

STATE OF MARYLAND  
MARYLAND GEOLOGICAL SURVEY  
KENNETH N. WEAVER, Director

THE MINERAL INDUSTRY  
of  
MARYLAND  
in  
1975  
by  
JOSEPH A. SUTTON



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# The Mineral Industry of Maryland

This chapter has been prepared under a cooperative agreement between the Bureau of Mines, U.S. Department of the Interior, and the Maryland Geological Survey for collecting information on all minerals in the State.

By Joseph A. Sutton <sup>1</sup>

Maryland's mineral production decreased in value in 1975 to \$165 million, about 5% below the \$173 million for 1974. The decrease in value was mainly the result of reduced activity in the construction industry for such materials as sand and gravel and cement.

Bituminous coal was again the most valuable commodity produced and accounted for 31% of the State's mineral wealth. In response to increased demand for fuel, coal production was 12% above that of 1974.

Stone was the second most valuable mineral commodity produced in the State. In spite of an 18% drop in production to 14.8 million tons, the industry contributed 26%

of Maryland's mineral wealth in 1975. The total value of stone produced was \$43.1 million, 9% below the 1974 value.

Sand and gravel contributed 18% to the State's mineral wealth in 1975. Production increased about 1% to 11.8 million tons, and value increased less than 1% to \$29.5 million.

Portland and masonry cement contributed significantly to the economy of the State in 1975, but the actual figures must be concealed to avoid disclosing individual company confidential data.

<sup>1</sup> State Liaison Officer—Maryland and Delaware, Bureau of Mines, Washington, D.C.

Table 1.—Mineral production in Maryland <sup>1</sup>

Mineral	1974		1975	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays <sup>2</sup> -----thousand short tons--	884	\$2,066	580	\$1,450
Coal (bituminous) -----do-----	2,337	48,630	2,606	50,502
Gem stones -----do-----	NA	8	NA	W
Lime -----thousand short tons--	23	527	15	434
Natural gas -----million cubic feet--	133	32	93	25
Peat -----thousand short tons--	3	45	2	39
Sand and gravel -----do-----	11,690	29,386	11,786	29,477
Stone -----do-----	18,072	47,630	14,796	43,110
Value of items that cannot be disclosed:				
Cement, ball clay, talc (1974), and values indicated by symbol W -----do-----	XX	44,556	XX	39,882
Total -----do-----	XX	172,880	XX	164,919
Total 1967 constant dollars -----do-----	XX	81,738	XX	P 65,308

<sup>P</sup> Preliminary. NA Not available. W Withheld to avoid disclosing individual company confidential data; included with "Value of items that cannot be disclosed." XX Not applicable.

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

<sup>2</sup> Excludes ball clay; included with "Value of items that cannot be disclosed."

Employment.—Final 1974 statistics and preliminary data for 1975 on business activity of the State are given in table 3.

Legislation and Government Programs.—According to the P.S. Railway Association preliminary reorganization plan to con-

Table 2.—Value of mineral production in Maryland, by county<sup>1</sup>  
(Thousands)

County	1974	1975	Minerals produced in 1975 in order of value
Allegany -----	W	W	Coal, stone.
Anne Arundel -----	\$2,819	\$3,118	Sand and gravel.
Baltimore <sup>2</sup> -----	25,125	W	Stone, sand and gravel, clays.
Carroll -----	W	W	Cement, stone, clays.
Cecil -----	8,406	8,693	Stone, sand and gravel.
Charles -----	W	W	Sand and gravel.
Dorchester -----	368	372	Do.
Frederick -----	19,329	W	Cement, stone, clays, lime.
Garrett -----	W	W	Coal, stone, sand and gravel, peat.
Harford -----	W	W	Sand and gravel, stone.
Howard -----	W	W	Stone.
Kent -----	51	W	Clays.
Montgomery -----	W	5,765	Stone.
Prince Georges -----	13,525	11,464	Sand and gravel, clays.
St. Marys -----	--	W	Sand and gravel.
Washington -----	W	W	Cement, stone, clays.
Wicomico -----	W	W	Sand and gravel.
Worcester -----	396	395	Do.
Undistributed <sup>3</sup> -----	102,859	135,111	
Total <sup>4</sup> -----	172,880	164,919	

W Withheld to avoid disclosing individual company confidential data; included with "Undistributed."

<sup>1</sup> Calvert, Caroline, Queen Annes, Somerset, and Talbot Counties are not listed because no production was reported.

<sup>2</sup> Includes Baltimore City.

<sup>3</sup> Includes some natural gas, gem stones, and values indicated by symbol W.

<sup>4</sup> Data may not add to totals shown because of independent rounding.

Table 3.—Indicators of Maryland business activity

	1974	1975 <sup>p</sup>	Change, percent
Employment and labor force, annual average:			
Total labor force -----thousands---	1,792.0	1,842.0	+2.8
Unemployment -----do-----	84.0	127.0	+51.2
Employment <sup>1</sup> (nonagricultural):			
Mining -----do-----	1.8	1.7	-5.6
Manufacturing -----do-----	254.2	229.9	-9.6
Contract construction -----do-----	103.8	91.9	-11.5
Transportation and public utilities -----do-----	80.9	78.7	-2.7
Wholesale and retail trade -----do-----	349.3	355.3	+1.7
Finance, insurance, and real estate -----do-----	80.0	79.5	-6
Services -----do-----	278.8	285.4	+2.4
Government -----do-----	285.7	301.9	+5.7
Total nonagricultural employment -----do-----	1,434.5	1,424.3	-7
Personal income:			
Total -----millions---	\$24,425	\$26,533	+8.6
Per capita -----do-----	\$5,973	\$6,474	+8.4
Construction activity:			
Number of private and public residential units authorized	23,299	19,661	-15.6
Value of nonresidential construction -----millions---	\$369.1	\$306.6	-16.9
Value of State road contract awards -----do-----	\$80.0	\$93.0	+16.2
Shipments of portland and masonry cement to and within the State -----thousand short tons---	1,490	1,196	-19.7
Mineral production value:			
Total crude mineral value -----millions---	\$172.9	\$164.9	-4.6
Value per capita, resident population -----do-----	\$42.28	\$40.01	-5.4
Value per square mile -----do-----	\$16,344.90	\$15,592.23	-4.6

<sup>p</sup> Preliminary.

<sup>1</sup> Excludes Federal employment in Maryland sector of the Washington Standard Metropolitan Statistical Area.

Sources: U.S. Department of Commerce; U.S. Department of Labor; Highway and Heavy Construction Magazine; and Federal Bureau of Mines.

solidate seven financially ailing railroads in the Northeast and Midwest, Maryland was scheduled to lose 81 miles of intrastate freight lines and 149 miles of track linking the State with other States.

Laws enacted at the 1975 regular session of the General Assembly of Maryland, follow: Section 7-505 (i) of Article—Natural Resources of the Annotated Code of Maryland (1974 Volume and 1974 Supplement) was amended by Senate Bill No. 1029 to the issuance of a permit for strip mining on slopes of 20 degrees or more from the horizontal, except in the case of a previously orphaned mining operation where the Land Reclamation Committee declares that the land could be restored to its original contour. New Sections (7-6A01 through 7-6A31) were added to the Article—Natural Resources of the Annotated Code of Maryland (1974 Volume and 1974 Supplement) by Senate Bill No. 340 for the purpose of regulating the surface mining of minerals other than coal, establishing a

Surface Mined Land Reclamation Fund, providing for uses of the surface mine inspectors, requiring licenses and permits for surface mining, establishing fees, requiring reclamation plans, providing for exemptions, authorizing the Secretary of Natural Resources to adopt rules and regulations to administer this Act, and generally relating to the surface mining of minerals other than coal. New Sections (6-501 to 6-511) were added to the Article—Natural Resources of the Annotated Code of Maryland (1974 Volume and 1974 Supplement) by House Bill No. 319 for the purpose of expressing the finding and intent of the General Assembly in relation to certain coastal facilities, defining certain terms, providing a procedure for application for permits for construction of certain coastal facilities, providing penalties for violations, providing for judicial review, and generally relating to the construction of certain coastal facilities.

## REVIEW BY MINERAL COMMODITIES

### NONMETALS

**Cement.**—Output of portland and masonry cement continued to decline in 1975 and was about 25% below that of 1974. However, the unit value of both cements continued to increase.

**Clays.**—Various types of clay were produced at nine operations located in Baltimore, Carroll, Frederick, Kent, Prince Georges, and Washington Counties. Approximately 93% of the clay produced in the State was used to manufacture brick and concrete block. Demand for such products was considerably below that of the previous year, and therefore clay production was about 34% below that of 1974.

**Gem Stones.**—Production of semiprecious stones was limited to small quantities collected by dealers and amateur collectors.

**Gypsum.**—United States Gypsum Co. and National Gypsum Co. calcined gypsum at Baltimore in Baltimore County. Output decreased 16% and was 18% below the 1972 record.

**Lime.**—S.W. Barrick & Sons, Inc., produced 14,529 tons of lime in Frederick County for use in agriculture. Output decreased 37% and was 61% below the 1963

record. The lime was consumed in Maryland, Virginia, Delaware, and Pennsylvania.

**Peat.**—Only one company produced peat in Maryland in 1975. Production of peat decreased to 2,345 short tons, about 18% below that of 1974, and the average unit value of the peat increased about 4% to bring the total valuation of Maryland's output to \$38,557. The peat was sold in bulk and packaged for soil improvement.

**Perlite.**—Relatively small amounts of raw perlite from the Western United States were processed in 1975 at a plant in Baltimore County. All of the perlite production was utilized as aggregates in plastering.

**Sand and Gravel.**—Production of sand and gravel was slightly above that of 1974. In value, sand and gravel was the fourth ranking mineral activity of the State. Sand was 14 cents per ton higher in value, and gravel was 13 cents per ton lower than the 1974 values.

Sand and gravel was utilized in residential and nonresidential construction, 36%; paving, 34%; concrete products, 16%; and fill, 9%. The remainder went to miscellaneous uses. Counties leading in value of sand and gravel production, in order of rank,

Table 4.—Maryland: Construction and industrial sand and gravel sold or used by producers

(Thousand short tons and thousand dollars)

Use	1974		1975	
	Quantity	Value <sup>1</sup>	Quantity	Value <sup>1</sup>
Construction:				
Processed:				
Sand .....	6,624	16,004	5,619	14,036
Gravel .....	4,455	12,209	4,517	11,811
Unprocessed: Sand and gravel .....	611	914	1,650	2,415
Total .....	11,690	29,127	11,786	28,262

<sup>1</sup> Value f.o.b. plant per ton of processed sand and per ton of processed gravel. Values in all other tables are f.o.b. plant of blended processed sand and gravel used as construction aggregate. Unit value of construction aggregate is generally higher than the unit value of unblended processed sand or gravel.

Table 5.—Maryland: Construction aggregate and industrial sand and gravel sold or used commercially by producers

(Thousand short tons and thousand dollars)

Use	1974		1975	
	Quantity	Value	Quantity	Value
Processed:				
Concrete aggregate (including use in ready-mixed concrete):				
Nonresidential and residential construction .....	5,001	13,335	4,161	11,908
Highway and bridge construction .....	228	637	181	565
Other construction (dams, waterworks, airports, etc.) .....	163	405	133	396
Concrete products (cement blocks, brick pipe, etc.) .....	1,862	4,650	1,839	4,634
Bituminous paving (asphalt and tar paving) .....	642	1,312	324	898
Roadbase and subbase .....	306	486	361	433
Fill .....	129	196	461	656
Other .....	W	W	W	W
Unprocessed:				
Roadbase and subbase .....	424	754	354	617
Fill .....	157	206	416	611
Other .....	--	--	W	W
Total .....	8,912	21,981	8,230	<sup>1</sup> 20,719

W Withheld to avoid disclosing individual company confidential data; included with "Unprocessed fill."

<sup>1</sup> Data do not add to total shown because of independent rounding.

were Prince Georges, Cecil, Anne Arundel, Charles, and Baltimore.

**Stone.**—Stone production in Maryland had an 18% decrease in tonnage to 14,796,000 short tons in 1975. The total value of the stone produced was \$43,110,000, 9.5% below that of 1974. Stone was the second most valuable mineral product of the State, contributing 26% of the State's mineral wealth. Baltimore County produced the largest tonnage of stone in the State and also had the highest unit value of all the major stone producing counties. Baltimore was followed by Montgomery, Frederick, Cecil, and Carroll Counties in order of stone production. There were 38 stone quarries in 10 counties. Twenty-two of the

quarries produced both dimension stone and crushed and broken stone, and 16 produced only crushed and broken stone.

Dimension stone made up less than 1% of the total tonnage and slightly more than 1% of total value of the commodity. Of the total stone produced, 72% was limestone; the remaining 28% was divided among traprock, granite, sandstone, and other types of stone.

Seventy percent of all stone produced in Maryland went to aggregates, 13% went to cement manufacture, 10% went to roadbase stone, and the remaining 7% was utilized in miscellaneous applications such as lime manufacture and riprap stone.

**Talc.**—Talc was mined by one relatively small producer in Harford County, and the material was used to make electrical insulators and roofing materials.

**Vermiculite (Exfoliated).**—W.R. Grace & Co., Prince Georges County, processed raw vermiculite into the exfoliated product at Muirkirk, Md., in 1975. The finished material was utilized primarily as aggregate for concrete and plaster.

#### MINERAL FUELS

**Coal (Bituminous).**—Bituminous coal was mined from five fields or basins in western Maryland. About 95% of the coal production came from open pit or strip mines, 4% from underground or deep mines, and 1% from auger mines.

Production of bituminous coal in 1975 increased to 2,606,000 short tons, about 12% above that of 1974. The average unit value of the coal decreased to \$19.38 per ton, 7% below the 1974 price. Of the 69 mines in the State, 31 were in Allegany County and 38 were in Garrett County. Sixty-one of these mines were open pit operations, six were auger type, and two were underground.

A State law passed in 1969 continued to be effective in regulating mining and in promoting the reclamation of strip-mined land. Revegetation of strip-mined areas was accomplished at a record pace in 1975. The 961 acres of land that was planted was more than the acres that were backfilled or the 887 acres that were stripped.<sup>2</sup> This was the first time since the law was passed that planting has kept pace with backfilling in the reclamation cycle.

The revegetation costs of strip-mined areas in Allegany and Garrett Counties follow: Revegetation work by coal operator, \$213 per acre; revegetation work by State of Maryland, \$250 per acre; and revegetation work by private contractor, \$450 per acre.<sup>3</sup>

The Appalachian Subsidence Control Project No. 20 on the Frostburg State College Campus, Frostburg, Md., was completed. A total of 55 holes were drilled around Residence Halls I and II, and the voids caused by prior underground mining of coal seams were filled with a mixture of cement and fly ash. This process also cemented broken rock strata beneath the buildings.

**Coke and Coal Chemicals.**—Bethlehem Steel Corp. produced coke for internal use at Sparrows Point. Byproducts recovered from the distillation of coal included oven coke gas, ammonia, crude light oil, benzene, toluene, xylene, oven coke tar, and other minor components in addition to the primary product, coke.

**Natural Gas and Petroleum.**—Natural gas production from fields in Garrett County during 1975 was 93 million cubic feet, a decrease of 30% from the 1974 production. An exploratory gas well drilled by the Texas Eastern Transmission Corp. on Negro Mountain, Garrett County, to a depth of 8,973 feet proved to be a dry hole.

A liquefied natural gas import terminal, designed to have a send-out capacity of approximately 1 billion cubic feet of gas per day, was being constructed by the Columbia LNG Corp., a subsidiary of the Columbia Gas System, Inc., at Cove Point on the Chesapeake Bay. The terminal, when completed in 1977, will pump Algerian liquefied natural gas into receiving vessels located on an offshore pier. From there, booster pumps will relay it through a tunnel to onshore tanks where it will be regasified and transported through a pipeline to markets served by the Columbia Gas System, Inc., and the Consolidated Natural Gas Co.

Two small petroleum refineries near Baltimore converted crude oil into asphalt products, but none of the feedstock originated in Maryland.

#### METALS

**Aluminum.**—No bauxite or other aluminum ore was mined in Maryland, but there was a significant production of metallic aluminum at two facilities in the State, Eastalco Aluminum Co. (Howmet Corp.) in Frederick County, and Tomke Aluminum Co. in Baltimore County. Company activities of the Howmet Aluminum Corp. (Eastalco Aluminum Co.) and the Howmet Turbine Components Corp. were purchased by the Pechiney Ugine Kuhlmann Corp., a U.S. subsidiary of Pechiney Ugine Kuhlmann of France, with executive offices in Greenwich, Conn., and the business activities of the Howmet Corp. ceased to be a publicly held company as of August 1975.

<sup>2</sup> Maryland Bureau of Mines. Fifty-second Annual Report, Calendar Year 1975. P. 25.

<sup>3</sup> Page 20 of work cited in footnote 2.

**Copper.**—Two copper refineries produced metal in Maryland by using raw materials obtained from outside the State, American Smelting and Refining Co. (ASARCO) in Baltimore, and Kennecott Refining Corp. at Hawkins Point, Anne Arundel County. The ASARCO plant, which has been reported to be outdated and not economically adaptable to modern concepts of copper refining and materials

handling, was closed in December.

**Iron and Steel.**—Bethlehem Steel Corp. of Sparrows Point continued to produce pig iron, raw steel, and semifabricated steel products from imported ore during the year.

**Lead.**—Lead, lead alloys, and other alloys and products were produced at three plants in Baltimore. The plants utilized primary metals and scrap as raw materials.

Table 6.—Principal producers

Commodity and company	Address	Type of activity	County
<b>Cement:</b>			
Portland:			
Alpha Portland Cement Co. <sup>1</sup>	15 South 3d St. Easton, Pa. 18042	Plant -----	Frederick.
Lehigh Portland Cement Co. <sup>2</sup>	718 Hamilton St. Allentown, Pa. 18101	----do -----	Carroll.
Portland and masonry: Marquette Cement Manufacturing Co. <sup>1</sup>	First American Center Nashville, Tenn. 37238	----do -----	Washington.
Masonry: M.J. Grove Lime Co. <sup>1</sup>	Frederick, Md. 21701	----do -----	Frederick.
<b>Clays:</b>			
Baltimore Brick Co -----	501 St. Paul Pl. Baltimore, Md. 21202	Pits -----	Baltimore and Frederick.
Cyprus Industrial Materials Co	555 South Flower St. Los Angeles, Calif. 90071	Pit -----	Baltimore.
Victor Cushwa & Sons, Inc ---	201 West Potomac St. Williamsport, Md. 21795	Pit -----	Washington.
<b>Coal:</b>			
Buffalo Coal Co -----	Box 275 Bayard, W. Va. 26707	5 strip mines --	Garrett.
Grafton Coal Co -----	Box 188 Mt. Lake Park, Md. 21550	3 strip mines --	Do.
Moran Coal Co., Inc -----	Drawer E Westernport, Md. 21562	Strip mine ---	Do.
Winner Brothers Coal Co., Inc	Box 300 Frostburg, Md. 21532	5 strip mines --	Allegheny.
<b>Gypsum (calcined):</b>			
National Gypsum Co -----	325 Delaware Ave. Buffalo, N.Y. 14202	Plant -----	Baltimore.
United States Gypsum Co ----	101 South Wacker Dr. Chicago, Ill. 60606	----do -----	Do.
<b>Finished iron oxide pigments (natural and manufactured):</b>			
Minerals Pigments Corp -----	7011 Muirkirk Rd. Beltsville, Md. 20705	----do -----	Prince Georges.
Lime: S. W. Barrick & Sons, Inc	Woodsboro, Md. 21798	----do -----	Frederick.
Peat: Garrett County Processing & Packaging Corp.	R.F.D. #1 Accident, Md. 21520	Bog -----	Garrett.
<b>Petroleum refineries:</b>			
Amoco Oil Co -----	910 South Michigan Ave. Chicago, Ill. 60680	Refinery -----	Baltimore.
Chevron Asphalt Co -----	Baltimore, Md. 21200	----do -----	Do.
<b>Sand and gravel:</b>			
Campbell Sand and Gravel, Inc	4911 Calvert Rd. College Park, Md. 20740	Pit -----	Prince Georges.
Contee Sand & Gravel Co., Inc	Box 460 Laurel, Md. 20810	Pit -----	Do.
York Building Products Co., Inc.	Box 1708 York, Pa. 17405	Pit -----	Cecil.
<b>Stone:</b>			
Arundel Corp -----	501 St. Paul Pl. Baltimore, Md. 21202	Quarries -----	Baltimore, Har- ford, Howard.
Martin-Marietta Aggregates ---	66 Long Clove Rd. Congers, N.Y. 10920	Quarry -----	Washington.
Maryland Materials, Inc -----	Box W North East, Md. 21901	----do -----	Cecil.
Rockville Crushed Stone, Inc --	Box 407 Rockville, Md. 20850	----do -----	Montgomery.
D. M. Stoltzfus & Sons, Inc ---	Talmage, Pa. 17580	Quarries -----	Cecil and Harford.

<sup>1</sup> Also stone.<sup>2</sup> Also clay and stone.