

# STATISTICAL SUMMARY

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This annual report summarizes data on crude nonfuel mineral production<sup>1</sup> 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.

Because of inadequacies in the statistics available, some series deviate from the foregoing definition. For copper, gold,

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<sup>1</sup>The terms “nonfuel mineral production” and related “values” encompass variations in meaning, depending on 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 2000 USGS mineral production data published in this chapter are as of January 2002. For some 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. A telephone listing for the specialists may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html> or by calling USGS information at (703) 648-4000 for the specialist's name and number. 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 2000 may vary from the Minerals Yearbook, Area Reports: Domestic 2000, Volume II, owing to revision of preliminary 2000 to final 2000 data.

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 increased almost 1% to \$39.4 billion in 2000, with metals increasing almost 4% to \$10.2 billion and industrial minerals decreasing less than 1% to \$29.2 billion compared with those of 1999. Nine of the mineral commodities produced in the United States in 2000 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, salt, and zinc. They composed almost 79% of the U.S. total production value (table 1).

In 2000, 13 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, Minnesota, Utah, Missouri, Pennsylvania, Alaska, and New York. They composed slightly over 59% 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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Metals:</b>						
Antimony 3/	metric tons	489	W	450 r/	W	W
Beryllium concentrates	do.	6,080	7	5,070	6	4,510
Copper 4/		1,860	3,220,000	1,600	2,680,000	1,440
Gold 4/	kilograms	366,000	3,480,000	341,000	3,070,000	353,000
Iron ore, usable		63,200	1,970,000	58,500 r/	1,550,000	61,000
Iron oxide pigments, crude	metric tons	46,100	7,290	44,100	7,740	57,100
Lead 4/	do.	481,000	480,000	503,000	485,000	457,000
Magnesium metal	do.	106,000	344,000	W	W	W
Molybdenum concentrates 3/	do.	52,100	200,000	42,800 r/	251,000 r/	41,100
Palladium 3/	kilograms	10,600	98,500	9,800	114,000	10,300
Platinum 3/	do.	3,240	39,000 r/	2,920	35,600	3,110
Rare-earth metal concentrates e/ 3/	metric tons	5,000	14,400	5,000	14,400	5,000
Silver 4/	do.	2,060	368,000 r/	1,950	329,000	1,860
Zinc 4/	do.	709,000	804,000	771,000 r/	909,000 r/	786,000
Combined value of mercury, titanium concentrates, vanadium, zirconium concentrates, and values indicated by symbol W		XX	145,000	XX	368,000	XX
<b>Total</b>		XX	11,200,000	XX	9,810,000	XX
<b>Industrial minerals, excluding fuels:</b>						
Asbestos	metric tons	5,760	W	7,190	W	5,260
Barite		476	11,400	434	11,100	392
Boron		1,170	486,000	1,220	630,000	1,070
Bromine	metric tons	230,000	162,000	239,000	213,000	228,000
<b>Cement:</b>						
Masonry		3,990	391,000 e/	4,380	452,000 e/	4,330
Portland		79,900	6,030,000 e/	81,600	6,280,000 e/	83,500
<b>Clays:</b>						
Ball		1,130	51,100	1,200	48,000	1,140
Bentonite		3,820	176,000	4,070	176,000	3,760
Common		24,500 r/	135,000 r/	24,800 r/	145,000 r/	23,700
Fire		410	7,520	402	6,770	476
Fuller's earth		2,420	233,000	2,560	231,000	2,910
Kaolin		9,640	1,060,000	9,160	948,000	8,800
Diatomite		725	180,000	747	178,000	677
Feldspar	metric tons	820,000	40,800	875,000	42,700	790,000
Garnet, industrial	do.	74,000	7,070	60,700	6,170	60,200
Gemstones		NA	14,300	NA	16,100	NA
Gypsum, crude		19,000	132,000	22,400	157,000	19,500
<b>Helium:</b>						
Crude	million cubic meters	33	29,700	63	57,200	62
Grade-A	do.	112 r/	219,000	117	233,000	127
Iodine	metric tons	1,490	22,700	1,620	23,800	1,470
Kyanite e/		90	13,200	90	12,700	90
Lime		20,100	1,250,000 r/	19,600 r/	1,180,000 r/	19,600
Mica, crude		102 r/	14,500 r/	102 r/	15,900 r/	104
Peat		791	19,200	834	22,100	847
Perlite, crude	metric tons	685,000	21,800	711,000	23,800	672,000
Phosphate rock, marketable		44,200	1,130,000	40,600	1,240,000	38,600
Potash		3,000	330,000	2,500	280,000	2,600
Pumice and pumicite	metric tons	583,000	12,600	643,000	17,800	697,000
Salt		40,800	986,000	44,400	1,110,000	43,300
<b>Sand and gravel:</b>						
Construction		1,070,000	4,910,000	1,110,000	5,250,000	1,120,000
Industrial		28,200	513,000	28,900	538,000	28,400
Silica stone 5/	metric tons	438	3,440	475	3,060	312
Soda ash		10,100	842,000	10,200	779,000	10,200
Stone, crushed 6/		1,510,000	8,130,000	1,540,000	8,240,000	1,560,000
Tripoli	metric tons	79,600	16,900	84,900	20,200	72,000
Vermiculite	do.	W	W	175,000 e/	W	150,000 e/
Zeolites	do.	38,500	NA	40,100	NA	(7/)

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	1998		1999		2000	
	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	614,000	XX	675,000	XX	619,000
Total	XX	28,200,000 r/	XX	29,300,000 r/	XX	29,200,000
Grand total	XX	39,400,000	XX	39,100,000 r/	XX	39,400,000

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

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 2000

(Principal States based upon quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Antimony 1/	ID	
Asbestos	CA	
Barite	NV, GA, TN	
Beryllium concentrate	UT	
Boron	CA	
Bromine	AR and MI	
Brucite	NV and TX	
Cement:		
Masonry	FL, CA, IN, SC, AL	AZ, AR, CO, GA, HI, IA, KS, KY, ME, MD, MI, MO, MT, NE, NM, NY, OH, OK, PA, SD, TN, TX, VA, WV.
Portland	CA, TX, 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, AL, MS, UT	AZ, CA, CO, 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, CO	KY and NM.
Fuller's earth	GA, MS, IL, MO, FL	CA, KS, NV, TN, TX, VA.
Kaolin	GA, AL, SC, CA, TX	AR, FL, NV, NC, TN.
Copper 1/	AZ, UT, NM, MT, NV	MO, ID, AK.
Diatomite	CA, NV, OR, WA	
Emery	OR	
Feldspar	NC, VA, CA, GA, OK	ID and SD.
Garnet, industrial	ID, NY, MT	
Gemstones, natural 2/	TN, AZ, CA, NV, UT	All other States.
Gold 1/	NV, UT, CA, AK, MT	AZ, CO, ID, NM, SD, WA.
Greensand marl	NJ	
Gypsum, crude	OK, IA, MI, NV, TX	AZ, AR, CA, CO, IN, KS, LA, MI, NM, NY, OH, SD, UT, WA, WY.
Helium:		
Crude	KS, TX, OK	
Grade-A	KS, WY, TX, CO, OK	UT.
Iodine	OK	
Iron ore, usable	MN, MI, NM, SD	
Iron oxide pigments, crude	GA, MO, MI, AL, VA	AZ.
Kyanite	VA	
Lead 1/	MO, AK, ID, MT, TN	NV and NY.
Lime	MO, KY, AL, OH, TX	All other States, except AK, CT, DE, FL, HI, KS, ME, MD, MS, NH, NJ, NY, NC, RI, VT.
Lithium	NV	
Magnesite	NV	

See footnotes at end of table.

TABLE 2--Continued  
 NONFUEL MINERALS PRODUCED IN THE UNITED STATES, BY COMMODITY AND STATES IN 2000

(Principal States based upon quantity unless otherwise noted)

Mineral	Principal States	Other States (alphabetical order)
Magnesium compounds	MI, FL, UT, DE, CA	
Magnesium metal	WA and UT	
Mercury	NV	
Mica, crude	NC, NM, SC, SD, GA	VA.
Molybdenum	AZ, UT, CO, ID, MT	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, CA	NV and ID.
Phosphate rock	FL, NC, ID, UT	
Platinum 1/	MT	
Potash	NM, UT, MI	
Pumice and pumicite	OR, CA, NM, ID, AZ	KS.
Pyrophyllite, crude 3/	NC and CA	
Rare-earth metal concentra	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, CA, WI, TX	All other States, except AK, CT, DE, HI, KY, ME, MA, MT, NH, OR, SD, UT, VT, WY.
Silica stone 4/	AR and WI	
Silver 1/	NV, AK, ID, AZ, UT	CA, CO, MO, MT, NM, SD, WA.
Soda ash	WY and CA	
Staurolite	FL	
Stone:		
Crushed	TX, PA, FL, GA, IL	All other States, except DE.
Dimension	IN, VT, WI, TX, GA	All other States except AK, DE, FL, HI, IL, IA, KY, LA, MS, NE, NV, NJ, ND, OR, RI, WY.
Sulfur, Frasch	LA	
Talc, crude 3/	MT, TX, VT, NY, OR	
Titanium concentrates:		
Ilmenite	FL and VA	
Rutile	FL	
Tripoli	IL, OK, AR, PA	
Vanadium 1/	ID	
Vermiculite, crude	SC and VA	
Wollastonite	NY	
Zeolites	NM, TX, OR, NV, AZ	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/ Formerly part of mineral grouping "Talc and Pyrophyllite."

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 2000 1/

State	Value (thousands)	Rank	Percentage of total	Principal minerals, in order of value
Alabama	\$930,000	16	2.36	Cement (portland), stone (crushed), lime, sand and gravel (construction), cement (masonry).
Alaska	1,140,000	12	2.89	Zinc, gold, lead, silver, sand and gravel (construction).
Arizona	2,510,000	3	6.38	Copper, sand and gravel (construction), cement (portland), molybdenum concentrates, stone (crushed).
Arkansas	484,000	30	1.23	Bromine, stone (crushed), cement (portland), sand and gravel (construction), gypsum (crude).
California	3,270,000	1	8.30	Sand and gravel (construction), cement (portland), boron, stone (crushed), gold.
Colorado	592,000	26	1.50	Sand and gravel (construction), cement (portland), stone (crushed), gold, molybdenum concentrates.
Connecticut 2/	112,000	42	0.29	Stone (crushed), sand and gravel (construction), stone (dimension), clays (common), gemstones.
Delaware 2/	12,400	50	0.03	Sand and gravel (construction), magnesium compounds, gemstones.
Florida	1,820,000	5	4.62	Phosphate rock, stone (crushed), cement (portland), sand and gravel (construction), cement (masonry).
Georgia	1,620,000	7	4.11	Clays (kaolin), stone (crushed), cement (portland), clays (fuller's earth), sand and gravel (construction).
Hawaii	92,000	44	0.23	Stone (crushed), cement (portland), sand and gravel (construction), cement (masonry), gemstones.
Idaho	358,000	33	0.91	Phosphate rock, silver, sand and gravel (construction), molybdenum concentrates, lead.
Illinois	913,000	17	2.32	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), lime.
Indiana	695,000	22	1.77	Stone (crushed), cement (portland), sand and gravel (construction), lime, cement (masonry).

See footnotes at end of table.

TABLE 3--Continued

## VALUE OF NONFUEL MINERAL PRODUCTION IN THE UNITED STATES AND PRINCIPAL NONFUEL MINERALS PRODUCED IN 2000 1/

State	Value (thousands)	Rank	Percentage of total	Principal minerals, in order of value
Iowa	\$503,000	28	1.28	Cement (portland), stone (crushed), sand and gravel (construction), gypsum (crude), lime.
Kansas	629,000	23	1.60	Cement (portland), helium (grade-A), salt, stone (crushed), helium (crude).
Kentucky	501,000	29	1.27	Stone (crushed), lime, cement (portland), sand and gravel (construction), clays (ball).
Louisiana	325,000	35	0.83	Salt, sulfur (Frasch), sand and gravel (construction), stone (crushed), sand and gravel (industrial).
Maine	95,500	43	0.24	Sand and gravel (construction), cement (portland), stone (crushed), cement (masonry), peat.
Maryland 2/	358,000	34	0.91	Stone (crushed), cement (portland), sand and gravel (construction), cement (masonry), stone (dimension).
Massachusetts 2/	200,000	39	0.51	Stone (crushed), sand and gravel (construction), stone (dimension), lime, clays (common).
Michigan	1,640,000	6	4.17	Cement (portland), iron ore (usable), sand and gravel (construction), stone (crushed), magnesium compounds.
Minnesota	1,460,000	8	3.70	Iron ore (usable), sand and gravel (construction), stone (crushed), stone (dimension), sand and gravel (industrial).
Mississippi	149,000	41	0.38	Sand and gravel (construction), clays (fuller's earth), cement (portland), stone (crushed), sand and gravel (industrial).
Missouri	1,370,000	10	3.48	Stone (crushed), cement (portland), lead, lime, zinc.
Montana	596,000	25	1.51	Palladium, gold, platinum, cement (portland), sand and gravel (construction).
Nebraska 2/	83,700	45	0.21	Cement (portland), stone (crushed), sand and gravel (construction), lime, cement (masonry).
Nevada	2,980,000	2	7.56	Gold, sand and gravel (construction), silver, lime, cement (portland).
New Hampshire 2/	57,100	47	0.14	Sand and gravel (construction), stone (crushed), stone (dimension), gemstones.
New Jersey 2/	291,000	37	0.74	Stone (crushed), sand and gravel (construction), sand and gravel (industrial), greensand marl, peat.
New Mexico	786,000	18	2.00	Copper, potash, sand and gravel (construction), cement (portland), stone (crushed).
New York	1,020,000	13	2.58	Stone (crushed), salt, cement (portland), sand and gravel (construction), zinc.
North Carolina	744,000	19	1.89	Stone (crushed), phosphate rock, sand and gravel (construction), sand and gravel (industrial), feldspar.
North Dakota	35,200	48	0.09	Sand and gravel (construction), lime, stone (crushed), clays (common), sand and gravel (industrial).
Ohio	999,000	14	2.54	Stone (crushed), sand and gravel (construction), salt, lime, cement (portland).
Oklahoma	473,000	31	1.20	Stone (crushed), cement (portland), sand and gravel (construction), sand and gravel (industrial), gypsum (crude).
Oregon	299,000	36	0.76	Stone (crushed), sand and gravel (construction), cement (portland), diatomite, lime.
Pennsylvania 2/	1,250,000	11	3.17	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	551,000	27	1.40	Cement (portland), stone (crushed), cement (masonry), sand and gravel (construction), clays (kaolin).
South Dakota	233,000	38	0.59	Gold, cement (portland), sand and gravel (construction), stone (crushed), stone (dimension).
Tennessee	737,000	20	1.87	Stone (crushed), zinc, cement (portland), sand and gravel (construction), clays (ball).
Texas	1,950,000	4	4.95	Cement (portland), stone (crushed), sand and gravel (construction), lime, salt.
Utah	1,430,000	9	3.64	Copper, gold, cement (portland), sand and gravel (construction), salt.
Vermont 2/	66,900	46	0.17	Stone (dimension), stone (crushed), sand and gravel (construction), talc (crude), gemstones.
Virginia	710,000	21	1.80	Stone (crushed), cement (portland), sand and gravel (construction), lime, clays (fuller's earth).
Washington	607,000	24	1.54	Sand and gravel (construction), stone (crushed), magnesium metal, cement (portland), gold.
West Virginia	172,000	40	0.44	Stone (crushed), cement (portland), sand and gravel (industrial), lime, salt.
Wisconsin 2/	372,000	32	0.94	Sand and gravel (construction), stone (crushed), lime, sand and gravel (industrial), stone (dimension).
Wyoming	978,000	15	2.48	Soda ash, clays (bentonite), helium (grade-A), cement (portland), stone (crushed).
Undistributed	157,000	XX	0.40	
Total	39,400,000	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 2000, 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	\$930,000	208	13	6,940	16
Alaska	1,530,000	635	1,140,000	1,790	2	745	48
Arizona	295,000	5,310	2,510,000	474	6	8,510	11
Arkansas	138,000	2,690	484,000	180	15	3,520	28
California	411,000	34,500	3,270,000	95	30	7,950	13
Colorado	270,000	4,420	592,000	134	20	2,190	41
Connecticut	13,000	3,430	112,000 2/	33	47	8,650	10
Delaware	5,290	796	12,400 2/	16	50	2,350	40
Florida	152,000	16,400	1,820,000	111	24	12,000	3
Georgia	153,000	8,380	1,620,000	193	14	10,600	6
Hawaii	16,800	1,220	92,000	75	35	5,490	24

See footnotes at end of table.

TABLE 4--Continued  
 VALUE OF NONFUEL MINERAL PRODUCTION PER CAPITA AND PER SQUARE KILOMETER IN 2000, BY STATE 1/

State	Area (square kilometers)	Population (thousands)	Total value (thousands)	Per capita		Per square kilometer	
				Dollars	Rank	Dollars	Rank
Idaho	216,000	1,320	\$358,000	271	10	1,660	42
Illinois	146,000	12,500	913,000	73	37	6,260	23
Indiana	93,700	6,110	695,000	114	23	7,420	15
Iowa	146,000	2,920	503,000	172	16	3,450	29
Kansas	213,000	2,690	629,000	233	12	2,950	31
Kentucky	105,000	4,070	501,000	123	22	4,780	26
Louisiana	124,000	4,470	325,000	73	38	2,630	35
Maine	86,200	1,290	95,500	74	36	1,110	47
Maryland	27,100	5,380	358,000 2/	67	40	13,200	2
Massachusetts	21,500	6,380	200,000 2/	31	48	9,320	9
Michigan	152,000	9,990	1,640,000	165	17	10,800	4
Minnesota	219,000	4,970	1,460,000	293	9	6,670	20
Mississippi	124,000	2,860	149,000	52	43	1,210	44
Missouri	181,000	5,630	1,370,000	243	11	7,590	14
Montana	381,000	904	596,000	659	4	1,570	43
Nebraska	200,000	1,710	83,700 2/	49	44	418	49
Nevada	286,000	2,110	2,980,000	1,410	3	10,400	7
New Hampshire	24,000	1,260	57,100 2/	45	45	2,380	39
New Jersey	20,200	8,480	291,000 2/	34	46	14,400	1
New Mexico	315,000	1,830	786,000	430	7	2,500	38
New York	127,000	19,000	1,020,000	54	42	8,000	12
North Carolina	136,000	8,190	744,000	91	32	5,450	25
North Dakota	183,000	634	35,200	56	41	192	50
Ohio	107,000	11,400	999,000	88	33	9,330	8
Oklahoma	181,000	3,460	473,000	137	18	2,610	36
Oregon	251,000	3,470	299,000	86	34	1,190	45
Pennsylvania	117,000	12,300	1,250,000 2/	102	26	10,600	5
Rhode Island	3,140	1,060	20,300 2/	19	49	6,480	22
South Carolina	80,600	4,060	551,000	136	19	6,830	17
South Dakota	200,000	757	233,000	308	8	1,170	46
Tennessee	109,000	5,740	737,000	128	21	6,750	18
Texas	691,000	21,300	1,950,000	91	31	2,820	32
Utah	220,000	2,270	1,430,000	631	5	6,510	21
Vermont	24,900	613	66,900 2/	109	25	2,690	34
Virginia	106,000	7,190	710,000	99	28	6,730	19
Washington	176,000	5,990	607,000	101	27	3,440	30
West Virginia	62,800	1,800	172,000	96	29	2,740	33
Wisconsin	145,000	5,400	372,000 2/	69	39	2,560	37
Wyoming	253,000	494	978,000	1,980	1	3,860	27
Undistributed	XX	XX	157,000	XX	XX	XX	XX
Total or average	9,370,000 3/	284,000 3/	39,400,000	139	XX	4,200	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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
Alabama:						
Cement:						
Masonry	371	39,100 e/	429	47,600 e/	401	45,600 e/
Portland	4,310	353,000 e/	4,300	349,000 e/	4,340	342,000 e/
Clays, common	2,400	23,100	2,320	23,700	2,090	23,200
Gemstones	NA	76	NA	76	NA	108
Lime	1,960	119,000	1,930	114,000	1,950	121,000

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	1998		1999		2000		
	Quantity	Value	Quantity	Value	Quantity	Value	
<b>Alabama--Continued:</b>							
<b>Sand and gravel:</b>							
Construction	14,400	64,100	15,500	68,900	14,500	63,700	
Industrial	757	9,910	687	9,780	731	10,100	
<b>Stone:</b>							
Crushed	48,900	383,000	49,100 r/	354,000 r/	49,100	300,000	
Dimension	metric tons	W	W	7,210	2,380	W	W
Combined values of clays [bentonite, fire (1998), kaolin], iron oxide pigments (crude), salt, and values indicated by symbol W	XX	18,500	XX	20,400	XX	24,400	
Total	XX	1,010,000	XX	990,000 r/	XX	930,000	
<b>Alaska:</b>							
Gemstones	NA	11	NA	11	NA	11	
Gold 3/ 4/	kilograms	18,300	174,000	16,200 r/	177,000 r/	15,600	140,000
Sand and gravel, construction		13,700	72,700	9,620	48,500	10,600	53,500
Stone, crushed		1,700 5/	9,970 5/	1,800 5/	9,900 5/	1,400	7,110
Combined values of copper, lead, silver, stone [crushed dolomite, limestone, shell, slate (1998-1999)], zinc	XX	734,000 r/	XX	880,000	XX	939,000	
Total	XX	991,000 r/	XX	1,120,000 r/	XX	1,140,000	
<b>Arizona:</b>							
Copper 3/		1,190	2,060,000	1,050	1,760,000	928	1,800,000
Gemstones		NA	2,120	NA	1,950	NA	2,920
Gold 3/	kilograms	1,840	17,400	786	7,080	W	W
Molybdenum concentrates	metric tons	16,600	W	15,700 r/	W	W	W
<b>Sand and gravel:</b>							
Construction		47,900	229,000	54,500	296,000	59,400	304,000
Industrial		307	3,290	268	3,720	W	W
Silver 3/	metric tons	211	37,700 r/	183	30,900	132	21,200
Stone, crushed		8,080	44,800	8,970 r/	53,900 r/	8,030	48,200
Zeolites	metric tons	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of cement, clays (bentonite, common), gypsum (crude), iron oxide pigments (crude), lime, mica (1999), perlite (crude), pumice and pumicite, salt, stone (dimension sandstone), and values indicated by symbol W	XX	344,000	XX	334,000 r/	XX	333,000	
Total	XX	2,740,000	XX	2,490,000 r/	XX	2,510,000	
<b>Arkansas:</b>							
Clays, common		995	1,370	1,010	1,510	958	1,170
Gemstones		NA	912	NA	731	NA	925
Sand and gravel, construction		12,100	55,400	11,300	53,200	9,820	48,600
Silica stone 7/	metric tons	404	3,400	W	W	W	W
Stone, crushed		35,700	180,000	30,700	145,000	28,300	137,000
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	242,000	XX	296,000	XX	296,000	
Total	XX	484,000	XX	497,000	XX	484,000	
<b>California:</b>							
Asbestos	metric tons	5,760	W	7,190	W	5,260	W
Boron minerals		1,170	486,000	1,220	630,000	1,070	557,000
<b>Cement:</b>							
Masonry		410	39,600 e/	466	38,300 e/	484	43,100 e/
Portland		10,000	746,000 e/	10,300	817,000 e/	10,900	821,000 e/
<b>Clays:</b>							
Bentonite		29	2,700	23	2,110	21	2,160
Common		918	9,610	829	13,100	969	16,800
Gemstones		NA	1,810	NA	1,100	NA	1,500
Gold 3/	kilograms	18,700	177,000	17,500	192,000 r/	17,200	155,000
Lime		185	18,100	W	W	W	W
Rare-earth metal concentrates e/	metric tons	5,000	14,400	5,000	14,400	5,000	W
<b>Sand and gravel:</b>							
Construction		135,000	801,000	145,000	897,000	148,000	940,000
Industrial		1,740	40,400	1,790	43,700	1,810	45,200
Silver 3/	metric tons	11	2,020 r/	8	1,290	9	1,390

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
California--Continued:						
Stone:						
Crushed	55,100	344,000	59,400 r/	384,000 r/	59,700	373,000
Dimension metric tons	28,500	4,710	29,400	4,930	33,300	5,790
Zeolites do.	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of clays (fire, fuller's earth, kaolin), diatomite, feldspar, gypsum (crude), iron ore [usable (1998-1999)], magnesium compounds, perlite, pumice and pumicite, pyrophyllite (1999-2000), salt, soda ash, sodium sulfate [natural (1998)], talc (1998-1999), titanium [ilmenite (1998)], and values indicated by symbol W	XX	318,000	XX	310,000	XX	308,000
Total	XX	3,000,000	XX	3,350,000 r/	XX	3,270,000
Colorado:						
Clays:						
Bentonite	W	W	1	W	W	W
Common	257	1,840	373	2,530	296	2,000
Gemstones	NA	257	NA	261	NA	277
Lime	40	1,820	40	2,380	37	2,170
Sand and gravel:						
Construction	42,900	195,000	45,200	217,000	43,900	216,000
Industrial	W	W	W	W	65	W
Stone:						
Crushed	12,000	63,800	13,200	75,500	13,000	81,900
Dimension metric tons	14,200	3,410	14,700	3,430	W	W
Combined values of cement, clays [fire (2000)], gold, gypsum (crude), helium (grade-A), lead (1998-99), molybdenum concentrates, peat (1998), sand and gravel (industrial), silver, stone [dimension marble and sandstone (2000)], zinc (1998-1999), and values indicated by symbol W	XX	306,000	XX	282,000 r/	XX	289,000
Total	XX	572,000	XX	584,000 r/	XX	592,000
Connecticut:						
Clays, common	55	(6/)	55	183	55	183
Gemstones	NA	5	NA	6	NA	6
Sand and gravel, construction	6,380	29,200	6,510	32,400	8,010	46,900
Stone:						
Crushed	7,660	69,400	7,170	57,400	7,740	65,300
Dimension metric tons	W	(6/)	W	(6/)	W	(6/)
Total	XX	98,700	XX	90,000	XX	112,000
Delaware:						
Gemstones	NA	1	NA	1	NA	1
Magnesium compounds metric tons	W	(6/)	W	(6/)	W	(6/)
Sand and gravel, construction	2,560	11,500	2,100	10,800	2,330	12,400
Total	XX	11,500	XX	10,800	XX	12,400
Florida:						
Cement:						
Masonry	442	40,600 e/	494	50,900 e/	546	64,900 e/
Portland	3,470	259,000 e/	3,500	260,000 e/	3,750	285,000 e/
Clays, kaolin	W	W	35	3,830	33	3,420
Gemstones	NA	1	NA	1	NA	1
Peat	391	7,360	408	8,180	416	8,640
Sand and gravel:						
Construction	20,900	84,600	27,200	114,000	24,500	107,000
Industrial	525	6,150	509	6,370	510	6,320
Stone, crushed	81,000 5/	377,000 5/	91,700 r/	466,000 r/	93,000	495,000
Combined values of clays (common, fuller's earth), magnesium compounds, phosphate rock, staurolite, stone [crushed marl (1998)], titanium concentrates, zirconium concentrates, and values indicated by symbol W	XX	1,030,000	XX	1,110,000	XX	848,000
Total	XX	1,810,000	XX	2,020,000	XX	1,820,000

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Georgia:</b>						
Clays:						
Common	1,650	5,470	1,600	5,130	1,500	5,200
Fuller's earth	686	74,800	725	73,800	919	81,400
Kaolin	8,350	998,000	8,170	907,000	7,660	877,000
Gemstones	NA	8	NA	9	NA	8
Sand and gravel:						
Construction	7,130	29,500	7,200	30,100	6,940	28,700
Industrial	608	10,900	612	11,100	651	12,200
Stone:						
Crushed 5/ Dimension metric tons	74,200	440,000	74,200	448,000	76,500	452,000
Crushed 5/ Dimension metric tons	72,100	8,790	83,400	12,200	74,200	11,400
Combined values of barite, cement, feldspar, iron oxide pigments (crude), lime, mica (crude), stone (crushed marble)	XX	152,000	XX	153,000	XX	151,000
Total	XX	1,720,000	XX	1,640,000	XX	1,620,000
<b>Hawaii:</b>						
Cement:						
Masonry	3	329 e/	3	298 e/	3	645 e/
Portland	251	25,600 e/	254	24,700 e/	286	26,800 e/
Gemstones	NA	77	NA	55	NA	(6/)
Sand and gravel, construction	368	4,590	508	5,840	607	6,420
Stone, crushed	5,500	53,900	5,870	55,500	5,770	58,100
Total	XX	84,500	XX	86,400	XX	92,000
<b>Idaho:</b>						
Antimony metric tons	242	W	450 r/	W	W	W
Gemstones	NA	321	NA	368	NA	411
Gold 3/ kilograms	W	W	W	W	2,260	20,400
Pumice and pumicite metric tons	73,400	686	98,600	917	W	W
Sand and gravel:						
Construction	16,600	52,400	15,500	48,200	17,500	55,700
Industrial	710	8,470	711	11,200	W	W
Silver 3/ metric tons	447	79,600 r/	416	70,100	416	66,900
Stone:						
Crushed	4,180	18,400	4,090 r/	18,500 r/	3,500	14,800
Crushed Dimension metric tons	15,900	4,710	39,300	5,510	W	W
Zeolites do.	--	--	--	--	(6/)	NA
Combined values of cement (portland), copper, feldspar, garnet (industrial), lead, lime, molybdenum concentrates, perlite [crude (1999-2000)], phosphate rock, stone [dimension granite, quartz, sandstone (2000)], vanadium ore (1998-1999), zinc, and values indicated by symbol W	XX	281,000	XX	266,000 r/	XX	200,000
Total	XX	446,000 r/	XX	421,000 r/	XX	358,000
<b>Illinois:</b>						
Cement, portland	2,690	207,000 e/	2,940	215,000 e/	2,860	218,000 e/
Clays, common	123	560	134	616	200	905
Gemstones	NA	8	NA	8	NA	8
Sand and gravel:						
Construction	34,100	150,000	34,100	147,000	30,300	132,000
Industrial	4,580	71,100	4,460	71,100	4,430	71,600
Stone, crushed 5/	72,100	371,000	76,900 r/	388,000 r/	76,000	394,000
Combined values of clays (fuller's earth), lime, peat, stone (crushed sandstone), tripoli	XX	75,400	XX	77,000 r/	XX	96,200
Total	XX	875,000	XX	899,000 r/	XX	913,000
<b>Indiana:</b>						
Cement:						
Masonry	W	W	W	W	444	46,800 e/
Portland	2,500	176,000 e/	2,510	178,000 e/	2,630	179,000 e/
Clays, common	681	1,330	752	1,480	639	1,560
Gemstones	NA	3	NA	3	NA	3
Sand and gravel:						
Construction	24,000	101,000	29,500	126,000	27,900	121,000
Industrial	W	W	175	1,860	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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Indiana--Continued:</b>						
<b>Stone:</b>						
Crushed 5/ Dimension metric tons	61,800	283,000	58,800 r/	270,000 r/	55,400	253,000
Combined values of clays [ball (1998)], gypsum (crude), lime, peat, stone [crushed slate (1998)], and values indicated by symbol W	XX	102,000	XX	106,000	XX	61,400
Total	XX	691,000	XX	716,000 r/	XX	695,000
<b>Iowa:</b>						
Cement, portland	2,610	211,000 e/	W	W	W	W
Clays, common	301	1,040	302	1,040	306	1,060
Gemstones	NA	4	NA	2	NA	2
<b>Sand and gravel:</b>						
Construction	13,500	58,500	13,500	60,600	12,300	54,100
Industrial	W	W	W	W	29	W
Stone, crushed	41,800	219,000	40,200 r/	203,000 r/	40,200	209,000
Combined values of cement (masonry), gypsum (crude), lime, peat, and values indicated by symbol W	XX	27,700	XX	216,000	XX	239,000
Total	XX	518,000	XX	481,000 r/	XX	503,000
<b>Kansas:</b>						
Cement, portland	1,800	138,000 e/	1,970	149,000 e/	1,980	155,000 e/
Clays, common	585	2,510	592	2,770	594	3,970
Gemstones	NA	29	NA	21	NA	12
Helium, Grade-A million cubic meters	56	110,000	61	121,000	77	153,000
Salt	3,090	120,000	2,780	115,000	2,770	114,000
Sand and gravel, construction	10,800	31,400	10,800	31,300	10,000	28,200
<b>Stone:</b>						
Crushed	21,800	115,000	23,700 r/	116,000	23,300	113,000
Dimension metric tons	15,800	1,240	16,100	1,640	14,100	1,890
Combined values of cement (masonry), clays (fuller's earth), gypsum (crude), helium (crude), pumice and pumicite, sand and gravel (industrial)	XX	31,400	XX	63,700	XX	59,800
Total	XX	551,000	XX	601,000 r/	XX	629,000
<b>Kentucky:</b>						
<b>Clays:</b>						
Common	872	3,930	892	3,790	1,000	4,190
Fire	W	W	W	W	10	35
Gemstones	NA	263	NA	292	NA	47
Sand and gravel, construction	8,100	27,500	9,620	32,400	11,000	36,000
Stone, crushed	58,600 5/	285,000 5/	59,800 r/	308,000 r/	55,600	296,000
Combined values of cement, clays (ball), lime, stone [crushed sandstone (1998)]	XX	175,000	XX	158,000	XX	164,000
Total	XX	492,000	XX	502,000 r/	XX	501,000
<b>Louisiana:</b>						
Clays, common	620	1,530 r/	626	1,540 r/	636	1,530
Gemstones	NA	5	NA	7	NA	6
Salt	14,900	173,000	16,500	193,000	13,400	124,000
<b>Sand and gravel:</b>						
Construction	11,400	53,800	16,500	81,700	14,900	76,900
Industrial	623	12,100	636	10,400	648	12,300
Combined values of gypsum (crude), lime, stone [crushed limestone and sandstone (1999-2000), crushed sandstone (1998)], sulfur (Frasch)	XX	96,300	XX	116,000 r/	XX	110,000
Total	XX	337,000 r/	XX	402,000 r/	XX	325,000
<b>Maine:</b>						
Clays, common	W	W	W	W	49 e/	125 e/
Gemstones	NA	228	NA	229	NA	239
Sand and gravel, construction	7,640	33,400	8,570	40,300	9,670	37,600
Stone, crushed	4,120	23,000	3,550 r/	21,200 r/	3,650	21,100
Combined values of cement, peat, stone (dimension granite), and values indicated by symbol W	XX	35,000	XX	38,400	XX	36,500
Total	XX	91,600	XX	100,000 r/	XX	95,500

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Maryland:</b>						
<b>Cement:</b>						
Masonry	W	W	110	10,000 e/	78	7,140 e/
Portland	1,760	123,000 e/	1,730	124,000 e/	1,760	125,000 e/
Clays, common	339	1,380	335	1,380	271	982
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	10,400	60,500	8,970	56,500	13,100	84,700
<b>Stone:</b>						
Crushed 5/	24,300	141,000	22,200	121,000	24,500	137,000
Dimension metric tons	23,100	2,730	26,000	3,160	28,700	3,560
Combined values of sand and gravel (industrial), stone [crushed marble and traprock (1998), crushed marble, shell, traprock (1999-2000)], and value indicated by symbol W	XX	23,700	XX	(6/)	XX	(6/)
<b>Total</b>	<b>XX</b>	<b>352,000</b>	<b>XX</b>	<b>316,000</b>	<b>XX</b>	<b>358,000</b>
<b>Massachusetts:</b>						
<b>Clays, common</b>						
	W	W	W	W	36 e/	321 e/
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	14,000	78,000	12,700	75,200	13,200	80,100
<b>Stone:</b>						
Crushed	12,800	96,900	11,600	89,900	13,400	103,000
Dimension metric tons	85,800	17,600	70,400	16,900	69,600	16,800
Combined values of lime, sand and gravel [industrial (1998-1999)] and values indicated by symbol W	XX	12,000	XX	10,800	XX	(6/)
<b>Total</b>	<b>XX</b>	<b>204,000</b>	<b>XX</b>	<b>193,000</b>	<b>XX</b>	<b>200,000</b>
<b>Michigan:</b>						
<b>Cement:</b>						
Masonry	294	28,000 e/	283	28,100 e/	296	28,900 e/
Portland	5,710	435,000 e/	5,810	439,000 e/	5,790	450,000 e/
Clays, common	644	2,920	615	3,550	594	3,210
Gemstones	NA	1	NA	1	NA	1
Gypsum, crude	1,830	15,000	2,170	15,700	1,980	19,800
Lime	761	40,300	781	43,900	W	W
Peat	190	5,500	195	4,520	207	5,750
<b>Sand and gravel:</b>						
Construction	66,900	245,000	70,200	245,000	75,600	269,000
Industrial	2,390	25,700	2,550	28,100	2,520	27,800
Stone, crushed 5/	43,700	167,000	41,200 r/	140,000 r/	42,200	148,000
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 value indicated by symbol W	XX	706,000	XX	625,000	XX	691,000
<b>Total</b>	<b>XX</b>	<b>1,670,000</b>	<b>XX</b>	<b>1,570,000 r/</b>	<b>XX</b>	<b>1,640,000</b>
<b>Minnesota:</b>						
<b>Clays, common</b>						
	W	W	W	W	14	15
Gemstones	NA	5	NA	6	NA	6
Iron ore, usable	47,200	1,470,000	43,800 r/	1,150,000	46,700	1,180,000
Peat	30	1,630	W	W	75	5,100
Sand and gravel, construction	39,400	154,000	37,300	142,000	39,500	158,000
<b>Stone:</b>						
Crushed	13,600 5/	71,500 5/	13,100 r/	62,700 r/	12,400	68,100
Dimension metric tons	48,100	18,800	42,700	20,700	W	W
Combined values of lime, sand and gravel (industrial), stone [crushed sandstone (1998-1999), dimension garnite and limestone (2000)], and values indicated by symbol W	XX	23,000	XX	35,200	XX	44,100
<b>Total</b>	<b>XX</b>	<b>1,740,000</b>	<b>XX</b>	<b>1,410,000 r/</b>	<b>XX</b>	<b>1,460,000</b>
<b>Mississippi:</b>						
<b>Clays:</b>						
Common	502	3,410	497	3,390	484	2,200
Fuller's earth	372	30,400	377	29,400	371	30,100
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	13,300	64,400	12,100	58,900	10,700	41,700
Stone, crushed 5/	789	2,790	1,760	15,900	2,530	23,700

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Mississippi--Continued:</b>						
Combined values of cement (portland), clays (ball, bentonite), sand and gravel (industrial), stone (crushed marl)	XX	58,400	XX	52,300	XX	51,700
Total	XX	159,000	XX	160,000	XX	149,000
<b>Missouri:</b>						
Cement, portland	4,570	323,000 e/	4,910	354,000 e/	4,880	372,000 e/
Clays:						
Common	1,030	4,440	1,080	4,180	1,050	3,240
Fire	288	4,220	293	3,980	351	4,630
Copper 3/	5	9,090	W	W	W	W
Sand and gravel, construction	9,470	39,300	12,400	50,300	11,700	60,900
Stone, crushed	68,400	356,000	72,600 r/	346,000 r/	75,500	399,000
Combined values of cement (masonry), clays (fuller's earth), gemstones, iron ore [usable (1998-1999)], iron oxide pigments (crude), lead, lime, sand and gravel (industrial), silver, stone (dimension granite), zinc, and values indicated by symbol W	XX	608,000 r/	XX	585,000 r/	XX	531,000
Total	XX	1,340,000 r/	XX	1,340,000 r/	XX	1,370,000
<b>Montana:</b>						
Gemstones	NA	453	NA	294	NA	267
Gold 3/ kilograms	8,200	77,900	7,540 r/	82,800 r/	9,310	83,800
Lead 3/ metric tons	7,310	7,300	7,950	7,660	W	W
Palladium 3/ kilograms	10,600	98,600	9,800	114,000	10,300	228,000
Platinum 3/ do.	3,240	39,000 r/	2,920	35,600	3,110	69,200
Sand and gravel, construction	8,550	34,900	12,000	50,700	9,950	40,600
Stone:						
Crushed	3,880	15,100	3,480 r/	13,400 r/	3,070	12,600
Dimension metric tons	W	W	9,500	1,440	W	W
Zinc 3/ do.	24,900	28,200	22,200	26,100	16,600	21,500
Combined values of cement [masonry (1998, 2000), portland], clays (bentonite, common), copper, garnet (industrial), iron ore [usable (1998-1999)], lime, molybdenum concentrates, peat, silver, talc, and value indicated by symbol W	XX	203,000 r/	XX	183,000 r/	XX	140,000
Total	XX	504,000 r/	XX	515,000 r/	XX	596,000
<b>Nebraska:</b>						
Cement:						
Masonry	W	(6/)	W	(6/)	W	(6/)
Portland	W	(6/)	W	(6/)	W	(6/)
Clays, common	134	345	133	(6/)	133	338
Gemstones	NA	3	NA	3	NA	3
Lime	19	1,580	18	1,510	20	1,690
Sand and gravel:						
Construction	13,800	47,000	12,000	40,800	11,700	39,200
Industrial	W	(6/)	W	(6/)	W	(6/)
Stone, crushed	7,490	49,800	7,090	44,500	6,590	42,400
Total	XX	98,700	XX	86,800	XX	83,700
<b>Nevada:</b>						
Clays:						
Bentonite	W	W	6	W	6	804
Fuller's earth	W	W	25	3,580	28	3,870
Gemstones	NA	159	NA	205	NA	W
Gold 3/ kilograms	273,000	2,590,000	256,000 r/	2,810,000 r/	268,000	2,410,000
Sand and gravel:						
Construction	26,400	114,000	31,700	142,000	36,800	172,000
Industrial	W	W	W	W	609	W
Silver 3/ metric tons	670	119,000 r/	597	101,000	633	102,000
Stone, crushed	6,320	34,000	7,090	37,900	7,640	37,300
Zeolites metric tons	(6/)	NA	--	--	(6/)	NA

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
Nevada--Continued:						
Combined values of barite, brucite, cement (portland), clays (kaolin), copper, diatomite, gypsum (crude), iron ore [usable (1998-1999)], lead (2000), lime, lithium, magnesite, mercury (1999-2000), perlite (crude), salt, sand and gravel (industrial), and values indicated by symbol W	XX	320,000	XX	286,000	XX	250,000
Total	XX	3,180,000 r/	XX	3,380,000 r/	XX	2,980,000
New Hampshire:						
Gemstones	NA	6	NA	6	NA	6
Sand and gravel, construction	8,590	40,000	7,950	36,700	8,660	41,400
Stone, crushed 3/	4,190	27,500	4,290	19,700	3,740	15,700
Combined values of stone (crushed sandstone and dimension granite)	XX	(6/)	XX	(6/)	XX	(6/)
Total	XX	67,600	XX	56,400	XX	57,100
New Jersey:						
Clays, common	W	W	W	W	W	130
Gemstones	NA	1	NA	1	NA	1
Sand and gravel:						
Construction	16,600	90,800	16,500	91,500	16,300	85,000
Industrial	1,800	34,400	1,580	32,100	1,690	35,700
Stone, crushed	23,900	161,000	24,500	160,000	24,900	170,000
Combined values of greensand marl and peat and values indicated by symbol W	XX	3,080	XX	3,200	XX	(6/)
Total	XX	290,000	XX	287,000	XX	291,000
New Mexico:						
Clays:						
Common	33	173	W	W	34	256
Fire	1	17	1	W	--	--
Copper 3/	252	438,000	197	330,000	195	380,000
Gemstones	NA	W	NA	13	NA	27
Sand and gravel, construction	11,100	53,300	10,600	53,000	13,400	66,800
Stone:						
Crushed	4,940 5/	21,000 5/	3,710 r/	22,200	3,690	22,400
Dimension metric tons	W	W	17,900	2,320	W	W
Zeolites do.	(6/)	NA	(6/)	NA	(6/)	NA
Combined values of cement, gold, gypsum (crude), iron ore (usable), lime (2000), mica (crude), molybdenum concentrates, perlite (crude), potash, pumice and pumicite, salt, sand and gravel [industrial (1999-2000)], silver, stone [crushed sandstone and traprock (1998), dimension miscellaneous (1998), dimension sandstone and miscellaneous (2000)], and values indicated by symbol W	XX	341,000	XX	311,000 r/	XX	317,000
Total	XX	853,000	XX	719,000 r/	XX	786,000
New York:						
Cement, portland	W	W	W	W	2,700	211,000 e/
Clays, common	622	16,100	W	W	630	7,820
Gemstones	NA	64	NA	68	NA	64
Salt	4,120	198,000	4,220	209,000	5,440	218,000
Sand and gravel, construction	32,100	161,000	29,900	152,000	29,700	154,000
Stone:						
Crushed	47,200	279,000	46,200 r/	266,000 r/	48,800	304,000
Dimension metric tons	52,900	8,870	49,300	8,940	62,200	5,780
Combined values of cement (masonry), garnet (industrial), gypsum (crude), lead, peat, sand and gravel (industrial), silver (1998-1999), talc, wollastonite, zinc, and values indicated by symbol W	XX	309,000	XX	358,000	XX	117,000
Total	XX	972,000	XX	994,000 r/	XX	1,020,000
North Carolina:						
Clays, common	2,380	11,600	2,430	18,700	2,430	18,600
Feldspar metric tons	381,000	16,800	381,000	16,100	W	W
Gemstones	NA	968	NA	2,860	NA	372

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
North Carolina--Continued:						
Sand and gravel:						
Construction	10,900	58,000	11,600	62,900	12,000	59,100
Industrial	1,440	24,100	1,470	27,300	1,480	28,300
Stone:						
Crushed	69,700	480,000	67,000	459,000	69,500	478,000
Dimension <span style="float:right">metric tons</span>	26,200	12,500	54,700	17,700	40,500	16,800
Combined values of clays (kaolin), lithium (1998), mica (crude), olivine, peat, phosphate rock, pyrophyllite, and value indicated by symbol W	XX	146,000	XX	138,000	XX	143,000
Total	XX	750,000	XX	742,000	XX	744,000
North Dakota:						
Clays, common	42	W	54	W	79	W
Gemstones	NA	3	NA	3	NA	3
Lime	W	W	W	W	176	7,010
Sand and gravel:						
Construction	10,700	30,400	11,700	33,000	10,600	27,800
Industrial	W	W	W	W	1	W
Combined values of peat (1998-99), sand and gravel (industrial), stone [crushed limestone, volcanic cinder, miscellaneous (1999-2000), crushed volcanic cinder and miscellaneous (1998)], and values indicated by symbol W	XX	7,860	XX	7,580	XX	410
Total	XX	38,300	XX	40,600	XX	35,200
Ohio:						
Cement:						
Masonry	W	W	W	W	92	11,000 e/
Portland	W	W	1,130	90,800 e/	1,030	83,300 e/
Clays:						
Common	1,530	7,290	1,710	8,170	1,370	7,380
Fire	62	2,810	W	W	W	W
Gemstones	NA	3	NA	3	NA	3
Lime	1,870	109,000	1,820	105,000	1,850	106,000
Sand and gravel:						
Construction	52,600	255,000	52,000	257,000	51,200	256,000
Industrial	1,110	27,700	1,150	30,700	1,200	32,800
Stone:						
Crushed	74,900 r/	348,000 r/	73,200	328,000	73,600	327,000
Dimension <span style="float:right">metric tons</span>	24,100	2,360	25,600	2,390	34,500	3,050
Combined values of gypsum (crude), peat, salt, silica stone 7/ (1998), and values indicated by symbol W	XX	276,000	XX	220,000	XX	172,000
Total	XX	1,030,000	XX	1,040,000	XX	999,000
Oklahoma:						
Cement:						
Masonry	96	7,140 e/	W	W	109	9,990 e/
Portland	1,830	132,000 e/	W	W	W	W
Clays, common	658	4,450	757	2,050	757	2,060
Gemstones	NA	53	NA	268	NA	197
Gypsum, crude	3,020	19,500	3,510	20,100	2,830	23,500
Iodine, crude <span style="float:right">metric tons</span>	1,490	22,700	1,620	23,800	1,470	21,500
Sand and gravel:						
Construction	9,000	35,900	10,200	41,200	9,210	35,500
Industrial	1,380	29,600	1,470	30,900	1,480	30,700
Stone:						
Crushed	38,500	152,000	36,200 r/	145,000	39,300	168,000
Dimension <span style="float:right">metric tons</span>	3,480	635	3,480	635	5,910	1,530
Combined values of feldspar, helium, lime, salt, tripoli, and values indicated by symbol W	XX	55,600	XX	177,000	XX	180,000
Total	XX	460,000	XX	441,000	XX	473,000
Oregon:						
Clays, common	177	W	240	77	227	632
Gemstones	NA	1,500	NA	949	NA	856
Sand and gravel, construction	18,600	99,200	16,900	105,000	16,500	97,000

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Oregon--Continued:</b>						
Stone, crushed	23,200	118,000	23,300 r/	111,000 r/	20,800	98,900
Zeolites metric tons	(6/)	NA	(6/)	NA	(6/)	NA
Combine value of cement (portland), clays (bentonite), diatomite, emery, lime, perlite (crude), pumice and pumicite, talc, and value indicated by symbol W	XX	82,400	XX	101,000	XX	102,000
Total	XX	301,000	XX	318,000 r/	XX	299,000
<b>Pennsylvania:</b>						
<b>Cement:</b>						
Masonry	319	31,100 e/	330	35,800 e/	324	33,700 e/
Portland	6,740	457,000 e/	6,690	479,000 e/	6,640	475,000 e/
Clays, common	886	2,270	816	1,760	840	1,870
Gemstones	NA	1	NA	1	NA	1
Lime	1,390	97,800	1,340	94,300	1,350	93,900
Peat	6	154	6	185	6	183
Sand and gravel, construction	19,200	116,000	18,600	115,000	17,900	110,000
<b>Stone:</b>						
Crushed	94,500	504,000	91,300 r/	485,000 r/	97,900	520,000
Dimension metric tons	45,200	9,480	50,800	12,600	49,500	12,100
Combined values of clays [kaolin, (1998)], sand and gravel (industrial), tripoli	XX	11,800	XX	(6/)	XX	(6/)
Total	XX	1,230,000	XX	1,220,000 r/	XX	1,250,000
<b>Rhode Island:</b>						
Gemstones	NA	1	NA	1	NA	1
<b>Sand and gravel:</b>						
Construction	1,390	11,100	1,310	9,900	1,240	9,780
Industrial	W	(6/)	W	(6/)	104	(6/)
Stone, crushed	2,240	14,200	2,070	12,200	1,860	10,600
Total	XX	25,300	XX	22,100	XX	20,300
<b>South Carolina:</b>						
<b>Cement:</b>						
Masonry	374	43,700 e/	421	49,400 e/	411	45,500 e/
Portland	2,640	210,000 e/	2,610	205,000 e/	2,910	210,000 e/
<b>Clays:</b>						
Common	1,220	3,950	1,130	4,930	890	2,790
Fire	36	38	35	45	40	50
Kaolin	395	22,000	408	15,700	397	21,900
Gemstones	NA	1	NA	1	NA	1
<b>Sand and gravel:</b>						
Construction	9,690	35,900	9,660	38,200	10,300	40,800
Industrial	881	20,700	769	18,400	755	18,600
<b>Stone:</b>						
Crushed	28,000	182,000	28,600 r/	189,000 r/	29,400	189,000
Dimension metric tons	12,900	1,150	9,230	855	W	W
Combined values of gold (1998-1999), lime (1999-2000), mica (crude), silver (1998-1999), vermiculite, and value indicated by symbol W	XX	42,600	XX	47,800 r/	XX	21,900
Total	XX	562,000	XX	569,000 r/	XX	551,000
<b>South Dakota:</b>						
Clays, common	188	W	183	W	191	W
Gemstones	NA	W	NA	5	NA	W
Gold 3/ kilograms	12,100	115,000	10,300 r/	113,000 r/	8,230	74,200
Sand and gravel, construction	10,100	35,600	12,400	45,600	12,800	46,500
Silver 3/ metric tons	2	348 r/	W	W	1	227
Stone, crushed	5,720	24,600	6,020	26,500	5,460	25,500
Combined values of cement, feldspar, gypsum (crude), iron ore (usable), lime, mica (crude), stone (dimension granite), and value indicated by symbol W	XX	83,500 r/	XX	92,600 r/	XX	86,400
Total	XX	259,000 r/	XX	277,000 r/	XX	233,000
<b>Tennessee:</b>						
Clays, ball	712	30,100	725	30,100	685	29,300

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
Tennessee--Continued:						
Sand and gravel:						
Construction	9,410	49,800	9,640	53,100	8,760	47,000
Industrial	999	17,100	W	W	W	W
Stone, crushed	63,600	370,000	63,100	382,000	62,100	371,000
Combined values of barite, cement, clays [common, fuller's earth, kaolin], copper (1998-1999), gemstones, lead, lime, salt, silver (1998-1999), stone (dimension marble), zinc, and values indicated by symbol W	XX	237,000	XX	261,000 r/	XX	290,000
Total	XX	705,000	XX	726,000 r/	XX	737,000
Texas:						
Cement:						
Masonry	216	20,500 e/	261	29,400 e/	268	28,800 e/
Portland	8,430	621,000 e/	8,680	659,000 e/	9,270	683,000 e/
Clays, common	2,120	10,100	2,100	9,890	2,210	9,460
Gemstones	NA	11	NA	11	NA	11
Gypsum, crude	2,260	15,500	2,230	15,700	1,760	8,980
Lime	1,620	101,000	1,670 r/	111,000 r/	1,600	105,000
Salt	9,420	83,900	10,200	97,500	10,800	104,000
Sand and gravel:						
Construction	74,600	354,000	77,100	373,000	80,800	408,000
Industrial	1,760	38,500	1,620	37,100	1,750	45,200
Stone:						
Crushed	100,000 r/	401,000 r/	108,000 r/	447,000 r/	121,000	496,000
Dimension	metric tons	40,900	16,700	82,500	24,200	84,700
Talc	do.	245,000 r/	5,230 r/	220,000	5,000	230,000
Zeolites	do.	(6/)	NA	(6/)	NA	(6/)
Combined values of brucite (2000), clays (ball, bentonite, fuller's earth, kaolin), helium, magnesium compounds (1998), magnesium metal (1998), sulfur [Frasch (1998-1999)]	XX	158,000	XX	58,400	XX	44,900
Total	XX	1,830,000 r/	XX	1,870,000 r/	XX	1,950,000
Utah:						
Beryllium concentrates	metric tons	6,080	7	5,070	6	4,510
Clays, common		298	4,760	327	4,600	335
Gemstones		NA	W	NA	1,040	NA
Salt		1,770	68,100	1,890	92,000	2,110
Sand and gravel, construction		46,300	140,000	39,500	125,000	30,900
Stone, crushed		6,970 r/	35,900 r/	8,780	45,300	8,520
Combined values of cement ( portland), clays (bentonite), copper, gold, gypsum (crude), helium (grade-A), lime, magnesium compounds, magnesium metal, mercury (1998), molybdenum concentrates, perlite (crude), phosphate rock, potash, silver, stone [dimension quartz and sandston (1999-2000)], and value indicated by symbol W		XX	1,090,000	XX	1,060,000 r/	XX
Total		XX	1,340,000	XX	1,330,000 r/	XX
Vermont:						
Gemstones		NA	1	NA	1	NA
Sand and gravel, construction		4,940	21,200	4,430	18,800	4,140
Stone:						
Crushed		5,590	28,500	5,400	22,800	5,210
Dimension	metric tons	93,300	24,500	98,600	25,600	103,000
Talc	do.	W	(6/)	W	(6/)	W
Total		XX	74,200	XX	67,200	XX
Virginia:						
Clays, common		872	3,310	881	3,240	1,010
Kyanite e/		90	13,200	90	12,700	90
Lime		859	51,700	W	W	W
Sand and gravel, construction		11,900	54,800	11,300	53,800	12,100
Stone:						
Crushed		65,900	390,000	66,400	389,000	68,800
Dimension	metric tons	5,430	600	5,640	624	W
Titanium, ilmenite	do.	W	W	139,000	13,900	139,000

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	1998		1999		2000	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Virginia--Continued:</b>						
Combined values of cement (portland), clays (fuller's earth), feldspar, gypsum [crude (1998-1999)], iron oxide pigments (crude), mica [crude (2000)], sand and gravel (industrial), vermiculite, zirconium concentrates, and values indicated by symbol W	XX	122,000	XX	176,000	XX	193,000
Total	XX	636,000	XX	650,000	XX	710,000
<b>Washington:</b>						
Cement, portland	1,200	95,500 e/	W	W	W	W
Clays, common	178	W	110	W	116	425
Gemstones	NA	24	NA	34	NA	37
Gold 3/ kilograms	3,540	33,600	3,250	29,200	2,930	26,400
Sand and gravel, construction	45,700	214,000	43,800	227,000	41,800	221,000
Silver 3/ metric tons	1	111 r/	W	W	2	250
Stone, crushed	19,400	111,000	19,300 r/	146,000	18,900	122,000
Combined values of cement [masonry (1998)], diatomite, gypsum [crude (1999-2000)], lime, magnesium metal, olivine, peat, sand and gravel (industrial), stone (dimension miscellaneous), and values indicated by symbol W	XX	156,000	XX	260,000	XX	237,000
Total	XX	609,000	XX	662,000	XX	607,000
<b>West Virginia:</b>						
Clays, common	231	515	336	813	199	560
Gemstones	NA	1	NA	1	NA	1
Sand and gravel, construction	1,650	8,050	1,850	9,030	1,980	9,800
Stone, crushed 5/	12,300	68,100	12,500 r/	56,500 r/	12,100	52,800
Combined values of cement, lime, peat, salt, sand and gravel (industrial), stone (crushed dolomite and dimension sandstone)	XX	93,000	XX	104,000	XX	109,000
Total	XX	170,000	XX	171,000 r/	XX	172,000
<b>Wisconsin:</b>						
Gemstones	NA	5	NA	6	NA	6
Lime	582	35,400	618	37,000	619	37,000
Peat	W	(6/)	W	(6/)	W	(6/)
<b>Sand and gravel:</b>						
Construction	34,700	116,000	35,700	128,000	39,600	150,000
Industrial	1,750	34,500	1,730	32,000	1,790	36,200
Silica stone 7/ metric tons	W	(6/)	W	(6/)	W	(6/)
<b>Stone:</b>						
Crushed	31,200	127,000	33,800 r/	135,000 r/	33,700	137,000
Dimension metric tons	77,100	10,800	85,500	13,400	93,100	11,700
Total	XX	323,000	XX	345,000 r/	XX	372,000
<b>Wyoming:</b>						
Clays, bentonite	3,150	145,000	3,370	146,000	3,080	126,000
Gemstones	NA	14	NA	12	NA	12
Sand and gravel, construction	4,770	18,100	4,410	17,200	6,340	23,800
Stone, crushed	5,580	31,600	6,970	27,600	6,250	26,100
Zeolites metric tons	(6/)	NA	--	--	--	--
Combined values of cement (portland), clays (common), gypsum (crude), helium (grade-A), lime, soda ash	XX	879,000	XX	814,000	XX	802,000
Total	XX	1,070,000	XX	1,000,000	XX	978,000
<b>Undistributed:</b>						
Connecticut, Delaware, Hawaii (2000), Maryland (1999-2000), Massachusetts (2000), Nebraska (1998-2000), New Hampshire, New Jersey (2000), Pennsylvania (1999-2000), Rhode Island, Vermont, Wisconsin, undistributed (1998, 2000)	XX	98,200	XX	64,300	XX	157,000

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	1998		1999		2000		
	Quantity	Value	Quantity	Value	Quantity	Value	
<b>Puerto Rico:</b>							
Cement, portland	metric tons	1,590	W	W	W	1,660	W
Clays, common		W	W	159	W	141	458
Lime		37	4,800	27	3,770	16	2,750
Salt		45	1,500	45	1,500	45	1,500
Stone, crushed		12,700	58,600	13,200	56,800	10,800	51,000
Combined values of sand and gravel (industrial), and stone (dimension marble), and values indicated by symbol W		XX	156,000	XX	178,000	XX	193,000
Total		XX	221,000	XX	240,000	XX	249,000
<b>Administered Islands:</b>							
American Samoa, stone, crushed		W	(3/)	W	(3/)	--	--
Guam, stone, crushed		1,850	14,100	1,740	11,800	121	856
Virgin Islands, stone, crushed limestone and traprock		W	(3/)	W	(3/)	W	(3/)
Total		XX	14,100	XX	11,800	XX	856

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	1999		2000		
	Quantity	Value	Quantity	Value	
<b>Metals:</b>					
<b>Aluminum:</b>					
Crude and semicrude	metric tons	1,640,000	3,530,000	1,760,000	3,880,000
Manufactures	do.	106,000	374,000	100,000	388,000
<b>Antimony:</b>					
Metal, alloys, waste and scrap	do.	473	1,810	1,080	2,820
Oxide, antimony content	do.	3,190	10,000	6,040	14,200
Arsenic metal	do.	1,350	4,650	41	5,620
<b>Bauxite and alumina:</b>					
Alumina, calcined equivalent		1,230	435,000	1,090	452,000
<b>Bauxite:</b>					
Calcined, refractory and other grade		34	6,570	9	1,800
Crude and dried		115	10,100	133	8,950
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	38,800	29,300	32,800	29,200
Beryllium, alloys, wrought or unwrought, and waste and scrap	kilograms	39,600	6,770	33,900	5,410
Bismuth, metal, alloys, and waste and scrap, bismuth content	do.	257,000	2,000	491,000	4,840
<b>Cadmium:</b>					
Metal, includes alloys and scrap	do.	20,400	523	312,000	1,140
Sulfide, gross weight	do.	107,000	28	1,110,000	607
<b>Chromium:</b>					
Chemicals	metric tons	41,800	55,600	37,200	60,400
Chromite ore and concentrate	do.	110,000	8,580	138,000	10,200
Metals, alloys, ferroalloys	do.	8,160	22,100	39,000	34,300
Pigments and preparations	do.	1,470	6,200	1,040	5,340
<b>Cobalt:</b>					
<b>Metal:</b>					
Unwrought, powders, waste and scrap, mattes, other intermediate products of metallurgy	do.	1,100	34,000	1,520	54,500
Wrought and cobalt articles	do.	546	26,400	971	37,800
Oxides and hydroxides	do.	521	8,140	1,320	11,700
Other forms, acetates and chlorides	do.	307	3,100	676	3,650

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	1999		2000		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Columbium (niobium) and tantalum:					
Columbium:					
Ferrocolumbium	metric tons	166	1,110	60	526
Ores and concentrates	do.	12	566	55	830
Tantalum:					
Ores and concentrates, includes synthetic	do.	317	7,280	354	11,600
Unwrought, alloys, metal, powders, waste and scrap	do.	418	65,000	429	99,200
Wrought	do.	132	43,500	139	47,500
Copper:					
Scrap, alloyed and unalloyed	do.	315,000	366,000	486,000	536,000
Semimanufactures	do.	150,000 r/	473,000 r/	188,000	638,000
Unmanufactured, does not include unalloyed scrap, copper content	do.	146,000 r/	204,000 r/	255,000	398,000
Ferroalloys not listed elsewhere:					
Ferrophosphorous	do.	1,100	699	4,510	3,110
Ferrotitanium and ferrosilicon-titanium	do.	1,210	2,650	1,090	2,990
Ferrozirconium	do.	51	155	213	482
Ferroalloys, other	do.	3,370	6,030	3,020	6,380
Gold:					
Bullion, refined	kilograms	435,000	3,880,000	440,000	4,030,000
Compounds	do.	561,000	14,100	1,390,000	15,300
Doré and precipitates	do.	87,300	778,000	106,000	924,000
Metal powder	do.	270	2,800	1,130	10,700
Ores and concentrates	do.	117	1,180	745	9,680
Waste and scrap	do.	40,000	302,000	64,100	700,000
Indium e/	metric tons	25	5,500	15	3,300
Iron and steel:					
Cast iron and steel products		203	447,000	202	445,000 e/
Fabricated steel products		1,120	3,640,000	1,050	3,410,000 e/
Steel mill products		4,920	4,260,000	5,920	5,120,000 e/
Iron and steel scrap:					
Direct-reduced iron, steelmaking grade		3	302	2	241
Ferrous, includes tinplate and ternplate, excludes used rails for rerolling and other uses, ships, boats, other vessels for scrapping		5,520	738,000	5,760	1,000,000
Pig iron, all grades		83	11,100	72	9,620
Ships, boats, other vessels for scrapping		7	2,610	11	153
Used rails for rerolling and other uses, includes mixed (new plus used) rails		34 r/	14,300	40	15,600
Iron ore		6,120	243,000	6,150	246,000
Lead, lead content:					
Ash and residues	metric tons	1,430	2,000	11,300	18,400
Base bullion	do.	64,100	76,200	32,100	75,300
Ore and concentrate	do.	93,500	33,400	117,000	42,600
Scrap, gross weight	do.	117,000	22,000	71,600	13,200
Unwrought and alloys	do.	23,400	17,700	21,400	23,800
Wrought and alloys	do.	13,900	38,500	27,200	57,600
Magnesium:					
Alloys, gross weight	do.	2,760	11,300	6,020	23,300
Metal	do.	4,790	14,600	7,300	20,200
Powder, sheets, tubing, ribbons, wire, other forms, gross weight	do.	4,990	20,200	4,060	24,000
Waste and scrap	do.	16,500	46,500	6,400	17,500
Manganese:					
Ferromanganese, all grades	do.	11,600	6,510	7,950	5,290
Metal, including alloys, waste and scrap	do.	3,540	7,940	2,220	5,020
Ore and concentrates with 20% or more manganese	do.	4,170	651	10,000	2,200
Silicomanganese	do.	3,700	2,180	1,870	1,200
Mercury	do.	181	1,120	178	2,040
Molybdenum, molybdenum content:					
Ferromolybdenum	do.	1,510	12,400	1,230	9,940
Ore and concentrates, including roasted and other	do.	27,900	129,000	23,600	104,000
Oxides and hydroxides, gross weight	do.	1,130	8,510	1,190	8,560
Molybdates, all	do.	1,300	7,050	1,080	7,530
Powder, gross weight	do.	362	7,540	300	6,940

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	1999		2000		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Molybdenum, molybdenum content--Continued:					
Unwrought, gross weight	metric tons	167	2,430	228	3,550
Wire, gross weight	do.	200	13,900	150	9,300
Wrought, gross weight	do.	147	8,050	185	9,610
Nickel, nickel content:					
Alloyed, gross weight	do.	27,300	371,000	28,700	433,000
Unwrought:					
Primary and chemicals, includes carbonate	do.	7,440	140,000	8,150	124,000
Secondary	do.	31,400	192,000	49,900	371,000
Wrought	do.	922	11,500	1,410	23,700
Platinum-group metals, metal content:					
Iridium, osmium, ruthenium	kilograms	851	11,200	1,480	17,200
Palladium	do.	43,800 r/	271,000 r/	58,600	518,000
Platinum	do.	27,100	520,000	32,400	505,000
Rhodium	do.	114	5,310	797	50,800
Rare-earths, estimated REO content:					
Cerium compounds	do.	3,960,000	18,400	4,050,000	19,000
Compounds	do.	1,690,000	19,600	1,760,000	24,700
Ferrocerium and other pyrophoric alloys	do.	2,360,000	10,700	2,300,000	7,620
Metals, including scandium and yttrium	do.	1,600,000	5,280	1,650,000	9,830
Selenium, metal, waste and scrap, selenium content	do.	233,000	1,900	82,100	583
Silicon, gross weight:					
Ferrosilicon	metric tons	46,600	40,100	43,300	41,900
Metal	do.	37,700	281,000	18,900	334,000
Silver, silver content:					
Bullion	kilograms	481,000	84,400	279,000	46,100
Doré	do.	64,400	11,400	36,000	6,440
Metal powder, gross weight	do.	324,000	55,100	424,000	89,700
Nitrate, gross weight	do.	62,500	7,330	217,000	29,400
Ores and concentrates	do.	70,800	14,200	65,100	9,110
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	122,000	28,700	148,000	35,200
Waste and scrap, gross weight	do.	1,310,000	223,000	1,670,000	377,000
Unwrought, other, gross weight	do.	75,100	14,400	57,500	11,500
Thorium and thorium-bearing materials, compounds	do.	2,520	318	4,640	478
Tin:					
Ingots and pigs	metric tons	6,770	38,100	6,640	35,300
Tin scrap and other tin bearing material, except tinplate scrap, includes rods, profiles, wire, powders, flakes, tubes, pipes	do.	33,200	56,100 r/	26,200	48,800
Tinplate and terneplate	do.	290,000	172,000	300,000	163,000
Titanium:					
Metal:					
Wrought, bars, rods, other	do.	5,260	239,000	5,380	253,000
Unwrought:					
Sponge and waste and scrap	do.	8,940	17,500	6,990	24,100
Other, billet, blooms, sheet bars, ingot	do.	2,470	58,400 r/	3,200	82,500
Ores and concentrates	do.	9,380	5,350	18,900	7,920
Pigments, dioxide and oxides	do.	384,000	627,000	464,000	784,000
Tungsten, tungsten content:					
Ammonium paratungstate	do.	103	911	53	489
Carbide powder	do.	701	16,900	969	19,000
Metal powders	do.	711	19,000	467	17,000
Miscellaneous tungsten-bearing materials, ferrotungsten, ferrosilicon tungsten, unwrought, waste and scrap, wrought, other metal, compounds	do.	1,340	33,900	1,310	35,400
Ores and concentrates	do.	26	826	70	2,050
Vanadium:					
Aluminum-vanadium master alloy, gross weight	kilograms	514,000	6,440	667,000	9,120
Ferrovandium, vanadium content	do.	213,000	3,180	172,000	2,360
Metal, including waste and scrap, gross weight	do.	177,000	3,200	105,000	1,680
Pentoxide, anhydride, vanadium content	do.	747,000	4,270	653,000	3,360
Other oxides and hydroxides, vanadium content	do.	69,700	656	99,800	741

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	1999		2000		
	Quantity	Value	Quantity	Value	
<b>Metals--Continued:</b>					
<b>Zinc:</b>					
Compounds, chloride, compounds, n.s.p.f., oxide, sulfate	metric tons	16,100	20,100	22,600	55,200
Ores and concentrates, zinc content	do.	531,000	317,000	523,000	298,000
Slab	do.	1,880	2,220	2,770	3,380
Rolled	do.	3,870	5,500	3,530	5,350
<b>Zirconium:</b>					
Ore and concentrates	do.	69,500	27,300	72,900	34,000
Oxide, includes germanium oxides and zirconium oxides	do.	1,680	14,100	2,220	18,600 e/
Unwrought and waste and scrap	do.	156	3,160	180	3,620
Total		XX	24,600,000 r/	XX	28,200,000
<b>Industrial minerals:</b>					
<b>Abrasives, manufactured:</b>					
Aluminum oxide, crude	metric tons	9,020	20,400	9,020	23,500
Boron carbide	do.	17	652	29	481
Metallic abrasives	do.	26,600	17,900	28,900	18,600
Silicon carbide, crude, ground and refined	do.	8,560 r/	10,900 r/	10,000	11,500
<b>Asbestos, includes reexports:</b>					
Manufactured		NA	237,000	NA	288,000
Unmanufactured	metric tons	21,700	7,960	18,800	7,220
Barite, natural barium sulfate	do.	21,800	2,750	36,300	4,180
<b>Boron minerals and compounds:</b>					
Boric acid, includes orthoboric and anhydrous		107	56,700	119	64,400
Sodium borates		370	180,000	413	136,000
<b>Bromine:</b>					
Compounds, includes methyl bromine and ethylene dibromide, contained bromine	metric tons	8,020	16,000	7,740	26,200
Elemental	do.	2,110	2,430	1,870	2,560
Cement, hydraulic and clinker		694	55,200	738	64,200
<b>Clays:</b>					
Ball		107	6,080	100	8,660
Bentonite		719	75,300	761	80,300
Fire		189	16,500	216	18,600
Fuller's earth		152	24,600	136	25,000
Kaolin		3,310	567,000	3,690	621,000
Other, n.e.c., includes chamotte or dinas earth, activated clays and earths, artificially activated clays		329	133,000	357	142,000
Diamond, includes reexports, excludes industrial diamond	thousand carats	5,440	3,080,000	16,300	3,980,000
<b>Diamond, industrial (exports and reexports):</b>					
Powder, dust and grit, natural and synthetic	do.	101,000	68,100	100,000	71,800
Stones, unworked	do.	3,970	36,700	3,620	34,600
Diatomite		123	39,700	131	40,800
Feldspar	metric tons	9,880 r/	1,160	11,400	1,490
Fluorspar	do.	55,400	6,970	39,800	5,330
Garnet, industrial e/		10	5,000	10	5,000
Graphite, natural and artificial 2/	metric tons	102,000	82,800	94,100	96,500
<b>Gypsum and gypsum products:</b>					
Boards		52	22,900	58	27,100
Crude		112	11,000	161	12,600
Plasters		588	32,000	248	30,200
Other		XX	27,400	XX	32,200
Helium, grade-A	million cubic meters	27	47,400	37	66,000
Iodine, crude/resublimed and potassium iodide	metric tons	1,130	18,000	1,130	15,000
<b>Iron oxide pigments and hydroxides:</b>					
Pigment grade	do.	13,800	15,200	9,640	17,200
Other grade	do.	30,100	59,800	30,900	46,500
Lime		59	8,270 r/	73	9,960
<b>Lithium chemicals:</b>					
Carbonate	metric tons	2,710	9,670	2,770	9,630
Hydroxide	do.	4,940	21,200	4,780	31,100

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	1999		2000		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Magnesium compounds:					
Compounds, chlorides, hydroxide and peroxide, sulfates	metric tons	28,900	12,300	31,800	29,600
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	3,190	1,680	11,600	8,470
Crude	do.	28,900	3,520	29,500	3,460
Dead-burned and fused magnesia	do.	66,700	25,200	59,800	22,400
Other magnesia	do.	15,800	13,300	21,400	19,000
Mica:					
Scrap and flake:					
Powder	do.	7,320	4,010	8,880	4,610
Waste	do.	3,950	1,290	1,380	383
Sheet:					
Unworked	do.	452	2,150	209	343
Worked	do.	840	16,600	1,070	17,100
Peat		40	4,310	37	3,490
Perlite, processed and expanded e/	metric tons	47,000	1,570	43,000	1,450
Phosphate rock		272	11,400	299	12,100
Pumice and pumicite		23	10,100	27	15,300
Salt		892	37,000	642	37,800
Sand and gravel:					
Construction:					
Gravel		378	7,080	270	3,030
Sand		1,270	20,800	2,140	21,200
Industrial		1,670	133,000	1,660	179,000
Silica:					
Quartz crystal, cultured, electronic- and optical-grade	metric tons	90	25,400	74	22,800
Special silica stone products		NA	6,400	NA	6,400
Soda ash		3,620	447,000	3,900	477,000
Stone:					
Crushed		4,120	30,800	4,020	29,700
Dimension		XX	54,500	XX	59,800
Strontium:					
Carbonate, precipitated	metric tons	3,860	2,470	6,320	4,250
Oxide, hydroxide, peroxide	do.	854	470	862	466
Sulfur:					
Elemental		685	35,800	762	53,700
Sulfuric acid, 100% H <sub>2</sub> SO <sub>4</sub>	metric tons	155,000	16,800	191,000	15,800
Talc, excludes powders, talcum in (package), face, compact		147	27,200	154	32,800
Vermiculite e/		13 r/	1,640 r/	5	590
Wollastonite e/		20,000	8,000	7,000	2,800
Zeolites e/	metric tons	500 r/	100	200	40
Total		XX	5,990,000 r/	XX	7,160,000
Grand total		XX	30,600,000 r/	XX	35,300,000

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/ 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	1999		2000		
	Quantity	Value	Quantity	Value	
Metals:					
Aluminum:					
Crude and semicrude	metric tons	4,000,000	6,200,000	3,910,000	6,860,000
Manufactures	do.	191,000	452,000	211,000	538,000
Antimony:					
Metal	do.	14,800	18,500	14,200	19,100

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	1999		2000		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Antimony--Continued:					
Ore and concentrate, antimony content	metric tons	2,870	3,350	3,690	4,250
Oxide, antimony content	do.	19,100	28,900	23,700	36,500
Arsenic:					
Acid	do.	4	24	--	--
Metal	do.	1,300	8,390	830	9,800
Trioxide	do.	29,100	14,700	31,100	15,500
Bauxite and alumina:					
Alumina, calcined equivalent		3,810	845,000	3,820	933,000
Bauxite:					
Calcined, refractory and other grade		299	28,000	310	26,600
Crude and dried		9,890	281,000	8,550	193,000
Speciality aluminum compounds, sulfate, chloride, fluoride-based	metric tons	51,200	31,500	46,700	26,000
Beryllium, ore, metal, and compounds	kilograms	136,000	2,620	164,000	3,260
Bismuth, metallic	do.	2,110,000	15,300	2,410,000	19,100
Cadmium:					
Metal	do.	294,000	848	425,000	1,510
Sulfide, gross weight	do.	18,400	95	45,400	169
Chromium:					
Chemicals	metric tons	22,900	39,600	29,100	27,300
Chromite ore	do.	252,000	15,700	268,000	17,100
Ferrochromium, metals, alloys	do.	649,000	334,000	608,000	339,000
Pigments and preparations based on chromium	do.	9,590	30,000	10,200	32,100
Cobalt:					
Metal:					
Alloys, articles, matte, wrought, waste and scrap	do.	819	22,600	1,120	29,300
Unwrought, excluding alloys and waste and scrap	do.	6,800	229,000	7,210	213,000
Oxide and hydroxides	do.	1,260	33,700	1,540	37,100
Other forms, includes acetates, carbonates, chlorides, sulfates	do.	1,610	12,400	1,710	11,000
Columbium (niobium) and tantalum:					
Columbium:					
Ferrocolumbium	do.	6,850	62,200	6,770	62,100
Ores and concentrates	do.	95	1,620	151	1,680
Oxide	do.	1,720 r/	30,600	1,700	29,200
Unwrought, alloys, metals, powder	do.	468	13,500	606	16,900
Tantalum:					
Ores and concentrates	do.	992	33,600	2,080	74,800
Unwrought, alloys, metal, powders, waste and scrap	do.	997	68,400	1,060	104,000
Wrought	do.	56	13,600	43	14,900
Copper:					
Scrap, alloyed and unalloyed	do.	108,000	168,000 r/	112,000	186,000
Semimanufactures	do.	313,000 r/	672,000 r/	397,000	1,000,000
Unmanufactured, does not include unalloyed scrap, copper content	do.	1,170,000	1,910,000	1,250,000	2,400,000
Ferroalloys not listed elsewhere:					
Ferrophosphorus	do.	10,600	3,050	13,000	3,310
Ferrotitanium and ferrosilicon-titanium	do.	4,750	8,620	6,050	15,900
Ferrozirconium	do.	100	173	281	548
Ferroalloys, other	do.	32,000	46,600	31,400	42,400
Gallium, unwrought and waste and scrap	kilograms	24,100	10,400	39,400	18,400
Germanium materials, gross weight	do.	12,400	10,400	8,210	9,240
Gold:					
Ash and residues	do.	133	1,760	60	1,800
Bullion, refined	do.	196,000	1,790,000	184,000	1,680,000
Compounds	do.	9,400	59,700	7,970	60,500
Doré and precipitates	do.	24,700	210,000	39,000	292,000
Metal powder	do.	5,500	48,700	6,720	58,800
Ores and concentrates	do.	117	1,130	65	636
Waste and scrap	do.	30,500	94,100	29,800	71,200
Indium, unwrought and waste and scrap	do.	77,400	14,500	69,400	9,620
Iron and steel:					
Cast iron and steel products		505	410,000	557	453,000 e/

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	1999		2000	
	Quantity	Value	Quantity	Value
Metals--Continued:				
Iron and steel--Continued:				
Fabricated steel products	4,020	5,780,000	4,240	6,090,000 e/
Stainless steel	metric tons	696,000	1,680,000	757,000
Steel mill products	32,400	12,600,000	34,400	13,400,000 e/
Iron and steel scrap:				
Direct-reduced iron, steelmaking grade	950	86,500	1,090	119,000
Ferrous, includes tinplate and ternplate, excludes used rails for rerolling and other uses, ships, boats, other vessels for scrapping	3,670	383,000	3,350	385,000
Pig iron, all grades	4,990	527,000	4,970	601,000
Ships, boats, other vessels for scrapping	(2/)	189	--	--
Used rails for rerolling and other uses, includes mixed (new plus used), rails	348	43,900	271	34,100
Iron ore	14,300	399,000	15,700	420,000
Lead, lead content:				
Base bullion	metric tons	90	58	65
Ore and concentrates	do.	12,300	3,100	31,200
Pigments and compounds, gross weight	do.	37,700	56,100	40,300
Pigs and bars	do.	311,000	175,000	356,000
Scrap, reclaimed, includes ash and residues	do.	--	--	25
Wrought, all forms, including wire and powders, gross weight	do.	11,800	18,300	9,200
Magnesium:				
Alloys, magnesium content	do.	56,500	180,000	56,300
Metal	do.	26,900	78,000	22,900
Powder, sheets, tubing, ribbons, wire, other forms, magnesium content	do.	594	2,260 r/	2,300
Waste and scrap	do.	6,780	7,690	9,890
Manganese, manganese content:				
Chemicals, manganese dioxide and potassium permanganate, gross weight	do.	42,600	61,200	52,700
Ferromanganese, all grades	do.	245,000	149,000	246,000
Metal, unwrought, waste and scrap, other, gross weight	do.	15,100	22,900	16,200
Ore and concentrates with 20% or manganese, all grades	do.	224,000	37,200 r/	227,000
Silicomanganese	do.	202,000	121,000	252,000
Mercury	do.	62	301	103
Molybdenum, molybdenum content:				
Ferromolybdenum	do.	5,160	37,300	5,310
Molybdates, all	do.	813	7,380	1,550
Ore and concentrates, roasted and other	do.	6,390	35,700	6,120
Oxides and hydroxides, gross weight	do.	746	5,100	1,210
Powders	do.	106	3,240	125
Unwrought	do.	13	542	16
Wire, gross weight	do.	8	638	17
Other, orange, mixtures of inorganic compounds, waste and scrap, other, gross weight	do.	2,030	14,500	2,100
Nickel, nickel content:				
Alloyed, gross weight	do.	13,300	184,000	19,000
Unwrought:				
Primary and chemicals, excludes carbonate	do.	139,000	854,000	156,000
Secondary	do.	9,480	54,800	10,700
Wrought	do.	1,090	17,900	992
Platinum-group metals, metal content:				
Iridium, unwrought and other forms	kilograms	2,250 r/	25,100	2,700
Osmium, unwrought	do.	23	272	133
Palladium, unwrought and other	do.	189,000	2,090,000	182,000
Platinum	do.	125,000 r/	1,150,000	94,000
Rhodium, unwrought and other forms	do.	10,300 r/	274,000 r/	18,200
Ruthenium, unwrought	do.	11,400	14,700	20,900
Rare-earths, estimated REO content:				
Cerium compounds, including oxides, hydroxides, nitrates, sulfate chlorides, oxalates	do.	3,990,000	26,200	4,310,000
Compounds, including oxides, hydroxides, nitrates, other compounds except chlorides	do.	7,760,000	71,600	11,200,000
Ferrocerium and other pyrophoric alloys	do.	120,000	1,920	118,000
Metals, whether intermixed or alloyed	do.	1,780,000 r/	18,500	2,470,000

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	1999		2000		
	Quantity	Value	Quantity	Value	
Metals--Continued:					
Rare-earths, estimated REO content--Continued:					
Mixtures of rare-earth chlorides, except cerium chloride	kilograms	1,530,000	6,960	1,330,000	3,980
Mixtures of rare-earth oxides except cerium oxide	do.	5,980,000	15,500	2,190,000	9,530
Yttrium compounds content by weight greater than 19% but less than 85% oxide equivalent	do.	161,000	3,200	58,400	2,590
Rhenium:					
Ammonium perrhenate	do.	2,750	1,670	7,450	3,830
Metal	do.	12,800	14,000	10,700	10,800
Selenium and tellurium:					
Selenium, selenium content:					
Unwrought and waste and scrap	do.	311,000	3,110	452,000	2,670
Selenium dioxide	do.	15,700	160	24,300	186
Tellurium, unwrought, and waste and scrap, gross weight	do.	38,000	1,440	52,300	1,800
Silicon, gross weight:					
Ferrosilicon	metric tons	246,000	160,000	322,000	193,000
Metal	do.	116,000	235,000	133,000	249,000
Silver, silver content:					
Ash and residues	kilograms	101,000	8,970	55,800	7,340
Bullion	do.	2,660,000	453,000	3,810,000	629,000
Doré	do.	407,000 r/	81,600	73,900	17,600
Metal powder, gross weight	do.	120,000	26,400	235,000	46,500
Nitrate, gross weight	do.	4,480 r/	364	24,200	1,770
Ore and concentrates:					
Base metal	do.	2,750	440	--	--
Silver	do.	10,800	1,970	1,420	229
Semimanufactured forms containing 99.5% or more by weight of silver, gross weight	do.	137,000 r/	23,900 r/	140,000	25,800
Waste and scrap, gross weight	do.	1,640,000	123,000 r/	1,130,000	134,000
Unwrought, other, gross weight	do.	126,000	22,200	204,000	37,200
Thallium, unwrought, waste and scrap, powders	do.	838	139	100	24
Thorium and thorium-bearing materials, compounds	do.	5,290	280	11,100	528
Tin, gross weight:					
Compounds	metric tons	411	3,550	586	4,740
Dross, skimmings, scrap, residues, alloys, n.s.p.f.	do.	3,870	7,840	5,170	17,700
Metal, unwrought	do.	47,500	255,000	44,900	244,000
Miscellaneous, includes tinfoil, tin powder, flitters, metallics, manufactures, n.s.p.f.	do.	NA	4,830	NA	5,680
Tinplate and terneplate	do.	449,000	255,000	359,000	206,000
Tinplate scrap	do.	58,000	5,270	14,500	1,660
Titanium:					
Concentrates:					
Ilmenite	do.	391,000	32,800	386,000	37,200
Rutile, natural and synthetic	do.	344,000	140,000	438,000	169,000
Slag	do.	678,000	265,000	533,000	219,000
Titaniferous iron ore	do.	10,700	2,620	88,200	4,890
Pigments, dioxides and oxides	do.	225,000	406,000	218,000	389,000
Metal:					
Unwrought:					
Ingots and billets	do.	1,380	20,400	1,540	23,200
Other, includes blooms, sheet, bars, slabs, other unwrought	do.	10	423	23	398
Powder	do.	224	1,170	250	2,610
Sponge	do.	6,000	42,200	7,240	49,900
Waste and scrap	do.	6,870	19,500	7,550	24,100
Wrought products, bars, castings, foil, pipes, plates, profiles, rods, sheet, strip, tubes, wire, other	do.	2,910	74,100	2,900	60,600
Tungsten, tungsten content:					
Ammonium paratungstate	do.	1,920	10,200	2,270	13,400
Ferrotungsten and ferrosilicon tungsten	do.	669	3,760	470	2,600
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.	5,650	62,700	5,070	69,100

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	1999		2000		
	Quantity	Value	Quantity	Value	
<b>Metals--Continued:</b>					
<b>Tungsten, tungsten content--Continued:</b>					
Ores and concentrates	metric tons	2,870	12,400	2,370	11,100
<b>Vanadium:</b>					
Aluminum-vanadium master alloy, gross weight	kilograms	1,210,000	1,680	16,400	83
Ferrovandium, vanadium content	do.	1,930,000	20,700	2,510,000	24,900
Metal, including waste and scrap, gross weight	do.	30,400	779	44,800	939
Miscellaneous chemicals, sulfates and vanadates, vanadium content	do.	174,000	1,650	149,000	1,070
Pentoxide, anhydride, vanadium content	do.	208,000	1,920	902,000	6,260
Vanadium-bearing ash, residues, slag from the manufacture of iron and steel, vanadium pentoxide content	do.	2,950,000	8,680	3,380,000	3,860
Other oxides and hydroxides, vanadium content	do.	--	--	13,500	231
<b>Zinc:</b>					
Compounds, lithopone, chloride, compounds n.s.p.f., hydrosulfite, oxide, sulfate	metric tons	78,700	75,800	87,400	83,800
Ore and concentrates, zinc content	do.	74,600	40,500	52,800	26,900
Rolled	do.	22,600	26,200	9,380	13,300
Slab, refined	do.	966,000	966,000	915,000	1,100,000
<b>Zirconium and hafnium:</b>					
Hafnium, unwrought, and waste and scrap	do.	9	1,770	11	2,240
Zirconium, ore and concentrates	do.	57,600	17,900	65,200	25,800
Zirconium oxide, includes germanium oxides and zirconium oxides	do.	3,140	27,800	3,950	35,000 e/
Zirconium, unwrought and waste and scrap	do.	859	46,700	1,040	52,700
Total		XX	45,700,000	XX	51,900,000
<b>Industrial minerals:</b>					
<b>Abrasives, manufactured:</b>					
Aluminum oxide, crude, ground and refined	metric tons	166,000	78,500	227,000	99,900
Boron carbide	do.	342	7,600	277	6,970
Metallic abrasives	do.	30,100	15,200 r/	33,500	17,600
Silicon carbide, crude, ground and refined	do.	169,000	79,500	190,000	94,300
Asbestos, chrysotile, crocidolite, other unspecified fibers	do.	15,800	3,150	14,600	2,510
<b>Barite:</b>					
Chemicals	do.	48,800	36,800	51,800	37,500
Crude	do.	836,000	43,500	2,070,000	92,400
Ground	do.	17,200	1,250	16,200	1,660
Other sulfates of	do.	17,500	14,300	15,400	14,000
<b>Boron minerals and compounds:</b>					
Borax		8	2,840	1	716
Boric acid		30	14,000	39	17,500
Colemanite		42	13,100	26	7,410
Ulexite		178	35,700	127	31,800
<b>Bromine:</b>					
Compounds, contained bromine	metric tons	7,140	31,200	14,500	31,100
Elemental	do.	1,970	2,110	5,470	3,730
Cement, hydraulic and clinker		29,400	1,140,000	28,700	1,070,000
<b>Clays:</b>					
Artificially activated clay and activated earth	metric tons	17,500	7,530	17,600	8,920
Bentonite	do.	8,930	2,990	8,470	2,930
Chamotte or dina's earth	do.	--	--	2	11
China clay or kaolin	do.	57,200	10,600	62,500	19,500
Common blue clay and other ball clay	do.	827	199	504	152
Decolorizing earths and fuller's earth	do.	398	19	70	12
Fire clay	do.	260	93	73	28
Other clay	do.	5,250	1,560	6,220	3,310
<b>Diamond, industrial:</b>					
Diamond stones, natural and miners'	thousand carats	3,130	14,300	2,520	13,400
Powder, dust and grit, natural and synthetic	do.	208,000	92,300	291,000	112,000
Diatomite	metric tons	387	332	529	316
<b>Feldspar and nepheline syenite:</b>					
Feldspar	do.	6,840	757	7,220	726
Nepheline syenite	do.	311,000	23,200	356,000	24,800

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	1999		2000		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Fluorspar:					
Aluminum fluoride	metric tons	19,300	16,700	21,500	17,300
Cryolite	do.	9,560	7,160	9,190	6,730
Fluorspar	do.	478,000	56,900 r/	523,000	65,200
Hydrofluoric acid, HF	do.	120,000	120,000	131,000	131,000
Garnet, industrial e/		12	1,440	23	2,760
Gemstones, excludes pearls		XX	10,700,000	XX	12,900,000
Graphite:					
Natural	metric tons	55,800	34,700	60,800	32,500
Electric furnace electrodes	do.	62,800	135,000	60,900	128,000
Gypsum:					
Boards		1,710	294,000	783	113,000
Crude		9,340	88,900	9,210	89,300
Plasters		14	3,470	15	3,920
Other		XX	79,300	XX	62,600
Iodine, crude and potassium iodide	metric tons	5,430	88,100	5,270	77,000
Iron oxide pigments:					
Natural	do.	7,450	3,710	7,340	3,410
Synthetic	do.	77,600	69,300	84,000	73,300
Kyanite and related materials, andalusite	do.	6,290	1,320	6,440	1,320
Lime		140 r/	15,700 r/	113	13,500
Lithium chemicals:					
Carbonate	metric tons	13,800	20,800	14,800	23,800
Hydroxide	do.	254	1,630	615	2,100
Magnesium compounds:					
Compounds, chlorides, hydroxide, peroxide, sulfates	do.	58,500	24,000	104,000	29,800
Magnesite, crude and processed:					
Caustic-calcined magnesia	do.	123,000	19,100	136,000	22,100
Crude	do.	7,900	1,720	14,600	2,830
Dead-burned and fused magnesia	do.	392,000	75,000	501,000	88,200
Other magnesia	do.	17,900	14,900	18,900	14,100
Mica:					
Scrap and flake:					
Powder	do.	20,600	11,300	22,100	12,800
Waste	do.	5,070	1,150	6,180	1,290
Sheet:					
Unworked	do.	2,770	1,520	4,400	2,040
Worked	do.	1,780	12,800	1,310	12,000
Nitrogen, major compounds, gross weight		10,600	1,410,000	12,000	1,850,000
Peat moss	metric tons	752,000	149,000	786,000	157,000
Perlite, processed	do.	144,000	4,820	180,000	6,080
Phosphate rock and phosphatic materials		2,390	162,000	2,150	144,000
Potash, chloride, nitrate, sodium nitrate mixtures, sulfate	metric tons	7,360,000	566,000	7,580,000	555,000
Pumice:					
Crude or unmanufactured		353	11,600	384	11,900
Wholly or partially manufactured		1	2,000	1	1,810
Salt		8,870	137,000	8,960	127,000
Sand and gravel:					
Construction		1,920	24,400	2,870	33,300
Industrial		211	5,590	247	11,800
Silica:					
Quartz crystal, cultured, electronic- and optical-grade	metric tons	26	11,000	31	14,300
Special silica stone products		NA	6,200	NA	3,800
Soda ash		92	11,100	75	8,570
Stone:					
Crushed, chips, calcium carbonate fines		12,300	106,000	13,000	105,000
Dimension		NA	808,000	NA	925,000
Strontium:					
Carbonate	metric tons	44,000	25,700	49,300	27,600
Metal	do.	315	1,770	307	1,310
Nitrate	do.	590	2,290	687	2,350

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	1999		2000		
	Quantity	Value	Quantity	Value	
Industrial minerals--Continued:					
Strontium--Continued:					
Oxide, hydroxide, peroxide	metric tons	267	600	192	466
Sulfate, celestite	do.	31,300	2,280	17,000	1,050
Sulfur:					
Elemental		2,580	51,600	2,330	39,400
Sulfuric acid, 100% H <sub>2</sub> SO <sub>4</sub>		1,370	62,600	1,420	41,500
Talc, unmanufactured		208	35,300	270	42,500
Vermiculite e/		71	13,300	59	11,100
Wollastonite e/		5,000	1,250	11,000	2,590
Zeolites e/	metric tons	200	40	100	20
Total		XX	17,200,000	XX	19,800,000
Grand total		XX	62,900,000 r/	XX	71,700,000

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.

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

(Thousand metric tons unless otherwise specified)

Mineral or product	1999			2000			
	World	U.S.	U.S. percent of world	World	U.S.	U.S. percent of world	
Metals:							
Mine: 2/							
Antimony	metric tons	108,000 r/	450 r/	0.4	118,000	W	NA
Arsenic trioxide 3/	do.	40,900 r/	--	--	36,900	--	--
Bauxite 3/ 4/		128,000 r/ 5/	NA	NA	135,000 5/	NA	NA
Beryl 3/	metric tons	6,220 r/	5,070	81.6 r/	5,650	4,510	79.8
Chromite 3/		14,100 r/	--	--	14,400	--	--
Cobalt	metric tons	30,600 r/	--	--	33,300	--	--
Columbium-tantalum concentrate 3/	do.	78,500 r/	--	--	79,300	--	--
Copper		12,700 r/	1,600	12.6 r/	13,200	1,440	10.9
Gold	kilograms	2,550,000 r/	341,000	13.4	2,550,000	353,000	13.9
Iron ore 3/		1,020,000 r/	57,700	5.7 r/	1,060,000	63,100	6.0
Lead		3,050 r/	520	17.0 r/	3,100	468	15.1
Manganese ore 3/		17,900 r/	--	--	20,200	--	--
Mercury	metric tons	1,630 r/ 5/	NA	NA	1,350 5/	NA	NA
Molybdenum	do.	128,000 r/	42,400 r/	33.1 r/	129,000	41,100	31.8
Nickel	do.	1,120,000	--	--	1,250,000	--	--
Platinum-group metals	kilograms	376,000 r/	12,700	3.4	365,000	13,400	3.7
Silver	metric tons	17,600 r/	1,950	11.1 r/	18,300	1,860	10.2
Tin	do.	216,000 r/	--	--	238,000	--	--
Titanium concentrates: 3/							
Ilmenite and leucosene	do.	4,160,000 r/ 5/	W	NA	4,770,000	400,000 6/	8.4
Rutile	do.	359,000 r/ 5/	W	NA	417,000 5/	(7/)	NA
Tungsten	do.	36,100 r/	--	--	37,400	--	--
Zinc		8,040	813 r/	10.1 r/	8,730	829	9.5
Refinery: 8/							
Aluminum 9/		23,600 r/	3,780	16.0 r/	24,000	3,670	15.3
Bismuth	metric tons	3,360	--	--	4,070	--	--
Cadmium	do.	19,700 r/	1,190	6.0 r/	19,700	1,890	9.6
Cobalt 9/	do.	32,400 r/	--	--	35,200	--	--
Copper		14,600 r/	2,120 r/	14.5 r/	15,000	1,790	12.0
Iron and steel:							
Direct-reduced iron 9/		38,000 r/	1,670	4.4 r/	41,900	1,560	3.7
Iron, pig 9/		538,000 r/	46,300	8.6 r/	571,000	47,900	8.4
Steel, raw		789,000 r/	97,400	12.3 r/	846,000	102,000	12.1
Lead 10/		6,130 r/	1,460	23.9 r/	6,460	1,470	22.8

See footnotes at end of table.

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

(Thousand metric tons unless otherwise specified)

Mineral or product		1999			2000		
		World	U.S.	U.S. percent of world	World	U.S.	U.S. percent of world
<b>Metals--Continued:</b>							
Magnesium	metric tons	438,000 r/	86,100 r/ 11/	19.7 r/	460,000	82,300 11/	17.9
Nickel 12/	do.	1,050,000	--	--	1,120,000	--	--
Selenium 9/	kilograms	1,400,000 r/ 5/	W	NA	1,460,000 5/	W	NA
Tellurium 9/	do.	116,000 r/ 5/	W	NA	138,000 5/	W	NA
Tin, smelter 13/	metric tons	262,000 r/	16,400 r/	6.3 r/	283,000	15,100	5.3
Zinc, smelter		8,570 r/	371	4.3 r/	9,050	371	4.1
<b>Industrial minerals:</b>							
Asbestos	metric tons	1,830,000 r/	7,190	0.4	1,900,000	5,260	0.3
Barite		6,360 r/	434 r/ 14/	6.8 r/	6,200	392 14/	6.3
Boron minerals		4,510 r/	1,220 14/	27.1 r/	4,380	1,070 14/	24.4
Bromine	metric tons	550,000 r/	239,000 14/	43.5 r/	542,000	228,000 14/	42.1
Celestite	do.	323,000 r/	--	--	318,000	--	--
Cement, hydraulic		1,600,000 r/	87,800 15/	5.5	1,640,000	89,500 15/	5.5
<b>Clays:</b>							
Bentonite		10,000 r/	4,070	40.6 r/	9,860	3,760	38.2
Fuller's earth		3,510 r/	2,560 r/	73.1 r/	3,870	2,910	75.3
Kaolin		41,100 r/	9,160	22.3 r/	41,200	8,800	21.3
Diamond, natural	thousand carats	117,000 r/	--	--	118,000	--	--
Diatomite	metric tons	1,960,000	747,000 14/	38.2 r/	1,890,000	677,000 14/	35.7
Feldspar		8,910 r/	875	9.8 r/	9,280	790	8.5
Fluorspar	metric tons	4,420,000 r/	-- 16/	--	4,520,000	-- 16/	--
Graphite, natural	do.	600,000 r/	--	--	602,000	--	--
Gypsum		106,000	22,400 r/	21.1 r/	106,000	19,500	18.5
Iodine, crude	metric tons	18,400 r/	1,620	8.8 r/	18,000	1,470	8.2
Lime		116,000 r/	19,700 r/ 14/	17.0 r/	116,000	19,600 14/ 15	16.8
Magnesite, crude		10,500 r/ 5/	W	NA	10,700 5/	W	NA
Mica, including scrap and flake 17/	metric tons	279,000 r/	95,400 r/	34.3 r/	290,000	101,000	34.9
Nitrogen, N content of ammonia		107,000 r/	12,900 r/ 18/	12.1 r/	109,000	12,300 18/	11.3
Peat		29,500 r/	731	2.5 r/	27,400	755	2.8
Perlite		1,960 r/	711 r/ 14/	36.4 r/	1,910	672 14/	35.1
Phosphate rock, gross weight		137,000 r/	40,600	29.7 r/	133,000	38,600	29.0
Potash, K <sub>2</sub> O equivalent		25,600 r/	1,200	4.7	25,300	1,300	5.1
Pumice		12,000 r/	643 14/	5.4 r/	12,000	697 14/	5.8
Salt		211,000 r/	45,000 15/	21.3 r/	214,000	45,600 15/	21.4
Sand and gravel, industrial, silica		106,000 r/	28,900 14/	27.3 r/	106,000	28,500 14/	26.9
Soda ash, natural and manufactured 19/		33,200 r/	10,200	30.9 r/	34,200	10,200	30.0
Sulfur, all forms		57,700 r/	11,300	19.6 r/	57,200	10,300	18.0
Talc and pyrophyllite 20/		10,000 r/	925	9.2 r/	8,790	851	9.7
Vermiculite	metric tons	541,000 r/	175,000	32.3 r/	512,000	150,000	29.3

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/ Content of ore and concentrate, unless otherwise specified.

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

7/ Included with ilmenite to avoid revealing company proprietary data; not included in "World" total.

8/ Primary and secondary, unless otherwise specified.

9/ Primary.

10/ Includes bullion.

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

12/ Refined nickel plus nickel content of ferronickel, nickel oxide, and other nickel salts.

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

14/ Quantity sold or used by producers.

15/ Includes Puerto Rico.

16/ Shipments.

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

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

19/ U.S. production is natural only.

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