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THE MINERAL INDUSTRY
OF NEW JERSEY
FOR 1923

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GENERAL SUMMARY.

Cooperation in Collection of Statistics. The statistics of the mineral industry of New Jersey for the calendar year 1923 were collected by the State Department of Conservation and Development in cooperation with the United States Geological Survey and the U. S. Bureau of the Census. This method avoids the necessity of troubling producers by requests from several organizations, and insures greater accuracy and completeness in the results.

Total Value of the Industry. The total value of the mineral production in New Jersey in 1923 was \$82,310,148. The total for 1922 was \$70,283,159. Therefore there was an increase in 1923 of \$12,026,989 over the total value for 1922.

General Table. In the following table there is given a general summary of the total quantity and total value for 1923 in the case of the principal mineral products, with the figures for 1922 for comparison. Details regarding the individual industries will be given in the pages that follow:

MINERAL PRODUCTION IN NEW JERSEY IN 1923.

Products	Pro- ducers	1923		1922	
		Quantity	Value	Quantity	Value
Zinc ore	1	548,891 s. t.	(a)	512,290 s. t.	(a)
Iron ore	6	349,435 l. t.	\$1,403,723	90,374 l. t.	\$400,356
Stone	56	2,038,740 s. t.	3,022,918	1,896,110 s. t.	2,804,664
Sand and Gravel	44	6,101,204 s. t.	4,381,855	4,854,433 s. t.	3,425,013
Clay	41	376,854 s. t.	1,650,900	313,360 s. t.	1,206,947
Brick and Tile	72	.....	22,128,816	.....	17,243,445
Pottery	60	.....	23,838,455	.....	20,381,443
Greensand Marl	4	10,656 s. t.	131,123	7,885 s. t.	56,800
Peat	4	18,380 s. t.	107,885	39,095 s. t.	193,940
Mineral Water	13	507,680 gal.	50,261	290,808 gal.	30,800
Miscellaneous (b)	15	.....	25,594,212	.....	24,039,751
Total	316		\$82,310,148		\$70,283,159

a. Value included in "Miscellaneous."

b. Includes Portland cement; coke; ground feldspar, talc and quartz; lime; fuel briquets; slate and zinc ore, whose values may not be separately published.

Chief Producing Districts. The mineral industries of New Jersey are widely distributed. There are, however, certain districts that are more active along these lines than other parts of the State. These are: the active *zinc-mining district* near Franklin Furnace, Sussex County; the three active *iron-mining districts* near Oxford, Warren County, near Dover, Morris County and near Ringwood, Passaic County; the *white limestone district* in Sussex County; the *trap-rock district* along the Watchung mountains in Passaic, Essex, Union and Somerset counties; the *trap-sandstone-argillite district* in Mercer and southern Hunterdon counties; the *clay, brick, tile and sand district* in northeastern Middlesex county; the *clay and pottery district* in Mercer county; the *sand and marl district* in the north-western part of Burlington County; the *clay district* in eastern Burlington and central Ocean counties; and the *glass, molding and building sand district* in central Cumberland, western Atlantic, eastern Gloucester and eastern Camden counties. The value of the combined output of the *districts* mentioned constitutes *over 70 per cent* of the total mineral production of the State.

Chief Producing Counties. Every one of the 21 counties makes some contribution in the way of mineral products. The leading counties approximately in the order of their rank are as follows: Mercer, Middlesex, Sussex, Warren, Hudson, Burlington, Camden, Morris, Hunterdon, Somerset, Monmouth, Cumberland, Passaic and Essex. The high rank of Mercer is due chiefly to the pottery output; that of Middlesex to the clay, brick and tile industry; that of Sussex chiefly to the zinc ore; that of Warren chiefly to the cement and iron ore; that of Hudson chiefly to the coke; that of Burlington chiefly to the sand; that of Camden chiefly to the coke; that of Morris chiefly to the iron ore; that of Hunterdon chiefly to the trap rock and pottery industries; that of Somerset chiefly to the trap rock and the brick and tile; that of Monmouth chiefly to the brick and tile; that of Cumberland chiefly to the sand; that of Passaic chiefly to the trap rock and that of Essex chiefly to the trap rock and fuel briquets. The county having the greatest variety of products is Warren, which produces iron ore, cement rock and Portland cement, limestone, quicklime, hydrated lime, verd antique marble, ground talc, peat, sand, crushed sandstone for foundries, and brick and tile.

ZINC ORE.

New Jersey is one of the chief zinc mining states, its rank being fourth in 1923. While the total amount of crude ore mined and treated in this State is considerably less than that of Oklahoma, Missouri, Michigan and Kansas which are the leading states and which in 1923 stood in the order given, the quality of the New Jersey ore is relatively high and the great Franklin Furnace mine has an output that is greater than nearly all of the large western mines; in fact, the Franklin Mine is one of the largest individual zinc mines in the world.

The New Jersey Zinc Company actively operated its mines at Franklin Furnace and Ogdensburg during 1923, the amount of zinc ore mined being 584,891 short tons, which was 36,601 tons more than in 1922. According to the United States Geological Survey the 1923 output is estimated to contain 150,454,000 pounds of recoverable zinc. The same authority in its advance chapter of the "Mineral Resources of the United States," 1923, Part I, page 3, gives the following statement regarding the zinc mining industry in the Eastern States:

"The recoverable zinc in the ore mined in the Eastern States in 1923 was valued at \$14,765,885, an increase of \$1,148,895. New Jersey produced 150,454,000 pounds, Tennessee 31,800,000 pounds and New York 16,926,000 pounds. Zinc ore mined and treated amounted to 1,186,131 tons, of which 584,891 tons was from New Jersey, 573,580 tons from Tennessee, and 63,660 tons from New York. Nearly all of the zinc ore from Tennessee and New York was sent to concentrating plants, and 488,946 tons of the zinc ore from New Jersey was concentrated and the remainder shipped as crude ore. Only a part of the zinc ore mined at Franklin Furnace is used directly for the manufacture of zinc. The greater part of this zinc is normally converted into oxide at works in Pennsylvania."

IRON ORE.

During 1923 the iron mining industry in New Jersey showed a quick rise from the depression of the previous year. The total quantity of ore mined was 307,733 long tons and the shipments were 349,435 tons valued at \$1,403,723. There were six operators reporting shipments, viz: Empire Steel & Iron Co. operating the Mount Hope Mine at Mount Hope, Morris County, and the Washington Mine near Oxford Furnace, Warren County; Thomas Iron

Co. operating the Richard Mine, near Wharton, Morris County; Replogle Steel Co. operating the Replogle Mine (formerly the Scrub Oak) near Wharton, Morris County; Ringwood Iron Co. operating the Cannon Mine and Peters Mine at Ringwood, Passaic County; the North Jersey Steel Co. operating the Beach Glen Mine, near Hibernia, Morris County and the Basic Iron Ore Co. operating the Ahles Mine near Oxford Furnace, Warren County. The addition of the amount *mined* in 1923 made a grand total of 23,590,545 long tons of iron ore taken from New Jersey mines since the year 1870.

Limonite Iron Ore for Gas Purification. A new development in the iron ore industry in recent years is the utilization of several forms of iron oxide for the purification of illuminating gas. In Pennsylvania a revival of the bog iron ore industry of former years has resulted from this development. Partly through the efforts of this Department some of the iron ore producers in New Jersey are now furnishing to several large manufacturers of gas part of the iron oxide they need for purification purposes. The material is the hydrated oxide, or limonite, or so called brown iron ore. We will watch with interest the further development of this new use for our New Jersey limonite iron ore. The value of the iron ore sold in 1923 for gas purification purposes is included in the total iron ore figures.

STONE.

The total output of stone in New Jersey in 1923, 2,038,740 short tons valued at \$3,022,918, was the largest in the history of the industry. The increase over 1922 was 143,630 tons in quantity and \$228,254 in value. This great output not only makes the stone industry one of our chief mineral industries, but also places New Jersey well up among the States. It ranks fifteenth, and all the states above it were larger in area.

During recent years the stone industry of New Jersey has shown steady advancement in some directions and steady decline in others. The decline has been in connection with the *granite* and *sandstone* industries, which at present put out only a comparatively small part of the stone quarried in the State. The advancement has been chiefly in connection with *trap rock*, the production of which has steadily increased in recent years, as is shown in the following table:

PRODUCTION OF TRAP-ROCK IN NEW JERSEY,
1916-1923.

	Quantity (Short Tons)	Value	Increase in Value
1916	1,496,560	\$1,293,217	\$11,672
1917	1,395,566	1,372,956	79,739
1918	1,041,716	1,475,358	102,402
1919	1,194,790	1,916,694	441,336
1920	1,216,810	2,140,845	224,151
1921	1,342,040	2,194,723	53,884
1922	1,581,740	2,412,109	217,380
1923	1,596,170	2,422,338	10,229

The great output of trap rock is practically all in the form of crushed stone for use as road metal, in concrete and as railroad ballast. Of the producing counties Passaic stood first, Somerset second and Mercer third. For years New Jersey has ranked very high among the States as a producer of trap rock. In 1921 and 1922 New Jersey stood first, California being second, Pennsylvania third and Connecticut fourth. Comparative figures for 1923 are not available but it is probable that New Jersey led in that year also.

The output of *limestone* in New Jersey has fluctuated considerably in recent years. During the recent war, owing to the importance of limestone as a blast furnace flux, the output rose to its highest level; the production in 1918 being 553,546 short tons, valued at \$674,397. After the war, the output dropped off, being only 228,600 tons, valued at \$280,761 in 1921. The production advanced again in 1922 and 1923, though it did not reach the war time level. The output for these years is given below. The leading county in the production of limestone in 1923 was Sussex.

PRODUCTION OF STONE IN NEW JERSEY IN 1923.

Variety	Pro- ducers	1923		1922	
		Quantity	Value	Quantity	Value
Trap (basalt, etc.) (a).....	34	1,596,170 s. t.	\$2,422,338	1,581,740 s. t.	\$2,412,109
Limestone (b)....	12	394,090 s. t.	473,416	264,340 s. t.	320,855
Other stone (c)...	7	48,480 s. t.	127,164	50,030 s. t.	71,700
Total.....	56	2,038,740 s. t.	\$3,022,918	1,896,110 s. t.	\$2,804,664

- a. Chiefly crushed stone for road material, concrete and railroad ballast.
 b. Includes stone for blast furnace flux, agricultural purposes and use as road metal.
 c. In 1923 includes argillite, granite, sandstone and serpentine marble (block and crushed.)

SAND AND GRAVEL.

The value of the output of sand and gravel in New Jersey has been mounting in recent years. The record-breaking total in 1923 was 6,101,204 short tons, with a value of \$4,381,855. This was an increase of 1,246,771 tons in amount and \$956,842 in value over the output of the previous year. This increase carries the industry up to and somewhat beyond the high level of 1920 when the output was 4,616,444 tons, valued at \$4,330,844. The output of New Jersey in 1923 was only a little less than 5 per cent of the total value for the United States, and its rank among the states was eighth, a remarkable showing for so small a state. The other leading states in the order of the value of their output were Pennsylvania (\$9,944,019), Ohio (\$7,863,375), Illinois (\$7,460,738), New York (\$7,291,076), Michigan (\$5,096,071), California (\$5,033,457), and Indiana (\$4,990,506.)

The various kinds of sand produced in New Jersey in 1923, are indicated in the following table.

PRODUCTION OF SAND AND GRAVEL IN NEW JERSEY IN 1923.

Variety	Pro- ducers	Amount		1922	
		Short Tons	Value	Short Tons	Value
Building sand	49	2,755,848	\$1,277,983	1,977,013	\$934,434
Molding sand	33	670,225	333,004	468,992	554,867
Paving sand	11	672,333	339,398	777,891	379,252
Glass sand	5	186,898	306,956	174,122	277,467
Cutting and grind- ing sand	5	76,499	205,689	87,812	193,619
Fire or Furnace sand	14	63,719	89,925	43,374	55,126
Engine sand	8	60,899	31,377	68,178	41,397
Other sands	9	108,400	140,005	66,004	101,564
Total sand	90	4,594,826	\$3,224,337	3,663,386	\$2,537,726
Gravel	24	1,506,378	1,157,518	1,191,047	887,287
Total sand and gravel	92	6,101,204	\$4,381,855	4,854,433	\$3,425,013

From an inspection of the above table it will be noted that during 1923, as in 1922, building sand (for mortar and concrete) led in both quantity and total value; paving sand (including sand for road-making) stood second in quantity but third in value; molding sand was second in value but third in amount and glass sand was fourth in both value and amount. Of the various sands in the above list the most valuable was that used for cutting and grinding, which averaged \$2.60 per ton; glass sand being second at \$1.64 per ton, fire sand third at \$1.41 per ton, and molding sand fourth at \$1.24 per ton. There was an increase in quantity

of 778,835 tons and in value of \$343,549 in the case of building sand; an increase of 201,233 tons in quantity and \$278,137 in value in molding sand; a decrease of 105,553 tons in amount, but an increase of \$39,854 in value in paving sand; and an increase of 12,776 tons in amount and of \$29,489 in value in the case of glass sand. Among the "other sands" mentioned in the table are filter sand, sand for soap manufacturers, for potteries, etc.

Of the counties, Burlington stood first, Cumberland second, Middlesex third and Morris fourth.

CLAY AND CLAY PRODUCTS.

Clay. Clay is mined in this State both by manufacturers who use it directly in making various products, chiefly building and fire brick, hollow building tile and terra cotta, and also by operators who mine the raw clay and sell it to makers of clay products. Statistics of production are available only in the latter case and are given in the following table.

CLAY MINED AND SOLD IN NEW JERSEY IN 1923.

Variety	Pro- ducers	1923		1922	
		Quantity	Value	Quantity	Value
Fire clay	33	286,145 s. t.	\$1,353,566	244,240 s. t.	\$979,345
Ball clay	5	11,280 s. t.	89,838	9,314 s. t.	66,555
Stoneware clay..	8	13,693 s. t.	68,167	10,008 s. t.	41,256
Miscellaneous clay (a)	12	65,826 s. t.	139,329	49,798 s. t.	119,791
Total	41	376,854 s. t.	\$1,650,900	313,360 s. t.	\$1,206,947

a. Chiefly clay for use in making terra cotta.

From the above table it will be seen that, as usual, the chief type of clay mined in New Jersey and sold in the raw state is *fire clay*. This is clay that will stand high temperatures and is valuable for many purposes, including the making of fire brick, front brick, enamel brick, stove linings, saggars, etc. *Ball clay* is a white burning plastic sedimentary clay, used chiefly in the manufacture of those finer grades of pottery that have a white body. New Jersey has never been a large producer of ball clay and it is gratifying to note that within the last few years the output has been increasing.

Of the counties that produced clay in 1923, Middlesex stood first, its output being greater than that of all the other counties combined. Mercer and Ocean counties were also important producers.

Clay Products. The statistics in regard to clay products are now compiled by the Bureau of the Census, of the U. S. Department of Commerce, with which this Department cooperates. New Jersey is one of the leading States in this important industry, ranking *third* in 1922. In 1922 the total value of all clay products for the United States was \$321,494,403. Of this Ohio produced 22.2 per cent, or \$71,347,314 worth; Pennsylvania 13 per cent, or \$41,683,044 and New Jersey 11.8 per cent or \$38,124,888. These three states therefore produced 47 per cent, or nearly half of the country's great output. *Comparable* figures are not yet available for 1923; but it is unlikely that New Jersey has lost ground. In view of the great increase in the 1923 values over those for the preceding year as noted below; it is more likely that the State has moved up to second place.

Brick and Tile. In the following table the quantity and value of the various kinds of brick and tile are given, both for 1923 and for the preceding year.

PRODUCTION OF BRICK AND TILE IN NEW JERSEY IN 1923.

Products	1922		1923	
	Quantity	Value	Quantity	Value
Common brick	322,491 M	\$5,231,979	289,406 M	\$4,340,175
Face brick (a) }	30,666 M	1,288,252	25,257 M	947,392
Enameled brick (a) }				
Terra cotta	36,278 n.t.	4,239,426	30,390 n.t.	3,118,054
Hollow bldg. tile (b)	338,354 n.t.	3,666,993	337,104 n.t.	3,016,383
Floor tile (c)	3,199,865 sq.ft.	792,699	1,708,589 sq.ft.	478,316
Ceramic mosaic	4,769,222 sq.ft.	1,488,936	5,426,985 sq.ft.	1,246,725
Faience (d)	327,747 sq.ft.	232,630	240,171 sq.ft.	198,314
Wall tile (e)	4,663,702 sq.ft.	2,346,281	7,770,468 sq.ft.	1,735,569
Fire brick	23,692 M	1,509,523	19,368 M	1,866,064
Miscellaneous (f)		1,282,097		795,953
Total (g)		\$22,128,816		\$17,243,445

- a. The figures for 1922 are for face brick only; those for enameled brick being included under "Miscellaneous."
 b. Includes partition, load-bearing, back up, blocks, furring, book tile, floor arch, silo tile, corn-crib tile, conduits, radial chimney blocks and fireproofing.
 c. Including plain, vitreous, encaustic, quarry, etc.
 d. Including art tile, enameled tile, and hand-decorated tile.
 e. Includes thin, white, glazed, etc.
 f. Includes drain tile, and other products not listed.
 g. The total number of establishments in 1923 was 72.

On inspection of the above table it will be noted that in 1923 there were increases all along the line. The total increase in value was \$4,885, 371; which was made up of an increase of \$891,804 in common brick, \$340,860 between face brick and face and enameled brick taken together, \$1,121,372 in architectural terra cotta, \$650,610 in hollow building tile, \$314,383 in floor tile, \$242,211 in

ceramic mosaic, \$83,816 in faience, \$610,712 in wall tile, \$143,459 in fire brick and \$486,144 in miscellaneous products.

Compared with other States, on the basis of the figures for 1922, New Jersey stood *first* in the production of ceramic mosaic, *second* in the production of terra cotta, hollow building tile, floor tile, faience, and wall tile, *fourth* in common brick and *fifth* in fire brick. The rank of the State is not likely to have been different in 1923 in the products mentioned.

Pottery. In the following table the value of the output of the various kinds of pottery, including porcelain electrical supplies, are given, both for 1923 and for the preceding year.

PRODUCTION OF POTTERY IN NEW JERSEY IN 1923.

Products.	Value-1923	Value-1922
Sanitary ware	\$13,776,499	\$13,748,287
White ware, etc.	1,850,771	(a)
Porcelain, china, belleek, etc.....	144,775	993,959
Hotel china	1,639,751	1,628,296
Porcelain electrical supplies	5,340,773	2,978,144
Miscellaneous products (b)	1,085,886	1,527,757
Total (c)	\$23,838,455	\$20,881,443

- a. In 1922, included under "Miscellaneous."
 b. Includes red earthenware, red and brown, white-lined cooking ware, stoneware (except chemical) and yellow and Rockingham ware, chemical stoneware, saggars (of own make, etc.
 c. The total number of establishments in 1923 was 60.

On inspection of the above table it will be noted that in 1923 there was a total increase, as compared with 1922, of \$2,957,012. The increase was mainly in connection with the output of porcelain electrical supplies, which was \$2,362,629 greater in 1923 than in 1922.

Compared with other States, on the basis of the figures for 1922, New Jersey stood *first* in sanitary ware (producing 56 per cent of the country's output), *first* in porcelain, china, belleek, etc., and *second* in hotel china, and in porcelain electrical supplies.

CEMENT-ROCK AND CEMENT.

For years, New Jersey has been an important producer of Portland Cement. It produces several million dollars worth every year; but, owing to the fact that there were but two active operators in 1923 detailed figures as to this industry cannot be separately published. The value of the output is included under the head of "Miscellaneous" in the general table on page 3. The

two active operators are the Edison Portland Cement Company whose quarry and plant are located at New Village, Warren County, and the Vulcanite Portland Cement Company, whose quarry and plant are located at Vulcanite, Warren County. The cement-rock which is quarried and utilized by these companies is similar in character and quality to that of the famous Lehigh District in Pennsylvania. It is an argillaceous, or clayey limestone having very nearly the composition required for the making of Portland cement of standard grade, as it requires the addition of but a small amount of pure limestone to the charge that goes into the kilns.

COKE AND FUEL BRIQUETS.

While no coal deposits have ever been discovered in New Jersey, the State does produce *coke* as a by-product in the making of illuminating gas and fuel briquets from waste anthracite shipped in from Pennsylvania. In 1923 the quantity of coke sold was 864,981 short tons. As there were but two operating companies, the value cannot be separately published; but it is included under the head of "Miscellaneous" in the general table given on page 3. The producing operators were the Camden Coke Company, whose plant is located at Camden and the Seaboard By-Product Coke Company whose plant is located at Kearney. The 1923 sales involved an increase in tonnage over those for 1922 of 125,213 tons.

The *fuel briquet industry* was more active in 1923 than in the preceding year. The producing companies were the Anthracite Manufacturing Company at Trenton and the Burnrite Coal Briquet Company at Newark. As there were less than three producers, the figures in regard to this industry cannot be separately published. The value of the output is included under "Miscellaneous products" in the general table.

GREENSAND OR GREENSAND MARL.

The year 1923 was marked by an interesting revival in the greensand marl industry in New Jersey, the second in the last decade. Old residents of Southern New Jersey will recall that many years ago the mining and shipping of greensand marl for use as a direct fertilizer was a flourishing industry. In 1873 there were 134,734 tons reported as shipped by the active operators besides about an equal amount dug by farmers for their own use. After the use of the marl as a fertilizer was discontinued by most

farmers in the State, shipments practically ceased. During the recent world war a considerable quantity of the greensand marl was mined and used for making potash salts, as the best marls are composed chiefly of the mineral glauconite, a silicate of iron and potassium, and carry as much as 7 per cent of potash. The cost of extracting the potash was too great however to permit of competition with foreign sources of supply and on the close of the war, the industry again waned. The latest revival of interest is due to the discovery that the greensand marl, or the greensand, as it is becoming the custom to call it, can, after treatment with sodium compounds, be used in place of the natural and synthetic zeolites used in the so-called "zeolite or base exchange" method of softening water. Mention was made of this new development in our last report; but since that time the returns for 1923 have come in and they show that the use of the greensand for water softening purposes is likely to be of even greater importance than was at first supposed. The output in 1923 was 10,656 tons, the value of which was \$131,123. This was reported by the following producers: The Permutit Company whose pit is near Birmingham; the Medford Manufacturing Company whose pit is at Reeve's Station near Medford; the Potash-Marl, Inc. and the Marl Mining Corporation whose two pits are located near Marlton. All of these pits are in Burlington County.

PEAT.

In 1923 New Jersey ranked second among the States in the production of peat; Illinois being first and California third. The output of this State was 18,380 short tons, whose value was \$107,885. The chief use of the peat is as a fertilizer or an ingredient of fertilizers. A considerable portion of the New Jersey output is subjected at the plants near the pits to bacterial inoculation and thereby given a greater value as a fertilizer for certain special purposes. The following operators were active in New Jersey: The Alphao Humus Company, near Great Meadows, Warren County; the Hyper Humous Company, near Newton, Sussex County, the Humus Natural Manure Company, near Branchville, Sussex County; and J. G. Marcrum, near Stanhope and near Andover, both in Sussex County.

MINERAL WATERS.

There were 13 active springs in New Jersey in 1923, whose total output was 507,680 gallons, valued at \$50,261. Most of the water bottled by these operators, while for convenience in tabulation classed as "mineral water" was non-medicinal in character and really bottled and sold because of its being good, pure, potable water. There was an increase in 1923 of 216,872 gallons in amount and \$19,461 in value, as compared with the output for 1922.

SLATE.

For many years slate has been one of the mineral products of New Jersey. The output has never been very large and in recent years there has usually been only one quarry in operation, there being an alternation in activity between the quarry at Newton and that at Lafayette, both of which are in Sussex County. In 1923 the Lafayette quarry was the one in active operation. The value of the slate output is included under "Miscellaneous products."

In view of the fact that we have slate of good quality in our own State within about 50 miles from Bound Brook one wonders why it is that a new concern planning to locate a plant at Bound Brook for the production of slate surfaced shingles should contract to have its slate furnished by an operator at Granville, New York, which is over 200 miles distant from Bound Brook. Yet this is the condition of affairs according to an article in "Stone" for August 1923, page 463. Cannot some of our New Jersey slate operators do something to improve such a situation as this?

TALC OR TALCOSE ROCK.

For many years an important deposit of talc or talcose rock associated with the serpentine or verd-antique marble occurring near Phillipsburg, Warren County, has been ground and sold. While the product is hardly of the high grade required for toilet preparations it finds extensive use in the rubber, paper and other industries. The value of the output is included under "Miscellaneous products." The producing operator is the Rock Products Company of Phillipsburg and Easton.

QUARTZ OR "SILICA"

Several concerns mine, or purchase from others, some of the high class glass sand occurring in Southern New Jersey, pulverize it and dispose of it for use in scouring soaps, polishing powder, paints and similar products. The sand is obtained at Cedarville and South Vineland in Cumberland County and at Williamstown Junction, Camden County. The value of this "ground quartz" or "Silica" is included under "Miscellaneous products."

GROUND FELDSPAR.

Up to the present time no deposits of feldspar of commercial importance have been discovered in New Jersey. It happens, however, that the great pottery making industry of the State requires large quantities of feldspar and three concerns located at Trenton are actively engaged in supplying their needs. The crude feldspar is shipped in from other states, chiefly Maine and Connecticut, and ground in the plants of the Eureka Flint and Spar Company, Golding & Sons Co., and Trenton Flint & Spar Company. The detailed figures regarding the output may not be published but the value is included this year for the first time under "Miscellaneous" mineral products.

LIME.

The lime industry in New Jersey has steadily declined in recent years. In former years there were many operators who burned both the white limestone and blue limestone into lime; but in 1923, only two reported a production. These were Todd & Cordes at Peapack, Somerset County, and the Twining-Large Lime and Chemical Company at Carpentersville, Warren County. The value of the lime produced is included under "Miscellaneous products."