THE MINERAL INDUSTRY OF OREGON

In 1998, the estimated value[1] of nonfuel mineral production for Oregon was $272 million, according to the U.S. Geological Survey (USGS). This was about a 5% decrease from that of 1997,[2] and followed a 7.1% increase in 1997 over that of 1996.

Industrial minerals accounted for all of Oregon's nonfuel mineral production. Crushed stone and construction sand and gravel, by value, remained Oregon's two leading nonfuel mineral commodities in 1998, together accounting for more than 69% of the State's total. In 1998, decreases in the values of crushed stone and construction sand and gravel together were more than double the total of the increases that occurred in diatomite, portland cement, and fuller's earth (listed from largest to smallest amount of change), resulting in Oregon's net decrease for the year (table 1). All other minerals had relatively small increases except bentonite and crude perlite that had similarly small decreases. In 1997, significant increases in the production values of construction sand and gravel, crushed stone, and portland cement led the State to a net gain over the preceding year. A decline in gemstone mining occurred during 1997, when a producer continued to sell 1996 output and reduce mine operations.

The Glenbrook Nickel Company, a joint venture of Cominco American Inc. and Cominco Resources International Ltd., permanently closed the Nickel Mountain Mine near Riddle, OR, and its adjoining smelter on March 31, 1998. Nickel Mountain had been idle and on a care-and-maintenance basis since 1996 because of low prices for nickel ore. The Nickel Mountain ore has a significantly lower nickel content than several ores being mined elsewhere in the Pacific region. The mine had been the sole domestic producer of primary nickel in the United States in recent years, operating on an intermittent basis—mine production depending on the price of nickel. Glenbrook operated its smelter in Riddle at full capacity during 1997, processing mostly garneritic laterite ore from Société Minière du Sud Pacifique of New Caledonia. During the first 3 months of 1998, the smelter produced 8,700 metric tons of ferronickel containing about 4,290 tons of nickel. The closure of the complex left almost 300 employees without jobs. The outlook for the smelter is uncertain.

Based on USGS estimates of the quantities of raw minerals produced in the United States during 1998, Oregon remained the only[2] State to produce emery; first among six States that produce pumice and pumicite; third in diatomite and zeolites; and fourth in crude perlite. The State rose in rank to fifth from sixth in gemstones (by value) and produced significant quantities of construction sand and gravel and crushed stone.

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[1]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 1998 USGS mineral production data published in this chapter are preliminary estimates as of February 1999 and are expected to change. For some mineral commodities (for example, construction sand and gravel, crushed stone, and portland cement), estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. A telephone listing for the specialists may be retrieved over the Internet at http://minerals.usgs.gov/minerals/contacts/comdir.html; by using MINES FaxBack at (703) 648-4999 from a fax machine with a touch-tone handset (request Document #1000 for a telephone listing of all mineral commodity specialists); 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 http://minerals.usgs.gov/minerals; facsimile copies may be obtained from MINES FaxBack.

[2]Values, percentage calculations, and rankings for 1997 may vary from the *Minerals Yearbook, Area Reports: Domestic 1997, Volume II*, owing to the revision of preliminary 1997 to final 1997 data. Data for 1998 are preliminary and expected to change, while related rankings may also be subject to change.

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN OREGON 1/ 2/

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral		1996 Quantity	1996 Value	1997 Quantity	1997 Value	1998 p/ Quantity	1998 p/ Value
Clays:							
Bentonite		33	1,530	W	W	W	W
Common		213	154	W	W	W	W
Gemstones		NA	6,730	NA	980	NA	1,300
Nickel ore 3/	metric tons	1,330	W	--	--	--	--
Sand and gravel: Construction		18,300	86,800	19,100	100,00	16,600	89,700
Stone: Crushed		22,000	102,00	21,200	110,00	19,700	98,500
Talc and pyrophyllite	metric tons	64	84	W	W	W	W
Zeolites	do.	(4/)	NA	(4/)	NA	NA	NA
Combined values of cement [masonry (1997-98), portland], clays (fuller's earth), diatomite, emery, lime, perlite [crude (1997-98)], pumice and pumicite, and values indicated by symbol W		XX	68,700 r/	XX	74,100	XX	82,600
Total		XX	266,00 r/	XX	285,00	XX	272,000

p/ Preliminary. r/ Revised. NA Not available. W Withheld to avoid disclosing company proprietary data; value included with "Combined value" data.
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/ There was no production at the Nickel Mountain Mine near Riddle, OR, in 1998. The mine has been idle and on a care-and-maintenance basis since 1996 because of disappointing prices for nickel ore. The Glenbrook Nickel Company permanently closed the mine and adjoining smelter on March 31, 1998.
4/ Withheld to avoid disclosing company proprietary data.

TABLE 2
OREGON: CRUSHED STONE SOLD OR USED, BY KIND 1/

Kind	1996 Number of quarries	1996 Quantity (thousand metric tons)	1996 Value (thousands)	1996 Unit value	1997 Number of quarries	1997 Quantity (thousand metric tons)	1997 Value (thousands)	1997 Unit value
Limestone	1	W	W	W	1	W	W	W
Granite	27	70	$306	$4.37	2	29	$146	$5.03
Traprock	288	19,700	91,000	4.61	158	19,100	98,800	5.16
Sandstone and quartzite	18 r/	389	1,770	4.56	17	322	1,480	4.61
Volcanic cinder and scoria	50	35	221	6.31	--	--	--	--
Shell	1	W	W	W	1	W	W	W
Miscellaneous stone	34 r/	566 r/	2,840 r/	5.01	10	611	3,080	5.04
Total	XX	22,000	102,000	4.65	XX	21,200	110,000	5.19

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.
1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 3
OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1997, BY USE 1/ 2/

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	111	$400	$3.60
Riprap and jetty stone	286	1,220	4.25
Filter stone	71	456	6.42
Other coarse aggregate	18	60	3.33
Coarse aggregate, graded:			
Concrete aggregate, coarse	357	1,860	5.20
Bituminous aggregate, coarse	744	4,150	5.58
Bituminous surface-treatment aggregate	62	409	6.60
Railroad ballast	503	3,420	6.80
Other graded coarse aggregate	119	533	4.48
Fine aggregate (-3/8 inch):			
Stone sand, bituminous mix or seal	223	1,520	6.79
Screening, undesignated	19	76	4.00
Other fine aggregate 3/	64	362	5.66
Coarse and fine aggregates:			
Graded road base or subbase	5,950	34,200	5.75
Unpaved road surfacing	1,230	6,220	5.07
Crusher run or fill or waste	2,090	9,100	4.35
Drain fields	2	11	5.50
Other coarse and fine aggregates	1,700	7,770	4.56
Other construction materials	11	58	5.27
Chemical and metallurgical: Cement manufacture	W	W	W
Other miscellaneous uses: Sugar refining	W	W	W
Unspecified: 4/			
Actual	2,340	11,300	4.83
Estimated	4,520	21,400	4.73
Total	21,200	110,000	5.17

W Withheld to avoid disclosing company proprietary data; included in "Total."
1/ Includes granite, limestone, miscellaneous stone, sandstone and quartzite, shell, slate, traprock, and volcanic cinder and scoria.
2/ Data are rounded to three significant digits; may not add to totals shown.
3/ Includes stone sand (concrete).
4/ Includes reported and estimated production without a breakdown by end use.

TABLE 4
OREGON: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 1997, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:						
Coarse aggregate (+1 1/2 inch) 2/	340	1,460	97	428	37	189
Coarse aggregate, graded 3/	757	4,410	15	67	284	1,970
Fine aggregate (-3/8 inch) 4/	161	987	--	--	W	W
Coarse and fine aggregate 5/	7,110	38,300	2,320	10,800	884	5,600
Other construction materials 6/	--	--	13	69	--	--
Chemical and metallurgical 7/	--	--	--	--	--	--
Other miscellaneous uses 8/	--	--	--	--	--	--
Unspecified: 9/						
Actual	1,660	9,390	15	59	W	W
Estimated	3,560	17,500	326	873	337	1,480
Total	13,600	72,000	2,780	12,300	1,620	9,680

	District 4		Unspecified districts	
	Quantity	Value	Quantity	Value
Construction aggregates:				
Coarse aggregate (+1 1/2 inch) 2/	11	60	--	--
Coarse aggregate, graded 3/	730	3,920	--	--
Fine aggregate (-3/8 inch) 4/	W	W	--	--
Coarse and fine aggregate 5/	659	2,590	--	--
Other construction materials 6/	--	--	--	--
Chemical and metallurgical 7/	W	W	--	--
Other miscellaneous uses 8/	W	W	--	--
Unspecified: 9/				
Actual	--	--	643	1,730
Estimated	61	314	239	1,240
Total	2,360	12,800	882	2,980

W Withheld to avoid disclosing company proprietary data; included in "Total."
1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregate.
3/ Includes concrete aggregate (coarse), bituminous aggregate (coarse), bituminous surface-treatment aggregate, railroad ballast, and other graded coarse aggregate.
4/ Includes stone sand (concrete), stone sand (bituminous mix or seal), screening (undesignated), and other fine aggregate.
5/ Includes graded road base or subbase, unpaved road surfacing, crusher run (select material or fill), and other coarse and fine aggregates.
6/ Includes drain fields.
7/ Includes cement manufacture.
8/ Includes sugar refining and other specified uses not listed.
9/ Includes reported and estimated production without a breakdown by end use.

TABLE 5
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997,
BY MAJOR USE CATEGORY 1/

Use	Quantity (thousand metric tons)	Value (thousands)	Value per ton
Concrete aggregate (including concrete sand)	4,600	$22,500	$4.89
Plaster and gunite sands	3	$42	14.00
Asphaltic concrete aggregates and other bituminous mixtures	1,400	9,750	6.95
Road base and coverings 2/	3,260	16,000	4.91
Fill	599	2,230	3.73
Snow and ice control	22	150	6.82
Railroad ballast	3	16	5.33
Other miscellaneous uses	826	5,160	6.25
Unspecified: 3/			
Actual	4,440	25,900	5.83
Estimated	3,930	18,600	4.74
Total or average	19,100	100,000	5.26

1/ Data are rounded to three significant digits, except value per ton; may not add to totals shown.
2/ Includes road and other stabilization (lime).
3/ Includes reported and estimated production without a breakdown by end use.

TABLE 6
OREGON: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 1997, BY USE AND DISTRICT 1/

(Thousand metric tons and thousand dollars)

	District 1		District 2		District 3	
Use	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand) 2/	3,640	16,900	605	3,620	200	1,110
Asphaltic concrete aggregates and other bituminous mixtures	981	6,860	421	2,890	--	--
Road base materials 3/	2,300	12,000	656	2,750	128	542
Fill	463	1,700	117	469	6	31
Other miscellaneous uses 4/	63	945	746	4,170	3	28
Unspecified 5/	7,270	39,600	138	395	38	62
Total	14,700	78,000	2,680	14,300	375	1,770

	District 4		Unspecified districts	
	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand) 2/	163	879	--	--
Asphaltic concrete aggregates and other bituminous mixtures	--	--	--	--
Road base materials 3/	172	690	--	--
Fill	13	37	--	--
Other miscellaneous uses 4/	39	186	--	--
Unspecified 5/	612	2,970	313	1,530
Total	999	4,760	313	1,530

1/ Data are rounded to three significant digits; may not add to totals shown.
2/ Includes plaster and gunite sands.
3/ Includes road and other stabilization (lime).
4/ Includes railroad ballast and snow and ice control.
5/ Includes reported and estimated production without a breakdown by end use.