,300	3,470	9,320
Ore and concentrates do.	117,000	42,600	181,000	77,400
Scrap, gross weight do.	71,600	13,200	108,000	24,900
Unwrought and alloys do.	21,400	23,900 r/	17,000	12,900
Wrought and alloys do.	27,200	57,600	17,700	31,300
Magnesium:				
Alloys, gross weight do.	6,020	23,300	3,860	15,100
Metal do.	7,300	20,200	4,870	15,300
Powder, sheets, tubing, ribbons, wire, other forms, gross weight do.	4,060	24,000	3,890	23,700
Waste and scrap do.	6,400	17,500	6,950	18,600
Manganese:				
Ferromanganese, all grades do.	7,950	5,290	9,240	5,780
Metal, including alloys, waste and scrap do.	2,220	5,020	1,820	6,900
Ore and concentrates with 20% or more manganese do.	10,000	2,200	9,170	3,270
Silicomanganese do.	1,870	1,200	3,640	2,350
Mercury do.	182 r/	2,040	108	851
Molybdenum, molybdenum content:				
Ferromolybdenum do.	1,230	9,940	629	6,440
Ore and concentrates, including roasted and other do.	23,600	104,000	27,800	110,000
Oxides and hydroxides, gross weight do.	1,190	8,560	940	6,660
Molybdates, all do.	1,080	7,530	1,180	9,670
Powder, gross weight do.	300	6,940	219	4,520
Unwrought, gross weight do.	228	3,550	334	5,770
Wire, gross weight do.	150	9,300	177	8,770
Wrought, gross weight do.	185	9,610	259	11,600
Nickel, nickel content:				
Alloyed, gross weight do.	28,700	433,000	36,000	538,000
Unwrought:				
Primary and chemicals, excludes carbonate do.	8,150	124,000	8,450	134,000
Secondary do.	49,900	371,000	4,860	325,000
Wrought do.	1,410	23,700	2,400	27,500
Platinum-group metals, metal content:				
Iridium, osmium, ruthenium kilograms	1,480	17,200	1,370	16,600
Palladium do.	57,900 r/	518,000	37,000	489,000
Platinum do.	32,400	502,000 r/	42,200	713,000
Rhodium do.	797	50,800	982	59,900
Rare-earth, estimated REO content:				
Cerium compounds do.	4,050,000	19,000	4,490,000	20,100
Compounds do.	1,760,000	24,700	1,680,000	18,300
Ferrocerium and other pyrophoric alloys do.	2,300,000	7,620	2,540,000	8,030
Metals, including scandium and yttrium do.	1,650,000	9,830	891,000	6,520
Selenium, metal, waste and scrap, selenium content do.	82,100	583	41,200	411
Silicon, gross weight:				
Ferrosilicon metric tons	43,300	41,900	23,300	28,500
Metal do.	18,900	334,000	12,700	263,000
Silver, silver content:				
Bullion kilograms	279,000	46,100	707,000	96,300
Doré do.	36,000	6,440	18,200	2,640
Metal powder, gross weight do.	444,000 r/	89,700	192,000	38,000
Nitrate, gross weight do.	217,000	29,400	143,000	17,900
Ores and concentrates do.	65,100	9,110	239,000	64,200

See footnotes at end of table.

TABLE 7--Continued
U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001	
	Quantity	Value	Quantity	Value
Metals--Continued:				
Silver, silver content--Continued:				
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight kilograms	150,000 r/	35,200	204,000	43,100
Waste and scrap, gross weight do.	1,670,000	377,000	1,810,000	426,000
Unwrought, other, gross weight do.	57,500	11,500	57,900	11,900
Thorium and thorium-bearing materials, compounds do.	4,640	478	7,300	291
Tin:				
Ingots and pigs metric tons	6,640	35,300	4,350	21,200
Tin scrap and other tin bearing material, except tinplate scrap, includes rods, profiles, wire, powders, flakes, tubes, pipes do.	26,200	48,800	27,500	33,200
Tinplate and terneplate do.	300,000	163,000	233,000	123,000
Titanium:				
Ferrotitanium and ferrosilicon-titanium do.	1,090	2,990	980	3,110
Metal:				
Wrought, bars, rods, other do.	5,380	253,000	6,700	264,000
Unwrought:				
Sponge and waste and scrap do.	6,990	24,100	9,670	32,100
Other, billet, blooms, sheet bars, ingot do.	3,200	82,500	3,830	91,700
Ores and concentrates do.	18,900	7,920	7,800	3,130
Pigments, dioxide and oxides do.	464,000	784,000	415,000	667,000
Tungsten, tungsten content:				
Ammonium paratungstate do.	53	489	257	2,000
Carbide powder do.	969	19,000	1,950	47,400
Metal powders do.	467	17,000	569	23,800
Miscellaneous tungsten-bearing materials, ferrotungsten, ferrosilicon tungsten, unwrought, waste and scrap, wrought, other metal, compounds do.	1,310	35,400	2,090	79,200
Ores and concentrates do.	70	2,050	220	5,550
Vanadium:				
Aluminum-vanadium master alloy, gross weight kilograms	667,000	9,120	363,000	6,990
Ferrovandium, vanadium content do.	172,000	2,360	70,000	768
Metal, including waste and scrap, gross weight do.	105,000	1,680	26,300	380
Pentoxide, anhydride, vanadium content do.	653,000	3,360	71,400	407
Other oxides and hydroxides, vanadium content do.	99,800	741	63,000	562
Zinc:				
Compounds, chloride, compounds, n.s.p.f., oxide, sulfate metric tons	22,600	46,800 r/	31,900	51,600
Ores and concentrates, zinc content do.	523,000	298,000	696,000	285,000
Rolled do.	3,530	5,350	5,700	6,210
Slab do.	2,770	3,380	1,180	1,290
Zirconium:				
Ore and concentrates do.	72,900	34,000	66,900	35,700
Oxide, includes germanium oxides and zirconium oxides do.	2,220	18,600 e/	2,400	20,200
Unwrought and waste and scrap do.	180	3,620	186	3,160
Total	XX	28,300,000 r/	XX	25,900,000
Industrial minerals:				
Abrasives, manufactured:				
Aluminum oxide, crude do.	9,020	23,500	8,950	26,300
Boron carbide do.	29	481	32	685
Metallic abrasives do.	28,900	18,600	22,600	14,700
Silicon carbide, crude, ground and refined do.	10,000	11,500	10,500	10,900
Asbestos, includes reexports:				
Manufactured	NA	288,000	NA	298,000
Unmanufactured metric tons	18,800	7,220	21,700	4,890
Barite, natural barium sulfate do.	36,300	4,180	44,800	5,330
Boron minerals and compounds:				
Boric acid, includes orthoboric and anhydrous	119	64,400	85	47,000
Sodium borates	413	136,000	221	91,700
Bromine:				
Compounds, includes methyl bromine and ethylene dibromide, contained bromine metric tons	7,740	26,200	6,740	14,900
Elemental do.	1,870	2,560	3,710	3,600
Cement, hydraulic and clinker	738	64,200	746	56,000

See footnotes at end of table.

TABLE 7--Continued
 U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Clays:					
Ball	100	8,660	174	9,550	
Bentonite	761	80,300	628	78,200	
Fire	216	18,600	238	21,500	
Fuller's earth	136	25,000	146	23,600	
Kaolin	3,690	621,000	3,440	567,000	
Other, n.e.c., includes chamotte or dinas earth, activated clays and earths, artificially activated clays	357	142,000	337	137,000	
Diamond, includes reexports, excludes industrial diamond	thousand carats	16,300	3,980,000	9,010	4,050,000
Diamond, industrial (exports and reexports):					
Powder, dust and grit, natural and synthetic	do.	100,000	71,800	95,100	67,400
Stones, unworked	do.	3,620	34,600	2,330	20,800
Diatomite		131	40,800	148	47,800
Feldspar	metric tons	11,400	1,490	5,460	1,410
Fluorspar	do.	39,800	5,330	21,200	3,240
Garnet, industrial e/		10	5,000	10	8,270
Graphite, natural and artificial 2/	metric tons	94,100	96,500	91,900	100,000
Gypsum and gypsum products:					
Boards		58	27,100	61	24,800
Crude		161	12,600	295	12,900
Plasters		248	30,200	260	38,200
Other		XX	32,200	XX	20,400
Helium, Grade-A	million cubic meters	37	66,000	43	77,500
Iodine, crude/resublimed and potassium iodide	metric tons	1,130	15,000	1,480	17,700
Iron oxide pigments and hydroxides:					
Pigment grade	do.	9,640	17,200	9,100	16,800
Other grade	do.	30,900	46,500	38,100	49,000
Lime		73	9,960	96	11,900
Lithium chemicals:					
Carbonate	metric tons	2,770	9,630	3,200	10,600
Hydroxide	do.	4,780	31,100	5,300	22,400
Magnesium compounds:					
Compounds, chlorides, hydroxide and peroxide, sulfates	do.	31,800	29,600	31,200	18,800
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	11,600	8,470	3,750	2,960
Crude	do.	29,500	3,460	18,800	2,300
Dead-burned and fused magnesia	do.	59,800	22,400	63,100	21,200
Other magnesia	do.	21,400	19,000	36,600	44,100
Mica:					
Scrap and flake:					
Powder	do.	8,880	4,610	7,410	3,900
Waste	do.	1,380	383	4,400	537
Sheet:					
Unworked	do.	209	343	199	324
Worked	do.	1,070	17,100	1,110	16,600
Peat		37	3,490	31	3,000
Perlite, processed and expanded e/	metric tons	43,000	1,450	43,000	1,720
Phosphate rock		299	12,100	111	4,280
Pumice and pumicite		27	15,300	27	12,000
Salt		642	37,800	1,120	48,000
Sand and gravel:					
Construction:					
Gravel		270	3,030	514	2,860
Sand		2,140	21,200	2,550	16,200
Industrial		1,660	179,000	1,540	163,000
Silica:					
Quartz crystal, cultured, electronic- and optical-grade	metric tons	74	22,800	38	10,600
Special silica stone products		NA	6,400	NA	5,800
Soda ash		3,900	477,000	4,090	487,000

See footnotes at end of table.

TABLE 7--Continued
 U.S. EXPORTS OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001	
	Quantity	Value	Quantity	Value
Industrial minerals--Continued:				
Stone:				
Crushed	4,020	29,700	4,370	35,600
Dimension	XX	59,800	XX	73,500
Strontium:				
Carbonate, precipitated	metric tons	6,320	4,250	446
Oxide, hydroxide, peroxide	do.	862	466	923
Sulfur:				
Elemental		762	53,700	675
Sulfuric acid, 100% H ₂ SO ₄	metric tons	191,000	15,800	210,000
Talc, excludes powders, talcum in (package), face, compact		154	32,800	137
Vermiculite e/		5	590	7
Wollastonite e/		7,000	2,800	3,000
Zeolites e/	metric tons	200	40	150
Total		XX	7,160,000	XX
Grand total		XX	35,500,000 r/	XX

e/ Estimated. r/ Revised. NA Not available. XX Not applicable.

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

2/ Artificial graphite includes large amounts of materials made from petroleum coke.

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

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Metals:					
Aluminum:					
Crude and semicrude	metric tons	3,910,000	6,860,000	3,740,000	6,250,000
Manufactures	do.	211,000	538,000	184,000	484,000
Antimony:					
Metal	do.	14,200	19,100	12,600	15,700
Ore and concentrate, antimony content	do.	3,690	4,250	2,290	3,440
Oxide, antimony content	do.	23,700	36,500	23,000	39,500
Arsenic:					
Acid	do.	--	--	2	3
Metal	do.	830	9,800	1,030	7,390
Sulfide	do.	--	--	(2/)	5
Trioxide	do.	31,100	15,500	31,500	15,900
Bauxite and alumina:					
Alumina, calcined equivalent		3,820	933,000	3,100	704,000
Bauxite:					
Calcined, refractory and other grade		310	26,600	242	21,600
Crude and dried		8,550	193,000	8,300	190,000
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	46,700	26,000	26,700	16,500
Beryllium, ore, metal, and compounds	kilograms	164,000	3,260	838,000 3/	5,620 3/
Bismuth, metallic	do.	2,410,000	19,100	2,220,000	18,400
Cadmium:					
Metal	do.	425,000	1,510	107,000	1,830
Sulfide, gross weight	do.	45,400	169	7,550	62,200
Chromium:					
Chemicals	metric tons	29,100	27,300	28,900	39,300
Chromite ore	do.	268,000	17,100	189,000	11,600
Ferrocromium, metals, alloys	do.	608,000 r/	339,000	279,000	162,000
Pigments and preparations based on chromium	do.	10,200	32,100	8,510	25,500
Cobalt:					
Metal:					
Alloys, articles, matte, wrought, waste and scrap	do.	1,120	29,300	892	25,400
Unwrought, excluding alloys and waste and scrap	do.	7,210	213,000	7,910	183,000
Oxide and hydroxides	do.	1,540	37,100	1,280	25,700
Other forms, includes acetates, carbonates, chlorides, sulfates	do.	1,710	11,000	2,150	11,000
Columbium (niobium) and tantalum:					
Columbium:					
Ferrocolumbium	do.	6,770	62,100	6,890	61,500
Ores and concentrates, includes synthetic concentrates	do.	151	1,680	128	1,740
Oxide	do.	1,700	29,200	1,940	30,000
Unwrought, alloys, metals, powder	do.	606	16,900	1,050	26,700
Tantalum:					
Ores and concentrates	do.	2,080	74,800	2,240	95,700
Unwrought, alloys, metal, powders, waste and scrap	do.	1,060	104,000	1,220	136,000
Wrought	do.	43	14,900	62	40,100
Copper:					
Scrap, alloyed and unalloyed	do.	112,000	186,000	91,100	144,000
Semimanufactures	do.	381,000 r/	972,000 r/	350,000	809,000
Unmanufactured, does not include unalloyed scrap, copper content	do.	1,250,000	2,400,000	1,310,000	2,330,000
Ferroalloys not listed elsewhere:					
Ferrophosphorus	do.	13,000	3,310	10,300	2,440
Ferrozirconium	do.	281	548	240	501
Ferroalloys, other	do.	31,400	42,400	25,000	30,900
Gallium, unwrought and waste and scrap	kilograms	39,400	18,400	27,100	24,200
Germanium materials, gross weight	do.	8,220 r/	9,240	8,240	7,840
Gold:					
Ash and residues	do.	76 r/	1,800	193	3,700
Bullion, refined	do.	184,000	1,680,000	161,000	1,420,000
Compounds	do.	7,970	60,500	1,960	6,590
Doré and precipitates	do.	39,000	292,000	31,100	211,000
Metal powder	do.	6,720	58,800	6,450	83,200
Ores and concentrates	do.	65	636	1,270	1,300

See footnotes at end of table.

TABLE 8--Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Gold--Continued:					
Waste and scrap	kilograms	29,800	71,200	26,400	55,800
Indium, unwrought and waste and scrap	do.	69,400	9,620	79,400	7,670
Iron and steel:					
Cast iron and steel products		557	419,000 r/	583	439,000 e/
Fabricated steel products		4,240	6,030,000 r/	3,930	5,590,000 e/
Stainless steel	metric tons	757,000	2,400,000 r/	632,000	2,000,000 e/
Steel mill products		34,400	11,500,000 r/	27,300	9,150,000 e/
Iron and steel scrap:					
Direct-reduced iron, steelmaking grade		1,090	119,000	16,700	145,000
Ferrous, includes tinplate and ternplate, excludes used rails for rerolling and other uses, ships, boats, other vessels for scrapping		3,350	385,000	2,630	274,000
Pig iron, all grades		4,970	601,000	4,370	479,000
Ships, boats, other vessels for scrapping		--	--	(2/)	15
Used rails for rerolling and other uses, includes mixed (new plus used), rails		271	34,100	175	23,700
Iron ore		15,700	420,000	10,700	293,000
Lead, lead content:					
Base bullion	metric tons	65	30	--	--
Ore and concentrates	do.	31,200	7,810	2,240	449
Pigments and compounds, gross weight	do.	40,300	57,600	34,500	45,900
Pigs and bars	do.	356,000	190,000	271,000	143,000
Scrap, reclaimed, includes ash and residues	do.	25	5	203	93
Wrought, all forms, including wire and powders, gross weight	do.	9,200	19,300	12,500	19,000
Magnesium:					
Alloys, magnesium content	do.	56,300	160,000 r/	35,100	100,000
Metal	do.	22,900	58,700	20,100	43,200
Powder, sheets, tubing, ribbons, wire, other forms, magnesium content	do.	2,300	8,670	2,870	14,100
Waste and scrap	do.	9,890	16,400	11,000	19,200
Manganese, manganese content:					
Chemicals, manganese dioxide and potassium permanganate, gross weight	do.	52,700	75,700	39,900	58,600
Ferromanganese, all grades	do.	246,000	151,000	200,000	112,000
Metal, unwrought, waste and scrap, other, gross weight	do.	16,200	24,700	21,600	29,300
Ore and concentrates with 20% or manganese, all grades	do.	219,000 r/	32,100	199,000	28,000
Silicomanganese	do.	252,000	169,000	177,000	113,000
Mercury	do.	103	1,130	100	816
Molybdenum, molybdenum content:					
Ferromolybdenum	do.	5,310	34,700 r/	3,580	21,000
Molybdates, all	do.	1,550	12,900 r/	1,720	15,300
Ore and concentrates, roasted and other	do.	6,120	35,300 r/	6,010	32,800
Oxides and hydroxides, gross weight	do.	1,210	7,200 r/	1,010	5,370
Powders	do.	125	3,590 r/	163	3,280
Unwrought	do.	16	314 r/	24	258
Wire, gross weight	do.	17	876 r/	17	1,040
Other, orange, mixtures of inorganic compounds, waste and scrap, other, gross weight	do.	2,100	14,300 r/	1,910	14,000
Nickel, nickel content:					
Alloyed, gross weight	do.	19,000	270,000	20,400	299,000
Unwrought:					
Primary and chemicals, excludes carbonate	do.	156,000	1,410,000	136,000	950,000
Secondary	do.	10,700	91,900	8,760	69,900
Wrought	do.	992	20,400	1,140	19,000
Platinum-group metals, metal content:					
Iridium, unwrought and other forms	kilograms	2,700	27,400	3,110	30,300
Osmium, unwrought	do.	133	1,130	77	646
Palladium, unwrought and other	do.	182,000	3,480,000 r/	160,000	3,230,000
Platinum	do.	93,700 r/	1,360,000	84,200	1,430,000
Rhodium, unwrought and other forms	do.	18,200	851,000	12,400	594,000
Ruthenium, unwrought	do.	20,900	49,600	8,170	30,700
Rare-earths, estimated REO content:					
Cerium compounds, including oxides, hydroxides, nitrates, sulfate chlorides, oxalates	do.	4,310,000	29,400	3,870,000	28,300

See footnotes at end of table.

TABLE 8--Continued
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Rare-earths, estimated REO content--Continued:					
Compounds, including oxides, hydroxides, nitrates, other compounds except chlorides	kilograms	11,200,000	71,300	9,150,000	73,000
Ferrocerium and other pyrophoric alloys	do.	118,000	1,560	118,000	1,470
Metals, whether intermixed or alloyed	do.	2,470,000	23,700	1,420,000	14,400
Mixtures of rare-earth chlorides, except cerium chloride	do.	1,330,000	3,980	2,590,000	9,060
Mixtures of rare-earth oxides except cerium oxide	do.	2,190,000	9,530	2,040,000	9,160
Yttrium compounds content by weight greater than 19% but less than 85% oxide equivalent	do.	58,400	2,590	77,900	4,310
Rhenium:					
Ammonium perrhenate	do.	7,450	3,830	4,560	3,600
Metal	do.	10,700	10,800	20,200	18,300
Selenium and tellurium:					
Selenium, selenium content:					
Selenium dioxide	do.	24,300	186	14,600	216
Unwrought and waste and scrap	do.	452,000	2,670	468,000	3,490
Tellurium, unwrought, and waste and scrap, gross weight	do.	52,300	1,800	28,000	1,630
Silicon, gross weight:					
Ferrosilicon	metric tons	322,000	193,000	176,000	110,000
Metal	do.	133,000	249,000	120,000	200,000
Silver, silver content:					
Ash and residues	kilograms	55,800	7,340	38,000	6,390
Bullion	do.	3,810,000	629,000	2,940,000	425,000
Doré	do.	74,100 r/	17,600	151,000	25,800
Metal powder, gross weight	do.	235,000	46,500	23,800	6,100
Nitrate, gross weight	do.	24,200	1,770	26,000	1,490
Ore and concentrates:					
Base metal	do.	--	--	--	--
Silver	do.	1,420	229	7,550	2,750
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	140,000	25,800	154,000	21,600
Waste and scrap, gross weight	do.	1,130,000	134,000	1,110,000	159,000
Unwrought, other, gross weight	do.	204,000	37,200	249,000	44,700
Thallium, unwrought, waste and scrap, powders	do.	100	24	2,110	182
Thorium and thorium-bearing materials, compounds	do.	11,100	528	1,850	68
Tin, gross weight:					
Compounds	metric tons	586	4,740	375	3,180
Dross, skimmings, scrap, residues, alloys, n.s.p.f.	do.	5,170	17,700	5,920	10,900
Metal, unwrought	do.	44,900	244,000	37,500	174,000
Miscellaneous, includes tinfoil, tin powder, flitters, metallics, manufactures, n.s.p.f.	do.	NA	5,680	NA	2,940
Tinplate and terneplate	do.	359,000	206,000	344,000	199,000
Tinplate scrap	do.	14,500	1,660	5,900	1,040
Titanium:					
Concentrates:					
Ilmenite	do.	386,000	37,200	467,000	37,400
Rutile, natural and synthetic	do.	438,000	169,000	324,000	128,000
Slag	do.	533,000	219,000	594,000	239,000
Titaniferous iron ore	do.	88,200	4,890	55,500	6,500
Ferrotitanium and ferrosilicon-titanium	do.	6,050	15,900	4,120	10,800
Pigments, dioxides and oxides	do.	218,000	389,000	209,000	367,000
Metal:					
Unwrought:					
Ingots and billets	metric tons	1,540	23,200	2,360	35,500
Other, includes blooms, sheet, bars, slabs, other unwrought	do.	23	398	522	3,580
Powder	do.	250	2,610	160	1,840
Sponge	do.	7,240	49,900	13,300	86,200
Waste and scrap	do.	7,550	24,100	11,600	41,200
Wrought products, bars, castings, foil, pipes, plates, profiles, rods, sheet, strip, tubes, wire, other	do.	2,900	60,600	3,170	72,800

See footnotes at end of table.

TABLE 8--Continued
 U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Tungsten, tungsten content:					
Ammonium paratungstate	metric tons	2,270	13,400	2,720	24,500
Ferrotungsten and ferrosilicon tungsten	do.	470	2,600	352	2,170
Miscellaneous tungsten-bearing materials, metal powders, carbide powder, unwrought, waste and scrap, wrought wire, plate, sheet, strip, foil, other, oxides, calcium tungstate, other tungstates, other compounds	do.	5,070	69,100	5,080	78,000
Ores and concentrates	do.	2,370	11,100	2,680	19,500
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	16,400	83	10,100	45
Ferrovandium, vanadium content	do.	2,510,000	24,900	2,550,000	20,500
Metal, including waste and scrap, gross weight	do.	44,800	939	50,000	639
Miscellaneous chemicals, sulfates and vanadates, vanadium content	do.	149,000	1,070	93,800	623
Pentoxide, anhydride, vanadium content	do.	902,000	6,260	600,000	3,460
Vanadium-bearing ash, residues, slag from the manufacture of iron and steel, vanadium pentoxide content	do.	3,380,000	3,860	2,980,000	3,400
Other oxides and hydroxides, vanadium content	do.	13,500	231	1,080,000	510
Zinc:					
Compounds, lithopone, chloride, compounds n.s.p.f., hydrosulfite, oxide, sulfate	metric tons	87,400	83,800	90,900	76,400
Ore and concentrates, zinc content	do.	52,800	26,900	84,000	31,600
Rolled	do.	9,380	13,300	7,240	10,400
Slab, refined	do.	915,000	1,100,000	813,000	773,000
Zirconium and hafnium:					
Hafnium, unwrought, and waste and scrap	do.	11	2,240	5	1,300
Zirconium, ore and concentrates	do.	65,200	25,800	60,600	21,600
Zirconium oxide, includes germanium oxides and zirconium oxides	do.	3,950	35,000 e/	2,950	27,400
Zirconium, unwrought and waste and scrap	do.	1,040	52,700	717	54,500
Total		XX	50,500,000 r/	XX	43,500,000
Industrial minerals:					
Abrasives, manufactured:					
Aluminum oxide, crude, ground and refined	metric tons	227,000	99,900	203,000	79,500
Boron carbide	do.	277	6,970	282	6,870
Metallic abrasives	do.	33,500	17,600	18,700	11,300
Silicon carbide, crude, ground and refined	do.	190,000	94,300	133,000	71,900
Asbestos, chrysotile, crocidolite, other unspecified fibers	do.	14,600	2,510	13,100	2,640
Barite:					
Chemicals	do.	51,800	37,500	40,400	30,400
Crude	do.	2,070,000	92,400	2,470,000	107,000
Ground	do.	16,200	1,660	6,460	646
Other sulfates of	do.	15,400	14,000	35,100	16,900
Boron minerals and compounds:					
Borax		1	716	1	642
Boric acid		39	17,500	56	21,700
Colemanite		26	7,410	35	9,790
Ulexite		127	31,800	109	21,800
Bromine:					
Compounds, contained bromine	metric tons	14,500	53,100 r/	10,600	41,800
Elemental	do.	5,470	3,730	5,610	4,240
Cement, hydraulic and clinker		28,700	1,070,000	25,900	987,000
Clays:					
Artificially activated clay and activated earth	metric tons	17,600	8,920	21,400	9,330
Bentonite	do.	8,470	2,930	4,280	2,350
Chamotte or dina's earth	do.	2	11	--	--
China clay or kaolin	do.	62,500	19,500	114,000	18,700
Common blue clay and other ball clay	do.	504	152	3,570	965
Decolorizing earths and fuller's earth	do.	70	12	31	14
Fire clay	do.	73	28	148	87
Other clay	do.	6,220	3,310	4,740	2,480
Diamond, industrial:					
Diamond stones, natural and miners'	thousand carats	2,520	13,400	2,450	8,690
Powder, dust and grit, natural and synthetic	do.	291,000	112,000	282,000	85,300

See footnotes at end of table.

TABLE 8--Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Diatomite	metric tons	529	316	1,990	823
Feldspar and nepheline syenite:					
Feldspar	do.	7,220	726	6,140	749
Nepheline syenite	do.	356,000	24,800	336,000	24,100
Fluorspar:					
Aluminum fluoride	do.	21,500	17,300	17,400	13,600
Cryolite	do.	9,190	6,730	6,750	5,340
Fluorspar	do.	523,000	65,200	522,000	69,000
Hydrofluoric acid, HF	do.	131,000	131,000	112,000	114,000
Garnet, industrial e/		23	2,760	23	2,770
Gemstones		XX	12,900,000	XX	11,400,000
Graphite:					
Natural	metric tons	60,800	32,500	52,100	23,300
Electric furnace electrodes	do.	60,900	128,000	49,700	96,300
Gypsum:					
Boards		783	113,000	516	85,700
Crude		9,210	89,300	8,270	77,300
Plasters		15	3,920	9	4,150
Other		XX	62,600	XX	63,800
Iodine, crude and potassium iodide	metric tons	5,270	77,000	5,370	77,300
Iron oxide pigments:					
Natural	do.	7,340	3,410	5,280	2,510
Synthetic	do.	84,000	73,300	84,700	74,400
Kyanite, andalusite, and sillimanite	do.	6,440	1,320	3,260	569
Lime		113	13,500	115	15,100
Lithium chemicals:					
Carbonate	metric tons	14,800	23,800	10,300	15,300
Hydroxide	do.	615	2,100	362	1,240
Magnesium compounds:					
Compounds, chlorides, hydroxide, peroxide, sulfates	do.	104,000	29,800	128,000	28,400
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	136,000	22,100	130,000	23,400
Crude	do.	14,600	2,830	11,500	1,950
Dead-burned and fused magnesia	do.	501,000	88,200	363,000	67,200
Other magnesia	do.	18,900	14,100	17,200	13,400
Mica:					
Scrap and flake:					
Powder	do.	22,100	12,800	17,700	9,370
Waste	do.	6,180	1,290	1,240	610
Sheet:					
Unworked	do.	4,400	2,040	3,200	1,710
Worked	do.	1,310	12,000	1,100	11,900
Nitrogen, major compounds, gross weight		12,000	1,850,000	14,700	2,380,000
Peat moss	metric tons	786,000	157,000	776,000	158,000
Perlite, processed	do.	180,000	6,080	175,000	7,000
Phosphate rock and phosphatic materials		2,150	144,000	2,700	194,000
Potash, chloride, nitrate, sodium nitrate mixtures, sulfate	metric tons	7,580,000	554,000 r/	7,480,000	537,000
Pumice:					
Crude or unmanufactured		384	11,900	378	11,000
Wholly or partially manufactured		1	1,810	1	2,370
Salt		8,960	127,000	12,900	179,000
Sand and gravel:					
Construction		2,870	33,300	3,820	40,800
Industrial		247	11,800	172	11,000
Silica:					
Quartz crystal, cultured, electronic- and optical-grade	metric tons	31	14,300	14	8,390
Special silica stone products		NA	3,800	NA	3,900
Soda ash		75	8,570	33	4,070
Stone:					
Crushed, chips, calcium carbonate fines		13,000	105,000	13,400	110,000
Dimension		NA	986,000 r/	NA	1,070,000

See footnotes at end of table.

TABLE 8--Continued
U.S. IMPORTS FOR CONSUMPTION OF PRINCIPAL MINERALS AND PRODUCTS, EXCLUDING MINERAL FUELS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral or product	2000		2001		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Strontium:					
Carbonate	metric tons	49,300	27,600	43,500	24,100
Metal	do.	308 r/	1,310	270	1,210
Nitrate	do.	687	2,350	831	2,550
Oxide, hydroxide, peroxide	do.	192	466	64	82
Sulfate, celestite	do.	17,000	1,050	12,800	806
Sulfur:					
Elemental		2,330	39,400	1,730	22,100
Sulfuric acid, 100% H ₂ SO ₄	metric tons	1,420,000	41,500	1,410,000	51,500
Talc		270	42,500	180	35,800
Vermiculite e/		59	11,100	65	12,100
Wollastonite e/		11,000	2,590	5,000	750
Zeolites e/	metric tons	100	20	100	20
Total		XX	19,900,000 r/	XX	18,700,000
Grand total		XX	70,400,000 r/	XX	62,200,000

e/ Estimated. r/ Revised. NA Not available. XX Not applicable. -- Zero.

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

2/ Less than 1/2 unit.

3/ All or part of these data have been referred to the U.S. Census Bureau for verification.

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

(Thousand metric tons unless otherwise specified)

Mineral or product	World					2001	
	1997	1998	1999	2000	2001	U.S.	U.S. percent of world
Metals:							
Aluminum 2/	21,700 r/	22,600 r/	23,600	24,500 r/	24,400	2,640	10.8
Antimony	metric tons 154,000 r/	116,000 r/	107,000 r/	115,000 r/	151,000	--	--
Arsenic trioxide 3/	do. 42,100 r/	40,300 r/	42,200 r/	39,200 r/	35,500	--	--
Bauxite 3/ 4/ 5/	122,000 r/	123,000 r/	13,000 r/	135,000	138,000	NA	NA
Beryl 3/	metric tons 6,910 r/	7,220 r/	6,210 r/	5,660 r/	3,630	2,480	68.3
Bismuth, refinery	do. 4,070 r/	4,040 r/	3,360	3,790 r/	3,990	--	--
Cadmium	do. 20,300 r/	20,200 r/	20,300 r/	20,100 r/	18,200	680	3.7
Chromite 3/	13,600 r/	13,600 r/	14,100	14,500 r/	12,100	--	--
Cobalt, Co content:							
Mine	metric tons 27,400 r/	34,900 r/	31,000 r/	33,800 r/	36,700	--	--
Refinery	do. 27,100	30,900	32,400	35,200	38,400	--	--
Columbium-tantalum concentrate 3/	do. 50,000 r/	64,200 r/	60,400 r/	61,200 r/	64,000	--	--
Copper:							
Mine	11,500 r/	12,100 r/	12,700	13,200	13,700	1,340	9.8
Refinery	13,500 r/	14,100 r/	14,700 r/	14,900 r/	15,600	1,800	11.5
Gold	metric tons 2,450 r/	2,500 r/	2,560 r/	2,580 r/	2,570	335	13.0
Iron ore 3/	million metric tons 1,070 r/	1,050 r/	1,020 r/	1,080 r/	1,060	46.2	4.4
Iron and steel:							
Direct-reduced iron 2/	36,200 r/	37,200 r/	38,200 r/	42,100 r/	40,600	1,200	3.0
Iron, pig 2/	540,000 r/	535,000 r/	538,000	572,000 r/	581,000	42,100	7.3
Steel, raw	797,000 r/	777,000 r/	789,000	849,000 r/	851,000	90,100	10.6
Lead:							
Mine	3,100 r/	3,060 r/	3,080 r/	3,200 r/	3,080	466	15.1
Refinery	5,880 r/	5,950 r/	6,160 r/	6,550 r/	6,470	1,390	21.5
Magnesium	metric tons 475,000 r/	484,000 r/	437,000 r/	520,000 r/	502,000	65,800 6/	13.1
Manganese ore 3/	21,900 r/	19,900 r/	17,800 r/	19,100 r/	19,100	--	--
Mercury 5/	metric tons 2,410 r/	1,580 r/	1,310 r/	1,320 r/	1,400	NA	NA
Molybdenum, Mo content	do. 139,000 r/	136,000 r/	129,000 r/	133,000 r/	130,000	37,600	28.9
Nickel, Ni content:							
Mine	1,140 r/	1,180 r/	1,160 r/	1,290 r/	1,330	--	--
Refinery	1,020 r/	1,040 r/	1,050 r/	1,110 r/	1,160	--	--
Platinum-group metals	kilograms 339,000 r/	354,000 r/	374,000 r/	378,000 r/	410,000	15,700	3.8
Selenium 2/ 5/	metric tons 1,720 r/	1,470 r/	1,410 r/	1,450 r/	1,630	W	NA
Silver	do. 16,500 r/	17,200 r/	17,700 r/	18,300 r/	18,700	1,740	9.3
Tellurium 2/ 5/	kilograms 109,000	123,000	116,000	138,000	141,000	W	NA
Tin:							
Mine	metric tons 217,000 r/	207,000 r/	216,000	244,000 r/	222,000	--	--
Smelter 7/	do. 259,000 r/	258,000 r/	275,000 r/	297,000 r/	290,000	13,900	4.8
Titanium concentrates: 3/							
Ilmenite and leucoxene	4,470	4,560 r/	4,150 r/	4,870 r/	4,910	500 8/	10.2
Rutile 5/	metric tons 425,000 r/	438,000 r/	348,000 r/	387,000 r/	378,000	W	NA
Tungsten, W content	do. 33,200 r/	37,400 r/	37,900 r/	44,200 r/	44,200	--	--
Zinc:							
Mine	7,540 r/	7,660 r/	8,040	8,780 r/	8,850	842	9.5
Smelter	7,920 r/	8,170 r/	8,600 r/	9,140 r/	9,290	311	3.3
Industrial minerals:							
Asbestos	2,150 r/	1,820 r/	1,770 r/	2,070 r/	2,050	5.26	0.3
Barite	6,780 r/	6,470 r/	6,180 r/	6,590 r/	6,700	400 9/	6.0
Boron minerals	4,580 r/	4,570 r/	4,460 r/	4,660 r/	4,620	1,050 9/	22.7
Bromine	metric tons 542,000	521,000 r/	547,000 r/	560,000 r/	538,000	212,000 9/	39.4
Celestite	do. 264,000 r/	264,000 r/	322,000 r/	319,000 r/	321,000	--	--
Cement, hydraulic	million metric tons 1,540 r/	1,530 r/	1,600 r/	1,660 r/	1,700	90 10/	5.3
Clays:							
Bentonite	10,500 r/	10,600 r/	10,400 r/	10,200 r/	10,400	4,290	41.3
Fuller's earth	3,350 r/	3,380 r/	3,560 r/	3,920 r/	3,890	2,890	74.3
Kaolin	39,300 r/	39,500 r/	41,100	42,400 r/	42,000	8,110	19.3
Diamond, natural	thousand carats 122,000 r/	129,000 r/	117,000	118,000	117,000	--	--
Diatomite	2,010 r/	1,980 r/	2,030 r/	2,030 r/	1,950	644 9/	33.0

See footnotes at end of table.

TABLE 9--Continued
WORLD AND U.S. PRODUCTION OF SELECTED NONFUEL MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Mineral or product	World					2001	
	1997	1998	1999	2000	2001	U.S.	U.S. percent of world
Industrial minerals--Continued:							
Feldspar	8,650 r/	9,220 r/	9,830 r/	9,420 r/	9,500	140	1.5
Fluorspar	4,180 r/	4,410 r/	4,290 r/	4,430 r/	4,530	-- 11/	--
Graphite, natural	metric tons 685,000	651,000 r/	692,000 r/	857,000 r/	873,000	--	--
Gypsum	107,000	104,000 r/	109,000 r/	108,000 r/	104,000	16,300	15.7
Iodine, crude	metric tons 15,700	18,600 r/	18,400 r/	19,400 r/	19,200	1,290	6.7
Lime	118,000 r/	117,000 r/	116,000	118,000 r/	118,000	18,900 9/ 11/	16.0
Magnesite, crude 5/	10,100 r/	11,400 r/	9,790 r/	11,100 r/	10,700	W	NA
Mica, including scrap and flake 12/	metric tons 309,000 r/	289,000 r/	278,000 r/	328,000 r/	288,000	84,700	29.4
Nitrogen, N content of ammonia	103,000 r/	104,000 r/	108,000 r/	109,000	106,000	9,730 13/	9.2
Peat	32,200 r/	19,800 r/	31,000 r/	27,800 r/	27,900	870	3.1
Perlite	1,900	1,890 r/	1,910 r/	1,790 r/	1,710	588 9/	34.4
Phosphate rock, gross weight	143,000 r/	144,000 r/	132,000 r/	132,000 r/	126,000	31,900	25.3
Potash, K ₂ O equivalent	25,200 r/	25,800 r/	26,900 r/	26,500 r/	26,000	1,200	4.6
Pumice	11,900 r/	12,300 r/	12,900 r/	12,600 r/	12,500	618 9/	4.9
Salt	221,000 r/	214,000 r/	223,000 r/	225,000 r/	225,000	44,800 10/	19.9
Sand and gravel, industrial, silica	94,600 r/	93,700 r/	95,500 r/	95,500 r/	95,100	27,900 9/	29.3
Soda ash, natural and manufactured 14/	33,100 r/	32,400 r/	33,200	34,200	35,100	10,300	29.3
Sulfur, all forms	56,900 r/	57,200 r/	57,800 r/	58,100 r/	57,300	9,260	16.2
Talc and pyrophyllite 15/	10,400 r/	9,400 r/	9,460 r/	9,020 r/	8,920	853	9.6
Vermiculite	metric tons 301,000 r/	328,000 r/	541,000	512,000	305,000	W	NA

r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; not included in "World" total. -- Zero.

1/ Data are rounded to no more than three significant digits.

2/ Primary.

3/ Gross weight.

4/ Individual country figures that are included in the world total represent dried bauxite equivalent of crude ore, but for some countries available data are insufficient to permit this adjustment.

5/ Does not include U.S. production.

6/ Secondary production only. U.S. primary production is withheld to avoid disclosing company proprietary data.

7/ Includes tin content of alloys made directly from ore.

8/ Includes rutile to avoid revealing company proprietary data. Rounded to one significant digit.

9/ Quantity sold or used by producers.

10/ Includes Puerto Rico.

11/ Shipments.

12/ Excludes, if any, U.S. production of low-quality sericite and sheet mica.

13/ Synthetic anhydrous ammonia; excludes coke oven byproduct ammonia.

14/ U.S. production is natural only.

15/ Data for the United States exclude proprietary pyrophyllite production.