THE MINERAL INDUSTRY OF NEW YORK

This chapter has been prepared under a Memorandum of Understanding between the U.S. Bureau of Mines, U.S. Department of the Interior, and the New York Education Department, New York Geological Survey, for collecting information on all nonfuel minerals.

For the 6th time in the last 8 years, New York ranked 14th in the Nation in nonfuel mineral value,[1] down from 13th in 1993, according to the U.S. Bureau of Mines. The estimated value for 1994 was $869 million, 2% increase over that of 1993. This increase followed the previous year's increase of 11% over that of 1992. The State accounted for a little less than 3% of the U.S. total. More than 90% of the State's nonfuel mineral value was derived from industrial minerals and mineral products, primarily salt, construction sand and gravel, crushed stone, portland cement, and less so, wollastonite. Most of the metal production and value was from zinc. While the estimated mineral production and value rose for most mineral commodities, the State's drop in rank resulted from slower overall mineral industry growth in the State as compared with more rapid growth in the State of Ohio. Decreases in portland cement and crushed stone affected growth most, both in terms of production and value; crushed stone alone dropped by about 12%. In estimated mineral production for 1994, New York remained the only major producer of wollastonite in the United States, second of two garnet producing States, third in salt and zinc, fourth in talc and pyrophyllite, and sixth in lead. The State dropped from sixth to seventh in the production of construction sand and gravel. Compared with 1993, the value of the following increased: salt, construction sand and gravel, zinc, wollastonite, crushed stone (traprock), talc and pyrophyllite, gypsum, dimension stone, garnet, peat, and lead. Decreases occurred in crushed stone, portland cement, common clays, industrial sand and gravel, silver, and gemstones.

According to the New York State Geological Survey, a 40,000-square-meter (422,500-square-foot) panel at the Akzo-Nobel Salt Co.'s Retsof salt mine, the largest underground salt mine in the world, collapsed underground at the 335-meter-level (1,100 feet) in March 1994. A seismic event measuring 3.6 on the Richter Scale was generated by the failure at the Livingston County mine. Two mammoth sink holes, measuring 185 meters (600-feet) in diameter, formed at the surface above the mine catastrophe and water from an adjacent aquifer began flooding the mine at a rate of 75 million to 115 million liters (20 million to 30 million gallons) per day. Mining continued at a record pace in the unflooded portions of the

TABLE 1
NONFUEL RAW MINERAL PRODUCTION IN NEW YORK[1]

Mineral		1992		1993		1994[p]	
		Quantity	Value (thousands)	Quantity	Value (thousands)	Quantity	Value (thousands)
Cement:							
Masonry	thousand metric tons	W	W	75	$5,422	75	$5,420
Portland	do.	W	W	2,966	149,491	2,850	144,000
Clays	do.	415	$2,412	508	9,250	454	8,440
Gemstones		NA	170	NA	W	NA	W
Salt	thousand metric tons	4,703	164,729	5,619	191,491	6,050	200,000
Sand and gravel (construction)	do.	28,538	130,379	[e]34,900	[e]161,500	41,000	197,000
Stone:							
Crushed	do.	[e]33,384	[e]212,700	38,448	223,293	[e]33,500	[e]196,000
Dimension	metric tons	[e]16,526	[e]2,779	19,275	3,436	[e]21,400	[e]3,590
Combined value of emery (1993), garnet (abrasive), gypsum (crude), lead, peat, sand and gravel (industrial), silver, stone [crushed traprock (1993-94)], talc and pyrophyllite, wollastonite, zinc, and values indicated by symbol W		XX	252,578	XX	107,624	XX	115,000
Total		XX	765,747	XX	851,507	XX	[2]869,000

[e]Estimated. [p]Preliminary. 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 do not add to total shown because of independent rounding.

mine. However, the mine, which has annually employed about 360 people, was expected to become completely flooded by late 1995. Increased output from Akzo-Nobel mines in Louisiana and Ohio and imports by Akzo-Nobel mitigated a potential shortage of road salt in the 14 northeastern States served by the company. Akzo-Nobel submitted an application to the New York State Department of Environmental Conservation (NYSDEC) for a new mine at Hamptons Corners in Groveland. The mine will require a $140 million investment and will employ 250 people when in full production. The State provided an incentive package to Akzo-Nobel worth $53 million to assist in the establishment of the new mine. A temporary task force was formed by the State of New York to investigate underground mineral mining regulations and address broad policy questions raised by the events surrounding the Retsof Mine collapse. New York's emery-producing mine, one of only two emery mines in the United States, remained closed after the Supreme Court of Westchester County granted a cross claim filed by NYSDEC concerning alleged violations of the existing mining permit and a 1991 Order of Consent. The Court revoked the permit and enjoined the present and any future owners from conducting mining activities at the site pending a decision by NYSDEC to issue a new mining permit. Emery, an extremely hard mineral, is used as an abrasive aggregate for nonskid, wear-resistant floors, pavements, and stair treads, and as a fine-grained abrasive in grinding and polishing. Already the world's leading supplier of wollastonite, NYCO, a division of NYCO Minerals Inc., made application to construct a new open pit mine at Oak Hill in Essex County. The Oak Hill deposit was discovered in 1988 and, when in full production, is expected to double the company' reserves, NYCO reported. Wollastonite is used as a high-performance mineral filler in paint, plastics, and ceramic wall tile, and as an asbestos replacement in thermal insulating board, brake shoes, etc. According to NYSDEC, 2,529 mines, 1,810 industry-owned and 719 government-owned, were active in the State at yearend 1994. The mines encompassed 16,840 hectares (41,609 acres), of which about 10% has been reclaimed.

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[1]The term value means the total monetary value as represented by either mine shipments, mineral commodity sales, or marketable production as is applicable to the individual mineral commodities.

TABLE 2

NEW YORK: CRUSHED STONE[1] SOLD OR USED BY PRODUCERS IN 1993, BY USE

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Coarse aggregate (+1 1/2 inch):			
Macadam	56	$518	$9.25
Riprap and jetty stone	524	3,851	7.35
Filter stone	130	945	7.27
Other coarse aggregate	22	140	6.36
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,660	17,854	6.71
Bituminous aggregate, coarse	7,989	51,303	6.42
Bituminous surface-treatment aggregate	804	4,519	5.62
Railroad ballast	174	1,075	6.18
Other graded coarse aggregate	W	W	6.56
Fine aggregate (-3/8 inch):			
Stone sand, concrete	51	375	7.35
Stone sand, bituminous mix or seal	1,514	8,824	5.83
Screening, undesignated	915	4,956	5.42
Other fine aggregate	50	323	6.46
Coarse and fine aggregates:			
Graded road base or subbase	3,677	18,347	4.99
Unpaved road surfacing	108	480	4.44
Terrazzo and exposed aggregate	47	1,948	41.45
Crusher run or fill or waste	7,315	41,094	5.62
Other coarse and fine aggregates	W	W	5.49
Other construction materials	1,534	9,459	6.17
Roofing granules	W	W	8.19
Agricultural:			
Agricultural limestone	(2)	(2)	8.66
Poultry grit and mineral food	5	140	28.00
Other agricultural uses	2	21	10.50
Chemical and metalurgical:			
Cement manufacture	3,722	12,863	3.46
Flux stone	(2)	(2)	6.07
Special:			
Other fillers or extenders	3	175	58.33
Unspecified:[3]			
Actual	4,217	26,868	6.37
Estimated	2,834	16,401	5.79
Total[4]	38,448	223,293	5.81
Total[5 6]	42,382	223,293	5.27

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials."
[1]Includes dolomite, granite, limestone, limestone-dolomite, marble, miscellaneous stone, sandstone, and traprock; excludes traprock from State total to avoid disclosing company proprietary data.
[2]Withheld to avoid disclosing company proprietary data; included with "Total."
[3]Includes production reported without a breakdown by use and estimates for nonrespondents.
[4]Data may not add to totals shown because of independent rounding.
[5]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[6]Total shown in thousand short tons and thousand dollars.

TABLE 3

NEW YORK: CRUSHED STONE SOLD OR USED, BY KIND

Kind	1991				1993			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone[1]	68	22,285	$116,359	$5.22	69	27,784		$5.41
Dolomite	10	7,123	58,695	8.24	13	7,489	56,069	7.49
Marble	1	77	3,354	43.56	1	75	2,423	32.31
Granite	6	913	5,697	6.24	9	1,435	9,102	6.34
Traprock	2	W	W	10.60	2	W	([2])	([2])
Sandstone	4	W	W	6.71	5	623	4,518	7.25
Miscellaneous stone	1	15	43	2.87	2	W	W	W
Total[3]	XX	31,634	195,639	6.18	XX	38,448	223,293	5.81
Total[4 5]	XX	34,871	195,639	5.61	XX	42,382	223,293	5.27

XX Not applicable. W Withheld to avoid disclosing company proprietary data included with "Total."
[1]Includes "Limestone - dolomite," reported with no distinction between the two.
[2]Excludes traprock value from State total to avoid disclosing company proprietary data.
[3]Data may not add to totals shown because of independent rounding.
[4]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[5]Total shown in thousand short tons and thousand dollars.

TABLE 4

NEW YORK: CRUSHED STONE[1] SOLD OR USED BY PRODUCERS IN 1993, BY USE AND DISTRICT

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3		District 4	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch)[2]	—	—	184	1,653	W	W	W	W
Coarse aggregate, graded[3]	—	—	W	W	1,078	6,928	1,476	7,132
Fine aggregate (-3/8 inch)[4]	—	—	W	W	W	W	W	W
Coarse and fine aggregate[5]	—	—	642	4,743	1,356	6,476	W	W
Other construction materials[6]	—	—	5,512	40,768	605	4,069	1,126	5,161
Agricultural[7]	—	—	([8])	([8])	([8])	([8])	([8]/)	([8])
Chemical and metallurgical[9]	—	—	—	—	([8])	([8])	([8])	([8])
Special[10]	—	—	—	—	—	—	—	—
Unspecified:[11]								
Actual	—	—	([8])	([8])	2,595	16,235	—	—
Estimated	—	—	190	1,888	—	—	8	88
Total[12]	—	—	7,158	53,254	8,733	44,964	3,276	14,163
Total[13 14]	—	—	7,890	53,254	9,626	44,964	3,611	14,163

	District 5		District 6		District 7		District 8	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Construction aggregates:								
Coarse aggregate (+1 1/2 inch)[2]	W	W	131	781	214	1,663	—	—
Coarse aggregate, graded[3]	W	W	1,111	6,416	1,256	7,480	([8])	([8])
Fine aggregate (-3/8 inch)[4]	W	W	643	3,472	W	W	([8])	([8])
Coarse and fine aggregate[5]	1,843	10,533	W	W	W	W	([8])	([8])
Other construction materials[6]	2,521	14,474	2,194	12,081	3,723	20,832	—	—
Agricultural[7]	([8])	([8])	([8])	([8])	([8])	([8])	([8])	([8])
Chemical and metallurgical[9]	([8])	([8])	—	—	—	—	—	—
Special[10]	3	175	—	—	—	—	—	—
Unspecified:[11]								
Actual	55	247	([8])	([8])	([8])	([8])	—	—
Estimated	133	748	—	—	908	5,572	1,594	8,714
Total[12]	4,579	26,558	4,346	24,474	6,787	39,707	3,569	20,173
Total[13 14]	5,047	26,558	4,791	24,474	7,481	39,707	3,934	20,173

W Withheld to avoid disclosing company proprietary data; included with "Other construction materials.
[1]Excludes traprock value from State total to avoid disclosing company proprietary data.
[2]Include 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, terrazzo and exposed aggregate, unpaved road surfacing, crusher run (select material or fill), and other coarse and fine aggregates.
[6]Includes roofing granules.
[7]Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.
[8]Withheld to avoid disclosing company proprietary data; included with "Total."
[9]Includes cement manufacture and flux stone.
[10]Includes other fillers or extenders.
[11]Includes production reported without a breakdown by use and estimates for nonrespondents.
[12]Data may not add to totals shown because of independent rounding.
[13]One short ton is equal to 907 kilograms or 2,000 pounds. To convert metric tons to short tons, divide metric tons by 0.907185.
[14]Total shown in thousand short tons and thousand dollars.