



STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL SURVEY
2045 MORSE RD., BLDG. C-1
COLUMBUS, OHIO 43229-6693
(614) 265-6576
(614) 447-1918 (FAX)
E-Mail: geo.survey@dnr.state.oh.us
World Wide Web: <http://www.OhioGeology.com/>



2011 Report on Ohio Mineral Industries: An Annual Summary of the State's Economic Geology

WITH

DIRECTORIES OF REPORTING
COAL AND INDUSTRIAL MINERAL OPERATORS

compiled by

Mark E. Wolfe

Database design and data retrieval: Joseph G. Wells
Interactive mineral industries map/digital cartography: Dean R. Martin

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FOREWORD

It is with great pleasure that the Ohio Geological Survey presents the 2012 edition of the *Report on Ohio Mineral Industries*.

As many may be aware, 2012 marks the 175th anniversary of the founding of the Ohio Geological Survey, making it the oldest government agency in the great State of Ohio. Ohio's founders recognized that an understanding of the geology and natural resources within the State would be vital to its economic development. This is as true then as it is today. Coal, oil, gas, and industrial minerals play a vital role in the economy of 2012. Research done by the Survey provides vital information used by coal companies, aggregate and industrial minerals companies, oil and gas companies, university researchers, environmental firms, educators, and other government agencies, such as the Ohio Department of Transportation. In fact, a 2011 study has shown that the legacy of the products and services of the Survey contributes an estimated \$575 million annually to the Ohio economy. It is clear that for taxpayer dollar spent vs. taxpayer return, the Survey has delivered tremendous value to the State of Ohio.

In celebration of this anniversary, the Ohio Aggregate and Industrial Minerals Association (OAIMA) and the minerals industry has cosponsored the *Geological Walk Through Time* exhibit unveiled on July 25, 2012, at the Ohio State Fairgrounds. This permanent exhibition displays the bedrock geology map of the State in 1:50,000 scale. In addition, the Survey is partnering with the OAIMA, the Ohio Oil and Gas Energy Education Program, the American Institute of Professional Geologists-Ohio Section, the Ohio Geological Society, and others to introduce the *Ohio Rocks!* license plates. These are available from the Ohio Bureau of Motor Vehicles. Proceeds from their sale will benefit Earth science education, specifically undergraduate and graduate student researchers within the State. Readers of this publication are encouraged to buy the plates in support of Earth science education.

We at the Survey hope that readers will benefit from this publication and others available for sale through the Geologic Records Center and on the website, **www.OhioGeology.com**. In this anniversary year, the Ohio Geological Survey can proudly look back upon its contributions, but we can also look forward to continuing to serve the needs of Ohioans for many years to come.



Thomas J. Serenko,
Chief and State Geologist
October 9, 2012

PREFACE

In 2012, the Ohio Department of Natural Resources, Division of Geological Survey celebrates its 175th anniversary of research into the economic geology of the state. The influence of geology on economic activity is clearly illustrated; publicly available geologic research is a critical component for industrial development. The table below provides a brief synopsis of that work performed by the Survey since its inception. For more information, including links to many early Survey publications, visit the anniversary page on the Survey Website at <http://www.dnr.state.oh.us/tabid/7811/Default.aspx>.

175 years of economic geology in Ohio

Years	State Geologist	Accomplishments
1837–1838	W. W. Mather	Working by horse and wagon, produced two reports that included coal resource estimates, the importance of the iron industry, and varied uses of limestone and sandstone. Constructed the initial geologic maps and cross-sections; also collected important geologic specimens.
1869–1882	J. S. Newberry	The Civil War magnified the importance of the state's geologic resources. Published a prodigious amount of printed material, more than 5,000 pages, detailing stratigraphic relationships that were essential to continued development of the state's economic geology.
1882–1899	Edward Orton, Sr.	Completed two major volumes on economic geology and pioneered research on the state's petroleum geology.
1899–1906	Edward Orton, Jr.	Founded the study of ceramic engineering, established Ohio State University as the home of the Ohio Geological Survey, and published nine Bulletins on topics including petroleum geology, limestone, cement, and salt.
1906–1928	J. A. Bownocker	Published 25 Bulletins on topics including building stones, peat, clays, and the mineral industries, as well as detailed county and quadrangle geologic maps. Completed a statewide geologic map that was the standard for more than 75 years.
1928–1946	W. E. Stout	The Great Depression and World War II severely limited funding, but investigations on coal composition, brine geochemistry, iron ore, flint, groundwater resources, and limestones of western Ohio were completed.
1946–1947	G. W. White	Funding was increased; published Reports of Investigations on salt and coal.
1947–1957	J. H. Melvin	The Survey became a charter member of the newly created Ohio Department of Natural Resources. Continued to publish detailed county economic-geology reports; research on limestones of eastern Ohio, sand and gravel resources, oil and gas activities, and coal resources by seam; and a complete bibliography on Ohio geology.
1957–1968	R. J. Bernhagen	Continued coal resource investigations and oil and gas studies, particularly in the deeper formations. First detailed investigation of Ohio's Precambrian geology. Instrumental in establishing salt leases and mining under Lake Erie.
1968–1988	H. R. Collins	Studied county sand and gravel resources, deep coal resources, and high-calcium limestones and continued research into subsurface geology. Nearly 120 publications were released, including 74 Reports of Investigations. The core drilling program was highlighted by the discovery of an unknown rift basin in western Ohio. Also began publishing the annual <i>Report on Ohio Mineral Industries</i> .
1989–2006	T. M. Berg	A new digitally produced state bedrock-geology map was completed. A dedicated core warehouse and laboratory was created at Alum Creek State Park. Geographic Information Systems were incorporated into coal availability studies and aggregate resource and geologic mapping. The <i>Report on Ohio Mineral Industries</i> becomes available in electronic format.
2007–2012	L. H. Wickstrom	Carbon sequestration, shale gas, and geothermal resource investigations are ongoing with reduced funding. Innovative three-dimensional surficial materials and derivative mapping continues, along with many additional products being made available on the Survey website.

MINERAL INDUSTRIES IN OHIO DURING THE AMERICAN CIVIL WAR AND RECONSTRUCTION

Mark E. Wolfe, Senior Economic Geologist
Ohio Department of Natural Resources, Division of Geological Survey

Early in the nineteenth century, Ohio extractive mineral industries were developed to support the state's growing population (Collins, 1987). Industrial commodities such as salt production, iron furnaces, and coal mining played an important role not only in the development of the state economy but also in supporting the efforts of the Union Army during the American Civil War (1861–1865) and the post-war Reconstruction Era.

Some of the initial legislation enacted by the new State of Ohio government in 1803 included an act regulating the salt works in Jackson and Muskingum Counties (Hansen, 1995). In 1810, approximately 70 bushels (2 tons) of salt per week were being produced in the salt kettles of Ohio; with the development of shallow brine wells in the Muskingum River valley, 300,000 to 400,000 bushels (8,400 to 11,200 tons) of salt were produced annually by the 1830s (Bownocker, 1906). The valuable salt trade was important to the development of early overland transportation routes such as Zane's Trace, which connected Wheeling, West Virginia, with Maysville, Kentucky. Pomeroy, on the Ohio River in Meigs County, became an important salt-producing area beginning in 1850 (Orton, 1885; Platt, 1995). When the American Civil War began, it was quickly realized that the geologic resources of Ohio would be important to the war effort of the northern forces. For example, bromine produced from Ohio brines was considered a "miracle drug" during the Civil War. Bromine was an excellent disinfectant and was used to treat gangrene that often occurred after battlefield surgery. During the post-war period and Reconstruction, much of the salt imported by southern states came from Pomeroy. And the value of potassium bromide as a nervous sedative was demonstrated in 1866, creating a larger market for bromine produced in Ohio (Ohio Geological Survey, 1888).



View of Pomeroy, Ohio, in the early 1900s from the West Virginia shore of the Ohio River. The dome of the Meigs County courthouse is visible in the far left of the photograph. Pomeroy was an important producer of coal and salt, as well as an Ohio River port in the Civil War era. The Pomeroy (No. 8a, Redstone) coal underlies the massive sandstone cliffs shown behind the town.

The first charcoal iron furnace in Ohio was erected sometime from 1802 to 1807 in Mahoning County and the remains have been preserved in Yellow Creek Park in Struthers, Ohio (Stout, 1944; Hannibal and others, 2011). By the late 1800s, approximately 130 iron furnaces that used native or imported ore and charcoal, coke, or coal had been built in Ohio; 81 iron furnaces were active during 1881 (Ohio Geological Survey, 1884). The Ohio iron furnaces were located in five districts: Mahoning Valley, Tuscarawas Valley, Steubenville or River, Hocking Valley, and an area in southern Ohio known as the "Hanging Rock" region. The Mahoning Valley District of northeast Ohio consisted of fifteen furnaces using iron ore primarily from Lake Superior and minor amounts from Ohio, Pennsylvania, and New York. The fuel used was predominantly coke produced near Connelsville, Pennsylvania, supplemented by Ohio coal. Iron production from the Mahoning Valley totaled 245,737 tons in 1881 (Ohio Geological Survey, 1884). The Cleveland Rolling Mill was the largest iron producer in Ohio, controlling large iron ore mines in the Upper Peninsula of Michigan (Comley and D'Eggville, 1875). The seven iron furnaces of the Steubenville or River District used a mixture of Ohio, Missouri, and Lake Superior ores and were all fired using coke from Pennsylvania. The Hocking Valley District consisted of fifteen furnaces using locally sourced iron ore, coal, and limestone used as flux. Some Lake Superior ore was imported by railroad. Iron production from the Hocking Valley in 1880 was 118,000 tons. The Tuscarawas Valley supported only two furnaces providing iron for local markets.

The major iron-producing area in southern Ohio was the Hanging Rock region and extended from northern



A 2009 photo of Buckeye Furnace, a reconstructed charcoal-fired iron furnace located in Milton Township, Jackson County, Ohio. Originally constructed in 1852, Buckeye Furnace was last used in 1894. The 270-acre site is currently owned by the Ohio Historical Society.



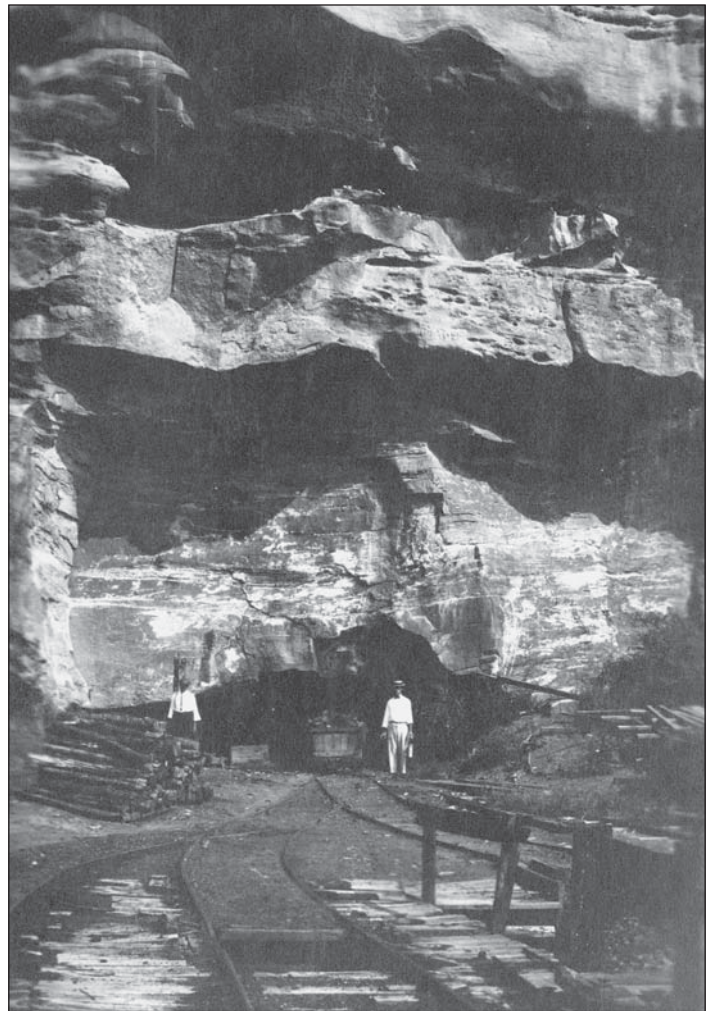
Hecla Iron Furnace located in Upper Township, Lawrence County, Ohio, circa 1870s. The furnace operated from 1833 to 1905, producing approximately 10 tons of iron each day. Iron used to make the Swamp Angel cannon used in the early bombardment of Charleston Harbor by Union forces during the Civil War, is reported to have been produced at the Hecla site (Dodds, 1957). Photo by Fred G. Leste.



Some of the remaining 120 coke ovens of the original 200 constructed by the Leetonia Iron & Coal Company from 1866 through 1870 in Columbiana County, Ohio. The Cherry Valley Iron & Coal Company began operating the coke ovens and nearby iron furnaces in 1872.

Kentucky across the Ohio River into Lawrence and Scioto Counties, then northward through Jackson, Vinton, and Hocking Counties. The first charcoal blast furnace of the Hanging Rock region was built in 1826 in Lawrence County. By the end of the Civil War, more than 45 iron furnaces were operating in southern Ohio, each capable of producing 2,000 to 3,000 tons of iron annually (Collins, 1986; Willard, 1916). The iron produced from the Hanging Rock Region was considered to be very high quality and was used at foundries throughout the eastern United States to manufacture such things as railroad car wheels, cannons, and plating. Much of the iron used in Union armament, cast at the Fort Pitt Works at Pittsburgh, came from the Hanging Rock region (Letee, 1862). Iron used to construct the ironclad warship *Monitor* and other gunships, as well as the famous *Swamp Angel*, a cannon used in the Union siege of Charleston Harbor, reportedly was cast in southern Ohio (Collins, 1986). Greater than 10 million short tons of iron were produced in Ohio from 1803 to 1877 (Ohio Division of Geological Survey, 1959).

Minor coal production occurred in Jefferson and Columbiana Counties along the Ohio River during the early 1800s. As Ohio industry and population increased, so did coal production. The completion of the Ohio & Erie Canal in the 1830s, the expansion of rail transportation in the 1840s and 1850s, and the increasing importance of the Ohio iron, clay, limestone, and salt industries appear to have been major catalysts in the growth of the Ohio coal industry. Annual Ohio coal production increased from 103,664 tons in 1840 to 616,846 tons in 1850 (Crowell, 1995). Coal mines near the Ohio River at Pomeroy in Meigs County were major producers in the 1850s and 1860s. The shallow underground coal mines of northeastern Ohio, particularly in Summit, Trumbull, and Mahoning Counties, also expanded production from 1850 into the 1870s as the industrial capacity of the Cleveland, Akron, and



The Pomeroy (No. 8a, Redstone) coal and overlying sandstone at the Peacock Coal Company mine near Pomeroy, Ohio. Meigs County was the leading producer of coal in Ohio during the mid-nineteenth century.



Unidentified mine near Zanesville, Muskingum County, Ohio, circa 1900. Dogs often were used to transport coal cars from the mine to awaiting horse-drawn wagons. It is interesting to note that much of the animal-assisted coal mined in Ohio was used to power the numerous steam engines that supported industry, including riverboats and railroads. Photo is from the collection of Don Nunley through the courtesy of the Ohio Historical Society and first appeared in the Fall 1990 issue of Ohio Geology.

Youngstown areas grew rapidly (Crowell, 1995). Ohio coal production in 1860 reached nearly 1,850,000 tons—more than triple the 1850 output. By the mid-1870s, coal production was greater than 5 million tons annually and had shifted geographically to the large underground mining operations in southeastern Ohio, primarily in Athens and Perry Counties. Ohio coal was used to fuel the countless steam engines used in transportation and manufacturing but also was essential for other economic geology-based industries in Ohio and surrounding states. The kilns, retorts, and furnaces used in ceramic, glass, salt, and lime facilities, as well as iron foundries and early steel blast furnaces, relied on Ohio coal.

Locally quarried sandstone was used extensively to construct furnaces throughout the Ohio iron-making industry from 1804 until the 1880s because it was moderately refractory, resistant to abrasion and slag acidity, and was changed by heat—the quartz became tridymite, which was impervious to gas penetration (Stout, 1946). The construction of the Ohio & Erie and Miami & Erie Canals from 1825 to 1847 was a boon to the stone industry of Ohio. Tremendous amounts of locally derived building stone were used in the extensive lock-and-dam system (Hannibal, 1998). Ohio railroads also used enormous amounts of building stone for abutments, piers, and stone arch bridge construction. The massive stone viaduct and Ohio River railroad bridge at Bellaire completed in 1870 and the railroad bridges at Belpre and Cincinnati completed in 1870 and 1877, respectively, used large amounts of building stone.

The development of the huge Devonian-age Berea Sandstone quarries of northern Ohio marked the beginning of the “golden age” for the Ohio building stone industry. Grindstones had been made from the Berea Sandstone at Berea in Cuyahoga County since 1828, but the quar-



West-facing view of the B. & O. Railroad viaduct at Bellaire, Belmont County, Ohio. The viaduct was constructed in 1870 using Pennsylvanian-age “Bellaire sandstone” quarried to the north at Martins Ferry, Ohio (Camp, 2006). The Bellaire viaduct consists of 43 arched spans leading to the railroad bridge crossing the Ohio River; the bridge is supported by an additional six sandstone piers and abutments. More than 50,000 tons of stone was used during construction. Prior to building the bridge and viaduct, rail cars had to be ferried across the Ohio River.



Close-up of the Cherry Valley coke ovens near Leetonia, Columbiana County, Ohio, illustrating the use of locally-sourced sandstone for foundations and bricks produced from area clays and shales used to construct and line the ovens. Coal mined nearby was the raw material for the coke ovens and native iron-ore was used in the furnaces.

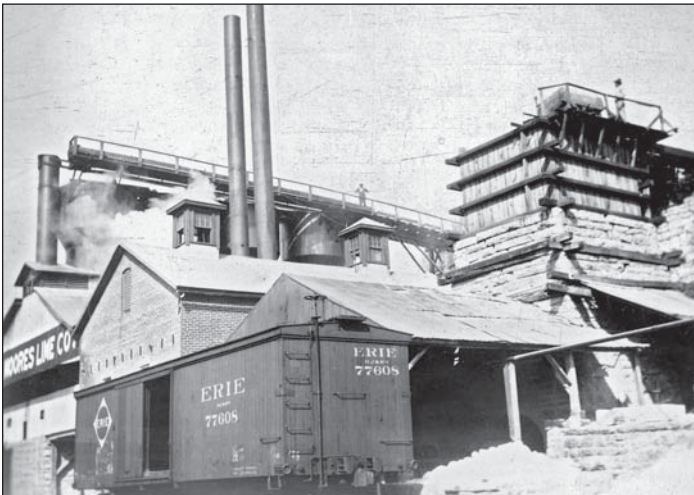
ries developed by the Cleveland Stone Company and its predecessors at South Amherst in Lorain County during 1869 propelled the Berea to become the dominant building stone in the United States (Bownocker, 1915). By the 1880s, the Cleveland Stone Company alone employed 2,000 Ohioans and produced 30,000 tons of grindstones and approximately 425,000 tons of building stone annually (Manufacturer and Builder, 1888).

Beginning in the early 1800s, Ohio's abundant Pennsylvanian-age clay and shale resources were increasingly being used by the state's growing ceramic industry. By 1840, nearly 100 factories in 32 counties were producing pottery (Wolfe and Blankenbeker, 2005). Roofing tile, pressed brick, fire brick, terra-cotta, drain tile, sewer pipe, and encaustic tiling were being manufactured in Ohio by the late 1870s (Stout and others, 1923). Columbiana, Muskingum, Perry, Hocking, Tuscarawas, and Scioto Counties had important ceramic-producing industries. Fire-clays mined in southern Ohio were important for the manufacture of refractory materials used to line furnaces and kilns. A single iron-producing operation in southern Ohio could use more than 1 million fire-bricks to line the furnace. By the late 1870s, more than 4 million tons of clay had been mined in Ohio (Ohio Division of Geological Survey, 1959).

Limestone quarries and petroleum producers also were making important contributions to the state and national economies during the Civil War and Reconstruction. Limestone was used as a flux in the Ohio iron industry, in the making of lime and cement, for railroad ballast, and as a building stone (Orton and Peppel, 1906; Bownocker,

1915). Oil was discovered in Trumbull County in late 1859 (Bownocker, 1903); by 1865, eight petroleum fields had been established in eastern Ohio and were producing oil from shallow Pennsylvanian-age sandstones and the Devonian-age Berea Sandstone (Riley and others, 2004). The Standard Oil refinery in Cleveland, owned by John D. Rockefeller, was processing 10,000 barrels of petroleum daily by the early 1870s, or nearly 50 percent of the entire oil production of Pennsylvania (Comley and D'Eggville, 1875).

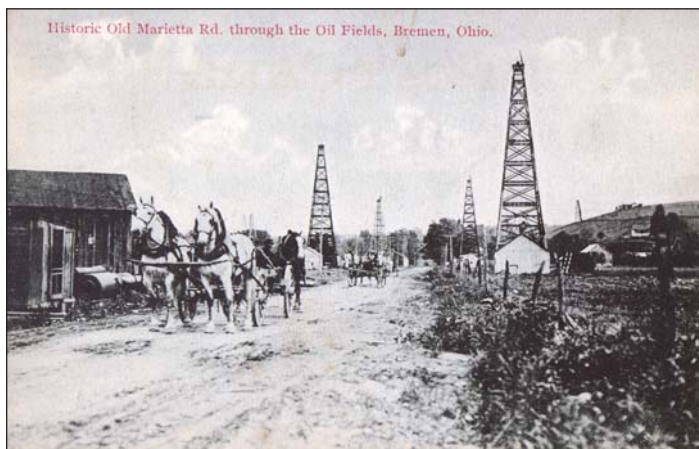
At the beginning of the Civil War, Ohio was the third most populous state in the nation with over 2.3 million citizens. Though only minor Civil War battles were fought on Ohio soil (for example, see Schumacher and Powers, 2004), the state was an important logistics center for Union forces. Before, during, and after the Civil War, Ohio produced iron for armaments, railroad cars, rails, and bridges; coal for kilns, furnaces, and steam engines used by railroads, riverboats, and industry; ceramic products to support industry; petroleum products for lubrication and early internal combustion engines; and cement and building stones for maintaining infrastructure.



Lime kilns and rail load-out at the Moore's quarry near Springfield, Clark County, Ohio, circa 1908. Limestone quarried in Ohio also was used to manufacture cement and used as a building stone during the Civil War.



Quarrying Devonian-age Columbus Limestone on Johnson's Island, Ottawa County, Ohio, circa 1916. Johnson's Island was the site of a prisoner of war camp for Confederate officers captured during the Civil War.



Apostcard featuring a typical oil-field scene of southeastern Ohio in the late nineteenth century.

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2011 OHIO ECONOMIC GEOLOGY IN BRIEF

Reports were filed in 2011 for 142 coal-mining operations, including 5 mines with their own coal-washing facilities. Coal production was reported from 74 of these 142 operations. Reports also were filed for 15 separate coal-washing plants and associated facilities. Of the 549 industrial-mineral-mining operations known to be operating in 2011, 367 operations were reported active. A total of 26 mines reported production of multiple mineral commodities, including coal and/or one or more industrial minerals. There were 365 new wells completed for oil and gas in 2011, of which 338 were productive and 27 were dry.

The total tonnage of coal and industrial minerals produced in Ohio during 2011 was 116,485,488 tons or approximately 10.1 tons per capita. The total value¹ of coal was \$1,194,931,060 in 2011; the value of oil and gas was \$747,714,808; and the total value¹ of all industrial minerals was \$886,417,044 in 2011. The combined total value of fuel and nonfuel minerals produced in Ohio during 2011 was \$2,829,062,912 or approximately \$245 per capita. Reported and estimated total employment in the extractive industries of Ohio in 2011 was more than 10,000 people.

¹Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A countywide- or statewide-average price per ton was calculated for each industrial-mineral commodity based on sales for which the value was reported. A countywide, average price per ton was calculated for coal based on sales for which the value was reported and method of production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

TABLE 1.—2011 Fuel and nonfuel mineral sales and production in Ohio

Commodity	Production ¹	Sales ²	Value ³	Change in value from 2010 (percent)
Coal	27,929,089 tons	26,948,302 tons	\$1,194,931,060	+4.0
Limestone and dolomite	52,710,175 tons	53,588,324 tons	\$476,512,973	+9.2
Sand and gravel	27,742,189 tons	27,301,135 tons	\$178,653,043	+4.5
Salt	5,635,712 tons	5,576,847 tons	\$176,664,764	-16.5
Sandstone and conglomerate	1,433,528 tons	1,190,332 tons	\$42,922,481	+25.0
Clay	274,310 tons	289,006 tons	\$2,424,933	-20.5
Shale	760,485 tons	734,258 tons	\$9,238,850	+9.0
Gas	73,289,838 MCF ⁴	⁶	\$310,659,568	-14.2
Oil	4,852,964 bbl ⁵	⁶	\$437,055,240	+22.7

¹The production figures for industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates, other operators do not report any production. For those operators who do not report production, production is assumed to equal sales. Timely completion of this report requires that when production and sales information are not available, production figures may be gathered from the ODNR Division of Mineral Resources Management or be estimated or be excluded.

²Includes material for captive use.

³The FOB value of industrial minerals sold was estimated for mines that failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton calculated on reported FOB values.

⁴Thousand cubic feet.

⁵Barrels.

⁶Figure not available.

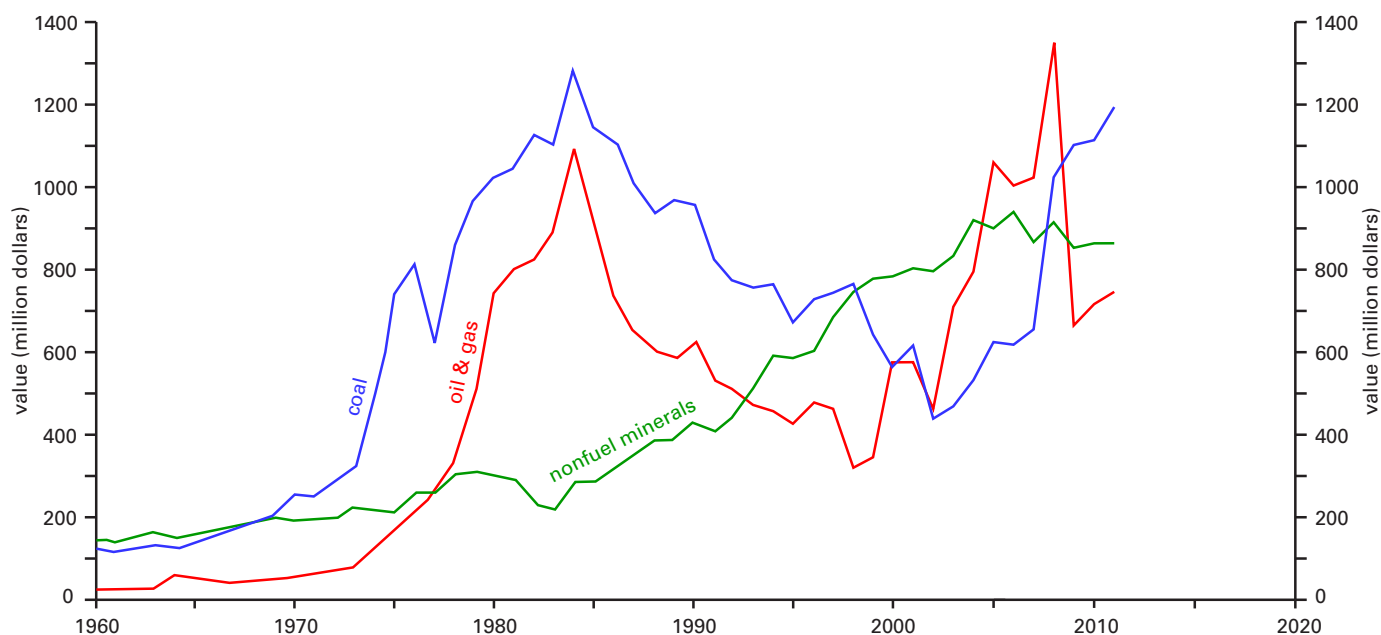


FIGURE 1.—Value of coal, nonfuel minerals, and oil and gas in Ohio.

COAL

(See also Appendix A)

Coal was produced by 29 companies at 74 mines in 16 Ohio counties during 2011. Production decreased 1.5 percent from 2010 (Wolfe, 2011), totaling 27,929,089 tons in 2011 (table 2). In 2011, tonnage from underground production exceeded tonnage from surface production, continuing a trend that began in 1995; 9,035,133 tons (32.4 percent of total production) were produced at 64 surface mines, and 18,893,956 tons (67.6 percent of total production) were produced at 10 underground mines (table 2). Of 25 coal-producing states, Ohio ranked eleventh in 2011. The top five states, in descending order of production, were Wyoming (438.5 million tons), West Virginia (134.5 million tons), Kentucky (107.8 million tons), Pennsylvania (59.8 million tons), and Texas (45.8 million tons) (USDOE, 2002). Ohio coal is used primarily to generate electricity; 82 percent of the state's electricity is produced by burning coal (PUCO, 2011). Ohio coal is also used in commercial, institutional, and industrial applications, while minor amounts are exported.

The five leading counties for 2011 production were Belmont, Harrison, Perry, Monroe, and Jefferson Counties (table 3 and fig. 2); these counties produced 82.4 percent of the 2011 total production. The Pennsylvanian-age Monongahela Group Pittsburgh (No. 8) coal was the most heavily mined seam, followed by the Allegheny Group Middle Kittanning (No. 6), Monongahela Group Meigs Creek (No. 9), Allegheny Group Lower Freeport (No. 6a), and the Allegheny Group Upper Freeport (No. 7) seams (see fig. 4 and table 6). Coal produced from these five seams constituted 91.8 percent of the total 2011 production. Since 1816, mining of the Pittsburgh (No. 8) in eastern Ohio has produced more than 1 billion tons of coal (Crowell, 1995).

In underground mining, 60 percent of the coal was produced by longwall mining and 40 percent was mined by continuous miner; no coal was produced by conventional mining in 2011. In surface operations, 81.9 percent of the coal was mined by conventional surface methods, 3.5 percent was mined by augering, and 14.5 percent was mined by highwall miner.

A total of 26,948,302 tons of coal were sold in 2011; total value² was \$1,194,931,060 (fig. 3). This was the fourth consecutive year that coal values were greater than \$1 billion, which had not happened since the early 1980s. The average price per ton of all coal sold was \$44.34; surface-mined coal averaged \$41.56 per ton and underground-mined coal averaged \$45.69 (table 8).

A total of 19,478,676 tons of washed coal was reported in 2011. Reports from 11 coal-washing plants indicate an average 34.8 percent loss in washing.

Rail was the primary means of coal disposition, carrying 60.1 percent of the total sales. Trucking transported 34.2 percent, and water carried 3.8 percent of the coal sold in 2011. A total of 365,550 tons (1.3 percent) of the coal produced was reported as stored (table 7).

The total average annual employment reported in 2011 was 2,995 employees; 2,224 of these were production employees (table 9). Production employees worked an average of 211 days producing coal in 2011. The average annual wage earned by all production employees was \$69,172 based on those employees for whom wages were reported. The average annual wage for surface-mine production employees was \$53,534, and the average annual wage for underground-mine production employees was \$76,721. Wages earned by all employees totaled \$217,098,139 in 2011 (table 10).

²Includes reported and estimated values. See footnote 1, p. 6.

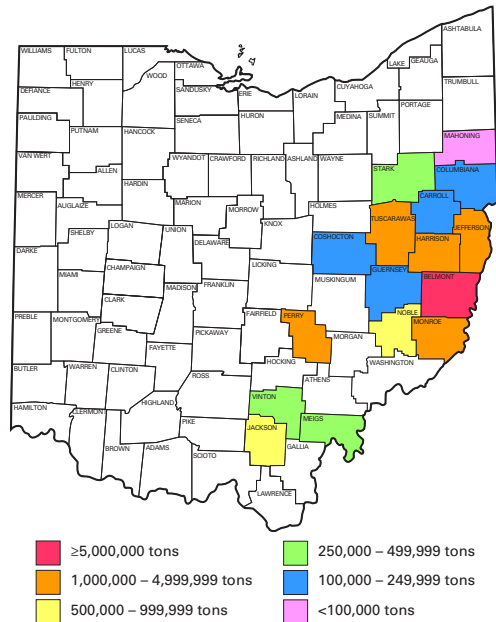


FIGURE 2.—Coal production in Ohio in 2011, by county and quantity.

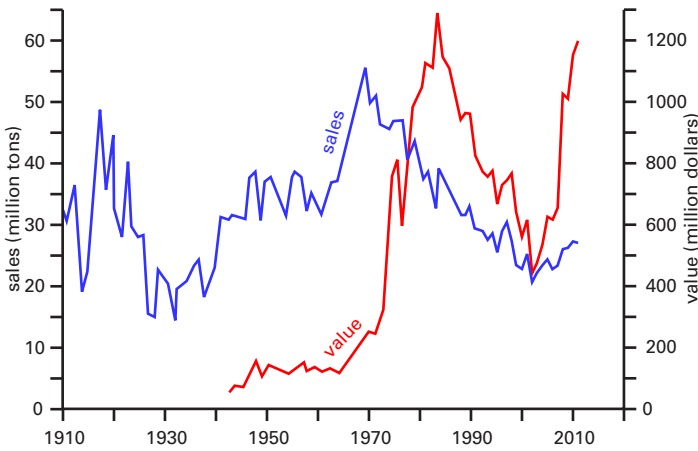


FIGURE 3.—Sales and value of coal in Ohio.

SYSTEM	GROUP	LITHOSTRATIGRAPHIC UNITS
Permian	Dunkard	Washington (No. 12) coal
Pennsylvanian	Monongahela	Uniontown (No. 10) coal Meigs Creek (No. 9) coal Pomeroy (No. 8a, Redstone) coal Pittsburgh (No. 8) coal
	Conemaugh	Ames marine zone Harlem coal Brush Creek marine zone Mahoning (No. 7a) coal
	Allegheny	Upper Freeport (No. 7) coal Lower Freeport (No. 6a) coal Middle Kittanning (No. 6) coal Lower Kittanning (No. 5) coal Vanport marine zone Clarion (No. 4a) coal Winters coal Newland (No. 4, Brookville) coal
	Pottsville	Upper Mercer (No. 3a) coal Quakertown (No. 2) coal Sharon (No. 1) coal

FIGURE 4.—Stratigraphic column of coals mined in Ohio during 2011 (black), other significant coal beds (red), and associated key beds (blue) used for stratigraphic correlation. Modified from Larsen (1991, fig. 2), Collins (1979, fig. 3), and Brant and Delong (1960, table 9).

TABLE 2.—2011 Ohio coal production, by county and mining method

County ¹	All methods (short tons)	Total number of mines	Underground				Surface				
			Number of mines reporting	Production (short tons)			Number of mines reporting	Production (short tons)			
				Total	Longwall	Continuous miner		Total	Strip	Auger	Highwall
Belmont	12,252,148	9	2	10,845,428	9,243,712	1,601,716	7	1,406,720	1,128,405	111,423	166,892
Carroll	202,040	2	1	190,625		190,625	1	11,415	11,415		
Columbiana	138,494	4					4	138,494	128,460	10,034	
Coshocton	154,862	1					1	154,862	84,185	14,027	56,650
Guernsey	235,283	3					3	235,283	217,442	17,841	
Harrison	3,370,001	8	1	1,345,400		1,345,400	7	2,024,601	2,020,229	4,372	
Jackson	669,768	4					4	669,768	669,768		
Jefferson	1,602,298	7	2	421,726		421,726	5	1,180,572	319,840	39,913	820,819
Mahoning	21,541	2					2	21,541	21,541		
Meigs	444,551	1	1	444,551		444,551					
Monroe	2,577,158	1 ³	1 ³	2,577,158	2,101,692	475,466					
Noble	720,582	5					5	720,582	707,105	13,477	
Perry	3,225,884	4	2	2,496,159		2,496,159	2	729,725	647,807	12,737	69,181
Stark	323,230	7					7	323,230	321,521	1,709	
Tuscarawas	1,529,821	14	1	572,909		572,909	13	956,912	665,057	90,940	200,915
Vinton	461,428	3					3	461,428	461,428		
TOTAL ²	27,929,089	74	10	18,893,956	11,345,404	7,548,552	64	9,035,133	7,404,203	316,473	1,314,447

¹Production from mines operating in more than one county was evenly split between the counties involved unless a county-specific breakdown was provided by the operator.

²Any tally inconsistencies are due to rounding of production tonnages.

³Mine extends into Monroe County from Belmont County; not included in total.

TABLE 3.—2011 Ohio coal production and sales, by county, in descending order of production

County	Production (short tons)	Sales (short tons)
Belmont	12,252,148	12,305,685
Harrison	3,370,001	3,381,340
Perry	3,225,884	2,437,764
Monroe	2,577,158	2,511,693
Jefferson	1,602,298	1,367,374
Tuscarawas	1,529,821	1,525,109
Noble	720,582	720,582
Jackson	669,768	671,150
Vinton	461,428	463,666
Meigs	444,551	481,227
Stark	323,230	323,230
Guernsey	235,283	235,284
Carroll	202,040	200,750
Coshocton	154,862	154,862
Columbiana	138,494	138,494
Mahoning	21,541	23,762
Athens		6,330
TOTAL	27,929,089	26,948,302

TABLE 4.—2011 Ohio coal production, by production size group and change from 2010

Production size group	2011		Change from 2010 (short tons)
	Number of mines reporting	Production (short tons)	
1,000,000 tons and over	4	16,572,854	-1,642,146
500,000 to 999,999 tons	5	3,649,906	-321,094
250,000 to 499,999 tons	11	3,851,292	+2,769,292
100,000 to 249,999 tons	14	2,455,570	-1,188,430
50,000 to 99,999 tons	14	1,047,755	+282,755
25,000 to 49,999 tons	5	169,023	-266,977
Less than 25,000 tons	21	182,689	-68,311
TOTAL	74	27,929,089	-434,911

TABLE 5.—2011 Ohio coal production, by county and month

County ¹	Production (short tons)												
	Total annual	January	February	March	April	May	June	July	August	September	October	November	December
Belmont	12,252,148	1,056,137	1,103,187	1,151,900	753,390	1,098,631	861,990	1,118,363	972,206	611,015	1,161,972	1,257,559	1,105,798
Carroll	202,040	19,058	14,850	26,473	19,343	17,918	17,413	14,837	15,665	13,922	14,903	12,877	14,781
Columbiana	138,494	4,215	3,806	3,760	5,761	13,088	20,951	11,492	18,475	10,347	9,467	14,788	22,344
Coshocton	154,862	27,092	23,652	26,335	11,372	10,970	13,974	11,425	13,321	9,628	7,094		
Guernsey	235,283	20,519	20,329	20,622	15,399	18,076	23,243	18,673	23,863	18,656	26,653	13,740	15,508
Harrison	3,370,001	278,845	258,532	288,716	263,764	281,971	285,683	274,229	315,967	322,276	291,893	251,128	256,997
Jackson	669,768	52,844	50,109	65,419	49,384	54,013	59,337	53,957	56,045	60,961	67,289	51,170	49,240
Jefferson	1,602,298	130,744	133,923	124,401	156,540	77,015	116,249	156,271	170,473	145,220	146,287	115,477	129,697
Mahoning	21,541	2,569	4,264	1,392	116	1,752	427	-	3,374	1,157	1,749	1,904	2,837
Meigs	444,551	35,707	44,666	71,701	42,115	49,545	39,866	30,874	39,409	42,041	22,817	16,496	9,314
Monroe	2,577,158	151,328	207,369	226,248	126,711	231,577	167,734	262,513	198,966	179,094	300,357	264,128	261,133
Noble	720,582	65,750	64,588	57,483	69,368	60,162	58,490	60,765	59,444	67,112	49,455	53,304	54,661
Perry	3,225,884	256,988	240,463	208,680	208,512	300,289	275,001	252,377	329,412	285,934	300,885	288,599	278,745
Stark	323,230	34,542	28,376	24,995	32,757	25,378	11,092	34,098	16,274	23,654	22,938	31,429	37,698
Tuscarawas	1,529,821	135,724	103,768	145,023	124,860	160,942	146,901	157,035	121,766	117,324	128,497	99,380	88,601
Vinton	461,428	54,849	40,677	32,097	23,246	28,127	50,441	39,004	50,248	35,069	29,326	35,132	43,212
TOTAL	27,929,089	2,326,912	2,342,558	2,475,246	1,902,637	2,429,455	2,148,791	2,495,915	2,404,907	1,943,411	2,581,580	2,507,111	2,370,566

¹Production from mines operating in more than one county was evenly split between the counties involved unless county-specific information was provided by the operator.

TABLE 6.—2011 Ohio coal production,

County ¹	Production								
	Total	Upper Mercer (No. 3a)	Newland (No. 4, Brookville)	Winters	Clarion (No. 4a)	Lower Kittanning (No. 5)	Middle Kittanning (No. 6)	Lower Freeport (No. 6a)	Upper Freeport (No. 7)
Belmont	12,252,148								
Carroll	202,040						190,625	8,608	2,807
Columbiana	138,494								84,933
Coshocton	154,862						154,862		
Guernsey	235,283						34,516		1,490
Harrison	3,370,001							1,345,400	
Jackson	669,768		190,000		157,765	217,686	92,459		11,858
Jefferson	1,602,298							6,139	308,530
Mahoning	21,541		9,978			11,563			
Meigs	444,551								
Monroe	2,577,158								
Noble	720,582								
Perry	3,225,884					256,080	2,278,513		691,291
Stark	323,230		49,982			195,751	71,205	6,292	
Tuscarawas	1,529,821	11,680	24,399			141,976	1,124,269		227,498
Vinton	461,428			145,614	171,117	98,666	18,869		27,162
TOTAL ²	27,929,089	11,680	274,359	145,614	328,882	921,722	3,965,318	1,366,439	1,355,569

¹Production from mines operating in more than one county was evenly split between the counties involved unless county-specific information was provided by the operator.

²Any tally inconsistencies are due to rounding of production tonnages.

by county and seam

(short tons)					
Mahoning (No. 7a)	Harlem	Pittsburgh (No. 8)	Pomeroy (No. 8a, Redstone)	Meigs Creek (No. 9)	County ¹
53,561	17,054	10,879,084	329,875	1,373,065	Belmont Carroll Columbiana Coshocton Guernsey
		199,276			
1,620,308		57,364		Harrison Jackson	
195,891		1,087,191		1,520	Jefferson Mahoning Meigs
444,551					
2,577,158		720,582		Monroe Noble Perry Stark Tuscarawas Vinton	
249,452	17,054	16,807,568	332,903	2,152,531	TOTAL

TABLE 7.—2011 Disposition of Ohio coal, by county

County ¹	Number of mines	Disposition ¹ (short tons)						Stored
		Total ²	Rail	Water	Truck	Conveyor	Unspecified/ other	
Athens	1	6,330	4,268		2,062			30
Belmont	9	12,305,685	9,722,062		2,583,623			275,782
Carroll	2	200,750			11,415	189,335		1,290
Columbiana	4	138,494			138,494			
Coshocton	1	154,862			154,862			
Guernsey	3	235,284	199,276		36,007			
Harrison	8	3,381,340	1,367,137		2,014,167		36	16,967
Jackson	4	671,150		212,333	458,817			2,728
Jefferson	7	1,367,374			1,106,001	261,373		1,239
Mahoning	2	23,762			19,164	4,598		19,229
Meigs	1	481,227		481,227				
Monroe	1 ³	2,511,693	2,492,528		19,165			
Noble	5	720,582	220,828		499,754			
Perry	4	2,437,764	2,053,282		384,482			37,266
Stark	7	323,230			323,230			
Tuscarawas	14	1,525,109	172,909		1,352,200			4,711
Vinton	3	463,666		338,864	124,802			6,308
TOTAL	75	26,948,302	16,232,290	1,032,424	9,228,245	455,306	36	365,550

¹Tonnage of coal shipped from mines operating in more than one county was evenly split between the counties involved and type(s) of disposition reported unless county-specific information was provided by the operator.

²Does not reflect tonnage stored. Reflects tonnage sold and shipped from mine. Any tally inconsistencies are due to rounding.

³Mine extends into Monroe County from Belmont County; not included in total.

TABLE 8.—2011 Dollar value of coal at mine, by county and mining method

County ¹	Total				Underground				Surface			
	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)	No. of mines	Tonnage sold (short tons)	Value at mine ² (dollars)	Per ton average (dollars)
Athens	1	6,330	\$355,050	\$56.09	1	6,330	\$355,050	\$56.09				
Belmont	9	12,305,685	529,240,138	43.01	2	10,898,966	469,883,743	43.11	7	1,406,719	\$59,356,395	\$42.19
Carroll	2	200,750	12,024,435	59.90	1	189,335	11,574,435	61.13	1	11,415	450,000	39.42
Columbiana	4	138,494	5,254,429	37.94					4	138,494	5,254,429	37.94
Coshocton	1	154,862	6,590,928	42.56					1	154,862	6,590,928	42.56
Guernsey	3	235,284	9,965,793	42.36					3	235,284	9,965,793	42.36
Harrison	8	3,381,340	165,849,901	49.05	1	1,356,736	74,936,700	55.23	7	2,024,604	90,913,201	44.90
Jackson	4	671,150	29,817,291	44.43					4	671,150	29,817,291	44.43
Jefferson	7	1,367,374	56,208,280	41.11	2	422,965	18,336,933	43.35	5	944,409	37,871,347	40.10
Mahoning	2	23,762	1,436,059	60.44					2	23,762	1,436,059	60.44
Meigs	1	481,227	36,744,267	76.36	1	481,227	36,744,267	76.36				
Monroe	1 ³	2,511,693	98,555,138	39.24	1 ³	2,577,158	98,555,138	39.24				
Noble	5	720,582	23,955,831	33.25					5	720,582	23,955,831	33.25
Perry	4	2,437,764	126,861,021	52.04	2	1,708,039	95,803,908	56.09	2	729,725	31,057,113	42.56
Stark	7	323,230	11,427,721	35.35					7	323,230	11,427,721	35.35
Tuscarawas	14	1,525,109	58,373,052	38.27	1	572,909	23,000,000	40.15	13	952,200	35,373,052	37.15
Vinton	3	463,666	22,271,727	48.03					3	463,666	22,271,727	48.03
TOTAL	75	26,948,302	\$1,194,931,060	\$44.34	11	18,213,665	\$829,190,174	\$45.69	64	8,801,089	\$365,740,886	\$41.56

¹Sales reported from mines operating in more than one county were evenly split between the counties involved unless county-specific information was provided by the operator.

²The FOB value of coal sold was estimated for those mines that failed to report this information. These estimates were calculated using a countywide-average price per ton by mining method, based on reported FOB values deemed to be reliable.

³Mine extends into Monroe County from Belmont County; not included in total.

TABLE 9.—2011 Ohio coal mine employment, by occupational group and month¹

Occupational group	Number of employees												
	Total annual ²	January	February	March	April	May	June	July	August	September	October	November	December
Production workers	2,224	2,158	2,202	2,188	2,207	2,167	2,202	2,217	2,241	2,305	2,266	2,251	2,275
Non-production workers	771	737	732	731	757	772	781	790	800	783	795	784	788
TOTAL	2,995	2,895	2,934	2,919	2,964	2,939	2,983	3,007	3,041	3,088	3,061	3,035	3,063

¹Employment was estimated for mines not reporting employment.²Represents the average number of employees for the year.

TABLE 10.—2011 Wage and salary payments to Ohio coal mine employees, by county and occupational group

County ¹	Wage and salary payments (nearest whole dollar) ²			
	All occupations	Underground production employees	Surface production employees	Other
Athens	\$108,717	\$108,717		
Belmont	100,829,840	54,691,119	\$7,839,058	\$38,299,663
Carroll	3,357,834	2,725,115	43,054	589,665
Columbiana	2,639,886		1,077,770	1,562,116
Coshocton	4,847,996		1,308,435	3,539,561
Guernsey	1,848,171		1,658,365	189,807
Harrison	22,154,408	11,440,700	7,383,443	3,330,265
Jackson	1,653,542		1,546,942	106,600
Jefferson	9,523,703	4,463,917	2,955,055	2,104,731
Mahoning	467,608		254,025	213,583
Meigs	7,706,781	7,180,421		526,360
Monroe	14,810,772	13,595,078		1,215,694
Noble	4,312,348		4,023,390	288,958
Perry	23,224,749	15,253,939	2,856,580	5,114,231
Stark	1,701,659		1,636,930	64,729
Tuscarawas	11,306,934	5,621,756	3,078,376	2,606,802
Vinton	6,603,191		3,097,064	3,506,127
TOTAL	\$217,098,139	\$115,080,762	\$38,758,486	\$63,258,892

¹For those operations reporting activity in more than one county, wage and salary payments were evenly split between the counties involved unless county-specific information was provided by the operator.²For those operations reporting only a total wage and salary payment for all workers, an equal pay rate was assumed for all employees. In cases where quarterly employment was reported but wage and salary payments were not, wage and salary payments for that quarter were estimated from reported payments in the other quarters to arrive at the annual figure. For mines reporting employment and no wage and salary payments, wage and salary payments were estimated using a countywide or statewide average.

INDUSTRIAL MINERALS

(See also Appendix B)

Industrial minerals were produced in a total of 87 Ohio counties in 2011, and 344 companies operated 549 industrial-mineral mining operations. Industrial minerals were reported as produced or sold by 243 companies from 367 active operations. The combined value of all industrial minerals sold in 2011 was \$886,417,044 (table 11).

The production of multiple commodities, including coal and/or one or more industrial minerals, is important to successful mine operations in many areas of Ohio. The most common multiple operations are sand and gravel with clay; coal along with clay, shale, or limestone; and limestone with associated clay or shale. The production of sand and gravel along with clay is often located in the glaciated portion of northern and western Ohio, where deposits of sand and gravel are often overlain by clay-rich glacial tills. The Pennsylvanian-age cyclic sedimentation in eastern Ohio often includes coals, clays, shales and limestones in close proximity, allowing for economic recovery of multiple commodities.³

The total average annual employment reported in 2011 for industrial-mineral operations was 3,186 people (2,310 production employees and 876 nonproduction employees; table 12). Total wages for all employees at industrial-mineral operations in 2011 were \$147,024,882. The average annual wage, based on those employees for whom wages were reported, was \$46,147.

³The following links will provide more information on the general bedrock and glacial geology of Ohio:
http://www.dnr.state.oh.us/Portals/10/pdf/BG-1_8.5x11.pdf
<http://www.dnr.state.oh.us/Portals/10/pdf/glacial.pdf>.

TABLE 11.—2011 Value of Ohio industrial minerals

Commodity	Sales (tons)	Change from 2010 (tons/percent)	Value ¹ (dollars)	Percent of total value
Limestone and dolomite	53,588,324	+3,509,324/+7.0	476,512,973	53.8
Sand and gravel	27,301,135	+286,135/+1.1	178,653,043	20.2
Salt	5,576,847	+335,847/+6.4	176,664,764	19.9
Sandstone and conglomerate	1,190,332	+108,332/+10.0	42,922,481	4.8
Clay	289,006	-69,994/-19.5	2,424,933	0.3
Shale	734,258	+207,258/+39.3	9,238,850	1.0
TOTAL	88,679,902	+4,376,902/+5.2	886,417,044	100.0

¹The FOB value of industrial minerals sold was estimated for those mines that failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton based on reported FOB values.

TABLE 12.—2011 Employment at Ohio industrial-mineral operations, by county and commodity (cont.)

County ¹	Number of employees ³																
	Total employees ²	Total ²		Limestone and dolomite		Sand and gravel		Sandstone and conglomerate		Clay		Shale		Salt		Multiple commodities	
		Production	Non production	Production	Non production	Production	Non production	Production	Non production	Production	Non production	Production	Non production	Production	Non production	Production	Non production
Muskingum	94	75	20	52	11	11	3			4	1					8	5
Noble	6	5	1	5	1												
Ottawa	83	65	18	65	18												
Paulding	18	13	5	9	3											4	2
Perry	26	21	5					19	4			2	1				
Pickaway	25	19	6	6	2	13	4										
Pike	36	29	7	12	4	4	1	13	2								
Portage	106	84	22			69	16									15	6
Preble	49	39	10	15	2	24	8										
Putnam	14	11	3	11	3												
Richland	32	23	9			23	9										
Ross	19	16	3			16	3										
Sandusky	218	196	22	183	21											13	1
Scioto	18	13	5			7	2	6	3								
Seneca	59	39	20	39	20												
Shelby	23	18	5		2	10	1									8	2
Stark	92	75	17			72	17			3							
Summit	5	1	4				2							1	2		
Trumbull	1	1										1					
Tuscarawas	63	51	12	1		33	4			3	2	4	2			10	4
Union	24	19	5	19	5												
VanWert	12	10	2	10	2												
Vinton																	
Warren	47	37	10			37	10										
Washington	33	23	10			23	10										
Wayne	34	23	11			6	2							12	6	5	3
Williams	4	4				4											
Wood	31	26	5	26	5												
Wyandot	97	85	12	65	6	20	6										
TOTAL	3,186	2,310	876	1,003	279	777	376	142	36	25	10	25	4	258	132	90	39

¹For those operations reporting activity in more than one county, the number of employees was rounded and evenly split between the counties, unless county-specific information was provided by the operator.

²Any tally inconsistencies are due to computer rounding of fractions produced by partial-year employment.

³Employment is not included for mines that were owner operated.

LIMESTONE AND DOLOMITE

(See also Appendix C)

Limestone and dolomite were reported sold or produced by 57 companies at 103 operations in 46 Ohio counties during 2011 (fig. 5). Reported production totaled 52,710,175 tons. Estimated sales of limestone and dolomite totaled 53,588,324 tons, up 7.0 percent from 2010 (Wolfe, 2011; fig. 6 and table 13). Wyandot, Ottawa, Erie, Franklin, and Sandusky Counties accounted for 38.8 percent of those sales. The total value⁴ of limestone and dolomite sold in 2011 was \$476,512,973 (fig. 6). Average price per ton was \$8.89.

Lime produced from Ohio limestone and dolomite totaled 1,298,181 tons in 2011 and came from four operations in Ottawa, Sandusky, and Seneca Counties (table 14). Ohio ranks fifth nationally in the production of lime out of 28 producing states and Puerto Rico. The top five states, in descending order of lime production, are Alabama, Kentucky, Missouri, Nevada, and Ohio. Ohio ranks sixth in the production of crushed stone (which includes crushed sandstone) out of 50 producing states. The states leading Ohio in the production of crushed stone, in descending order, are Texas, Pennsylvania, Missouri, Illinois, and Kentucky (USGS, 2012a).

Devonian-age and Silurian-age carbonates located in the western half of Ohio are the primary geologic units producing crushed stone. Pennsylvanian-age and Mississippian-age limestones are important sources of aggregate in local markets of eastern Ohio (Stout, 1941; Lamborn, 1951), particularly the Youngstown (Mahoning County) and Zanesville (Muskingum County) areas. The top five geologic units in Ohio producing limestone or dolomite during 2011, in order of largest tonnage, were Devonian-age Columbus Limestone, Silurian-age Lockport Dolomite, Devonian-age Detroit River Group, Silurian-age Greenfield/Tymochtee Dolomites, and the Silurian-age Cedarville Dolomite (see fig. 7).

An annual average of 1,003 employees worked an average of 173 days to produce limestone and dolomite. Total wages of \$61,934,702 were paid to a total of 1,282 employees (1,003 production employees and 279 nonproduction employees; table 12). The average annual wage, based on those employees for whom wages were reported, was \$48,311.

In 2011 the primary use for crushed and broken limestone and dolomite was road construction/resurfacing. Other major uses for various forms of limestone and dolomite included stone for asphaltic concrete and portland cement concrete, commercial building construction, and the production of lime.

⁴Includes reported and estimated values. See footnote 1, p. 6.

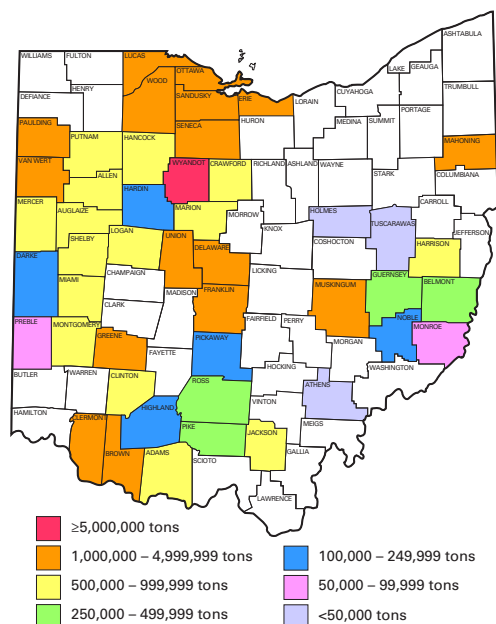


FIGURE 5.—Sales of limestone and dolomite in Ohio in 2011, by county and quantity.

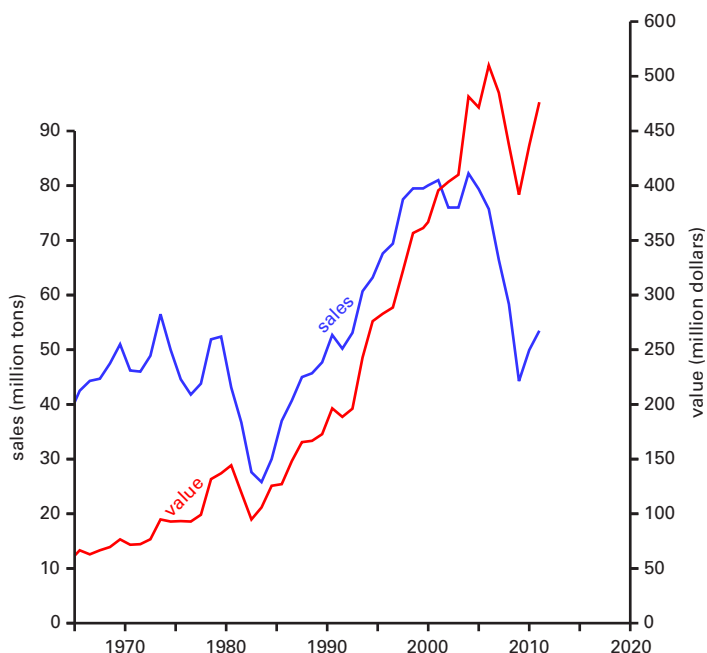


FIGURE 6.—Sales and value of limestone and dolomite in Ohio.

TABLE 13.—2011 Ohio limestone and dolomite sales, by county and use

County	Tons sold												
	Total all types	Crushed and broken stone								Dimension stone	Stone for portland cement manufac- ture	Agricultrual stone (aglime)	Raw stone for burning
		Total	Riprap	Flux stone	Stone for portland cement concrete	Stone for asphaltic concrete	Road construc- tion/ resurfacing	Commercial building	Railroad ballast				
Adams	834,077	834,077			154,832	178,581	33,050	29,188	28,183	14,752	834,077		
Allen	921,520	914,469	16,320				12,882				459,563		7,051
Athens	17,882	5,000	5,000										4,000
Auglaize	518,000	514,000	6,000		238,000	67,000					203,000		
Belmont	445,564	445,564	6,522								439,042		
Brown	1,276,477	1,276,477									1,276,477		
Clermont	1,001,211	989,918	9,883		45,847	144,542	151,127	558,889			79,630		11,293
Clinton	925,998	918,819	41,091		152,504	307,985	264,735	95,000	40,060		17,444		7,179
Crawford	977,000	882,000	11,000		240,000	236,000				15,000	380,000		95,000
Darke	229,427	229,427	836			83,182	53,842	91,567					
Delaware	1,980,000	1,965,000	26,000		393,000	262,000					1,284,000		15,000
Erie	3,801,306	3,658,836	55,471		999,791	280,182	590,841	189,575	97,023		1,445,952		142,470
Franklin	3,783,275	3,783,275	20,000		850,000	850,000	1,000,000	950,000	50,000		63,275		
Greene	1,399,883	1,135,013	10,000		50,000	210,386	467,310	305,000			92,317	264,870	3,077
Guernsey	477,637	474,560					474,560		20,000		364,000		
Hancock	518,000	518,000	18,000		30,000	86,000		20,000			14,600		
Hardin	194,600	194,600	10,000		50,000	50,000	50,000						
Harrison	972,708	968,302	2,935				965,367						4,406
Highland	249,692	243,818	4,316		99,074	116,873	12,319				11,236		5,874
Holmes	13,548	13,548					13,548						
Jackson	947,243	947,243	67,638		40,035		715,715	100,000	505		23,350		
Logan	769,102	769,102	40,177		306,929	100,000	121,555	172,441			28,000		
Lucas	1,949,823	1,943,632	4,440		378,495	245,749	441,096	226,015	6,136		641,701		6,191
Mahoning	2,707,926	2,707,926	12,841				754,902				1,940,183		
Marion	552,000	550,000	3,000		67,000	93,000					387,000		2,000
Mercer	575,000	575,000	10,000		100,000	100,000	200,000	100,000			65,000		
Miami	956,022	888,187	12,881	15,866	111,469		518,599	229,372					67,835
Monroe	62,433	62,433	62,433										
Montgomery	633,022	541,641	20,000		100,000	100,000	200,000	100,000	10,000		21,641	91,381	
Muskingum	1,093,862	1,093,862	14,608		120,000	120,000	603,405	100,000			125,850		
Noble	197,416	197,416	78,794				107,404				11,218		
Ottawa	4,984,277	4,700,199	33,200		230,000	162,800	2,823,077	1,292,461		91,661	67,000	33,104	250,974
Paulding	1,048,139	591,938	10,000		100,000	100,000	233,400	100,000			48,538	456,201	
Pickaway	232,300	232,300	4,000		30,000	60,000	90,000	30,000	2,000		16,300		
Pike	420,920	420,920	12,500		90,000	100,000	150,000		20,000		48,420		
Preble	84,312	82,440	9,308				73,131					1,872	
Putnam	554,731	554,731	5,056		93,770	17,000	194,905				244,000		
Ross	264,400	264,400					160,000	50,000			54,400		
Sandusky	2,819,272	813,396			42,995	466,525	303,876					437	30,968
Seneca	1,563,571	914,640	9,876		62,923	137,991	237,613	65,308	14,682	384,151	2,096	3,099	1,974,471 635,354

SYSTEM		GROUP		LITHOSTRATIGRAPHIC UNITS
Pleistocene				
Permian		Dunkard		Glacial clay
Pennsylvanian	Monongahela		Fishpot limestone Redstone limestone	
	Conemaugh		Ames limestone Brush Creek limestone	
	Allegheny		Lower Kittanning clay Vanport limestone Putnam Hill limestone Newland-Brookville clay	
	Pottsville		Tionesta clay Middle Mercer clay Flint Ridge clay Massillon sandstone Sharon conglomerate	
Mississippian				Maxville Limestone Logan Formation Cuyahoga Formation Black Hand Sandstone Buena Vista Sandstone
Devonian		Detroit River		Berea Sandstone Bedford Shale Ohio Shale Chagrin Member Ten Mile Creek Dolomite Silica Shale Dundee Limestone Anderdon Limestone Lucas Dolomite Amherstburg Dolomite Delaware Limestone Columbus Limestone
Silurian		Salina		Salina Dolomite “Salt beds” Tymochtee Dolomite Greenfield Dolomite Peebles Dolomite Cedarville Dolomite Lockport Dolomite Laurel Limestone Dayton Limestone Brassfield Limestone
Ordovician		Black River		Black River Limestone

FIGURE 7.—Stratigraphic column of industrial minerals mined in Ohio during 2011. Modified from Slucher and others (2006), Ohio Division of Geological Survey (1990), and Brant and Delong (1960, table 9).

SAND AND GRAVEL (See also Appendix D)

Sand and gravel were reported sold or produced by 160 companies at 224 operations in 57 Ohio counties during 2011 (fig. 8). Estimated production of sand and gravel totaled 27,742,189 tons in 2011. Estimated sales of sand and gravel totaled 27,301,135 tons (+1.1 percent from 2010; Wolfe, 2011; fig. 9). Sand accounted for 15,233,880 tons of the total sand and gravel sold, and gravel accounted for 12,067,255 tons (table 15). No sand was reported dredged from Lake Erie in 2011. Portage, Hamilton, Stark, Butler, and Franklin Counties led in sales, accounting for 45.1 percent of the total. The total value⁵ of sand and gravel sold in 2011 was \$178,653,034 (fig. 9). Average price per ton was \$6.54.

Ohio ranks tenth nationally in the production of construction sand and gravel out of 50 producing states and Puerto Rico. The states leading Ohio, in descending order of production, are California, Texas, Arizona, Michigan, New York, Utah, Minnesota, Wisconsin, and Colorado. Ohio ranks fifth nationally in the production of aggregates, including crushed stone. The states leading Ohio in the production of aggregates are Texas, California, Pennsylvania, and Missouri (USGS, 2012a).

Sand-and-gravel deposits in Ohio primarily are associated with Wisconsinan-age glacial outwash and kame terraces in the valleys and tributaries of the Great Miami, Scioto, and Muskingum Rivers located in the central and southwestern portions of the state. Important sand-and-gravel deposits also are found in glacial kames in northeast Ohio, particularly south of Cleveland in Portage, Summit, and Stark Counties. Additional sand-and-gravel resources are found in beach ridges associated with ancestral Lake Erie and alluvium of modern floodplains of the Ohio River and its tributaries.

An annual average of 777 employees worked an average of 141 days in 2011 to produce sand and gravel. Total wages of \$52,791,258 were paid to a total of 1,153 employees (777 production employees and 376 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$45,786.

Commercial and residential building, portland cement concrete, asphaltic concrete, and road construction/resurfacing were the major uses for Ohio sand and gravel in 2011.

⁵Includes reported and estimated values. See footnote 1, p. 6.

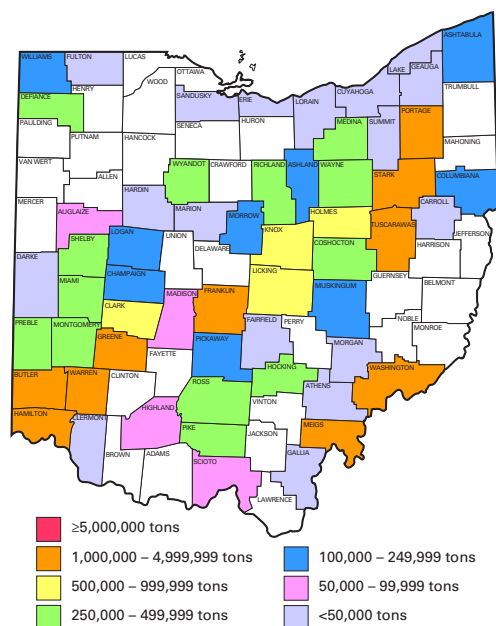


FIGURE 8.—Sales of sand and gravel in Ohio in 2011, by county and quantity.

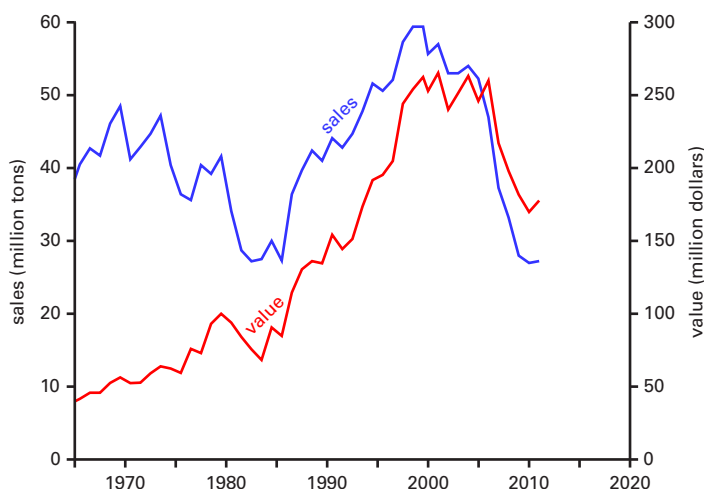


FIGURE 9.—Sales and value of sand and gravel in Ohio.

County	Tons sold																
	Total sand and gravel	Total sand	Total gravel	Building		Portland cement concrete		Asphaltic concrete		Road construction/ resurfacing		Filtration		Foundry sand	Industrial sand	Other/unspecified	
				Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel	Sand	Gravel			Sand	Gravel
Ashland Ashstabula Athens Auglaize Butler	229,311	86,735	142,576	37,049	63,249						45,198	68,412				4,488	10,916
	112,825	59,614	53,211	34,856	43,231	17,492							1,316	8,482		5,950	1,498
	31,149	15,971	15,178	15,178	15,178												
	82,800	41,000	41,800	41,000	41,800												
	2,066,296	989,347	1,096,949	270,656	265,808	80,978	56,932	112,978	128,932		20,000	151,586	2,783	7,924		481,952	485,767
Carroll Champaign Clark Clermont Columbiana	30,906	15,453	15,453														
	222,967	98,438	124,529	1,689	54,077	64,288		15,453	13,135			2,318					
	612,688	214,432	398,256	33,795	30,000	55,000	84,300	32,461	32,470			37,982				55,637	190,011
	5,124	3,519	1,605					70,000	67,700			20,000		6,245		1,496	901
	154,910	57,733	97,177		8,808		6,157	10,557			5,654	10,329	2,000	20,400		39,522	51,483
Coshocton Cuyahoga Darke Defiance Erie	347,713	176,847	170,866	34,753	20,898	30,000	15,000	30,000	15,000		56,850	110,853		850		25,244	8,265
	7,281	7,281														7,281	
	41,420	20,710	20,710													20,710	20,710
	259,896	247,484	12,412	14,712	9,838	232,771										2,574	439
			439														
Fairfield Franklin Fulton Gallia Geauga	11,907	10,867	1,040													10,867	1,040
	1,595,596	976,365	619,231	95,370	212,241	760,605	226,146	120,390	122,482			34,362				5,432	24,000
	15,917	15,917		10,485												3,003	675
	3,678	3,003	675													290	86
	376	290	86														
Greene Hamilton Hardin Highland Hocking	1,215,746	482,083	733,663	88,106	95,833	98,073	107,677	26,488	117,300		3,000	66,728	16,000			250,416	346,126
	2,868,085	1,685,766	1,182,319	734,645	658,113	550,192	105,021	150,169	88,031		29,046	169,646		3,600		221,714	157,908
	450		450														450
	90,559	54,622	35,937			52,756		15,224					1,866	652		8,934	8,934
	287,801	188,373	99,428	13,739	4,998	20,210	9,352	77,733	11,682		1,024	33,706				75,667	39,690
Holmes Knox Lake Licking Logan	593,934	319,074	274,860	64,431	90,725	81,075	29,243	28,772	15,476		58,085	70,908	31,936	6,976		54,776	61,532
	702,316	391,226	311,090	48	103,066	215,185	2,048	84,024	10,947			41,506		25,572		91,969	127,951
	1,825	1,825														1,825	
	633,145	383,967	269,178	142,256	154,003	114,144	22,048	57,567	30,947		50,000	52,189				9,991	9,991
	116,936	49,678	67,258	3,699		13,917										32,062	67,258
Lorain Madison Marion Medina Meigs	3,549	3,549														3,549	
	95,783	39,577	56,206	31,770	56,206						7,807					120	2,107
	12,973	9,987	2,986	585		9,281							1	878		50,000	
	250,250	176,100	74,150	6,100	74,150	120,000										706,027	297,196
	1,323,223	906,027	417,196	50,000	30,000	50,000	30,000	50,000	30,000		50,000	30,000					
Miami Montgomery Morgan Morrow Muskingum	338,672	192,887	145,785			44,632								250		148,255	122,647
	456,556	195,688	260,868	94,300	132,538	30,000	40,000	30,000	40,000		30,100	40,400				11,288	7,930
	20,471		20,471													20,471	20,471
	178,806	72,555	106,251	69,353	38,533									4,501		16,506	16,506
	171,876	118,169	53,707	7,992	4,795			45,951	16,358		408	1,234				63,818	31,320

Pickaway	178,051	49,000	129,051	6,740	32,180	6,000		6,000	20,000	2,367	10,920				30,260	65,951
Pike	282,408	234,830	47,578								4,677				232,463	42,901
Portage	3,028,114	2,125,726	902,388	263,915	301,957	933,886	190,644	516,822	185,817	120,238	123,457	56,160	52,707		234,706	47,806
Preble	288,919	147,415	141,504	35,937	34,518					36,921	22,068				74,557	84,918
Richland	287,027	92,351	194,676	14,285	136,822	25,115		19,166	22,197		4,165				33,785	31,492
Ross	343,420	196,106	147,314	52,240	28,378	38,815	17,191	45,574	52,897	31,470	17,169				28,007	31,679
Sandusky	13,427	13,427						13,427								
Scioto	91,276	80,908	10,368	32,164	9,098	24,636	1,271			24,109						
Shelby	256,721	72,308	184,413		490	63,096	69,862		66,978		136				9,212	46,947
Stark	2,759,909	1,643,840	1,116,069	12,513	86,808	196,095	29,519	559,161	472,583	600,095	399,532				275,976	127,627
Summit	26,391	17,626	8,765					17,626	398		4,922					3,445
Tuscarawas	1,590,869	911,440	679,429	278,811	297,769	208,168	47,222	146,837	107,421	270,023	224,883		4,796		2,805	2,135
Warren	1,066,456	399,407	667,049	216,547	280,026	27,794	13,897	41,690	34,742						113,376	338,384
Washington	1,019,928	423,082	596,846	100,924	58,422	90,948	138,558	132,844	317,989	70,000	71,010				28,366	10,867
Wayne	410,241	213,754	196,487	9,688	110,950	161,499	7,782	30,861	39,618	9,688	34,468	2,018	3,669			
Williams	113,765	86,000	27,765		2,765										86,000	25,000
Wyandot	348,058	254,501	93,557	72,863	56,450	104,000		68,324	2,492			1,072	30,615		8,242	4,000
TOTAL ¹	27,301,135	15,233,880	12,067,255	2,993,987	3,677,254	4,520,651	1,249,870	2,542,898	2,079,520	1,522,083	1,907,759	118,354	173,321	4,796	3,531,113	2,979,534

¹Any tally inconsistencies are due to rounding of production tonnages.

SANDSTONE AND CONGLOMERATE

(See also Appendix E)

Sandstone and conglomerate were reported sold and/or produced by 20 companies at 23 operations in 19 Ohio counties during 2011 (fig. 10). Reported production of sandstone and conglomerate was 1,433,528 tons in 2011. Sales totaled 1,190,332 tons (+10.0 percent from 2010; Wolfe, 2011; fig. 11). Geauga, Mahoning, Perry, Knox, and Lake Counties accounted for 90.7 percent of the total sales. Crushed sandstone and conglomerate accounted for 1,158,897 tons of the total sales (table 16) and dimension stone accounted for 31,435 tons (table 17). The total value⁶ of sandstone and conglomerate sold in 2011 was \$42,922,481 (fig. 11). Average price per ton was \$33.28 for crushed stone and \$138.29 for dimension stone.

Ohio ranks seventeenth out of 37 producing states nationally in production of all dimension stone. Ohio ranks fourth in the production of sandstone dimension stone. The top five states, in descending order of total dimension-stone production, are Georgia, Texas, Indiana, South Dakota, and Wisconsin (USGS, 2012b). National standings for crushed stone are included in the “Limestone and Dolomite” section (p. 19).

The Pennsylvanian-age Sharon conglomerate in northeast Ohio was the most productive sandstone mined for industrial purposes during 2011. The Pennsylvanian-age Massillon sandstone and the Mississippian-age Black Hand Sandstone also were important sources of high-silica sandstone. The Massillon sandstone and the Devonian-age Berea Sandstone of northern Ohio, as well as the Mississippian-age Buena Vista Sandstone in southern Ohio, were the primary geologic units quarried for building stone (Bownocker, 1915; see also fig. 7).

An annual average of 142 employees worked an average of 153 days in 2011 to produce sandstone and conglomerate. Total wages of \$7,360,834 were paid to a total of 178 employees (142 production employees and 36 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$41,353.

Crushed sandstone was used primarily for construction, glass sand, hydraulic fracturing proppant, and aggregate. Dimension stone was used primarily for rough construction purposes.

⁶Includes reported and estimated values. See footnote 1, p. 6.

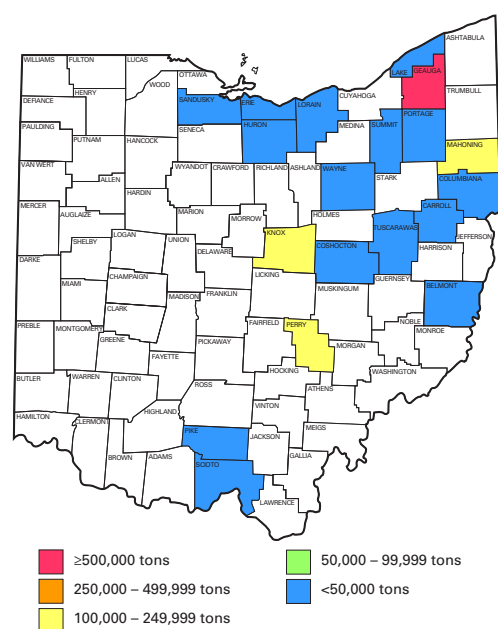


FIGURE 10.—Sales of sandstone and conglomerate in Ohio in 2011, by county and quantity.

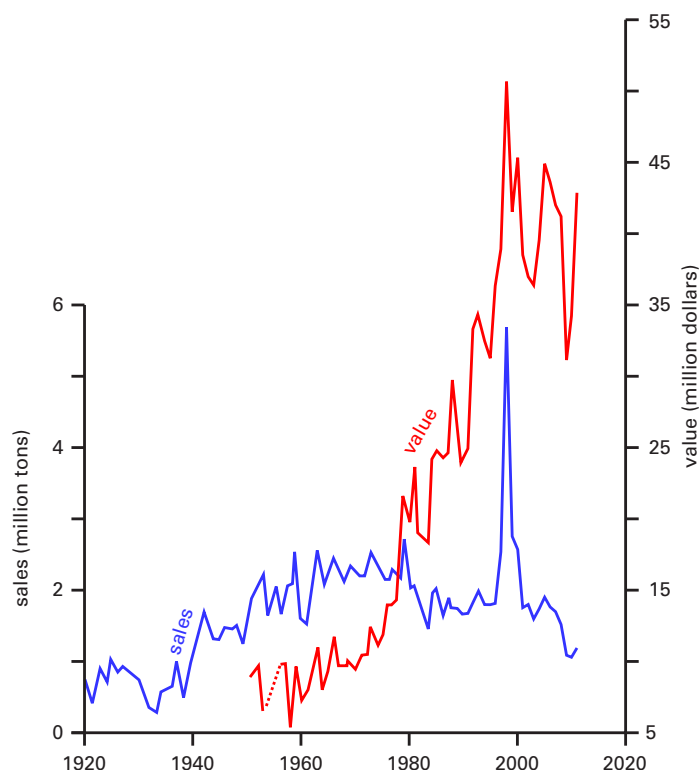


FIGURE 11.—Sales and value of sandstone and conglomerate. Value line dashed where data not available.

TABLE 16.—2011 Ohio sales of crushed sandstone and conglomerate, by county and use

County	Tons sold														
	Total	Foundry sand	Glass sand	Metallurgical pebble	Refractory	Riprap	Aggregate	Silica flour	Polishing/ grinding sand	Fire and furnace sand	Engine sand	Frac sand	Construction	Industrial sand	Other/unspecified
Belmont Carroll Columbiana Geauga Knox	3,998					3,998									
	1,668					1,668							1,671		
	6,671						5,000						269,188	14,460	154,847
	659,660		177,834				31,900		3,221			8,210	27,177		
Lake Mahoning Perry Pike Portage	102,484	655	19,956									54,696			
	45,379						20,083						25,296		
	137,659												137,659		
	134,940	7,057	32,248		2,752			17,664				61,934	13,285		30,327
Sandusky Tuscarawas Wayne	30,327														
	24,472												24,472		
	1,803					1,803									
TOTAL	2,038														2,038
	7,798												7,798		
TOTAL	1,158,897	7,712	230,038		2,752	7,469	56,983	17,664	3,221			124,840	506,546	14,460	187,212

TABLE 17.—2011 Ohio sales of dimension sandstone, by county and use

County	Tons sold									
	Total	Refractory	Rough construction	Rubble	Grindstones	Rough architectural	Finished	Curbing	Flagging	Other/ unspecified
Coshocton	7,832		7,832							
Erie	5,623		1,619	20			3,962		22	
Huron	7,344		7,344							
Lorain	6,530			1,100		5,430	3,853			
Scioto	3,853									
Summit	253		253							
TOTAL	31,435		17,048	1,120		5,430	7,815		22	

CLAY
(See also Appendix F)

Clay was reported sold by 23 companies at 27 operations in 15 Ohio counties during 2011 (fig. 12). Reported known production of clay was 274,310 tons. Clay sales (including material for captive use) totaled 289,006 tons (–19.5 percent from 2010; Wolfe, 2011; fig. 13); Tuscarawas, Mahoning, Columbiana, Jackson, and Lucas, accounted for 87.4 percent of the total sales (table 18). National rankings for clay are included in the “Shale” section (p. 29). The total value⁷ of clay sold (including material for captive use) in 2011 was \$2,424,933 (fig. 13). Average price per ton was \$8.84. General discussions of clay and shale geology in Ohio can be found in Lamborn and others (1938) and Stout and others (1923). An annual average of 45 employees worked mining clay (including multiple commodities) an average of 111 days in 2011. Total wages of \$1,758,600 were paid to a total of 60 employees (45 production employees and 15 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$29,310. Clay mined in Ohio in 2011 was used largely for captive use in the production of common clay products, such as building bricks.

⁷Includes reported and estimated values. See footnote 1, p. 6.

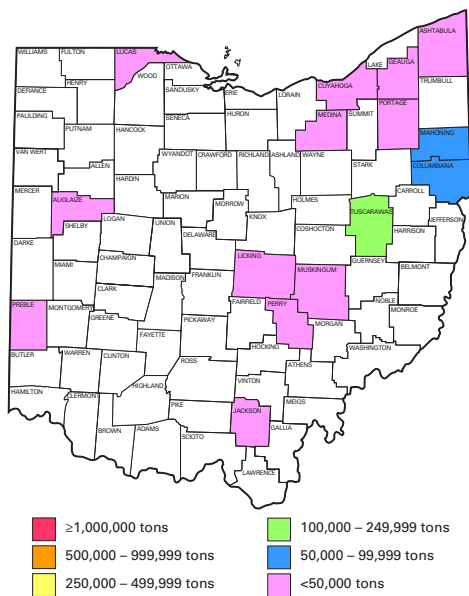


FIGURE 12.—Clay sales in Ohio in 2011, by county and quantity.

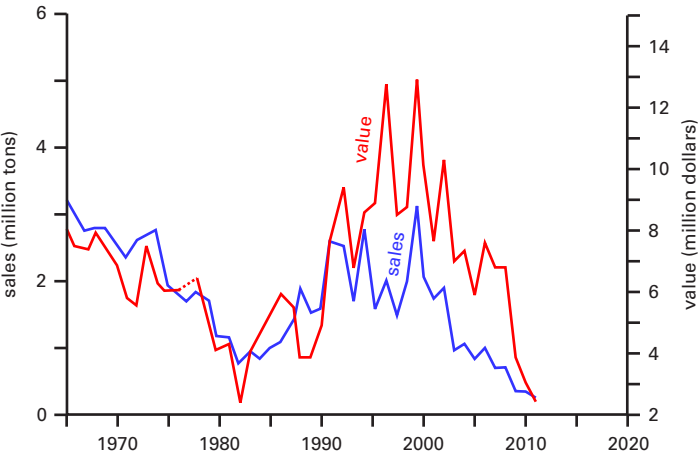


FIGURE 13.—Sales and value of clay in Ohio. Value line dashed where data not available.

TABLE 18.—2011 Ohio clay sales, by county and use

County	Tons sold ¹								
	Total	Common clay products	Stoneware	Vitrified products	Cement manufacture	Refractories	Construction	Landfill use	Other/ unspecified
Ashtabula	1,424					704	720		
Auglaize	305	305							
Columbiana	50,950	50,950							
Cuyahoga	156								156
Geauga	106							106	
Jackson	17,039	14,739				2,300			
Licking	2,475						2,475		
Lucas	14,700								14,700
Mahoning	61,025								61,025
Medina	1,500						1,500		
Muskingum	9,888	9,888							
Perry	14,073	11,231					2,842		
Portage	6,226						6,226		
Preble	390						390		
Tuscarawas	108,749	108,749							
TOTAL	289,006	195,862				3,004	14,153	106	75,881

¹Any tally inconsistencies are due to rounding of total tons sold.

SHALE

(See also Appendix G)

Shale was reported sold by 17 companies at 21 operations in 13 Ohio counties during 2011 (fig. 14). Reported production of shale in 2011 was 760,485 tons. Shale sales (including material for captive use) totaled 734,258 tons (+39.3 percent from 2010; Wolfe, 2011; fig. 15); Tuscarawas, Cuyahoga, Paulding, Marion, and Columbiana Counties accounted for 86.8 percent of the total sales (table 19).

Combined clay and shale production in 2011 was the lowest since 1935. However based on 2010 data, the latest available from USGS, Ohio ranks sixth out of 40 producing states nationally in the production of common clay and shale. The states leading Ohio are Georgia, Wyoming, Texas, Alabama, and North Carolina (Virta, 2012). The total value⁸ of shale sold (including material for captive use) in 2011 was \$9,238,850 (fig. 15). Average price per ton was \$12.58.

An annual average of 54 employees worked mining shale (including multiple commodities) an average of 157 days in 2011. Total wages of \$2,856,198 were paid to a total of 73 employees (54 production employees and 19 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$39,126.

Shale mined in Ohio was largely for captive use in the production of common clay products, such as building bricks; for lightweight aggregate; and in the cement industry.

⁸Includes reported and estimated values. See footnote 1, p. 6.

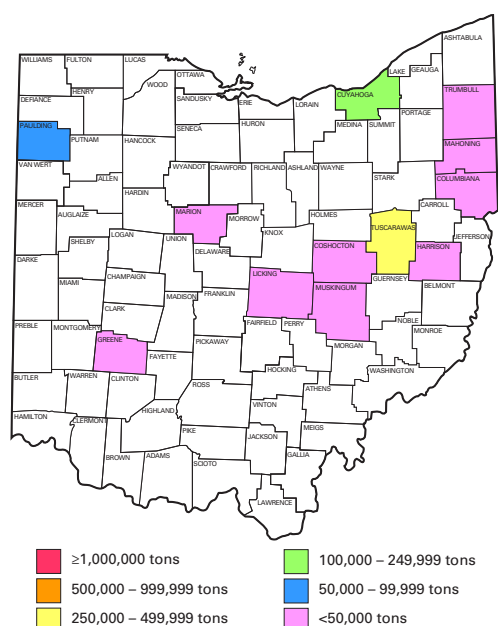


FIGURE 14.—Shale sales in Ohio in 2011, by county and quantity.

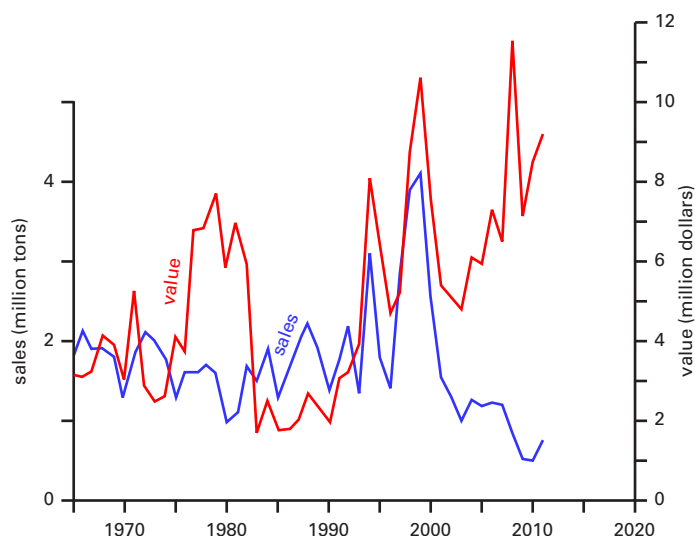


FIGURE 15.—Sales and value of shale in Ohio.

TABLE 19.—2011 Ohio shale sales, by county and use

County	Tons sold							
	Total	Common clay products	Vitrified products	Cement manufacture	Lightweight aggregate	Construction	Landfill use	Other/ unspecified
Columbiana	34,927	20,232		14,445		250		
Coshocton	3,466				3,466			
Cuyahoga	128,297				128,297			
Greene	22,151			22,151				
Harrison	30,256	30,256						
Licking	12,948	12,948						
Mahoning	1,859					1,700		159
Marion	46,068	46,068						
Muskingum	462						462	
Paulding	61,867			61,867				
Perry	24,489	24,489						
Trumbull	1,500					1,500		
Tuscarawas	365,968	365,653			315			
TOTAL	734,258	499,646		98,463	131,763	3,765	462	159

SALT

(See also Appendix H)

Salt was reported produced by 4 companies at 6 operations in 5 Ohio counties during 2011 (fig. 16). Estimated production of salt was 5,635,712 tons in 2011. Estimated total tonnage of salt sold in 2011 was 5,576,847 tons (+6.4 percent from 2010; Wolfe, 2011; fig. 17). Rock salt sales totaled 4,899,539 tons from two underground mines, one each in Cuyahoga and Lake Counties. Four brining operations, two in Licking County and one each in Summit and Wayne Counties, sold an estimated total of 787 tons of salt in brine and 676,521 tons of evaporated salt. The total value⁹ of the salt sold in 2011 was \$176,664,764 (fig. 17). Average price per ton of rock salt was \$22.89 and of salt in brine and evaporated salt was \$95.17. The average price per ton of all salt sold was \$31.67.

The top five salt-producing states nationally, based on 2010 data from USGS, are Louisiana, Texas, New York, Ohio, and Kansas (Kostick, 2012).

Both solution-mined and rock salt in Ohio is produced from bedded deposits in the Silurian-age Salina Group. The Salina salt beds are restricted to the subsurface in eastern Ohio. The Salina Group in eastern Ohio is subdivided into seven units, A through G, from lowest to highest. The salt produced in Ohio comes from the F unit, which is further subdivided into four beds. Individual salt beds are less than 100 feet thick and may contain thin interbeds of anhydrite and dolomite. Depth to the F unit varies from 1,900 feet in the Cleveland mine to over 2,000 feet at the Fairport Harbor mine (Tomastik, 2002; Clifford, 1973; see also fig. 7).

An annual average of 258 employees worked to produce salt an average of 272 days in 2011. Total wages of \$20,323,290 were paid to a total of 390 employees (258 production employees and 132 nonproduction employees). The average annual wage, based on those employees for whom wages were reported, was \$52,111. The primary use for Ohio salt was ice control. Salt also was used as an additive in animal feed, for cattle blocks, and as a commercial and residential water-softening agent.

⁹Includes reported and estimated values. See footnote 1, p. 6.

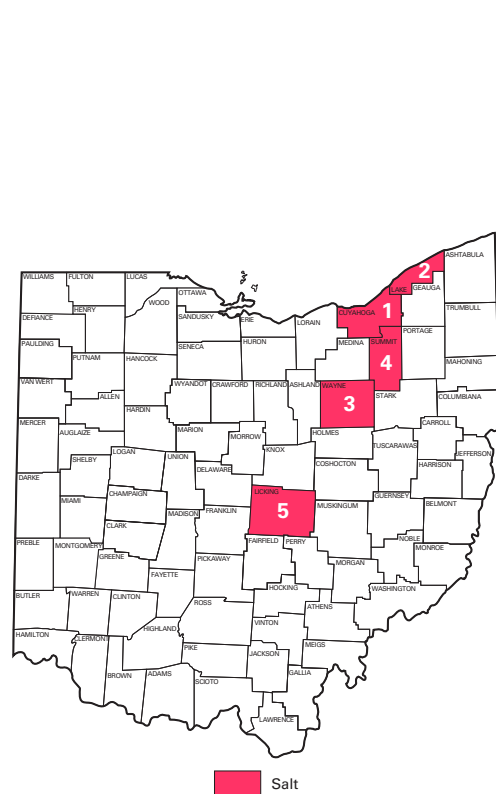


FIGURE 16.—Counties producing salt in Ohio in 2011 and their rankings in sales.

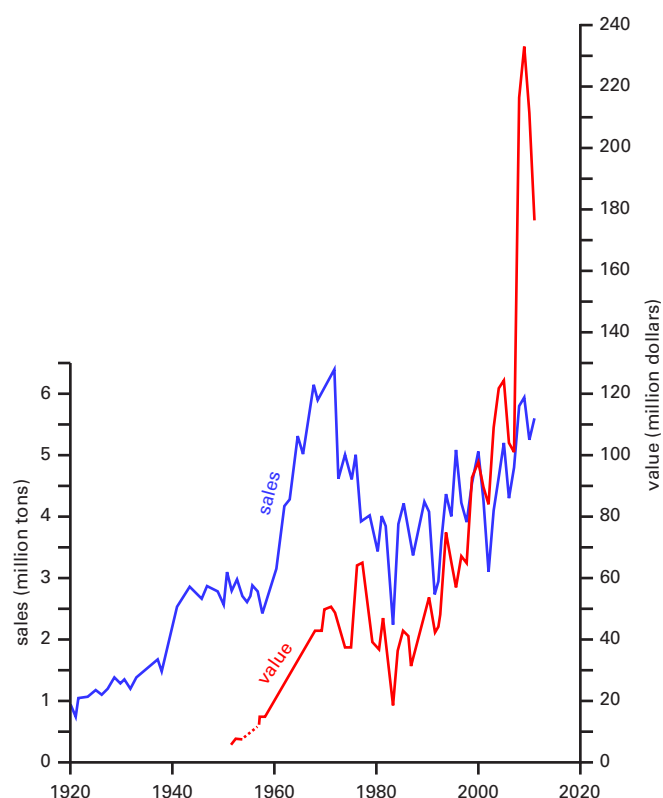


FIGURE 17.—Sales and value of salt in Ohio. Value line dashed where data not available.

GYPSUM

There was no gypsum production or sales reported in 2011. A history of gypsum production in Ohio can be found in Wolfe (2001).

PEAT

Peat production and sales in 2011 totaled 184 tons with a value of \$1,472 (fig. 19). Dachnowski (1912) contains information on the origin, formation, and uses of peat in Ohio.

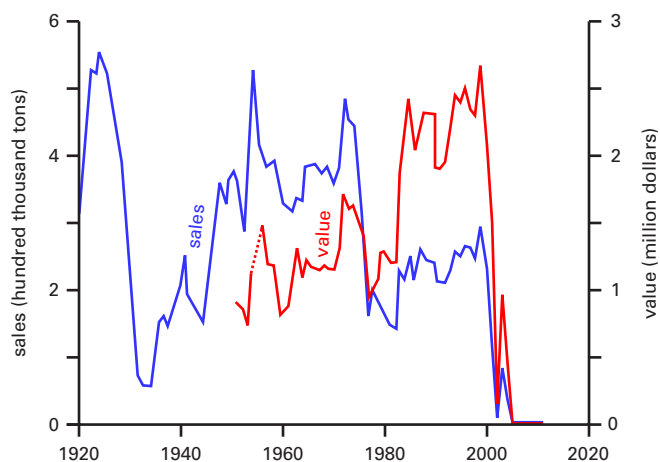


FIGURE 18.—Sales and value of gypsum in Ohio. Value line dashed where data not available. Some sales and values were estimated because in order to maintain confidentiality, actual sales and values were not reported.

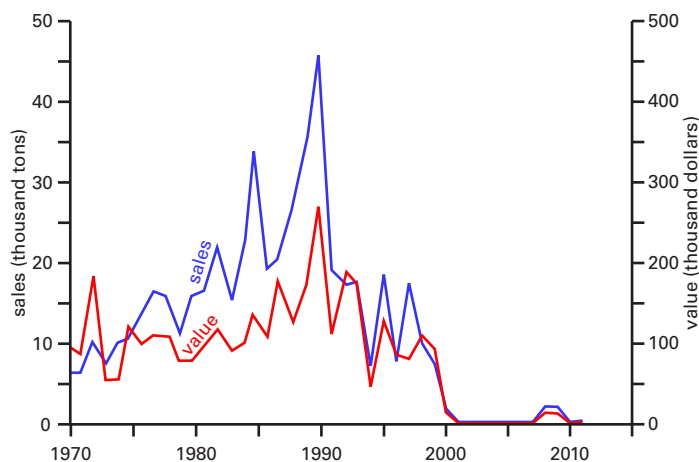


FIGURE 19.—Sales and value of peat in Ohio.

OIL AND GAS

(This information is summarized from DMRM, 2012)

The ODNR Division of Mineral Resources Management (DMRM) estimates that 460 wells were drilled in 2011, an increase of 33 wells from 2010. Wells were drilled in 42 of Ohio's 88 counties (fig. 20), a decrease of two counties from 2010. The top counties in number of new wells drilled in 2011 were Stark, Knox, Belmont, Coshocton, Muskingum, Licking, Mahoning, Guernsey, Meigs, Tuscarawas, and Summit. The DMRM received 365 well completion reports; 338 wells were productive and 27 were dry holes for a completion rate of 92.6 percent (table 20).

The Silurian-age "Clinton" sandstone continued to dominate Ohio's drilling statistics (table 21), as it has for more than 50 years. The number of wells drilled to the "Clinton" in 2011 declined 6.4 percent compared to 2010, with an average depth increase of 153 feet per well. Drilling to the Ohio Shale increased by 29 percent. A total of 24 wells were completed in the Utica/Point Pleasant interval, which represents the initial production from a promising new play in the state.

The total reported crude oil production in Ohio in 2011 was 4,852,964 barrels (bbl; fig. 21), a 1.4 percent increase from 2010. Through 2011, Ohio wells have produced approximately 1.14 billion bbl of crude oil. The dollar value of crude oil produced in Ohio in 2011 was \$437,055,240, an increase of 22.7 percent. Average price per barrel in 2011 was \$90.06, a 21.0 percent increase from the 2010 price.

Natural gas production in Ohio in 2011 was 73,289,838 thousand cubic feet (MCF; fig. 21), a 6.2 percent decrease from 2010. This production figure includes an estimated 725,642 MCF of gas used on the lease. Through 2011, Ohio wells have produced approximately 8.6 trillion cubic feet of natural gas. The dollar value of natural gas produced in Ohio in 2010 was \$310,659,568, a decrease of 14.2 percent from 2010. The value of the estimated volume of gas used on the lease was not used in computing the total dollar value. The average price per MCF in 2011 was \$4.28, a decrease of \$0.40 per MCF from 2010.

The combined total value of Ohio oil and gas production in 2011 was \$747,714,808 an increase of 4.1 percent from 2010.

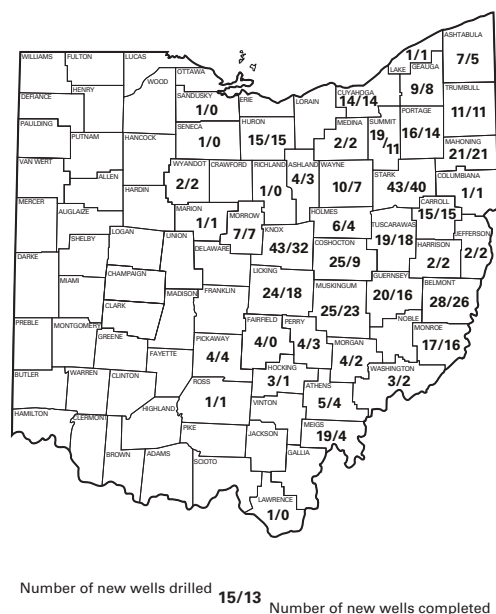


FIGURE 20.—New wells drilled and completed (including dry holes) for oil and gas in Ohio in 2011, by county (from DMRM, 2012).

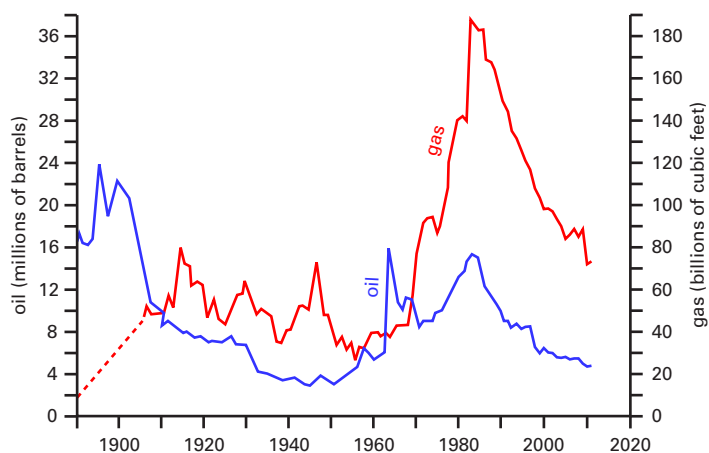


FIGURE 21.—Production of oil and gas in Ohio. Gas line dashed where data not available.

TABLE 20.—2011 Ohio summary of new oil and gas well completions, by county

County ¹	Development wells		Exploratory wells		Total wells	Percent productive	Drilled footage		
	Productive	Dry	Productive	Dry			Productive	Dry	Total
Ashland	1	2	0	0	3	33	800	1,331	2,131
Ashtabula	5	0	0	0	5	100	16,928	0	16,928
Athens	4	0	0	0	4	100	6,857	0	6,857
Belmont	13	0	13	0	26	100	90,281	0	90,281
Carroll	2	0	13	0	15	100	124,265	0	124,265
Columbiana	0	0	1	0	1	100	3,923	0	3,923
Coshocton	8	0	0	1	9	89	26,906	6,606	33,512
Cuyahoga	14	0	0	0	14	100	52,200	0	52,200
Geauga	7	0	0	1	8	88	29,206	6,783	35,989
Guernsey	9	1	6	0	16	94	82,739	7,042	89,781
Harrison	1	0	1	0	2	100	8,083	0	8,083
Hocking	0	0	1	0	1	100	5,103	0	5,103
Holmes	4	0	0	0	4	100	18,121	0	18,121
Huron	6	3	6	0	15	80	40,882	10,365	51,247
Jefferson	0	0	2	0	2	100	18,674	0	18,674
Knox	26	0	6	0	32	100	100,438	0	100,438
Lake	1	0	0	0	1	100	3,496	0	3,496
Licking	13	1	4	0	18	94	48,270	572	48,842
Mahoning	20	0	1	0	21	100	117,197	0	117,197
Marion	1	0	0	0	1	100	3,288	0	3,288
Medina	1	0	0	1	2	50	3,710	4,870	8,580
Meigs	1	0	3	0	4	100	7,992	0	7,992
Monroe	15	0	1	0	16	100	39,990	0	39,990
Morgan	2	0	0	0	2	100	2,850	0	2,850
Morrow	5	2	0	0	7	71	17,758	6,675	24,433
Muskingum	16	3	4	0	23	87	104,616	18,961	123,577
Perry	2	1	0	0	3	67	7,059	1,171	8,230
Pickaway	0	2	0	2	4	0	0	10,323	10,323
Portage	11	0	3	0	14	100	71,915	0	71,915
Ross	0	0	0	1	1	0	0	3,870	3,870
Stark	38	0	2	0	40	100	220,258	0	220,258
Summit	11	0	0	0	11	100	45,157	0	45,157
Trumbull	11	0	0	0	11	100	55,865	0	55,865
Tuscarawas	12	2	2	2	18	78	58,714	29,618	88,332
Washington	0	0	2	0	2	100	1,915	0	1,915
Wayne	6	1	0	0	7	86	28,157	5,624	33,781
Wyandot	1	0	0	1	2	50	3,534	1,420	4,954
TOTAL	267	18	71	9	365	93	1,467,147	115,231	1,582,378

¹No wells were drilled in these counties in 2011: Adams, Allen, Auglaize, Brown, Butler, Champaign, Clark, Clermont, Clinton, Crawford, Darke, Defiance, Delaware, Erie, Fairfield, Fayette, Franklin, Fulton, Gallia, Greene, Hamilton, Hancock, Hardin, Henry, Highland, Jackson, Lawrence, Logan, Lorain, Lucas, Madison, Mercer, Miami, Montgomery, Noble, Ottawa, Paulding, Pike, Preble, Putnam, Richland, Sandusky, Scioto, Seneca, Shelby, Union, Van Wert, Vinton, Warren, Williams, and Wood.

TABLE 21.—*2011 Ohio summary of new oil and gas well completions, by geologic unit
(modified from DMRM, 2012)*

Geologic unit	No. of producing wells	No. of dry holes	Total no. of wells	Percent productive	Total footage
Pennsylvanian undifferentiated	4	0	4	100	3,472
Upper Mississippian undifferentiated	1	0	1	100	1,275
Devonian					
“1st & 2nd Berea”	23	4	27	85	33,048
Ohio Shale	44	0	44	100	138,440
Silurian					
“Clinton-Medina”	176	0	176	100	756,890
Ordovician					
Utica/Point Pleasant	24	0	24	100	175,720
Trenton/Black River	2	3	5	40	17,167
Beekmantown	24	4	28	86	195,813
Cambrian-Ordovician					
Rose Run	9	6	15	60	92,313
Cambrian					
Trempealeau	31	9	40	78	159,520
Precambrian	0	1	1	0	8,720
TOTAL	338	27	365	93	1,582,378

TABLE 22.—*Ohio counties¹ and their state mine number abbreviations²*

<i>County</i>	<i>Abbreviation</i>	<i>County</i>	<i>Abbreviation</i>	<i>County</i>	<i>Abbreviation</i>
Adams	Ads	Hamilton	Hmn	Noble	Ne
Allen	An	Hancock	Hk	Ottawa	Oa
Ashland	Ald	Hardin	Hdn	Paulding	Pg
Ashtabula	Asa	Harrison	Hn	Perry	Py
Athens	As	Henry	Hy	Pickaway	Pky
Auglaize	Ae	Highland	Hd	Pike	Pke
Belmont	Bt	Hocking	Hg	Portage	Pe
Brown	Bn	Holmes	Hs	Preble	Pre
Butler	Br	Huron	Hrn	Putnam	Pm
Carroll	Cl	Jackson	Jkn	Richland	Rd
Champaign	Cpn	Jefferson	Jfn	Ross	Rs
Clark	Ck	Knox	Kx	Sandusky	Sy
Clermont	Ct	Lake	Lke	Scioto	So
Clinton	Cln	Lawrence	Le	Seneca	Sa
Columbiana	Ca	Licking	Lg	Shelby	Shy
Coshocton	Cn	Logan	Lgn	Stark	Sk
Crawford	Cd	Lorain	Ln	Summit	St
Cuyahoga	Cya	Lucas	Ls	Trumbull	Tl
Darke	Dke	Madison	Mdn	Tuscarawas	Ts
Defiance	De	Mahoning	Mg	Union	Un
Delaware	Del	Marion	Mn	Van Wert	Vt
Erie	Ee	Medina	Ma	Vinton	Vn
Fairfield	Fd	Meigs	Ms	Warren	Wan
Fayette	Fe	Mercer	Mr	Washington	Wn
Franklin	Fn	Miami	Mi	Wayne	We
Fulton	Ftn	Monroe	Me	Williams	Ws
Gallia	Ga	Montgomery	My	Wood	Wd
Geauga	Gea	Morgan	Mon	Wyandot	Wt
Greene	Ge	Morrow	Mw		
Guernsey	Gy	Muskingum	Mum		

¹Henry County reported no production or sales of mineral commodities in 2011.²As used for State of Ohio mine numbers.

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**2011 COAL COMPANIES WITH SALES
AND/OR PRODUCTION**

Company	Number of mines	Production (tons)	Sales (tons)
American Energy Corp.	1	7,080,629	6,900,767
American Landfill, Inc.	1	21,834	21,834
Anthony Mining Co., Inc.	2	117,570	117,570
B & N Coal, Inc.	4	499,755	499,755
Belden Brick Co.	2	6,299	6,299
Buckingham Coal Co., Inc.	2	2,496,159	1,714,369
Cedar Heights Clay Co.	1	555	555
Cumberland Limestone, LLC	1	1,490	1,491
D. & D. Mining Co.	1	4,548	4,769
East Fairfield Coal Co.	1	16,993	18,993
Egypt Valley Stone, LLC	1	22,280	22,280
F. & M. Coal Co.	1	9,200	9,200
Gatling Ohio, LLC	1	444,551	481,227
Harrison Resources, LLC	1	769,692	769,692
Hopedale Mining, LLC	1	1,345,400	1,356,736
Kimble Clay & Limestone Co.	7	275,330	275,330
L & M Mineral Co.	2	8,437	3,726
Ohio American Energy, Inc.	2	1,079,548	843,385
Ohio Valley Coal Co.	1	6,341,957	6,509,892
Oxford Mining Co., LLC	4	428,868	428,868
Oxford Resource Partners, LP	17	4,236,212	4,236,212
Rosebud Mining Company	9	1,061,212	1,061,212
Sands Hill Mining, LLC	3	701,123	704,763
Schaney Mining	1	1,288	1,288
Sidwell Materials, Inc.	1	11,374	11,374
Solomon's Mines, Inc.	1	3,749	3,749
Sterling Mining Co.	2	450,759	450,708
Valley Mining, Inc.	1	62,759	62,759
Waterloo Coal Co., Inc.	3	429,518	429,498
TOTAL: 29 companies	75	27,929,089	26,948,302

2011 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL MINE OPERATORS

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

The designation (u) indicates an underground mine.

To convert short tons to metric tons, multiply the given tonnage by 0.907185.

Name, address, telephone number, and president/owner/manager of company	Name of mine	County(ies)	2011 production (tons)	State mine number	Mineral Resources Management permit number
American Energy Corp. 43521 Mayhugh Hill Rd., Twp Rd. 88 Beallsville, OH 43950 (740) 795-5220 Robert E. Murray, pres.	Century Mine (u)	Belmont, Monroe	7,080,629	Bt-67	D-0425
American Landfill, Inc. 7916 Chapel St. SE Waynesburg, OH 44688 (330) 866-3265 Jerry R. Ross, pres.	American Landfill, Inc.	Stark	21,834	Sk-246	D-1090
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 (740) 266-8100 Michael Carapelotti, pres.	Carson-Harrah Patton-Mader	Harrison Harrison	100,516 17,054	Hn-766 Hn-A	D-1041 D-2281
B & N Coal, Inc. P.O. Box 100 Dexter City, OH 45727 (740) 783-3575 Carl Baker, Jr., pres.	Estadt Mine Westfork Mine Mantel Mine Whigville III	Noble Noble Noble Noble	90,193 125,849 90,221 193,492	Ne-BN Ne-BN5 Ne-BN7 Ne-BN8	D-1038 D-2218 D-2285 D-2332
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 (330) 852-2424 Robert F. Belden, pres.	Moomaw Pit Shanesville Pit	Tuscarawas Tuscarawas	4,424 1,875	Ts-1517 Ts-1939	IM-46 IM-47
Buckingham Coal Co., Inc. P.O. Box 400 Corning, OH 43730-0400 (740) 347-4565 Gerald N. Little, pres.	Buckingham Mine No. 7 (u) Buckingham Mine No. 6 (u)	Perry Perry	691,291 1,804,868	Py-B1 Py-B2	D-2223 D-2269
Cedar Heights Clay Co. 50 Portsmouth Rd. P.O. Box 295 Oak Hill, OH 45656-0295 (740) 682-7794 William T. Brown, pres.	Phillips	Jackson	555	Jkn-CH3	IM-2035
Cumberland Limestone, LLC 53681 Spencer Rd. Cumberland, OH 43732 (740) 638-3942 Chris D. Sidwell, pres.	Cumberland Limestone, LLC	Guernsey	1,490	Gy-309	IM-1030
D. & D. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 (330) 549-3127 Donald Thompson, pres.	D. & D. Strip	Mahoning	4,548	Mg-D	D-2164
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452-0217 (330) 549-2165 W. Thomas Mackall, pres.	Withers-Petersburg	Mahoning	16,993	Mg-E	IM-1103

2011 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County(ies)	2011 production (tons)	State mine number	Mineral Resources Management permit number
Egypt Valley Stone, LLC P.O. Box 188 Morristown, OH 43759 (740) 782-0042 Richard Petrozzi, pres.	Shugert	Belmont	22,280	Bt-E	IM-2299
F. & M. Coal Co. 3925 County Rd. 56 Toronto, OH 43964 (740) 544-5203 Edward Fiala, partner	Grabbit Pit	Jefferson	9,200	Jfn-FM1	D-2216
Gatling Ohio, LLC 430 Harper Park Dr. Beckley, WV 25801 (740) 949-3333 Middle Wilgat, pres.	Yellow Bush Mine (u)	Meigs	444,551	Ms-G	D-2317
Harrison Resources, LLC P.O. Box 205 Cadiz, OH 43907 (740) 942-4393 Chuck Ungurean, pres.	Sexton 2	Harrison	769,692	Hn-H	D-2289
Hopedale Mining, LLC P.O. Box 415 Hopedale, OH 43976 (740) 937-2225 David G. Zatezalo, pres.	Hopedale Mine (u)	Harrison	1,345,400	Hn-169	D-0424
Kimble Clay & Limestone Co. 3596 State Route 39 W Dover, OH 44622-9801 (330) 343-1226 Keith B. Kimble, pres.	Kimble Clay & Limestone Co.	Stark	61,666	Sk-K	D-2263
	Kimble Clay & Limestone Co.	Stark	19,075	Sk-P	D-2205
	Kimble Clay & Limestone Co.	Tuscarawas	68,422	Ts-K10	D-2264
	Kimbel Clay & Limestone Co.	Tuscarawas	1,149	Ts-K11	IM-2170
	Kimble Clay & Limestone Co.	Tuscarawas	95,086	Ts-K12	D-2327
	Kimble Clay & Limestone Co.	Tuscarawas	26,991	Ts-K4	D-1079
	Kimble Clay & Limestone Co.	Tuscarawas	2,941	Ts-K7	D-2079
L & M Mineral Co. 2010 County Rd. 144 Sugarcreek, OH 44681 (330) 852-3696 John E. Ling, Jr., pres.	Luikart	Tuscarawas	3,726	Ts-1914	D-0701
	Spring Industries	Tuscarawas	4,711	Ts-SI	IM-569
Ohio American Energy, Inc. 34 Kelley Way Brilliant, OH 43913 (740) 598-4325 Robert E. Murray, pres.	Salt Run	Jefferson	462,395	Jfn-M	D-2180
	North Star Mine	Jefferson	617,152	Jfn-O4	D-2362
Ohio Valley Coal Co. 153 Highway 7 S Powhatan Point, OH 43942 (740) 795-5220 Michael Loiacono, pres.	Powhatan No. 6 (u)	Belmont	6,341,957	Bt-68	D-0360
Oxford Mining Co., LLC P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	Otesego	Guernsey	34,516	Gy-OX	D-2373
	Ellis	Jefferson	2,991	Jfn-OX	D-2369
	East Canton	Stark	50,121	Sk-O	D-2364
	Stone Creek-Kaiser/Mathais	Tuscarawas	341,239	Ts-O9	D-2340

2011 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County(ies)	2011 production (tons)	State mine number	Mineral Resources Management permit number
Oxford Resource Partners, LP 544 Chestnut St. P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	CR 29	Belmont	426,713	Bt-CON	D-2238
	Barnesville North	Belmont	235,679	Bt-J	D-2319
	Lafferty	Belmont	260,133	Bt-OX3	D-2198
	Flushing	Belmont	77,284	Bt-OX4	D-2313
	Wheeling Valley	Belmont	373,256	Bt-OX5	D-2315
	Dailey	Columbiana	78,817	Ca-CE2	D-2097
	Plainfield	Coshocton	154,862	Cn-OX4	D-2295
	Hall's Knob	Guernsey	199,276	Gy-O	D-2334
	Standingstone Mine	Harrison	998,860	Hn-O2	D-2277
	Oxford Resource Partners, LP	Harrison	74,432	Hn-O3	D-2358
	Long-Sears	Noble	220,828	Ne-O1	D-2290
	Oxford Mining Co., Inc.	Perry	288,399	Py-O1	D-2254
	New Lex North 2	Perry	441,327	Py-O2	D-2318
	Strasburg Slurry	Tuscarawas	1,638	Ts-HC	D-0981
	Chumney	Tuscarawas	122,671	Ts-O5	D-2324
	Page	Tuscarawas	203,077	Ts-O6	D-2325
	Mizer	Tuscarawas	78,961	Ts-O7	D-2329
Rosebud Mining Company 301 Market St. Kittanning, PA 16201 (724) 545-6222 J. Clifford Forest, pres.	James Mine (Carrol Pits)	Carroll	11,415	Cl-B4	D-2229
	Kress Mine	Columbiana	18,413	Ca-BI3	D-1174
	Miller	Columbiana	37,515	Ca-R	D-2359
	Kirk	Jefferson	88,834	Jfn-B1	D-2241
	Bergholz Mine (u)	Jefferson	161,592	Jfn-BI	D-1180
	Mapleton Mine	Stark	39,608	Sk-B11	D-2346
	Wilson Mine	Stark	57,849	Sk-BI5	D-2320
	Hamilton Strip	Stark	73,077	Sk-R	D-2357
	Tusky Mine (u)	Tuscarawas	572,909	Ts-TR	D-2177
Sands Hill Mining, LLC P.O. Box 650 Hamden, OH 45634-0650 (740) 384-4211 Dave Zatezalo, pres.	Sands Hill Rockcamp II	Jackson	270,088	Jkn-S2	D-1087
	Big Valley	Vinton	147,977	Vn-S4	D-2114
	Big Rock	Vinton	283,058	Vn-S7	D-2344
Schaney Mining 47134 Giacobbi Rd. Jewett, OH 43986 (740) 937-2515 Melvin Schaney, owner	Kuchan	Harrison	1,288	Hn-SM1	D-2195
Sidwell Materials, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 (740) 849-2394 Jeffrey R. Sidwell, pres.	Uniontown Stone	Belmont	11,374	Bt-S	D-2261
Solomon's Mines, Inc. 7732 Salem-Unity Rd. Salem, OH 44460 (330) 337-0123 Jack Solomon, pres.	Solomon's Mines, Inc.	Columbiana	3,749	Ca-SM	IM-1258
Sterling Mining Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 (330) 549-2165 W. Thomas Mackall, pres.	Sterling-Carroll Hollow Deep (u)	Carroll	190,625	Cl-S1	D-2091
	SMC-Shinn Hill (u)	Jefferson	260,134	Jfn-ST2	D-2187
Valley Mining, Inc. P.O. Box 152 Uhrichsville, OH 44683 (740) 922-3942 William C. Aubiel, pres.	Picken/Strip #3	Harrison	62,759	Hn-V	D-2286

2011 OHIO ALPHABETICAL DIRECTORY OF PRODUCING COAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County(ies)	2011 production (tons)	State mine number	Mineral Resources Management permit number
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 286-5633 T. L. Darlington, Jr., pres.	Mead-Zinn & Westlake	Jackson	168,839	Jkn-367	D-0594, D-968, D-1083, D-1167, D-2059
	Layne Jolly Mine	Jackson Vinton	230,286 30,393	Jkn-W2 Vn-W	D-712 D-2287

2011 OHIO DIRECTORY OF COAL PREPARATION PLANTS AND ASSOCIATED FACILITIES, BY COUNTY

For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C).

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Mining and reclamation permit number	Type of facility
Belmont	Marietta Coal Co. 67705 Friends Church Rd. St. Clairsville, OH 43950 (740) 695-2197 John Nicolozakes, mgr.	Loading Dock	Pultney	Bt-936	D-0216	loading dock, prep plant—jig, flotation, centrifugal dryer, crushers, screens
	Ohio Valley Coal Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 (740) 926-1351 John Forelli, pres.	Powhatan #6	Smith, Washington	Bt-68	D-0360	prep plant—jigs, cyclones, centrifuges, thickeners, filters, screens
	Ohio Valley Transloading Co. 56854 Pleasant Ridge Rd. Alledonia, OH 43902 (216) 765-1240 Robert E. Murray, pres.	Harbour Facility	York	Bt-1198		dock
	Oxford Resource Partners, LP P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	Bellaire Dock	Pultney	Bt-832	D-0838	loading dock
	Rayle River Coal 67705 Friends Church Rd. St. Clairsville, OH 43950 (740) 695-2197 John Nicolozakes, pres.	Rayle River Terminal	Pultney	Bt-1191		coal transfer facility
Columbiana	Rosebud Mining Compnay 301 Market St. Kittanning, PA 16201 (724) 545-6222 J. Clifford Forest, pres.	Kensington Preparation Plant	West	Ca-879	D-0806	prep plant—heavy-media washer, cyclone, centrifuges, breaker
	State Line Resources, Inc. P.O. Box 419 Negley, OH 44441 (330) 426-9611 Charles H. Muse, Jr., pres.	State Line Resources, Inc.	Middleton	Ca-505	D-0223	prep plant—crushers, cyclones, screens
Coshocton	Conesville Coal Preparation Co. 14561 Twp. Rd. 263 Conesville, OH 43811 (740) 829-2392 Mike Morris, gen. mgr.	Conesville Coal Preparation Co.	Franklin	Cn-810		prep plant—jig, cyclones, froth cells, flotation, filter press, screens, dryers
	Oxford Resource Partners, LP P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	Lori Tipple	Franklin	Cn-736	D-0671	tipple
Gallia	Sands Hill Mining, Inc. P.O. Box 650 Hamden, OH 45634-0650 (740) 384-4211 Dave Zatezalo, pres.	Sands Hill Coal Co., Inc.	Addison	Ga-183	D-0834	tipple
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 682-7787 T. L. Darlington, Jr., pres.	Waterloo Dock #1	Addison	Ga-229	D-0725	dock, tipple

**2011 OHIO DIRECTORY OF COAL PREPARATION PLANTS AND
ASSOCIATED FACILITIES, BY COUNTY (cont.)**

County	Name, address, telephone number, and president/owner/manager of company	Name of plant	Township	State mine number	Mining and reclamation permit number	Type of facility
Harrison	Hopedale Mining, LLC P.O. Box 415 Hopedale, OH 43907 (740) 937-2225 David G. Zatezalo, pres.	Hopedale Prep Plant	Green	Hn-169	D-0424	prep plant—heavy-media vessel, heavy-media cyclones, spirals, dryers, thickeners, crushers, screens
Jackson	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 682-7787 T. L. Darlington, Jr., pres.	Bowman Strip	Jefferson, Madison	Jkn-367	D-0285	prep plant—jig, crushers, breaker, screens, dryers, wash tables
Mahoning	Thompson Bros. Mining Co. 3379 E. Garfield Rd. New Springfield, OH 44443 (330) 549-3979 Donald Thompson, owner	Thompson Bros. Mining Co.	Springfield	Mg-588	D-0711	tipple
Meigs	Meigs Point Dock, LLC P.O. Box 388 New Haven, WV 25265 (304) 255-7458 David Jude, pres.	Meigs Point Dock	Sutton	Ms-M	D-2323	dock
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 682-7787 T. L. Darlington, Jr., pres.	Waterloo Dock #3	Salisbury	Ms-285	D-0698	tipple, dock
Scioto	Norfolk Southern Railroad 914 Hayport Rd. Wheelersburg, OH 45694 (740) 574-8491 Charles G. Howard, asst. to mgr.	NS Wheelersburg Terminal	Porter	So-96		dock
Tuscarawas	Central Fuel Co. County Rd. 55 P.O. Box 165 New Philadelphia, OH 44663 (330) 339-5049 Keith B. Kimble, gen. mgr.	Central Fuel Co.	York	Ts-1938	D-0264	prep plant—jig, screen, dryers
	Oxford Resource Partners, LP P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	Strasburg Wash Plant	Franklin, Lawrence	Ts-1942	D-0287	prep plant—jigs, cyclones, centrifuges, crushers, screens, picking tables
		Slurry Wash Plant	Franklin, Lawrence	Ts-HC	D-0981	prep plant—cyclones
Vinton	Sands Hill Mining, Inc. P.O. Box 650 Hamden, OH 45634-0650 (740) 384-4211 Dave Zatezalo, pres.	Sands Hill Tipple/ Preparation Plant	Clinton	Vn-641	D-0169, D-0309	tipple, prep plant—heavy-media washers, flotation, cyclones, centrifuge, crushers, screens, dryer, picking tables, magnets
	Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 682-7787 T. L. Darlington, Jr., pres.	Benedict Tipple Dundas Tipple	Swan Clinton	Vn-145 Vn-178	D-0159 D-0185	tipple tipple

2011 OHIO DIRECTORY OF PRODUCING COAL MINE OPERATORS, BY COUNTY

NOTE: This directory lists only coal-producing operations and excludes tipples; loading docks; preparation plants; or other active, nonproducing operations that would contribute to employment and wage statistics presented in tables 9–10 (p. 13). For those mines that have not been assigned a state mine number, a letter designation is used (example: Bt-C). There is no correlation between the “Seam: Number” column and the “Production: Tonnage” column. The “Seam: Number” column represents the seam(s) mined at the operation. No production tonnage is listed by seam. Days in production were estimated for those companies not providing this information. To convert short tons to metric tons, multiply the given tonnage by 0.907185.

TYPE OF MINE/PRODUCTION

SEAM IDENTIFICATION OF PRINCIPAL OHIO COALS

1 Sharon	4 Newland (Brookville)	6a Lower Freeport	9 Meigs Creek	H Harlem	S Surface
2 Quakertown	4a Clarion	7 Upper Freeport	11 Waynesburg	W Wilgus	UG Underground
3 Lower Mercer	5 Lower Kittanning	7a Mahoning	12 Washington	WI Winters	
3a Upper Mercer	5a Strasburg	8 Pittsburgh			
3b Tionesta	6 Middle Kittanning	8a Pomeroy (Redstone)			

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in produc- tion in 2011	Disposition		Employment			State mine number
			Number	Thick- ness (inches)		Method	Tonnage		Method	Tonnage	Production		Other	
											UG	S		
BELMONT COUNTY—Total production = 12,252,148														
American Energy Corp.	Century Mine	Wayne, Washington	8	54	UG	longwall cont. miner Total	3,672,615 830,856 4,503,471	352	rail truck Total	4,355,584 33,490 4,389,074	306		137	Bt-671
	Egypt Valley Stone, LLC	Kirkwood, Union	8	42	S	strip	22,280	261	truck	22,280		11	2	Bt-E
Ohio Valley Coal Co.	Powhatan No. 6	Smith	8	62	UG	longwall cont. miner Total	5,571,097 770,860 6,341,957	348	rail truck Total	4,939,765 1,570,127 6,509,892	444		197	Bt-68
	Oxford Resource Partners, LP	Warren	9	42	S	strip auger Total	232,490 3,189 235,679	254	truck	235,679		19	2	Bt-J
	CR 29	Flushing, Wheeling	9	44	S	strip auger Total	394,757 31,956 426,713	254	rail	426,713		31	4	Bt-CON
	Flushing	Flushing, Wheeling	9	36	S	strip highwall Total	29,948 47,336 77,284	97	truck	77,284		22	5	Bt-OX4
	Lafferty	Union	9	46	S	strip auger highwall Total	139,050 1,528 119,555 260,133	254	truck	260,133		26	3	Bt-OX3
	Wheeling Valley	Wheeling	9	45	S	strip auger Total	298,506 74,750 373,256	254	truck	373,256		35	4	Bt-OX5
Sidwell Materials, Inc.	Uniontown Stone	Wheeling	8		S	strip	11,374	82	truck	11,374		3		Bt-S

CARROLL COUNTY—Total production = 202,040												
Rosebud Mining Company	James Mine (Carrol Pits)	Rose	6a 7		S	strip	11,415	158	truck	11,415	1	Cl-B4
Sterling Mining Co.	Sterling-Carroll Hollow Deep	Fox	6	36	UG	cont. miner	190,625	250	conveyor	189,335	35	7 Cl-S1
COLUMBIANA COUNTY—Total production = 138,494												
Oxford Resource Partners, LP	Dailey	Elk Run	7 7a	34 24	S	strip auger Total	68,783 10,034 78,817	173	truck	78,817	16	2 Ca-CE2
Rosebud Mining Company	Kress Mine	Center	7a	36	S	strip	18,413	139	truck	18,413	3	Ca-BI3
Solomon's Mines, Inc.	Miller	Elkrun	7		S	strip	37,515	160	truck	37,515	2	Ca-R
	Solomon's Mines, Inc.	Salem	7		S	strip	3,749	57	truck	3,749	2	Ca-SM
COSHOCTON COUNTY—Total production = 154,862												
Oxford Resource Partners, LP	Plainfield	Linton	6	38	S	strip auger highwall Total	84,185 14,027 56,650 154,862	200	truck	154,862	29	5 Cn-OX4
GUERNSEY COUNTY—Total production = 235,283												
Cumberland Limestone, LLC	Cumberland Limestone LLC	Spencer	7		S	strip	1,490	20	truck	1,491	2	1 Gy-309
Oxford Resource Partners, LP	Hall's Knob	Millwood	8	45	S	strip auger Total	185,858 13,418 199,276	214	rail	199,276	26	5 Gy-O
Oxford Mining Co., LLC	Otsego	Knox	6	40	S	strip auger Total	30,094 4,422 34,516	35	truck	34,516	20	2 Gy-OX
HARRISON COUNTY—Total production = 3,370,001												
Anthony Mining Co., Inc.	Carson-Harrah	Green	8 8a 9	56 20 18	S	strip	100,516	238	truck	100,516	11	12 Hn-766
Hopedale Mining, LLC	Patton-Mader	German	H	20	S	strip	17,054	122	truck	17,054	6	2 Hn-A
	Hopedale Mine	Green, German	6a	62	UG	cont. miner	1,345,400	359	rail truck other Total	1,337,700 19,000 36 1,356,736	144	22 Hn-169
Harrison Resources, LLC	Sexton 2	Athens	8 8a 9	52 19 45	S	strip auger Total	765,320 4,372 769,692	302	rail truck Total	29,437 740,255 769,692	44	12 Hn-H
¹ See also Monroe County.												

¹See also Monroe County.

2011 OHIO DIRECTORY OF PRODUCING COAL MINE OPERATORS, BY COUNTY (cont.)

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in produc- tion in 2011	Disposition		Employment			State mine number
			Number	Thick- ness (inches)		Method	Tonnage		Method	Tonnage	UG	S	Other	
HARRISON COUNTY (continued)	Oxford Resource Partners, LP	Moorefield, Nottingham Cadiz	8	54	S	strip	74,431	141	truck	74,435		4	1	Hn-O3
	Standingstone Mine		8 8a 9	50 18 36	S	strip	998,860	254	truck	998,860		60	7	Hn-O2
	Kuchan	Green	8	40	S	strip	1,288	46	truck	1,288		2		Hn-SM1
	Picken/Strip #3	Athens	8		S	strip	62,759	112	truck	62,759		18	4	Hn-V
JACKSON COUNTY—Total production = 669,768														
Cedar Heights Clay Co.	Phillips	Madison	5		S	strip	555	20	truck	555		4		Jkn-CH3
Sands Hill Mining, LLC	Sands Hill Rockcamp II	Milton	4a 5 6 7	40 19 8 15	S	strip	270,088	263	truck water Total	59,157 212,333 271,490				Jkn-S2
Waterloo Coal Co., Inc.	Layne	Madison	4 5 6	28 18 16	S	strip	230,286	242	truck	230,266		25		Jkn-W2
	Mead-Zinn & Westlake	Bloomfield	4 5 6	30 24 14	S	strip	168,839	147	truck	168,839		20	1	Jkn-367
JEFFERSON COUNTY—Total production = 1,602,298														
F. & M. Coal Co.	Grabbit Pit	Smithfield, Green	8 8a	18 54	S	strip	9,200	307	truck	9,200		3		Jfn-FM1
Ohio American Energy, Inc.	North Star Mine	Cross Creek	8	54	S	strip auger highwall Total	81,043 9,186 526,923 617,152	237	truck	478,394		25	7	Jfn-O4
	Salt Run	Wells	8	54	S	strip auger highwall Total	137,772 30,727 293,896 462,395	235	truck	364,991		16	4	Jfn-M
Oxford Mining Co., LLC	Ellis	Wells	8 8a 9	50 18 38	S	strip	2,991	15	truck	2,991		10	2	Jfn-OX
Rosebud Mining Company	Kirk	Springfield, Ross	6a 7a		S	strip	88,834	231	truck	88,834		11		Jfn-B1

Sterling Mining Co.	Bergholz Mine	Ross	7a	48	UG	cont. miner	161,592	234	truck	161,592	35	5	Jfn-BI	
	SMC-Shinn Hill	Brush Creek	7	36	UG	cont. miner	260,134	250	conveyor	261,373	28	8	Jfn-ST2	
MAHONING COUNTY—Total production = 21,541														
D. & D. Mining Co.	D. & D. Strip	Springfield	5	30	S	strip	4,548	20	truck conveyor Total	171 4,598 4,769		2	4	Mg-D
East Fairfield Coal Co.	Withers-Petersburg	Springfield	4 5	22 22	S	strip	16,993	225	truck	18,993		3		Mg-E
		Sutton	8a	72	UG	cont. miner	444,551	269	water	481,227	70	6		Ms-G
MEIGS COUNTY—Total production = 444,551														
Gatling Ohio, LLC	Yellow Bush Mine													
MONROE COUNTY—Total production = 2,577,158														
American Energy Corp.	Century Mine	Sunsbury	8	54	UG	longwall cont. miner Total	2,101,692 475,466 2,577,158	352	rail truck Total	2,492,528 19,165 2,511,693	178	12		Bt-67 ²
NOBLE COUNTY—Total production = 720,582														
B & N Coal, Inc.	Whigville III	Marion	9	42	S	strip	193,492	255	truck	193,492		13	1	Ne-BN8
	Estadt Mine	Stock, Enoch	9	36	S	strip	90,193	255	truck	90,193		10	1	Ne-BN
	Mantel Mine	Jefferson, Elk	9		S	strip	90,221	236	truck	90,221		12	1	Ne-BN7
	Westfork Mine	Jefferson, Aurelius	9	36	S	strip	125,849	255	truck	125,849		13	1	Ne-BN5
Oxford Resource Partners, LP	Long-Sears	Beaver	9	50	S	strip auger Total	207,351 13,477 220,828	254	rail	220,828		22	2	Ne-O1
PERRY COUNTY—Total production = 3,225,884														
Buckingham Coal Co., Inc.	Buckingham Mine No. 6	Monroe	6	72	UG	cont. miner	1,804,868	274	rail truck Total	963,142 268,821 1,231,963	106	32		Py-B2
	Buckingham Mine No. 7	Monroe	7	60	UG	cont. miner	691,291	274	rail truck Total	360,415 115,661 476,076	86	51		Py-B1
Oxford Resource Partners, LP	New Lex North 2	Clayton	5 6	42 52	S	strip	441,327	254	rail	441,327		29	3	Py-O2
	Oxford Mining Co., Inc.	Clayton, Harrison	5 6	42 52	S	strip auger highwall Total	206,480 12,738 69,181 288,399	254	rail	288,398		17	2	Py-O1
² See also Belmont County.														

²See also Belmont County.

2011 OHIO DIRECTORY OF PRODUCING COAL MINE OPERATORS, BY COUNTY (cont.)

Name of company	Name of mine	Township	Seam		Type of mine	Production		Days in production in 2011	Disposition		Employment			State mine number
			Number	Thick-ness (inches)		Method	Tonnage		Method	Tonnage	Production			
											UG	S	Other	
STARK COUNTY—Total production = 323,230														
American Landfill, Inc.	American Landfill, Inc.	Sandy, Osnaburg	5	32	S	strip	21,834	99	truck	21,834	3		Sk-246	
	Kimble Clay & Limestone Co.	Pike	4	28	S	strip	19,075	90	truck	19,075	3	1	Sk-P	
		Pike	5	28	S	strip	60,079	239	truck	61,666	4		Sk-K	
				5	28		auger	1,587						
			6	28		Total	61,666							
Oxford Mining Co., LLC	East Canton	Osnaburg	5	28	S	strip	49,999	53	truck	50,121	13	2	Sk-O	
			6	36		auger	122							
			6a	14		Total	50,121							
Rosebud Mining Company	Hamilton Strip	Paris	5		S	strip	73,077	276	truck	73,077	6		Sk-R	
			6											
	Wilson Mine	Sandy	5		S	strip	57,849	275	truck	57,849	4		Sk-BI5	
			6											
	Mapleton Mine	Osnaburg	5		S	strip	39,608	275	truck	39,608	4		Sk-B11	
			6											
TUSCARAWAS COUNTY—Total production = 1,529,821														
Belden Brick Co.	Moomaw Pit	Sugar Creek	4	12	S	strip	4,424	6	truck	4,424	4		Ts-1517	
	Shanesville Pit	Sugar Creek	4	8	S	strip	1,875		truck	1,875			Ts-1939	
Kimble Clay & Limestone Co.	Kimble Clay & Limestone Co.	York	5	28	S	strip	80,909	156	truck	95,086	5		Ts-K12	
			6	28		auger	14,177							
						Total	95,086							
L & M Mineral Co.	Dover	Dover	4	28	S	strip	1,149	3	truck	1,149	1		Ts-K11	
	York	York	6	28	S	strip	2,455	4	truck	2,941	1		Ts-K7	
						auger	486							
						Total	2,941							
L & M Mineral Co.	Sugar Creek	Sugar Creek	3a	28	S	strip	26,437	71	truck	26,991	2		Ts-K4	
			4	28		auger	554							
						Total	26,991							
L & M Mineral Co.	Salem, Clay	Salem, Clay	5	28	S	strip	49,154	133	truck	68,422	4		Ts-K10	
			6	28		auger	19,268							
			7	28		Total	68,422							
	Luikart	Mill, Warwick	7		S	strip	3,726	49	truck	3,726	1		Ts-1914	

Oxford Resource Partners, LP	Spring Industries	Warwick	7		S	strip	4,711	22				1	Ts-SI
	Mizer	York	5 6	34 36	S	strip auger <i>Total</i>	70,327 8,634 <i>78,961</i>	149	truck	78,961		6	Ts-O7
	Page	Rush	7	28	S	strip auger <i>Total</i>	165,083 37,995 <i>203,077</i>	254	truck	203,077		25	Ts-O6
	Strasburg Slurry	Lawrence, Franklin	4	18	S	strip	1,638	2	truck	1,638		2	Ts-HC
	Chumney	Fairfield	6	54	S	strip	122,671	154	truck	122,671		29	Ts-O5
	Stone Creek-Kaiser/Mathais	York	5 6		S	strip auger highwall <i>Total</i>	130,497 9,827 200,915 <i>341,239</i>	254	truck	341,239		22	Ts-O9
	Tusky Mine	Mill	6	54	UG	cont. miner	572,909	275	rail truck <i>Total</i>	172,909 400,000 <i>572,909</i>	67	21	Ts-TR
	VINTON COUNTY—Total production = 461,428												
	Big Rock	Clinton	W 4a 5	47 42 29	S	strip	283,058	263	truck water <i>Total</i>	61,998 222,530 <i>284,528</i>			Vn-S7
	Big Valley	Wilkesville, Vinton	4a 5 6 7	42 20 8 15	S	strip	147,977	263	truck water <i>Total</i>	32,411 116,334 <i>148,745</i>	60	62	Vn-S4 ³
Waterloo Coal Co., Inc.	Jolly Mine	Clinton	5 6 7	24 14 14	S	strip	30,393	49	truck	30,393		3	Vn-W

³Includes employees for Vn-S7 and Jkn-S2.

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2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Ts-A).

If there are no sales or production figures given for an operation, that operation reported no sales or production in 2011.

To convert short tons to metric tons, multiply the given tonnage by 0.907185.

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
A. P. Green Refractories, Inc. 400 Fairway Dr., Bldg. 400 Moon Township, PA 15108 (573) 642-8787 Jon Allegretti, pres.	Boggs/Smith	Jackson	clay	2,300	2,300	Jkn-G	IM-2353
Addy Sand & Gravel 21301 County Rd. 106 P.O. Box 52 Newcomerstown, OH 43832 (740) 502-9598 Gerald L. Addy, owner	Addy	Coshocton	sand & gravel			Cn-AD	IM-971
Agg Rok Materials 711 Frank Rd. Columbus, OH 43223 (614) 875-5500 William G. Heffner, pres.	Agg Rok	Franklin	sand & gravel	6,000	6,000	Fn-36	IM-302
Allgeier & Son, Inc. 6386 Bridgetown Rd. Cincinnati, OH 45248 (513) 574-3735 Michael E. Allgeier, pres.	Allgeier & Son, Inc. Pit 1 Allgeier & Son, Inc. Pit 2 Allgeier & Son, Inc.	Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	45,000	45,000	Hmn-AS1 Hmn-AS Hmn-C	IM-797 IM-1106 IM-1132
American Sand & Gravel, Inc. 9500 Forty Corners Rd. NW Massillon, OH 44647 (330) 762-9373 Christopher A. Scala, pres.	Plant #4 Plant #6	Stark Stark	sand & gravel sand & gravel	583,019 20,819	583,019 20,819	Sk-243 Sk-RO	IM-908 IM-2084
Anchor-Land, Ltd. P.O. Box 648 St. Clairsville, OH 43950 (740) 695-7237 C. F. Dawson, owner	Anchor Limestone	Belmont	limestone			Bt-A	IM-2148
Anthony Mining Co., Inc. P.O. Box 1298 Steubenville, OH 43952 (740) 268-8100 Albert Carapellotti, pres.	Patton-Mader	Harrison	limestone	54,360	54,360	Hn-A	IM-2247
Apex Environmental, LLC 11 County Rd. 78 P.O. Box 151 Amsterdam, OH 43903 (412) 562-1700 Anthony Rizzo, pres.	Apex	Jefferson	limestone			Jfn-K	IM-1164
Arch Materials, LLC 4438 State Route 276 Batavia, OH 45108 (513) 724-7625 Ben Rechter, pres.	Batavia	Clermont	limestone	1,001,211	996,224	Ct-A ¹	
Area Aggregates, LLC 4755 South High St. Columbus, OH 43207 (614) 491-1515 Kenneth Holland, pres.	Area Aggregates, LLC	Sandusky	limestone	476,320	682,317	Sy-A	IM-2227

¹This mine began underground operations in 2009.

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Ashcraft Sand & Gravel, Inc. 5850 Dry Fork Rd. Cleves, OH 45002 (513) 367-5700 Rick Ashcraft, owner	Ashcraft Sand & Gravel, Inc.	Hamilton	sand & gravel	3,707	3,707	Hmn-54	IM-710
Athens Hocking Reclamation Center Athens Hocking Reclamation Clay Mine 450 Gallagher Ave. P.O. Box 946 Logan, OH 43138 (740) 385-6019 Edward F. Kilbarger, pres.	SAA	Athens	clay			As-594	
Atlas Towing Co. P.O. Box 1632 Parkersburg, WV 26101 (304) 428-0341 Christopher V. Criss, pres.	Belpre Bank Run	Washington	sand & gravel	5,573	5,573	Wn-54	IM-383
Baker Sand, Inc. 7800 White Rd. Burbank, OH 44214 (330) 948-1448 Baker Family, owners	Baker Sand, Inc.	Medina	sand & gravel	230,000	230,000	Ma-20	IM-448
Ballentine Sand & Gravel, LLC 7854 Cooley Rd. Ravenna, OH 44266 (330) 297-6712 Daniel H. Ballentine, owner	Ballentine Lake	Portage	sand & gravel	57,839	57,839	Pe-BA	IM-1327
Barrett Paving Materials, Inc. P.O. Box 13671 Dayton, OH 45413 (937) 424-9100 Marc Zehnder, plants mgr.	Haddix Road Aggregates Plant #341	Greene	sand & gravel	443,652	493,675	Ck-28	IM-1100, IM-2120
	Hardin Sand & Gravel	Shelby	sand & gravel	256,095	229,221	Shy-SC	IM-1018
	Jones Deposit	Shelby	sand & gravel	0	247	Shy-18	IM-388
	Pence Deposit	Shelby	sand & gravel	0	221	Shy-11	IM-743
	Schmidt Deposit	Shelby	sand & gravel	0	203	Shy-SC1	IM-2017
Barrett Paving Materials, Inc. 5325 Medway Rd. Fairborn, OH 45324 (937) 878-8631 Steve Hurley, plant mgr.	Fairborn Aggregate Plant	Greene	sand & gravel	19,048	0	Ge-4	IM-394
Barrett Paving Materials, Inc. 4710 Soldiers Home-WC Rd. Miamisburg, OH 45342 (937) 279-3200 Mike Oliver, plant super.	West Carrollton Aggregate Plant	Montgomery	sand & gravel	330,000	330,000	My-19	IM-401, IM-916
Barrett Paving Materials, Inc. Mid-Ohio 3244 S. Davis Rd. Ludlow Falls, OH 45339 (937) 698-3043 Jim Meckstroth, reg. mgr.	Barrett Paving Materials, Inc., #231	Miami	limestone	76,269	85,425	Mi-BPM	IM-1169
	Bed Rock Properties	Miami	limestone	128,824	128,824	Mi-502	IM-414
	Miami River Quarry #261	Shelby	limestone	630,767	501,855	Shy-17	IM-389
			sand & gravel	136	0		
	Rock Run	Shelby	limestone			Shy-16	IM-411
	Staley Pit	Shelby	sand & gravel	490	0	Shy-SS	IM-438
	Vandemark Quarry #221	Shelby	limestone	10,895	0	Shy-15	IM-387
Bartley & Bolin Excavating 1242 County Rd. 1475 Ashland, OH 44805-9277 (419) 289-1507 Mitchell W. Bolin, owner	Bartley & Bolin, Inc., James Plant	Ashland	sand & gravel	58,086	58,036	Ald-B	IM-2141
	McNaul Road Plant	Richland	sand & gravel			Rd-20	IM-617

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Bear Creek Clay Co. 11123 State Route 37 E New Lexington, OH 43764 (740) 342-5473 Tom L. Dennis, owner	Saltillo	Perry	clay shale	11,231 16,339	11,231 16,339	Py-D1	IM-1304
Beaver Excavating, Inc. 2000 Beaver Place Ave. SW P.O. Box 6059 Canton, OH 44706 (330) 484-6088 W. Mark Sterling, pres.	Stone Products	Stark	clay			Sk-BE	IM-1202
Beck Sand & Gravel, Inc. 2820 Webb Rd. Ravenna, OH 44266 (330) 626-3863 Dan Lostoski, owner	Beck Sand & Gravel, Inc.	Portage	sand & gravel	268,640	268,640	Pe-50	IM-96
Belden Brick Co. P.O. Box 20910 Canton, OH 44701 (330) 852-2424 Robert F. Belden, pres.	Beagle Pit	Tuscarawas	clay			Ts-1960	IM-48
	Belden Pit	Tuscarawas	clay shale	7,549 13,841	7,549 13,841	Ts-1646	IM-44
	Dundee Pit	Tuscarawas	clay			Ts-BB	IM-1221
	Moomaw Pit	Tuscarawas	clay limestone	29,711 15,811	29,711 15,811	Ts-1517	IM-46
	Plotner Pit	Tuscarawas	shale	103,246	103,246	Ts-B	IM-49
	Shanesville Pit	Tuscarawas	clay shale limestone	53,891 126,556 6,222	53,891 126,556 6,222	Ts-1939	IM-47
	Wallick Pit	Tuscarawas	clay limestone	14,920 9,905	14,920 9,905	Ts-1841	IM-45
	Benjamin's Farm, Inc.	Portage	sand & gravel			Pe-BF	IM-2163
	Best Sand Corp. 11830 Ravenna Rd. Chardon, OH 44024 (440) 285-3132 Charles D. Fowler, pres.	Geauga Pike	sandstone sandstone	547,080	675,549	Gea-3 Pke-31	IM-89 IM-835
	Black Top Contracting, Inc. P.O. Box 426 Nelsonville, OH 45764 (740) 753-1181 Tim Maiden, pres.	Athens	sand & gravel			As-BT	IM-1350
Bluffton Stone Co. P.O. Box 26 Bluffton, OH 45817-0026 (419) 358-6941 Michael J. Gerken, pres.	Bluffton Stone Co.	Allen	limestone	276,520	311,284	An-1	IM-485
Richard Bonner P.O. Box 1359 Middlefield, OH 44062 (216) 409-2505 Richard Bonner, pres.	Shalersville	Portage	sand & gravel			Pe-SM	IM-499
Bontrager Excavating Co. 11087 Cleveland Ave. NW Uniontown, OH 44685 (330) 499-8775 Daniel Bontrager, pres.	Gilbert	Summit	sand & gravel			St-B	IM-2303

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Boone Coleman Construction, Inc. 32 State Route 239 West Portsmouth, OH 45663 (740) 858-6661 Timothy Coleman, pres.	Boone Coleman Construction, Inc. Coleman Pit	Scioto Scioto	sand & gravel sand & gravel			So-BC So-B	IM-1252 IM-705
Bowerston Shale Co. 1329 Seven Hills Rd. NE Newark, OH 43055 (740) 763-3921 Mark Willard, pres.	Hanover Pit Frazeyburg	Licking Muskingum	shale clay limestone	12,948 4,628 21,741	12,948 4,628 21,741	Lg-501 Mum-776	IM-257 IM-256
Bowerston Shale Co. 515 Main St. P.O. Box 199 Bowerston, OH 44695 (740) 269-2921 Mark Willard, pres.	Bowerston Scott Farm	Harrison Harrison	shale clay	30,256	30,256	Hn-152 Hn-B	IM-42 IM-1020
Boyas Excavating, Inc. 11311 Rockside Rd. Cleveland, OH 44125-4247 (216) 524-3620 Michael Boyas, pres.	Boyas Excavating, Inc.	Cuyahoga	clay sand & gravel	156 7,281	156 7,281	Cya-42	IM-686
Boyd Excavating 9553 County Rd. 28 Zanesfield, OH 43360 (937) 465-3290 Jeff Boyd, owner	Boyd Excavating	Logan	sand & gravel	3,904	3,904	Lgn-B	IM-1309
Briar Hill Stone Co. P.O. Box 457 Glenmont, OH 44628 (330) 377-5100 Frank L. Waller, pres.	Quarry #18 Quarry #24 Quarry #26 Quarry #32 Quarry #54 Quarry #55 Quarry #56 Quarry #31 Quarry #6	Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Coshocton Holmes Knox	sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone sandstone	335 1,642 5,855	335 1,642 5,855	Cn-695 Cn-692 Cn-13 Cn-686 Cn-809 Cn-815 Cn-BH Hs-49 Kx-12	IM-402 IM-294 IM-397 IM-504 IM-909 IM-939 IM-2147 IM-418 IM-445
Briggs Sand & Gravel, Inc. County Rd. 10 1905 Blue Knob Rd. Marietta, OH 45750 (740) 373-3363 James A. Briggs, pres.	Briggs Sand & Gravel, Inc.	Washington	sand & gravel	4,081	4,081	Wn-508	IM-57
Brookside Materials, LLC 2850 Rohr Rd. Groveport, OH 43215 (740) 739-4637 Gerald E. Bennett, pres.	Brookside Materials, LLC	Licking	sand & gravel	110,000	110,000	Lg-B	IM-2273
Broshear Contractors, Inc. 2520 Millville-Ross Rd. Hamilton, OH 45013 (513) 863-3388 Gerald Broshear, pres.	Green Heron Ross Twp. Gravel	Butler Butler	sand & gravel sand & gravel	10,707	10,707	Br-B Br-48	IM-2029 IM-562
Marilyn J. Burkholder, Trust 1655 Fairview Rd. Galion, OH 44833 (419) 468-1361 Marilyn J. Burkholder, owner	Burkholder	Crawford	sand & gravel			Cd-B	IM-2204

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Burlington Sand & Gravel Co. P.O. Box 399 Chesapeake, OH 45619 (740) 867-0473 Vernon E. Collier, owner	Burlington Sand & Gravel Co.	Lawrence	sand & gravel			Le-426	IM-856
Burrell Industries 1198 Polo Club Rd. Wellington, FL 33414 (561) 229-8990 Glenn Straub, pres.	Bolivar Pit Tri-State Asphalt Products	Stark Belmont	sand & gravel sand & gravel			Sk-SI Bt-74	IM-588 IM-288
Richard & Kathy Burwinkel 5915 Dry Ridge Rd. Cincinnati, OH 45252 (513) 385-7131 Richard & Kathy Burwinkel, owners	Burwinkel	Hamilton	sand & gravel	121,233	121,233	Hmn-RB	IM-2333
C & S Contractors, Inc. P.O. Box 498457 Cincinnati, OH 45249 (513) 530-9844 Raymond A. Conn, pres.	C & S Contractors, Inc.	Warren	sand & gravel			Wan-47	IM-846
C. F. Poeppelman, Inc. 4755 N. State Route 721 Bradford, OH 45308 (937) 448-2191 James C. Poeppelman, pres.	C. F. Poeppelman, Inc.	Miami	limestone sand & gravel	239,840 12,364	239,840 12,364	Mi-10	IM-335
Calvins Hauling, Inc. 1205 S. Johnson Ave. Bartow, FL 33830 (863) 533-5453 Calvin Cochenour, pres.	Calvins Hauling, Inc.	Ross	sand & gravel	2,180	2,180	Rs-C	IM-2349
Cardinal Aggregates, Inc. 8026 Fremont Pike Perrysburg, OH 43551 (419) 872-4380 Philip Elsel, oper. mgr.	Cardinal Aggregates, LLC	Wood	limestone	559,311	559,311	Wd-C	IM-2231
Cargill, Incorporated Cargill Deicing Technology 2400 Ships Channel P.O. Box 6920 Cleveland, OH 44101 (216) 357-4600 Richard Maxfield, pres.	Cargill Deicing Technology	Cuyahoga	salt	3,634,528	3,594,531	Cya-30	
Cargill Salt 2065 Manchester Rd. Akron, OH 44314 (330) 745-0031 Connie Petersen, mgr.	Cargill, Incorporated	Summit	salt	310,805	319,765	St-9127	
Carl E. Oeder and Sons Sand & Gravel 1000 W. Mason Morrow Millgrove Lebanon, OH 45036 (513) 494-1238 Carl E. Oeder, pres.	Carl E. Oeder and Sons Sand & Gravel	Warren	sand & gravel	351,309	351,309	Wan-41	IM-629

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Carmeuse Lime, Inc. P.O. Box 708 Bettsville, OH 44815 (419) 986-2000 Thomas Buck, pres.	Millersville Plant Maple Grove	Sandusky Seneca	limestone limestone	402,416 1,357,496	422,114 1,357,496	Sy-4 Sa-2	IM-381 IM-352
Carmeuse Lime & Stone, Inc. 2446 Glassrock Rd. Glenford, OH 43739 (740) 599-7773 Thomas Buck, pres.	Millwood Plant Carmeuse Lime & Stone, Inc. Glass Rock Plant	Knox Perry Perry	sandstone sandstone sandstone	102,484 134,940	115,035 159,562	Kx-1 Py-C Py-344	IM-269 IM-2365 IM-1014
Joe E. Carter 21399 State Line Rd. Lawrenceburg, IN 47025 (812)-537-3970 Joe E. Carter, owner	Lost Bridge	Hamilton	sand & gravel	1,500	1,500	Hmn-JC	IM-1267
Carter & Carter, Inc. P.O. Box 266 Miamisburg, OH 45343-0266 (937) 859-5414 Charles V. Carter, pres.	Carter & Carter, Inc.	Montgomery	sand & gravel	500	500	My-CW	IM-878
Cedar Heights Clay Co. P.O. Box 295 Oak Hill, OH 45656-0295 (740) 682-7794 William T. Brown, pres.	Harrison Phillips	Jackson Jackson	clay clay	14,739	14,739	Jkn-CH2 Jkn-CH3	IM-1302 IM-2035
CEMEX, Inc. 3250 Linebaugh Rd. Xenia, OH 45385 (937) 878-8651 Bernard P. McCormick, plant mgr.	Miller, Schieder, Batdorf, Stewart G-Tract	Greene Montgomery	limestone shale limestone	264,870 22,151 91,381	264,870 22,151 91,381	Ge-8 My-58	IM-364 IM-330
Central-Allied Enterprises, Inc. P.O. Box 80449 Canton, OH 44708-0449 (330) 477-6751 Gerald S. Orn, pres.	Canton Aggregate Div. Central Sand & Gravel Div. Massillon Washed Gravel Div. Massillon Washed Gravel Div.	Stark Stark Stark Stark	sand & gravel sand & gravel sand & gravel sand & gravel	1,150 564,566 275 156,810	1,150 564,566 275 156,810	Sk-681 Sk-CA1 Sk-607 Sk-MW	IM-164 IM-2140 IM-102 IM-1171
Central Ohio Coal Co. P.O. Box 98 Cumberland, OH 43732-0098 (740) 558-7213 Robert P. King, pres.	Muskingum	Morgan	limestone			Mon-C1	IM-2301
Central Ready Mix, LLC P.O. Box 70 Monroe, OH 45050 (513) 402-5001 Todd Dragna, pres.	Middletown Plant #22 Germantown Plant #21 Carlisle Plant #27	Butler Montgomery Warren	sand & gravel sand & gravel sand & gravel	97,131 6,252 75,000	97,131 0 75,000	Br-6 My-41 Wan-7	IM-177 IM-360 IM-151
Chesterville Sand & Gravel Co., Inc. State Route 95 E P.O. Box 51 Chesterville, OH 43317 (419) 768-3369 David W. Gleason, v. pres.	Chesterville Sand & Gravel Co., Inc.	Morrow	sand & gravel	177,763	177,763	Mw-10	IM-258

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Christman Quarries 47278 Swazey Rd. Lewisville, OH 43754 (740) 838-2475 Kathy L. Dimmerling, owner	Christman Quarry	Monroe	limestone	62,433	62,433	Me-C	IM-1088
City Stone, LLC 8063 Southern Blvd. Boardman, OH 44512 (800) 262-9365 Ronald R. Carrocce, pres.	City Stone, LLC City Stone, LLC	Mahoning Trumbull	sandstone sandstone	137,659	137,659	Mg-62 Tl-CA	IM-599 IM-2085
Harlen D. & Barbara L. Clark 11535 County Rd. 16 Wauseon, OH 43567 (419) 335-2234 Harlen D. Clark, pres.	Clark	Fulton	sand & gravel	8,500	8,500	Ftn-C	IM-2274
Clemson Excavating, Inc. 9954 Old State Rd. Chardon, OH 44024 (440) 286-4757 Bill Clemson, pres.	Clemson Excavating Sand & Gravel	Ashtabula	sand & gravel			Asa-C	IM-1278
Clinton Stone, LLC P.O. Box 650 Hamden, OH 45634-0650 (740) 384-4211 David G. Zatezalo, pres.	Clinton Stone, LLC	Jackson	limestone	423,893	423,893	Jkn-S2	D-1087
Cochran Transportation Services, Inc. P.O. Box 578 Athens, OH 45701 (740) 593-3906 Charles W. Cochran, pres.	Circle Hill	Athens	sand & gravel	31,149	31,149	As-595	IM-1083
Bill D. Colwell 2530 Regina Pl. Hamilton, OH 45013 (513) 863-2138 Bill D. Colwell, owner	Bill D. Colwell Gravel	Butler	sand & gravel	384	384	Br-36	IM-649
Con-Ag, Inc. 16672 County Rd. 66A N St. Marys, OH 45885 (419) 394-8870 John R. Hirschfeld, pres.	Con-Ag, Inc.	Auglaize	limestone	210,000	210,000	Ae-31	IM-744
Cremeans Concrete & Supply P.O. Box 475 Gallipolis, OH 45631 (740) 446-1142 John Cremeans, pres.	Cremeans Concrete & Supply Co., Inc.	Gallia	sand & gravel	675	675	Ga-626	IM-1046
Crushers Stone Products, LLC 7000 Columbus Rd. Shreve, OH 44676 (330) 263-7350 Dan Stauffer, Sr., pres.	Crushers Stone Products, LLC	Wayne	sandstone			We-25	IM-1209
Cumberland Limestone, LLC 53681 Spencer Rd. Cumberland, OH 43732 (740) 638-3942 Chris D. Sidwell, pres.	Cumberland Limestone, LLC	Guernsey	limestone	477,637	477,637	Gy-309	IM-1030

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Custar Stone Co., Inc. P.O. Box 627 Napoleon, OH 43545 (419) 533-8831 Brent Gerken, pres.	Custar Stone Co., Inc.	Wood	limestone	529,712	638,591	Wd-5	IM-473
D. & D. Mining Co. 3379 East Garfield Rd. New Springfield, OH 44443 (330) 549-3127 Donald Thompson, pres.	D. & D. Strip D. & D. Strip D. & D. Strip	Columbiana Columbiana Mahoning	shale clay shale sandstone	250 1,700	250 1,700	Ca-888 Ca-348 Mg-D	IM-1181 IM-976 D-2164
D & K Materials, Inc. 3072 Congress Lake Rd. Mogadore, OH 44260 (330) 678-2411 Kimberly S. Ebie, pres.	D & K Materials, Inc.	Portage	clay sand & gravel	41 97,607	41 97,607	Pe-101	IM-1154
D. H. Bowman & Sons, Inc. 14220 Parrott St. P.O. Box 750 Mt. Vernon, OH 43050 (740) 886-2711 Jeff Ellis, pres.	D. H. Bowman & Sons, Inc.	Richland	sand & gravel			Rd-4	IM-279, IM-1255
Darby Creek Excavating, Inc. 6790 Brooksmiller Rd. Circleville, OH 43113 (740) 477-8600 Kevin R. Steward, pres.	Darby Creek	Pickaway	clay			Pky-DC	IM-1316
D.B.M. Materials, LLC 2040 Alum Creek Dr. Columbus, OH 43207 (614) 445-8421 John B. Igel, pres.	D.B.M. Materials, LLC	Franklin	sand & gravel			Fn-14	IM-832
D.C. Engineering and Development Ltd. 329 Mabel Court London, OH 43140 (614) 270-8785 Charles W. Duvall, pres.	D.C. Engineering	Madison	sand & gravel			Mdn-D	IM-2338
De Milta Sand & Gravel, Inc. 921 Erie Rd. Eastlake, OH 44095 (440) 942-2015 Nick De Milta, pres.	De Milta Sand & Gravel, Inc.	Lake	sand & gravel			Lke-D	IM-1187
Demmy Construction, Inc. 4324 Fairfield Pike Springfield, OH 45502 (937) 323-4079 Daniel E. Demmy, pres.	Demmy Constuction, Inc.	Clark	sand & gravel			Ck-501	IM-340
Demmy Sand & Gravel 4324 Fairfield Pike Springfield, OH 45502 (937) 323-4079 Daniel Demmy, pres.	Deam Demmy Sand & Gravel	Clark Clark	sand & gravel sand & gravel	11,540	11,540	Ck-LG Ck-502	IM-2073 IM-375
D.G.M., Inc. 453 Salisbury Rd. Beaver, OH 45613 (740) 820-3145 Mark A. Salisbury, pres.	Towpath-Warwick Tow Path Ready Mix	Ross Scioto	sand & gravel sand & gravel	25,710 55,593	25,711 55,592	Rs-D So-DGM	IM-2176 IM-1280

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Diamond Stone Quarries P.O. Box 315 McArthur, OH 45651 (740) 596-5226 W. E. Engle, pres.	Diamond Stone	Athens	limestone	17,882	17,882	As-533	IM-17
DiGeronimo Aggregates, LLC 5531 Canal Rd. Valley View, OH 44125 (216) 524-2950 Victor DiGeronimo, Jr., pres.	DiGeronimo Aggregates, LLC	Cuyahoga	shale	128,297	161,554	Cya-19	IM-95
Dingledine Basic Materials, Inc. 2304 Somerville Rd. P.O. Box 262 Somerville, OH 45064 (513) 726-5258 Gerald Dingledine, pres.	Dingledine Basic Materials, Inc.	Butler	sand & gravel	37,819	52,000	Br-50	IM-739
John R. Doherty 2229 Walnut Blvd. Ashtabula, OH 44004 (440) 964-8431 John R. Doherty, pres.	Doherty	Ashtabula	sand & gravel	500	500	Asa-JD	IM-2250
James E. Downard 1185 Mount Zwingli Rd. Bremen, OH 43107 (740) 569-7849 James E. Downard, owner	Downard Pit	Fairfield	sand & gravel	9,971	9,971	Fd-16	IM-1156
Duff Quarry, Inc. 9042 State Route 117 P.O. Box 305 Huntsville, OH 43324-0305 (937) 686-2488 James E. Duff, pres.	Duff Quarry, Inc. Duff Quarry, Inc. Duff Quarry, Inc. Duff Quarry, Inc. Duff Sand Co.	Logan Logan Logan Logan Logan	sand & gravel sand & gravel limestone sand & gravel sand & gravel	431,102 431,102 17,616	431,102 17,616	Lgn-39 Lgn-36 Lgn-15 Lgn-12 Lgn-31	IM-887 IM-1007 IM-453 IM-1071 IM-454
E. E. Blair Construction Co. 9540 Ohio River Rd. P.O. Box 39 Wheelersburg, OH 45694 (740) 574-6575 Edwin E. Blair, pres.	Cab Pit E. E. Blair	Scioto Scioto	sand & gravel sand & gravel	35,684	35,684	So-98 So-BL	IM-474 IM-2220
East Clayton Asphalt, Inc. P.O. Box 543 Nelsonville, OH 45764 (740) 753-1005 Dan L. Simms, pres.	East Clayton Asphalt, Inc.	Athens	sand & gravel			As-1161	IM-97
East Fairfield Coal Co. 10900 South Ave. P.O. Box 217 North Lima, OH 44452 (330) 549-2165 W. Thomas Mackall, pres.	Withers Petersburg - Surface	Mahoning	clay shale	61,025 159	61,025 159	Mg-EF	IM-2101
	Withers-Petersburg	Mahoning	limestone limestone	43,379 549,419	43,379 450,696	Mg-631 ²	IM-1103
David E. Edgington P.O. Box 282 Frankfort, OH 45628 (740) 998-5328 David E. Edgington, owner	Edgington Pit	Ross	sand & gravel	3,781	3,781	Rs-E	IM-1168

¹This mine began underground operations in 2003.

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Egypt Valley Stone, LLC P.O. Box 188 Morristown, OH 43759 (740) 782-0042 Richard Petrozzi, pres.	Shugert	Belmont	limestone	445,564	445,564	Bt-E	IM-2299
Enon Sand & Gravel, LLC 11641 Mosteller Rd. Cincinnati, OH 45241 (513) 771-0820 James P. Jurgensen, pres.	Enon Sand & Gravel, LLC	Clark	sand & gravel	355,500	355,500	Ck-3	IM-463, IM-1359, IM-2026
Envirosafe Services of Ohio, Inc. 876 Otter Creek Rd. Oregon, OH 43616 (419) 698-3500 Douglas E. Roberts, pres.	Johlin Property Clay Mine	Lucas	clay	14,700	0	Ls-E	IM-1075, IM-2116
ENZ, Inc. P.O. Box 405 Magnolia, OH 44643 (330) 339-4935 James R. Demuth, pres.	Baum Sand & Gravel	Stark	sand & gravel			Sk-E	IM-2230
Erie Blacktop, Inc. 4507 Tiffin Ave. P.O. Box 2308 Sandusky, OH 44870 (419) 625-7374 Dean Wikel, pres.	Erie Blacktop Quarry	Erie	limestone	204,857	204,857	Ee-27	IM-608
Erie Materials, Inc. 4507 Tiffin Ave. Sandusky, OH 44870 (419) 625-7374 Dean Wikel, pres.	Borchardt	Erie	sand & gravel	439	439	Ee-18	IM-676
Ervin Hill Enterprises, Inc. P.O. Box 559 Hillsboro, OH 45133 (937) 393-4120 Mark Edenfield, pres.	Ervin Hill Enterprises, Inc.	Highland	sand & gravel	90,559	90,559	Hd-L	IM-1297
ESSROC Cement Corp. P.O. Box 779 Bessemer, PA 16112 (610) 837-2596 Derek Nicholls, v. pres.	Bessemer Quarry Carbon Quarry	Mahoning Mahoning	limestone limestone			Mg-608 Mg-EM	IM-4 IM-1056
Evans Gravel, Inc. 4229 Round Bottom Rd. Cincinnati, OH 45244 (513) 271-1119 Douglas L. Evans, pres.	Evans Gravel, Inc. Evans Gravel, Inc.	Clermont Hamilton	sand & gravel sand & gravel	2,727 67,691	0 186,214	Ct-9 Hmn-E	IM-526 IM-2181
Feikert Sand & Gravel, Inc. 6871 Twp. Rd. 605 Millersburg, OH 44654 (330) 674-7245 Lynn O. Feikert, pres.	Feikert Sand & Gravel, Inc.	Holmes	sand & gravel	151,392	151,392	Hs-511	IM-1048, IM-1240
Fleming Construction Co., Inc. DBA Scioto S & G P.O. Box 31 Marion, OH 43301-0031 (740) 494-2177 Sonja E. Fleming, pres.	Pit #1 Pit #2	Marion Marion	sand & gravel sand & gravel	4,925 8,048	4,925 8,048	Mn-16 Mn-19	IM-171 IM-990

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Flesher Sand & Gravel, Inc. 2795 Barber Rd. Norton, OH 44203 (330) 745-9191 James E. Fisher, Jr., pres.	Flesher Sand & Gravel, Inc.	Summit	sand & gravel			St-52	IM-900
Foureman's Sand & Gravel, Inc. 2791 Wildcat Rd. Greenville, OH 45331 (937) 548-1718 Gary B. Foureman, pres.	Foureman's Sand & Gravel, Inc.	Darke	sand & gravel	41,420	41,420	Dke-4	IM-433
Friendsville Sand, L.P. 9601 Avon Lake Rd. Lodi, OH 44254 (336) 948-2610 Richard L. Rothel, pres.	Klotzsche & Associates	Medina	clay sand & gravel	1,500 20,250	1,500 25,600	Ma-F	IM-2348
Lloyd B. Fry 10328 Hardin Rd. Piqua, OH 45356 (937) 773-3613 Lloyd B. Fry, owner	Ticon	Miami	sand & gravel	3,122	3,122	Mi-T	IM-696
Frye Sand & Gravel, Inc. P.O. Box 3 Dorset, OH 44032-0003 (440) 858-2627 David Frye, owner	Frye Sand & Gravel, Inc.	Ashtabula	sand & gravel			Asa-10	IM-198
G. E. Baker Construction, Inc. 6555 Wharton Rd. Shreve, OH 44676 (330) 264-6626 Glenn E. Baker, pres.	Humphrey	Ashland	sand & gravel	21,186	23,300	Ald-GB	IM-2298
Ganges Gravel Co. 1884 London East Rd. Shelby, OH 44875 (419) 896-3660 Don Daugherty, pres.	Ganges Gravel Co.	Richland	sand & gravel			Rd-18	IM-670
GANS, Ltd. 800 West Maple St. Hartville, OH 44632 (330) 877-2525 Ellis Erb, pres.	Gans, Ltd. dba Brimfield Sand & Soils	Portage	sand & gravel	3,520	3,500	Pe-102	IM-1184
General Motors, LLC 26427 State Route 281 E Defiance, OH 43512 (419) 782-7010 Tom Gallagher, plant mgr.	General Motors, LLC Clay Borrow Area	Defiance	clay			De-3	IM-1351
George J. Igel & Co., Inc. 2040 Alum Creek Dr. Columbus, OH 43207 (614) 445-8421 John B. Igel, pres.	George J. Igel & Co., Inc.	Pickaway	sand & gravel	920	920	Pky-C	IM-1223
Gerken Materials, Inc. P.O. Box 607 Napoleon, OH 43545 (419) 533-7701 Brent Gerken, pres.	Gerken Materials, Inc.	Wood	limestone	262,712	285,324	Wd-1	IM-548

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Gibson Sand & Gravel Co. 1475 Knorr Rd. Galion, OH 44833 (419) 468-5820 John Gibson, owner	Gibson Sand & Gravel Co.	Crawford	sand & gravel			Cd-G	IM-0693
Glen-Gery Corp. P.O. Box 207 Iberia, OH 43325 (610) 374-4011 Steve Matsick, pres.	Iberia Quarry Glen-Gery Corp.	Marion Morrow	shale clay	46,068	46,068	Mn-7 Mw-G	IM-309 IM-2378
Gray Road Fill, Inc. 700 W. Pete Rose Way Cincinnati, OH 45203 (513) 721-6000 Roy B. Schweitzer, pres.	Gray Road Fill, Inc.	Hamilton	limestone			Hmn-GR	IM-1363
Graymont Dolime (OH), Inc. P.O. Box 158 Genoa, OH 43430 (419) 855-8336 William Dodge, pres.	Graymont Dolime (OH), Inc.	Ottawa	limestone	530,141	530,141	Oa-1	IM-292
Grimes Excavating 165 Holdren Ln. P.O. Box 120 New Matamoras, OH 45767 (740) 865-3990 Lewis Grimes, owner	Grimes Sand and Gravel	Washington	sand & gravel	26,275	26,275	Wn-1008	IM-1111
Hanson Aggregates Midwest, Inc. Heidelberg Cement Group 8130 Brint Rd. Sylvania, OH 43560 (419) 882-0123 Ron Tipton, v. pres.	Sandusky Crushed Stone Sylvania Quarry Sylvania Waterville Paulding Bloomville Flat Rock North Baltimore Quarry	Erie Lucas Lucas Lucas Paulding Seneca Seneca Wood	limestone limestone limestone limestone limestone limestone limestone limestone	2,377,680 1,100 963,033 389,690 202,756 2,106	2,320,324 1,100 963,033 358,536 206,537 0	Ee-11 Ls-12 Ls-3 Ls-1 Pg-7 Sa-3 Sa-1 Wd-H	IM-263 IM-953 IM-580 IM-575 IM-349 IM-347 IM-2341
Hanson Aggregates, LLC 1136 Morgantown Rd. Russellville, KY 42276 (270) 726-4936 Craig Morgan, v. pres.	Plum Run Quarry Eagle Crushed Stone Dry Fork Sand & Gravel	Adams Brown Hamilton	limestone limestone sand & gravel	833,987 1,276,477 681,315	942,082 1,387,053 704,776	Ads-1 Bn-EC Hmn-50	IM-237 IM-1195 IM-205, IM-1139
	Highland Stone Chattin Pit Piketon Sand & Gravel Scioto Valley Resources	Highland Pike Pike Scioto	limestone sand & gravel sand & gravel sand & gravel	275,365	296,308	Hd-2 Pke-23 Pke-24 So-100	IM-230 IM-242 IM-222 IM-950
Hanson Aggregates Midwest, Inc. dba Wagner Quarries Co. 4203 Milan Rd. Sandusky, OH 44870 (419) 625-8141 Lehigh Hanson, pres.	Wagner Quarry	Erie	limestone	1,218,769	1,076,196	Ee-1	IM-310
Norman Harpster 16069 State Route 235 Belle Center, OH 43310 (937) 464-5623 Norman Harpster, owner	Harpster Pit	Hardin	sand & gravel	450	450	Hdn-H	IM-864
Harrison Sand & Gravel Co. 10980 Campbell Rd. Harrison, OH 45030 (513) 367-5174 Donald L. Gauck, v. pres.	Harrison Sand & Gravel Co.	Hamilton	sand & gravel			Hmn-17	IM-295

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Hartley Gravel 22941 Hartley Rd. Alliance, OH 44601 (330) 823-0003 Jacob Maendel, pres.	Hartley Gravel	Columbiana	sand & gravel			Ca-H1	IM-2033
Harvest Sand & Gravel, Inc. 522 Perkins Jones Rd. Warren, OH 44483 (330) 372-4408 Herbert R. Cottrell, pres.	Eberly Harvest Sand & Gravel, Inc.	Columbiana Columbiana	sand & gravel sand & gravel	25,147	25,147	Ca-H2 Ca-H	IM-2174 IM-2027
Heiser Sand & Gravel Corp. 4833 Applegrove St. NW North Canton, OH 44720 (330) 499-8201 Richard L. Heiser, pres.	Heiser Sand & Gravel Corp.	Stark	sand & gravel	5,705	5,705	Sk-HS1	IM-1203
Hidden Ranch Ltd. 9874 Winesburg Rd. Dundee, OH 44624 (330) 359-6126 Willis Miller, pres.	Schmid	Stark	sandstone			Sk-HR	IM-2282
Highlanders Enterprises, LLC 6235 Twp. Rd. 179 Cardington, OH 43315 (419) 560-9906 Patricia Neuman, mgr.	Highlander Enterprises, LLC	Morrow	sand & gravel	1,043	1,043	Mw-H	IM-2350
Hocking Valley Concrete, Inc. 35255 Hocking Dr. Logan, OH 43138 (740) 385-2165 Mark Vaughn, v. pres.	Hocking Valley Concrete, Inc.	Hocking	sand & gravel	48,299	54,000	Hg-262	IM-41
William A. Hoffman, Jr. 25043 State Route 104 Circleville, OH 43113 (740) 474-2002 William A. Hoffman, Jr., owner	Hoffman Pit	Pickaway	sand & gravel	1,328	1,328	Pky-H	IM-1039
Hollinger Excavating 2097 Hollansburg-Arcanum Rd. New Madison, OH 45346 (937) 996-5381 Tom W. Hollinger, lessee	Hollinger Gravel	Darke	sand & gravel			Dke-10	IM-326
Holmes Redimix, Inc. 5420 County Rd. 349 Millersburg, OH 44654 (330) 674-0370 Steve Schlabach, pres.	Holmes Redimix, Inc.	Holmes	sand & gravel	116,308	116,308	Hs-82	IM-707
Holmes Supply Corp. 7571 State Route 83 Holmesville, OH 44633 (330) 279-9000 Steve Schlabach, pres.	Holmes Supply Corp. Schlabach	Holmes Holmes	sand & gravel sand & gravel	226,250 0	226,250 3,000	Hs-J Hs-H1	IM-1043 IM-2310
Honey Creek Stone Co. P.O. Box 422 Edinburg, PA 16116 (724) 654-5537 Carmen W. Shick, pres.	Honey Creek Stone Co.	Mahoning	limestone			Mg-54	IM-93

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
IRG Operating, LLC dba Cleveland Quarries 5270 Devon Dr. Vermilion, OH 44089 (440) 963-4008 Zachary Carpenter, pres.	IRC Operating	Erie	sandstone	5,623	12,172	Ee-21	IM-416
IRG Amherst, LLC 3623 Brecksville Rd., Suite A Richfield, OH 44286 (440) 963-4008 Stuart Kichter, pres.	Amherst Quarries	Lorain	sandstone			Ln-3	IM-415
J. E. Nicolozakes Co. 62920 Georgetown Rd. Cambridge, OH 43725 (740) 435-3222 John E. Nicolozakes, pres.	Bank One	Tuscarawas	sand & gravel			Ts-N	IM-2032
J. L. & Son Excavating Inc. 8241 Ft. Laurens Rd. NW Strasburg, OH 44680 (330) 878-5883 Jerry L. Slankard, pres.	Beach City Pit	Tuscarawas	sandstone			Ts-2032	IM-1141
J. McCoy Lumber Co., Ltd. 6 N. Main St. Peebles, OH 45660 (937) 587-3423 Jack McCoy, pres.	Adams County Quarry	Adams	limestone	90	90	Ads-H	IM-805
Jaclib Enterprises, Inc. 560 State Route 554 Cheshire, OH 45620 (740) 367-0602 Jason C. Leach, pres.	Cheshire Pit	Gallia	sand & gravel			Ga-JE	IM-2034
JALIP, Ltd. 16303 Twp. Rd. 124 Harpster, OH 43323 (740) 496-2008 David Herring, owner	JALIP, Ltd.	Wyandot	sand & gravel	8,242	8,242	Wt-J	IM-2119
James Bros. Sand & Gravel, Ltd. 3000 Dillon School Dr. P.O. Box 1420 Zanesville, OH 43702 (740) 454-1522 Daniel G. James, owner	James Brothers Sand & Gravel, Ltd.	Muskingum	sand & gravel			Mum-J1	IM-2251
Jaymar, Inc. 8751 N. State Route 7 Cheshire, OH 45620 (740) 992-6637 Jay Hall, Jr., pres.	Plant #4	Meigs	sand & gravel	611,449	611,449	Ms-308	IM-1174
JBM, Ltd. dba State Route 416 Sand & Gravel 764 State Route 416 SE New Philadelphia, OH 44663 (330) 339-4313 William P. Marino, Jr., pres.	State Rt. 416 Sand & Gravel	Tuscarawas	sand & gravel	66,803	66,803	Ts-2018	IM-1076

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
J.J.J. Properties, LLC 5585 Canal Rd. Valley View, OH 44125 (216) 447-0814 John Allega, member	J.J.J. Properties, LLC	Lake	sand & gravel	1,156	1,156	Lke-P	IM-2258
Joe Simak & Sons Trucking, Inc. 3052 E. Center St. P.O. Box 599 North Kingsville, OH 44068 (440) 224-1992 Joseph E. Simak, pres.	Amboy Pit Baird Pit North Ridge Pit	Ashtabula Ashtabula Ashtabula	sand & gravel sand & gravel clay sand & gravel	12,200 704 6,250	12,200 704 6,250	Asa-ST Asa-JS Asa-18	IM-1349 IM-1360 IM-949
Joe Yochman Excavating, Inc. 610 S. Newton Falls Rd. Diamond, OH 44412 (330) 538-0014 Joe Yochman, v. pres.	Yochman	Mahoning	sand & gravel			Mg-Y	IM-2192
John L. Garber Materials, Inc. 2745 Gass Rd. - Route 8 Lexington, OH 44904 (419) 884-1567 John L. Garber, pres.	John L. Garber Materials, Inc. John L. Garber Materials, Inc.	Richland Richland	sand & gravel sand & gravel	107,284	107,999	Rd-G Rd-14	IM-2152 IM-436
Betty & Rebecca Johnson 3403 U.S. Route 68 S Bellefontaine, OH 43311 (937) 593-5602 Betty and Rebecca Johnson, owners	Johnson Gravel Pit	Logan	sand & gravel			Lgn-J	IM-2053
Johnson Stone Products, Inc. 4018 Cleveland Rd. E Huron, OH 44839 (440) 775-1913 Terry A. Johnson, pres.	Johnson Stone Products	Lorain	sandstone	6,530	6,530	Ln-J	IM-1300
K.C. Sand & Gravel, LLC 1913 Mulligan Bluff Rd. Bryan, OH 43506 (419) 658-2186 David Karlstadt, pres.	Kartstadt	Defiance	sand & gravel			De-K	IM-2308
KCI Sand & Gravel P.O. Box 946 Logan, OH 43138 (740) 385-6019 Edward Kilbarger, pres.	SAA	Hocking	sand & gravel	81,971	81,971	Hg-HA	IM-1320
Keeney Sand & Stone, Inc. 13320 Girdled Rd. Painesville, OH 44077 (440) 254-4582 Dennis J. Keeney, pres.	Keeney Sand & Stone, Inc.	Lake	sandstone	45,379	45,380	Lke-K	IM-859
Kimble Clay & Limestone Co. 3596 State Route 39 NW Dover, OH 44622-9801 (330) 343-1226 Keith B. Kimble, pres.	Kimble Clay & Limestone Co. Kimble Clay & Limestone Co.	Tuscarawas Tuscarawas	shale limestone	100,348	100,348	Ts-K1 Ts-1818	IM-2170 IM-9
King Quarries, Inc. 41820 Parrish Ridge Caldwell, OH 43724 (740) 732-2923 David King, Jr., pres.	King Quarries, Inc. King Quarries, Inc.	Noble Noble	limestone limestone	74,356	74,356	Ne-K1 Ne-K	IM-1292 IM-1254

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Kinsman Materials, Ltd. P.O. Box 76 Chardon, OH 44024 (440) 286-4757 Bill Clemson, pres.	Kinsman Materials, Ltd.	Ashtabula	sand & gravel	20,769	20,770	Asa-20	IM-1198
Kipp's Gravel Co., Inc. 4987 State Route 222 Batavia, OH 45102 (513) 732-1024 Melvin M. Kipp, pres.	Kipp's Gravel Co., Inc.	Clermont	sand & gravel	2,396	0	Ct-7	IM-432
Kirby's Sand & Gravel, Inc. 4876 County Hwy. 43 Upper Sandusky, OH 43351-9155 (419) 927-2260 Minor E. Kirby, owner	Kirby's Sand & Gravel, Inc. Kirby's Sand & Gravel, Inc.	Wyandot Wyandot	sand & gravel sand & gravel	154,000	154,000	Wt-K Wt-17	IM-943 IM-604
Kleese Development Associates, Inc. 103 W. Market St. Warren, OH 44481 (330) 392-7899 Robert S. Kleese, pres.	Kleese Development Associates	Trumbull	sand & gravel			TI-K	IM-1101
Knox County Board of Commissioners 117 E. High St. Mt. Vernon, OH 43050 (740) 397-1590 James L. Henry, county engineer	Apple Valley	Knox	sand & gravel	3,749	3,749	Kx-K	IM-870
L. A. Horn Excavating/Constr., Inc. 35380 Hocking Dr. Logan, OH 43138 (740) 385-2625 Lucas A. Horn, pres.	L. A. Horn Excavating/Constr., Inc.	Hocking	sand & gravel			Hg-L	IM-2117
L & I Natural Resources, Inc. 10369 Cones Rd. Loveland, OH 45140 (513) 459-7716 Jerry Walker, pres.	L & I Pit & Mill	Warren	sand & gravel	53,264	53,264	Wan-50	IM-1006
L & M Mineral Co. 2010 County Rd. 144 Sugarcreek, OH 44681 (330) 852-3696 John E. Ling, Jr., pres.	Barr Farm Heil Luikart Spring Industries Spring	Stark Tuscarawas Tuscarawas Tuscarawas Tuscarawas	clay shale clay clay clay	21,977 2,678	21,977 2,678	Sk-LM Ts-1884 Ts-1914 Ts-SI Ts-1982	IM-2270 IM-6 D-0701 IM-569 IM-621
Lafarge Corp. Great Lakes Region P.O. Box 160 Paulding, OH 45879 (419) 399-4861 Bruno Lafont, pres.	Paulding Quarry	Paulding	limestone shale	539,601 61,867	544,895 54,837	Pg-1	IM-513
Lafarge North America 10325 State Route 43 Streetsboro, OH 44241 (330) 954-1750 Ken MacLean, pres.	Marblehead	Ottawa	limestone	3,337,136	3,337,136	Oa-7	IM-440

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Lakeside Sand & Gravel Co. 3498 Frost Rd. Mantua, OH 44255 (330) 274-2569 Larry Kotkowski, pres.	Lakeside Sand & Gravel Co. Plant 1 Solak	Portage Portage	sand & gravel sand & gravel	522,480 4,361	522,480 4,361	Pe-LS Pe-A	IM-1293 IM-1362
Latham Limestone, LLC 11641 Mosteller Rd. Cincinnati, OH 45241 (513) 771-0820 James P. Jurgensen, pres.	Latham Limestone	Pike	limestone	420,920	420,920	Pke-13	IM-213
Link Trucking Co., Inc. 7305 State Route 669 N McConnelsville, OH 43756 (740) 617-7544 Glen Kussmaul, pres.	Matthew	Morgan	sand & gravel	20,471	20,471	Mon-L	IM-1266
Little Miami Sand & Gravel P.O. Box 36 Lebanon, OH 45036 (513) 932-3221 Paul N. Herdman, pres.	Little Miami Sand & Gravel Plant #1 Little Miami Sand & Gravel Plant #2	Warren Warren	sand & gravel sand & gravel	0 0	500 350	Wan-B Wan-46	IM-679 IM-842
The Logan Clay Products Co. P.O. Box 698 Logan, OH 43138 (740) 385-2184 Richard H. Brandt, pres.	Webb Summit	Perry	shale	8,150	8,150	Py-L	IM-2367
Logan Construction, LLC 3610 County Rd. 50 Rushsylvania, OH 43347 (937) 468-2356 Todd Mobley, owner	Logan Construction	Logan	sand & gravel			Lgn-L	IM-2064
Loxley Aggregates, Inc. 4277 Falls Rd. Lewisburg, OH 45338 (937) 839-5488 Matthew L. Loxley, pres.	Loxley Aggregates, Inc.	Preble	clay sand & gravel	390 509	390 509	Pre-9	IM-1095
LUB, Inc. 4174 East Pike Zanesville, OH 43701 (740) 452-3668 Otto Luburgh, pres.	LUB, Inc.	Muskingum	sand & gravel	12,787	12,787	Mum-LB	IM-2106
Luburgh, Inc. 4174 East Pike Zanesville, OH 43701 (740) 452-3668 Otto Luburgh, pres.	Luburg-Cameron Brothers Yearly	Muskingum Muskingum	clay clay			Mum-L2 Mum-L3	IM-2200 IM-2342
M. J. Coates Construction Co., Inc. P.O. Box 41231 Dayton, OH 45441 (937) 433-1581 Martin J. Coates, owner	M. J. Coates Construction Co., Inc. M. J. Coates Construction Co., Inc.	Greene Greene	sand & gravel sand & gravel	66,728	66,728	Ge-47 Ge-G	IM-751 IM-655
MAR-DEL Enterprises, Inc. P.O. Box 6156 Chillicothe, OH 45601 (740) 775-3098 Marvin E. Riley, pres.	MAR-DEL Enterprises, Inc.	Jackson	sand & gravel			Jkn-M	IM-2209

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Mark Williams Blacktop Co., Inc. 695 Bramblewood Heights Rd. Marietta, OH 45750 (740) 373-3401 Mark Williams, pres.	Williams Pit #2	Washington	sand & gravel			Wn-1007	IM-1042
Marshall Quarry, Inc. 10460 State Route 124 Hillsboro, OH 45133 (937) 466-2855 Troy A. Main, v. pres.	Marshall Quarry, Inc.	Highland	limestone	12,896	7,900	Hd-4	IM-406
Martin Marietta Aggregates 9277 Centre Point Dr., SU 250 West Chester, OH 45069 (304) 485-7341 Dan Goethel, gen. mgr.	Apple Grove Plant	Meigs	sand & gravel	387,779	251,115	Ms-205	IM-30
Martin Marietta Aggregates 9277 Centre Pointe Dr., SU 250 West Chester, OH 45069 (513) 701-1141 Steve Raffensperger, v. pres.	Fairfield II Gravel	Butler	sand & gravel			Br-14	IM-147
	Fairfield Sand & Gravel	Butler	sand & gravel	859,292	877,974	Br-35	IM-200
	Hamilton Gravel	Butler	sand & gravel	4,791	0	Br-5	IM-153
	Ross Sand & Gravel	Butler	sand & gravel	48,636	600	Br-29	IM-149
	Fairborn Gravel	Clark	sand & gravel	245,648	208,836	Ck-13	IM-366
	Clinton Limestone	Clinton	limestone	20,159	0	Cln-W	IM-2160
	Blue Rock Limestone	Fayette	limestone			Fe-2	IM-169
	Cedarville	Greene	limestone	600,392	567,989	Ge-17	IM-435
	Cook Rd.	Greene	sand & gravel	387,413	344,549	Ge-MM	IM-2123
	Haines Rd.	Greene	sand & gravel			Ge-32	IM-400
	Spring Valley S & G	Greene	sand & gravel			Ge-42	IM-954, IM-2123
	Xenia S & G	Greene	sand & gravel	85,551	49,514	Ge-33	IM-379
	E-town Sand & Gravel	Hamilton	sand & gravel	328,564	353,541	Hmn-71	IM-771
	Harrison Sand & Gravel	Hamilton	sand & gravel	2,138	0	Hmn-37	IM-170
	Kilby Rd. #713	Hamilton	sand & gravel			Hmn-AAC	IM-716
	Miamitown	Hamilton	sand & gravel			Hmn-D	IM-1079
	Stuart Pit	Hamilton	sand & gravel			Hmn-P	IM-1333
	Lynchburg Quarry	Highland	limestone	11,236	0	Hd-M	IM-1170
	Troy Sand & Gravel	Miami	sand & gravel	267,780	254,173	Mi-3	IM-462, IM-658
	Phillipsburg	Montgomery	limestone	541,641	503,038	My-1	IM-374
	Rip Rap Rd.	Montgomery	sand & gravel	6,001	0	My-66	IM-677
	Franklin Gravel	Warren	sand & gravel	96,475	96,475	Wan-38	IM-615
Martin Marietta Magnesia Specialties, Inc. 755 Lime Rd. Woodville, OH 43469 (419) 849-4200 Tim Tawney, oper. mgr.	Woodville Quarry	Sandusky	limestone	1,817,804	1,767,388	Sy-1	IM-537
MAR-ZANE Materials, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 (740) 453-0721 Nick Little, pres.	Enterprise Pit	Hocking	sand & gravel	10,127	23,910	Hg-HV	IM-1284
Mason's Sand & Gravel Co. 2385 Rathmell Rd. Obetz, OH 43207 (614) 491-3611 George C. Smith, pres.	Mason's Sand & Gravel Co.	Franklin	sand & gravel	24,518	24,518	Fn-11	IM-234

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Massillon Materials, Inc. 26 N. Cochran St. P.O. Box 499 Dalton, OH 44618 (330) 837-4767 Howard J. Wenger, pres.	Massillon Materials, Inc. MMI Warmington Plant	Stark Stark	sand & gravel sand & gravel clay	320,013 129,680	320,013 129,680	Sk-M Sk-M1	IM-1031 IM-1332
	MMI Sandyville Plant	Tuscarawas	sand & gravel			Ts-MM	IM-1324
Mathews Sand & Gravel 5061 Monroe Center Conneaut, OH 44030 (440) 594-1130 Edward G. Mathews, owner	Mathews Sand & Gravel	Ashtabula	sand & gravel	750	750	Asa-M	IM-1301
Maysville Materials, LLC 3499 Foxfire Dr. Zanesville, OH 45701 (740) 638-3942 Chris D. Sidwell, pres.	Moore Smith	Muskingum Muskingum	limestone limestone			Mum-M Mum-M1	IM-2371 IM-2372
James L. Meade 2151 State Route 46 N Jefferson, OH 44047 (440) 593-6902 James L. Meade, pres.	Meade	Ashtabula	sand & gravel			Asa-JM	IM-2242
Mechanicsburg Sand & Gravel, Inc. 5734 State Route 54 Mechanicsburg, OH 43044 (937) 834-2606 James G. Cushman, pres.	Mechanicsburg Sand & Gravel, Inc.	Champaign	sand & gravel			Cpn-22	IM-889
The Melvin Stone Co., LLC P.O. Box 158 Sabina, OH 45169 (740) 474-2134 Dennis J. Garrison, pres.	The Melvin Stone Co., LLC Bowersville Circleville Williamsport Plano Road	Clinton Greene Pickaway Pickaway Ross	limestone limestone sand & gravel limestone limestone	905,839 534,621 88,200 232,300 264,400	905,839 534,621 88,200 232,300 264,400	Cln-1 Ge-M Pky-R Pky-4 Rs-MC1	IM-241 IM-2052 IM-993 IM-209 IM-1298
Mesenburg Bros., Inc. 2366 Wells Rd. Collins, OH 44826 (419) 668-5691 William Mesenburg, pres.	Mesenburg Bros., Inc.	Huron	sandstone	7,344	7,344	Hrn-8	IM-268
Miami View Mining Co., Ltd. 998-B E. Ridge Dr. Lebanon, OH 45036 (513) 932-6481 James P. Jurgensen, managing mbr.	Miami View	Warren	sand & gravel	351,438	351,438	Wan-MV	IM-1329
Mid Ohio Resources 459 State Route 97 W Bellville, OH 44813 (352) 369-8600 Darryl C. Lanker, pres.	Bellville West	Richland	sand & gravel	82,946	196,609	Rd-M1	IM-2191
Ed Miller 6640 Twp. Rd. 348 Millersburg, OH 44654 (330) 674-1157 Ed Miller, owner	Miller	Holmes	limestone	4,000	5,000	Hs-M	IM-2352
Miller's Sand & Gravel, Inc. 10228 State Route 82 Windham, OH 44288 (330) 326-3157 Brian K. Miller, pres.	Miller Sand & Gravel, Inc.	Portage	sand & gravel	107	107	Pe-39	IM-1078

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Milligan Materials P.O. Box 419 Sidney, OH 45365 (937) 492-4722 Thomas P. Milligan, pres.	Washington Twp. Pit	Shelby	sand & gravel			Shy-13	IM-412
Milton Materials, LLC 7131 W. Fenner Rd. Ludlow Falls, OH 45339 (937) 698-7048 Tom Wagner, pres.	Milton Materials Fenner Pit	Miami	sand & gravel	55,406	55,406	Mi-4	IM-472
Jerry Mock 2480 Leonard Rd. Baltimore, OH 43015 (740) 862-6681 Jerry Mock, owner	Jerry Mock	Licking	sand & gravel	19,042	19,042	Lg-504	IM-991
Moore's Excavating Co. 2222 N. U.S. Hwy. 68 Urbana, OH 43078 (937) 652-3513 Dorothy Moore, former pres.	Moore's Excavating Co.	Clark	sand & gravel			Ck-29	IM-1233
Morrow Gravel Co. 11641 Mosteller Rd. Cincinnati, OH 45241 (937) 584-2486 Dennis Garrison, pres.	Urbana Pike County Morrow Gravel Co.	Champaign Pike Warren	sand & gravel sand & gravel sand & gravel	222,967 138,969	222,967 138,969	Cpn-1 Pke-M Wan-M	IM-371 IM-1325 IM-728, IM-1065
Morton International, Inc. Morton Salt Division 151 Industrial St. P.O. Box 337 Rittman, OH 44270-0337 (330) 925-3015 Mark Roberts, pres.	Morton Salt Well Field 9129	Wayne	salt	365,716	474,892	We-9129	
Morton International, Inc. Morton Salt Division P.O. Box 428 Grand River, OH 44045-0428 (440) 639-4243 Mark Mitchell, facility mgr.	Fairport Mine	Lake	salt	1,265,011	1,245,737	Lke-6	
Muskingum River Gravel Co. P.O. Box 1585 Zanesville, OH 43702-1585 (740) 453-0721 Nick Little, pres.	S & S Aggregate #8 S & S Aggregate S & S Aggregate #1 S & S Aggregate Plant #7 Plant #2	Hocking Morgan Muskingum Ross Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	147,404 155,484 93,232 2,316	138,053 146,440 86,059 2,316	Hg-301 Mon-M Mum-228 Rs-M Wn-38	IM-458 IM-0718 IM-421 IM-114 IM-701
National Aggregates, Inc. P.O. Box 340 Malvern, OH 44644 (330) 866-1999 William Scheckler, pres.	National Aggregates, Inc.	Stark	sand & gravel			Sk-1017	IM-1186
National Lime & Stone Co. P.O. Box 120 Findlay, OH 45839-0120 (419) 422-4341 Paul Palmer, pres.	Bloomlock Quarry Lima Plant Buckland Plant Bucyrus Plant Delaware Plant Meredith Quarry Warrensburg Columbus Plant Findlay Plant Ridge Quarry	Allen Allen Auglaize Crawford Delaware Delaware Delaware Franklin Hancock Hancock	limestone limestone limestone limestone limestone limestone limestone sand & gravel limestone limestone	 645,000 308,000 977,000 1,980,000 209,000 518,000	 645,000 308,000 977,000 1,980,000 209,000 518,000	An-4 An-3 Ae-10 Cd-1 Del-5 Del-2 Del-3 Fn-52 Hk-7 Hk-A	IM-491 IM-484 IM-486 IM-404 IM-207 IM-299 IM-327 IM-191, IM-2193 IM-1002 IM-1299

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
	County Line Quarry	Hardin	limestone			Hdn-N	IM-2072
	Hamilton Quarry	Marion	limestone			Mn-2	IM-423
	Marion Plant	Marion	limestone	552,000	552,000	Mn-3	IM-168
	Rimer Plant	Putnam	limestone	318,000	318,000	Pm-N	IM-0479
	Delphos Quarry	Van Wert	limestone	89,000	89,000	Vt-1	IM-500
	Carey Plant	Wyandot	limestone	2,589,000	2,589,000	Wt-1	IM-405
	Sammet	Wyandot	sand & gravel	160,000	160,000	Wt-N	IM-2132
Neer's Sand & Gravel 4859 Twp. Rd. 45 Bellevue, OH 43311 (937) 585-6733 Arden J. Neer, Sr., owner	Neer's Sand & Gravel	Logan	sand & gravel	95,416	95,416	Lgn-6	IM-459
Nelson Sand & Gravel, Inc. P.O. Box 466 Kingsville, OH 44048 (440) 224-0198 Thomas H. Nelson, pres.	Nelson Sand & Gravel, Inc.	Ashtabula	sand & gravel	35,130	35,130	Asa-N1	IM-2102
New Carlisle Sand & Gravel Co. 6090 S. Scarff Rd. New Carlisle, OH 45344 (937) 845-8434 James R. Upton, owner	New Carlisle Sand & Gravel Co.	Miami	sand & gravel			Mi-501	
Newbury Sand & Gravel, Inc. 5197 Chillicothe Rd Chagrin Falls, OH 44022-4171 (440) 708-1958 Bruce Thomas, pres.	Newbury Sand & Gravel, Inc.	Geauga	sand & gravel			Gea-N	IM-1123
Newton Asphalt Paving, Inc. P.O. Box 86 Strasburg, OH 44680 (330) 878-5648 George A. Gessner, pres.	516	Tuscarawas	sand & gravel	100,499	100,499	Ts-2001	IM-1004
North Shore Stone Quarries, Inc. 72 Fernhill Ave. Columbus, OH 43228 (614) 878-0620 Clifford Hammond, pres.	North Shore Stone Quarries, Inc.	Seneca	limestone	1,159	1,159	Sa-8	IM-313
Northwest Ohio Property Developments, Ltd. P.O. Box 23242 Toledo, OH 43623 (419) 260-4406 Gene W. Borton, pres.	NOPD, Ltd.	Fulton	sand & gravel	7,417	7,417	Ftn-NW	IM-2138
Nuway Services 3441 Sportsman Club Rd. Johnstown, OH 43031 (740) 587-2451 Wilda McInturff, pres.	Hopewell	Licking	clay	2,475	2,475	Lg-NU	IM-2046
Ohio Asphaltic Limestone Corp. 8591 Mad River Rd. Hillsboro, OH 45133 (937) 364-2191 Diana M. Jones, pres.	Ohio Asphaltic Limestone Corp.	Highland	limestone	225,560	225,560	Hd-3	IM-253

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Ohio Basic Minerals, LLC 15317 Beaver Pike Jackson, OH 45640 (740) 286-0258 Patrick McDonald, pres.	Scioto Mine	Pike	sandstone	30,000	30,000	Pke-O	IM-2370
Olen Corp. 4755 S. High St. Columbus, OH 43207-4028 (614) 491-1515 Kenneth W. Holland, pres.	Columbus Plant #3 Fredericktown Plant #2 Hathaway St. Louisville Plant #5 Lucky Sand & Gravel Co. Hickerson The Olen Corp.-Wooster Upper Sandusky	Franklin Knox Knox Licking Portage Richland Wayne Wyandot	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone	1,356,078 302,958 244,112 87,489 306,008 559,133	1,562,054 268,996 358,585 188,238 267,871 496,792	Fn-58 Kx-O Kx-DH Lg-31 Pe-L Rd-O We-11 Wt-3	IM-1023 IM-2159 IM-2078 IM-246 IM-154 IM-2257 IM-547 IM-298
Orrville Trucking P.O. Box 220 Orrville, OH 44667 (330) 682-4010 David A. Renner, pres.	Orrville Trucking	Ashland	sand & gravel			Ald-G	IM-1121
Oscar Brugmann Sand & Gravel, Inc. 3828 Dudley Rd. Mantua, OH 44255 (330) 274-8224 Alan R. Brugmann, pres.	Oscar Brugmann Sand & Gravel, Inc. Oscar Brugmann Sand & Gravel, Inc. Oscar Brugmann Sand & Gravel, Inc.	Portage Portage Portage	sandstone sand & gravel sand & gravel sand & gravel	24,472 435,450	24,472 435,450	Pe-9 Pe-OB1 Pe-OB	IM-119 IM-2300 IM-1241
Oster Sand & Gravel, Inc. 5947 Whipple Ave. NW North Canton, OH 44720-7692 (330) 494-5472 Marlene K. Oster, pres.	Malvern Plant Massillon Plant Oster Sand & Gravel, Inc.-Bolivar	Carroll Stark Tuscarawas	sand & gravel sand & gravel sand & gravel	487,375 109,462	487,375 109,462	Cl-O Sk-165 Ts-2036	IM-2082 IM-192 IM-1155
Ours Sand & Gravel 20444 State Route 7 S Crown City, OH 45623 (740) 256-1378 Donald A. Ours, owner	Ours Sand & Gravel	Gallia	sand & gravel	3,003	3,003	Ga-O	IM-1028
Oxford Resource Partners, LP P.O. Box 427 Coshocton, OH 43812 (740) 622-6302 Charles C. Ungurean, pres.	Standingstone Mine New Lex-North 2 Strasburg Slurry	Harrison Perry Tuscarawas	limestone clay limestone	918,348 2,842 4,655	918,348 2,842 4,655	Hn-O2 Py-O2 Ts-HC	D-2277 D-2318 D-0981
The Parry Company, Inc. 33630 Old U.S. Route 35 Chillicothe, OH 45601 (740) 884-4893 David Meredith, pres.	Jackson-Grandview Builders	Pike	sandstone	327	327	Pke-P	IM-2337
Patrick Excavating, Inc. 5839 State Route 5 P.O. Box 387 Ravenna, OH 44266 (330) 296-7706 Tim Patrick, pres.	Patrick	Portage	clay	221	221	Pe-P	IM-1322
Paul D. Beery Trucking Co. 4770 Cincinnati-Zanesville Rd. NE Lancaster, OH 43130 (740) 653-5061 Paul D. Beery, pres.	Paul D. Beery Trucking Co.	Fairfield	sand & gravel	1,936	1,936	Fd-14	IM-933

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Phillips Companies 620 Phillips Dr. Beavercreek, OH 45435 (937) 426-5461 Rick Phillips, pres.	Miller Bros. Gravel, Inc.	Montgomery	sand & gravel	100,586	100,586	My-52	IM-348
Phillips Sand & Gravel P.O. Box 187 Alpha, OH 45301 (937) 426-5461 Dennis K. Phillips, pres.	Phillips Sand & Gravel	Greene	sand & gravel	206,500	230,000	Ge-36	IM-305
Phoenix Asphalt Company, Inc. 3497 University Dr. NE New Philadelphia, OH 44663 (330) 339-4935 James R. Demuth, pres.	Smith Sand & Gravel #1 Smith	Carroll Carroll	sand & gravel sand & gravel	30,906	30,996	Cl-P1 Cl-P	IM-2354 IM-2322
Piqua Materials, Inc. Piqua Minerals Division 1750 W. Statler Rd. Piqua, OH 45356 (800) 338-2962 Dennis Garrison, pres.	Piqua Minerals Division	Miami	limestone	511,089	511,089	Mi-1	IM-382
Portage Aggregate & Supply, LLC 10155 Royalton Rd. North Royalton, OH 44133 (330) 297-6800 Anthony J. Farinacci, pres.	Portage Aggregate & Supply, LLC	Portage	sand & gravel	69,304	69,304	Pe-M	IM-1312
Power Development Corp. P.O. Box 936 Malvern, OH 44644 (330) 863-0603 Paul W. Robertson, pres.	Power Development/Robertson	Carroll	sand & gravel			Cl-PD	IM-1352
Prairie West, Ltd. 7260 Twp. Rd. 569 Frederickburg, OH 44627 (330) 695-2478 Ivan R. Hochstetler, pres.	Prairie West, Ltd.	Holmes	clay			Hs-P	IM-2293
Precision Aggregates I, LLC 4843 County Rd. 43 Upper Sandusky, OH 43351 (419) 352-4681 Randolph Schmeltz, pres.	Precision Aggregates I, LLC	Wyandot	limestone sand & gravel	689 25,816	689 25,816	Wt-4	IM-520
Precision Aggregates II, LLC 12205 E. Gypsy Ln. Bowling Green, OH 43402 (419) 352-4681 Randolph G. Schmeltz, pres.	Precision Aggregates II, LLC	Wood	limestone	169,990	169,223	Wd-14	IM-1157
Precision Aggregates III, LLC 12205 E. Gypsy Lane Rd. Bowling Green, OH 43402 (419) 352-4681 Randolph Schmeltz, pres.	Precision Aggregates III, LLC	Sandusky	limestone sandstone sand & gravel	122,732 1,803 13,427	122,732 0 13,427	Sy-5	IM-0259

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Putnam Stone Co. 7053 Road M Ottawa, OH 45875-9754 (419) 523-6004 Tony Shroyer, pres.	Putnam Stone Co.	Putnam	limestone	236,731	218,804	Pm-2	IM-570
Quality Ready Mix, Inc. 16672 County Rd. 66A N St. Marys, OH 45885 (419) 738-2817 John Hirschfield, pres.	Quality Pit	Auglaize	sand & gravel	82,800	82,800	Ae-16	IM-595
R. A. Cruise Sand & Gravel, Inc. 2568 Lake Rockwell Rd. Ravenna, OH 44266 (330) 296-4087 Larry A. Cruise, pres.	R. A. Cruise Sand & Gravel, Inc.	Portage	sand & gravel			Pe-45	IM-139
R. H. Penick Co., Ltd. 1504 Blue Jay Rd. Heath, OH 43056-1767 (740) 323-3040 Suzanne R. Neumeyer, owner	R. H. Penick Co.	Licking	salt	295	295	Lg-45	
R. J. Martin Service & Excavating 1875 Roxanna-New Burlington Rd. Waynesville, OH 45068 (937) 862-4182 Roger J. Martin, pres.	Horseshoe Bend Sand & Gravel, Inc.	Greene	sand & gravel	190	190	Ge-40	IM-923
R. L., Ltd. 5850 Dryfork Rd. Cleves, OH 45002 (513) 367-5177 Otis Ashcraft, pres.	R. L., Ltd.	Hamilton	sand & gravel	360	360	Hmn-67	IM-529
R. W. Sidley, Inc. 436 Casement Ave. Painesville, OH 44077 (440) 298-3232 Robert Buescher, pres.	Sidley-Kingsville Plant	Ashtabula	sand & gravel	37,033	49,640	Asa-15	IM-783
R. W. Sidley, Inc. 7123 Madison Rd. Thompson, OH 44086 (440) 298-3232 Robert Buescher, pres.	Thompson Pit Sidley-Painesville Plant	Geauga Lake	sandstone sand & gravel	112,580 669	180,000 0	Gea-1 Lke-7	IM-163 IM-162
RAK, Inc. dba Rainbow Sand & Gravel, Inc. P.O. Box 240 Bristol, OH 44402 (330) 389-3451 Rex King, pres.	Rainbow Sand & Gravel, Inc.	Portage	sand & gravel			Pe-64	IM-1017
Ralph C. Wagner & Sons 7317 Brinker St. Navarre, OH 44662 (330) 879-5788 Michael Wagner, owner	Wagner & Sons	Stark	sand & gravel			Sk-W	IM-867

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Razor Lake S. & G., LLC 59894 County Rd. 9 Newcomerstown, OH 43832 (740) 294-1370 Terry L. Jurin, owner	Razor Lakes S. & G., LLC	Coshocton	sand & gravel	63,000	63,000	Cn-R	IM-2175
Regeneration Materials P.O. Box 146 Dundee, OH 44624 (330) 852-2012 Matthew Maendel, pres.	Dundee Mine	Tuscarawas	sandstone	2,038	7,425	Ts-1660	IM-68
Ridge Township Quarry 16905 Middlepoint Rd. Van Wert, OH 45891 (419) 238-2533 Nancy Agler, office mgr.	Ridge Township Quarry	Van Wert	limestone	160,943	160,943	Vt-7	IM-642
Riverside Sand & Gravel Co., Inc. P.O. Box 324 Tallmadge, OH 44278-0324 (330) 673-2021 Albert H. Acken, Jr., pres.	Riverside Sand & Gravel Co., Inc.	Summit	sandstone	253	253	St-24	IM-239
Rockwell Sand & Gravel, Inc. 1022 State Route 43 Suffield, OH 44260 (330) 628-3231 Alvin Rufener, pres.	Suffield Aggregate, LLC	Portage	sand & gravel peat	14,663 184	14,663 184	Pe-R	IM-2037
Rocky Enterprise 53557 Mud Run Rd. Senecaville, OH 43780 (740) 838-6555 Tim Hall, owner	Rocky Enterprise-Robins Ridge	Guernsey	clay sandstone			Gy-R	IM-2375
Rohr Excavating, Ltd. 5028 Twp. Rd. 339 Millersburg, OH 44654 (330) 763-1124 Montell J. Rohr, pres.	Rohr	Holmes	limestone	9,548	9,548	Hs-R1	IM-2368
	Rohr	Holmes	clay clay limestone			Hs-R	IM-2345
Romig Excavating P.O. Box 260 Sherrodsville, OH 44675 (740) 269-1225 James D. Romig, owner	Romig Excavating	Carroll	sandstone	1,668	1,668	Cl-R	IM-2296
Rosebud Mining Company 301 Market St. Kittanning, PA 16201 (724) 545-6222 J Clifford Forest, pres.	James South	Carroll	clay			Cl-B4	D-2229
	Ingledue	Columbiana	clay			Ca-B1	D-2003
	Peters Road	Columbiana	clay shale	80 14,445	80 14,445	Sk-BIM	IM-1271
	West Point	Columbiana	clay			Ca-987	D-0928
	Baird	Stark	clay			Sk-B4	D-2096
	Berlin Minerals	Stark	clay			Sk-BI3	D-2267
Roy M. Roush 11278 Darby Creek Rd. Orient, OH 43146 (614) 877-4792 Roy M. Roush, owner	Close	Stark	clay			Sk-B	D-1123
	Coy	Stark	clay			Sk-BI2	D-2145
	Weisel	Stark	clay			Sk-BI4	D-2288
	R Farm S & G	Pickaway	sand & gravel	589	589	Pky-RR	IM-2040

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Royalty Enterprises, Inc. P.O. Box 8680 Newark, OH 43058 (740) 323-3333 Clayton King, pres.	King #1	Licking	salt	492	492	Lg-4484	
Rupp Construction, Inc. 18228 Fulton Rd. Marshallville, OH 44645 (330) 855-2781 Gary D. Radabaugh, pres.	Rupp Construction, Inc.	Wayne	sand & gravel	101,509	101,509	We-7	IM-471
S & R Aggregate 17280 State Route 60 Lowell, OH 45744 (740) 984-4417 Mike Story, pres.	Story	Washington	sand & gravel			Wn-SR	IM-2314
S & S Aggregate, Inc. P.O. Box 1585 Zanesville, OH 43702-1585 (740) 453-0721 Nick Little, v. pres.	Lockbourne Rd. S & S Aggregate #16 Twin Lakes-S & S Aggregate #10 S & S Aggregate #14 Twin Lakes-S & S Aggregate #9	Franklin Portage Portage Richland Summit	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	419,429 96,797 26,391	404,759 83,240 26,391	Fn-24 Pe-15 Pe-67 Rd-5 St-44	IM-266 IM-104 IM-202 IM-470 IM-178
Sam's Excavating Unlimited, Inc. 4324 St. Paul Rd. Ashville, OH 43103 (740) 983-6589 Samuel Hall, pres.	Scioto Aggregates-Sam's Excavating Unlimited	Pickaway	sand & gravel	6,920	6,920	Pky-S	IM-2328
Sandkuhl Clay Works, Inc. 05536 Kossuth-Amanda Rd. Spencerville, OH 45887 (419) 657-2905 Ann L. Engh, pres.	Sandkuhl Clay Works, Inc.	Auglaize	clay	305	305	Ae-7	
Scassa Asphalt, Inc. 4167 Beaumont Ave. NW Massillon, OH 44647 (330) 830-2039 Nicholas Scassa, pres.	Roio Sand & Gravel	Stark	sand & gravel	6,000	60,000	Sk-S	IM-2326
Guy Schieve 52943 State Route 113 Wakeman, OH 44889 (440) 965-8792 Guy Schieve, owner	Schieve Pit	Lorain	sand & gravel	3,549	3,549	Ln-12	IM-731
Roy B. Schweitzer dba The Gravel Co. 700 W. Pete Rose Way Cincinnati, OH 45203 (513) 721-6000 Roy B. Schweitzer, pres.	New Miami Pit Cleves	Butler Hamilton	sand & gravel sand & gravel			Br-3 Hmn-28	IM-719 IM-353
Mark E. Scott P.O. Box 6112 Chillicothe, OH 45601 (740) 772-4990 Mark E. Scott, owner	Scott Pit	Ross	sand & gravel	26,564	26,564	Rs-P	IM-122
Sereday Trucking, Inc. 7591 Warren Sharon Rd. Brookfield, OH 44403 (330) 448-4000 Richard Sereday, owner	Sereday	Trumbull	shale	1,500	1,500	TI-SE	IM-2351

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Seville Sand & Gravel, Inc. 8215 Seville Rd. Lodi, OH 44254 (330) 948-1812 Richard L. Rothel, mgr.	Seville Sand & Gravel, Inc.	Medina	sand & gravel			Ma-22	IM-425, IM-442, IM-650, IM-651
Shamrock Materials, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 (513) 771-0820 James P. Jurgensen, pres.	Shamrock Walls Material	Butler Darke	sand & gravel limestone	167,900 229,427	167,900 229,427	Br-52 Dke-1	IM-814 IM-362
Sharon Stone Co. P.O. Box 100 Dexter City, OH 45727 (740) 989-2290 David J. Skinner, pres.	Sharon Stone Co. Belpre Sand & Gravel	Noble Washington	limestone sand & gravel	123,060 448,023	123,060 448,023	Ne-S Wn-SS	IM-913 IM-2006
Shelly Materials, Inc. 80 Park Dr. Thornville, OH 43076 (740) 246-6315 Douglas Rauh, pres	Coshocton Apache #1 Coshocton Apache #2 Shelly Materials, Inc. Plant #1305 Shelly Materials, Inc. Plant #1314	Coshocton Coshocton Coshocton Fairfield	sand & gravel sand & gravel sand & gravel sand & gravel	215,373	215,373	Cn-783 Cn-718 Cn-694 Fd-13	IM-717 IM-227 IM-293 IM-848, IM-1331
	Columbus Limestone #331 Marble Cliff Plant #0332 Shelly Materials Plant #1312	Franklin Franklin Licking	limestone limestone sand & gravel	3,388,863 394,412	3,388,863 394,412	Fn-53 Fn-2 Lg-W	IM-185 ³ IM-261 IM-1213
	St. Louisville Petersburg Portland Plant Shelly Materials, Inc.-Racine East Fultonham Shelly Materials, Inc.-Dresden	Licking Mahoning Meigs Meigs Muskingum Muskingum	sand & gravel limestone sand & gravel sand & gravel limestone sand & gravel	259,991 767,743 323,995 541,008	229,991 729,700 323,995 541,008	Lg-10 Mg-L Ms-S Ms-298 Mum-106 Mum-799	IM-217 IM-1353 IM-1326 IM-32 IM-297 IM-317, IM-264
	Jefferson Materials Plant #1302 Shalersville South	Portage Portage	sand & gravel sand & gravel	315,468	309,396	Pe-63 Pe-68	IM-82 IM-1107, IM-660
	Chillicothe RT 35 Shelly Material, Inc.-Chillicothe Haverhill Allied Corp. Allied Corp., Inc. #1301 Allied Corp., Inc. Navarre Ostrander Quarry Willow Island	Ross Ross Scioto Stark Stark Stark Stark Union Washington	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel limestone sand & gravel	191,953 457,679 1,127,258 524,717	191,953 411,873 1,127,258 524,717	Rs-G Rs-27 So-79 Sk-CA Sk-N Sk-173 Sk-241 Un-2 Wn-C	IM-2099 IM-1098 IM-221 IM-1234 IM-156 IM-879 IM-582 IM-236 IM-1315
Shelly Materials, Inc. 80 Park Dr. Thornville, OH 43076 (740) 246-6315 Ty Nofziger, pres.	Cunningham Pit	Scioto	sand & gravel			So-83	IM-211
Shelly Materials, Inc. P.O. Box 3100 Findlay, OH 45840 (419) 422-8854 Ty Nofziger, pres.	Mechanicsburg Forest Quarry Hardin Quarry Belle Center East Liberty Quarry Tri-County Limestone Co. Rockford Quarry York Center Quarry	Champaign Hardin Hardin Logan Logan Marion Mercer Union	sand & gravel limestone limestone limestone limestone limestone limestone limestone	192,000 2,600 338,000 512,000	209,000 0 209,000 370,000	Cpn-21 Hdn-S Hdn-2 Lgn-2 Lgn-1 Mn-1 Mr-2 Un-1	IM-616 IM-1034 IM-443 IM-494 IM-574 IM-250 IM-430 IM-208
Shelly Materials, Inc. 80 Park Dr. Thornville, OH 43076 (740) 246-6315 Douglas Rauh, pres.	Shelly Materials, Inc.-Lockbourne #1344 Shalersville North	Franklin Portage	sand & gravel sand & gravel	572,439	562,280	Fn-23 Pe-La	IM-183 IM-1047

³This mine began underground operations in 2010.

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Sidco Development, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 (740) 849-2422 Jeffrey R. Sidwell, pres.	Columbia Cement Midvale Sand & Gravel	Muskingum Tuscarawas	limestone sand & gravel limestone	158,151	158,151	Mum-SD Ts-S2	IM-1313 IM-1356
Sidwell Materials, Inc. 4620 Limestone Valley Rd. Zanesville, OH 43701 (740) 849-2422 Jeffrey R. Sidwell, pres.	Bellaire Stone	Belmont	sandstone	3,998	3,998	Bt-1190	IM-1089, IM-2256
	Uniontown Stone Dupler/Ford	Belmont Muskingum	clay limestone	49,756	1,938	Bt-N Mum-SB	IM-1283 IM-1212, IM-1269
	Sidwell Materials, Inc.	Muskingum	limestone sand & gravel			Mum-SW	IM-2092
	White Cottage	Muskingum	limestone	361,908	404,584	Mum-104 ⁴	IM-277
Small's Sand & Gravel, Inc. P.O. Box 617 Gambier, OH 43022 (740) 427-3677 Michael W. Small, pres.	Small's Sand & Gravel, Inc. Small's Sand & Gravel, Inc. Small's Sand & Gravel, Inc.	Knox Knox Knox	sand & gravel sand & gravel sand & gravel	15,117 204,501 302	15,117 204,501 302	Kx-S Kx-15 Kx-17	IM-2000 IM-967 IM-968
Sober Sand & Gravel Co. 2898 Tallmadge Rd. Ravenna, OH 44266 (330) 867-0666 Joseph F. Bertolini, pres.	Sober Sand & Gravel Co.	Portage	clay sand & gravel	5,964 158,417	5,964 158,417	Pe-18	IM-193
Soehnlén Bros. Sand & Gravel, Inc. 10449 Soehnlén Rd. NW Beach City, OH 44608 (330) 756-2244 Francis L. Soehlen, pres.	Soehnlén Bros. Sand & Gravel, Inc.	Tuscarawas	sand & gravel	323,818	323,818	Ts-1826	IM-88
Solomon's Mines, Inc. 7732 Salem-Unity Rd. Salem, OH 44460 (330) 337-0123 Jack Solomon, owner	Solomon's Mines, Inc. Solomon's Mines, Inc.	Columbiana Mahoning	sandstone sand & gravel clay sand & gravel	6,671 41,034	6,671 41,034	Ca-S Mg-632	IM-1258 IM-808
Soltis Sand & Gravel 19102 Nelson Ledges Rd. P.O. Box 452 Garrettsville, OH 44231 (440) 548-5813 James Soltis, owner	Soltis Sand & Gravel	Geauga	clay sand & gravel	106 376	110 400	Gea-9	IM-132
South Central Sand & Gravel 340 Bailey Chapel Rd. Piketon, OH 45661 (740) 289-2629 James A. Nier, owner	South Central Sand & Gravel	Pike	sand & gravel	7,044	7,044	Pke-30	IM-786
Southern Ohio Aggregates, Inc. 11641 Mosteller Rd. Cincinnati, OH 45241 (800) 338-2962 Dennis Garrison, pres.	New Miami Plant Cleves Pit Kilby Road Gratis Plant	Butler Hamilton Hamilton Preble	sand & gravel sand & gravel sand & gravel sand & gravel	55,000	55,000	Br-S Hmn-S Hmn-SO Pre-7	IM-1053 IM-746 IM-720 IM-306
Southern Ohio Sand, LLC P.O. Box 748 Willoughby, OH 44094 (440) 946-7478 Roy Vaughn, pres.	Southern Ohio Sand, LLC	Pike	sandstone			Pke-S	IM-1348

⁴This mine began underground operations in 2010.

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
City of Springfield 201 Eagle City Rd. Springfield, OH 45502 (937) 525-5880 Allen Jones, water plant supt.	City of Springfield	Clark	sand & gravel			Ck-7	IM-449
S.R.I., Inc. 1550 Soldiers Home-West Carrollton Dayton, OH 45418 (937) 268-8991 Steve Rauch, pres.	S.R.I., Inc.	Montgomery	sand & gravel			My-R	IM-539
St. Joe Sand & Gravel, LLC 13307 County Rd. J35 Montpelier, OH 43543 (419) 392-6749 David A. Nixon, pres.	St. Joe Sand & Gravel LLC (STSG) St. Joe Sand & Gravel LLC (STSG)	Williams Williams	sand & gravel sand & gravel	111,000	158,000	Ws-S1 Ws-S	IM-2343 IM-2243
Stansley Mineral Resources, Inc. 5648 Main St. Sylvania, OH 43560 (419) 843-2813 Jeffrey Stansley, pres.	Stansley Mineral Resources, Inc., Plant 301	Ottawa	limestone	320,000	320,000	Oa-1	IM-292
State Line Resources, Inc. P.O. Box 419 Negley, OH 44441 (330) 426-9611 James Muse, pres.	State Line Resources, Inc.	Columbiana	clay	50,870	50,870	Ca-505	IM-13, IM-936
Stocker Sand & Gravel Co. P.O. Box 176 Gnadenhutten, OH 44629 (740) 254-4635 William E. Stocker, pres.	Stocker Sand & Gravel Co.-Gnaden Stocker Sand & Gravel Co.-Island Stocker Sand & Gravel Co. Stocker Sand & Gravel Co.	Tuscarawas Tuscarawas Tuscarawas Tuscarawas	sand & gravel sand & gravel sand & gravel sand & gravel	221,310 610,826	221,310 610,826	Ts-69 Ts-125 Ts-ST Ts-S3	IM-51 IM-50 IM-2125 IM-2232
Stoneco, Inc. P.O. Box 3100 Findlay, OH 45840 (419) 422-8854 Ty Nofziger, pres.	Maumee Quarry Celina Quarry Rocky Ridge Quarry White Rock Quarry Auglaize Quarry Scott Quarry Lime City Quarry Portage Quarry Carey Quarry	Lucas Mercer Ottawa Ottawa Paulding Van Wert Wood Wood Wyandot	limestone limestone limestone limestone limestone limestone limestone limestone limestone	596,000 575,000 797,000 508,538 863,000 7,745 281,000 2,245,000	575,000 679,000 950,000 490,639 863,000 0 322,000 1,716,500	Ls-2 Mr-1 Oa-14 Oa-6 Pg-2 Vt-3 Wd-6 Wd-11 Wt-8	IM-503 IM-592 IM-320 IM-296 IM-481 IM-495 IM-480 IM-475 IM-273
Subtropolis Mining 10900 South Ave. P.O. Box 217 North Lima, OH 44452 (330) 549-2165 W. Thomas Mackall, pres.	Kemp Mine	Mahoning	limestone	1,347,385	1,131,233	Mg-EF1 ⁵	IM-2093
Sugarcreek Clay & Limestone P.O. Box 402 Sugarcreek, OH 44681 (330) 852-4440 David K. Longfellow, pres.	Sugarcreek Clay & Limestone	Coshocton	sand & gravel			Cn-624	IM-243

⁵This mine began underground operations in 2009.

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Summitville Tiles, Inc. P.O. Box 173 Summitville, OH 43962 (330) 223-1511 David Johnson, pres.	Summitcrest, Inc. Summitville Tiles, Inc.	Columbiana Columbiana	shale shale	20,232	20,232	Ca-SU Ca-205	IM-2186 IM-74
Sunrise Sand & Gravel 1716 Mill Creek Rd. Jefferson, OH 44047 (440) 576-9693 Kenneth, Robert & Richard McElroy, partners	Sunrise Sand & Gravel	Ashtabula	sand & gravel			Asa-21	IM-1239
Sunshine Sand Co. 30799 Pinetree Rd., PMB 410 Cleveland, OH 44124 (216) 587-2700 Dorothy M. Stroh, pres.	Sunshine Sand Co.	Portage	sand & gravel	900	900	Pe-SSC	IM-318
Joseph N. Sypniewski 3780 Mechanicsville Rd. Rock Creek, OH 44084 (440) 563-5644 Joseph N. Sypniewski, pres.	Sypniewski	Ashtabula	clay sand & gravel	720 192	720 192	Asa-SY	IM-2222
T & K Kuhnle Co. P.O. Box 375 Newbury, OH 44065 (440) 564-7168 Bob Russell, owner	Munn Materials	Geauga	sand & gravel			Gea-TK	IM-902
Tackett Builders 906 Charleston Pike Chillicothe, OH 45601-9312 (740) 772-5431 Carmel G. Tackett, owner	Tackett's Pit	Ross	sand & gravel			Rs-T	IM-1189
The Terry Byrne Mining Co. 4775 Mill Run Rd Lexington, OH 44904 (419) 564-9809 Terrance K. Byrne, owner	The Terry Byrne Mining Co.	Richland	sand & gravel			Rd-TB	IM-1343
Thiel Construction Co. P.O. Box 225 Blakeslee, OH 43505 (419) 272-2712 Robert L. Thiel, pres.	Thiel Construction Co.	Williams	sand & gravel	2,765	2,765	Ws-21	IM-1225
Thomas Sand & Gravel 5801 Enterprise Rd. West Alexandria, OH 45381 (937) 787-4677 Estelle Thomas, owner	Howard Thomas	Preble	sand & gravel	20	80	Pre-T	IM-2036
Thompson Bros. Mining Co. 3379 E. Garfield Rd. P.O. Box 57 New Springfield, OH 44443 (330) 549-3979 J. E. Thompson, owner	Rapp Mine	Mahoning	clay			Mg-588	D-0374, D-1168
Thompson Mining Co. 12321 Ideal Rd. Byesville, OH 43723 (740) 685-6726 George V. Thompson, pres.	Pleasant Valley Limestone	Muskingum	limestone shale	119,449 462	119,449 462	Mum-907	IM-1200

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Three C's Gravel 936 S. Main St. Bellefontaine, OH 43311 (937) 599-2078 Todd Watson, pres.	Three C's Gravel	Champaign	sand & gravel			Cpn-T	IM-2234
Tiger Sand & Gravel, LLC 4141 Southway St. SW Canton, OH 44706 (330) 477-9653 Pete Bitzel, Jr., partner	Tiger Sand & Gravel, LLC	Stark	sand & gravel	26,818	8,000	Sk-T	IM-2279
Tipp Stone Co., Inc. P.O. Box 367 Troy, OH 45373 (937) 890-4051 Michael Eidemiller, pres.	Tipp Stone Co., Inc. Tipp Stone Co., Inc.	Miami Montgomery	sand & gravel sand & gravel	13,217	13,217	Mi-12 My-61	IM-467 IM-468
Top Dog Service Company 660 Lunken Park Dr. Cincinnati, OH 45226 (513) 353-2555 Michael P. O'Rourke, pres.	Whitewater Reclamation Company	Hamilton	sand & gravel	1,250	1,250	Hmn-G	IM-1270
Total Waste Logistics, LLC 7131 Akron-Canfield Rd. Canfield, OH 44405 (330) 702-0702 Guy F. Fragle, dir.	Penn Ohio Mine	Columbiana	clay			Ca-TW	IM-2336
Triple B of Lakeville, Ltd. 13739 State Route 226 Lakeville, OH 44638 (419) 289-1507 Mitchell W. Bolin, pres.	Lakeville Sand & Gravel, Ltd.	Holmes	sand & gravel	99,984	99,984	Hs-C	IM-1303
Trout Sand & Gravel Co. 347 Gravel Bank Rd. Marietta, OH 45750 (740) 373-7471 Henry C. Trout, Jr., owner	Trout Sand & Gravel Co.	Washington	sand & gravel	8,943	7,295	Wn-510	IM-25
Tuffco Sand & Gravel, Inc. P.O. Box 399 Marysville, OH 43040 (614) 873-3977 Charles Lewis, pres.	Tuffco Sand & Gravel, Inc.	Madison	sand & gravel	95,783	95,783	Mdn-11	IM-1063
Twinsburg Development Corp. P.O. Box 248 Grand River, OH 44045 (440) 357-5562 Gary D. Bradler, pres.	Twinsburg Development Corp.	Portage	sand & gravel			Pe-84	IM-868
Ty, Inc. 7603 Old Rockside Rd. Independence, OH 44131 (216) 328-9278 Tom Simich, pres.	Bradley Rd.	Cuyahoga	sand & gravel			Cya-T	IM-2356
U.S. Aggregates, Inc. 5400 W. 86th St. P.O. Box 68123 Indianapolis, IN 46268 (317) 872-6010 James Fehsenfeld, pres.	Richmond Plant U.S. Aggregates/Richmond Plant	Preble Preble	sand & gravel sand & gravel	128,935	206,384	Pre-U Pre-AAC	IM-2307 IM-779

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
United Aggregates, Inc. P.O. Box 750 Mt. Vernon, OH 43050 (740) 397-0000 Jeff Ellis, pres.	United Aggregates, Inc. United Aggregates, Inc.	Knox Knox	sand & gravel sand & gravel	127,346 48,343	127,732 57,454	Kx-3 Kx-5	IM-300 IM-884, IM-1307
Valley Clay Mining Co. 451 Gordon St. Roseville, OH 43777 (740) 697-2005 Stephen R. McCann, pres.	Spring Pit	Muskingum	clay	5,260	5,260	Mum-904	IM-1127
Valley Materials Co. 4947 U.S. Route 23 S P.O. Box 400 Piketon, OH 45661 (740) 289-4400 Ralph McFann, pres.	Valley Materials #2	Pike	sand & gravel			Pke-V	IM-1330
Walhonding Sand & Gravel 27679 State Route 206 Walhonding, OH 43843 (740) 824-5251 Ezra Helmick, v. pres.	Walhonding Valley Sand & Gravel	Coshocton	sand & gravel shale	52,697 3,466	52,697 3,466	Cn-WL	IM-2127
Waller Bros. Stone Co. P.O. Box 157 McDermott, OH 45652 (740) 259-2356 Frank L. Waller, pres.	Crabtree Quarry Inskeep Quarry Miller Quarry New Inskeep Quarry	Scioto Scioto Scioto Scioto	sandstone sandstone sandstone sandstone	3,853	3,853	So-76 So-48 So-82 So-W	IM-141 IM-140 IM-158 IM-2111
Ward Materials, Inc. 385 Oak St. Leipsic, OH 45856 (419) 943-2450 Arnold W. Rosebrock, pres.	Ward Materials, Inc.	Allen	sand & gravel			An-W	IM-2069
Waterloo Coal Co., Inc. P.O. Box 626 Jackson, OH 45640 (740) 286-5633 Denton H. Bowman, pres.	Waterloo Coal Stone Plant	Jackson	limestone	523,350	523,350	Jkn-367	D-594, D-968, D-1083
	Route 32	Vinton	limestone			Vn-193	
Watson Gravel, Inc. 2728 Hamilton-Cleves Rd. P.O. Box 277 Ross, OH 45061 (513) 863-0070 Ronald E. Watson, pres.	Mecco, Inc. Ongais Plant #1 River Pit Watson Pit Dry Fork Harrison #2 Harrison Pit Minges-Getz	Butler Butler Butler Butler Hamilton Hamilton Hamilton Hamilton	sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel sand & gravel	310,927 0 0 382,588 71,440 547,286 346,635	66,108 244,819 903 381,685 71,440 547,286 346,635	Br-15 Br-O Br-57 Br-47 Hmn-68 Hmn-ARH Hmn-60 Hmn-64	IM-316 IM-2143 IM-111 IM-747 IM-1273 IM-761 IM-137
Weber Sand & Gravel, Inc. 14586 U.S. Route 127 EW Bryan, OH 43506 (419) 636-4238 Thomas G. Weber, pres.	Weber Sand & Gravel, Inc.	Defiance	sand & gravel	259,896	259,896	Ws-11	IM-0661
Joann O. Weddle 2419 U.S. Route 68 N Yellow Springs, OH 45387 (937) 374-1234 Joann Weddle, owner	Yellow Springs Plant	Greene	sand & gravel			Ge-W	IM-645
Welch Sand & Gravel, Inc. 10217 Columbia St. Harrison, OH 45030-9751 (513) 353-3220 Charles H. Welch, pres.	Schlichter Pit East Miami Pit Fernald Pit	Butler Hamilton Hamilton	sand & gravel sand & gravel sand & gravel	91,121 217,144 432,822	91,121 217,144 432,822	Br-38 Hmn-48 Hmn-42	IM-218 IM-220 IM-823

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Westfall Aggregate & Materials, Inc. 6790 Brooks-Miller Rd. Circleville, OH 43113 (740) 477-8600 Kevin R. Steward, pres.	Hill Road Pit	Pickaway	sand & gravel	80,095	80,095	Pky-WA	IM-2217
William Albert, Inc. 1300 Cassingham Hollow Rd. Coshocton, OH 43812 (740) 622-3045 William Albert, pres.	William Albert, Inc. Pit 1 William Albert, Inc. Pit 2	Coshocton Coshocton	sand & gravel sand & gravel	16,643	19,643	Cn-828 Cn-WA	IM-1026 IM-2036
Willowbrook Sand & Gravel, LLC 39130 Brookfield St. P.O. Box 304 Lisbon, OH 44432 (330) 424-0742 Ray Perrino, owner	Willowbrook Sand & Gravel	Columbiana	sand & gravel	42,629	42,629	Ca-993	IM-1180
Wysong Gravel Co. 9325 W. Third St. Dayton, OH 45427 (937) 452-1523 John D. Wysong, pres.	Wysong Gravel Co.-Trotwood Plant Wysong Gravel Co.-West Alexandria Plant Wysong Gravel Co.	Montgomery Preble Preble	sand & gravel sand & gravel sand & gravel	107,626 51,829	107,626 51,829	My-Wy Pre-6 Pre-4	IM-2194 IM-478 IM-477
Wysong Stone Co. 5897 State Route 503 N P.O. Box 159 Lewisburg, OH 45338 (937) 962-2559 Carroll E. Wysong, v. pres.	Wysong Stone Co.	Preble	limestone	84,312	85,000	Pre-5	IM-447
X. L. Sand & Gravel Co., Inc. P.O. Box 255 Negley, OH 44441 (330) 426-9876 Kristen Kalis, owner	X. L. Sand & Gravel Co., Inc. X. L. Sand & Gravel Co., Inc.	Columbiana Columbiana	sand & gravel sand & gravel	46,100	46,100	Ca-881 Ca-XL	IM-611 IM-1347
Xenia Sand & Gravel, Inc. 610 Dayton-Xenia Rd. Xenia, OH 45385 (937) 372-2978 Scott A. Filson, pres.	Xenia Sand & Gravel, Inc.	Greene	sand & gravel	6,665	6,665	Ge-10	IM-518
Young's Sand & Gravel Co. P.O. Box 117 Loudonville, OH 44842 (419) 994-3040 Myron Oswalt, owner	Sprang & Youngs Ayers Spreng	Ashland Ashland Ashland	sand & gravel sand & gravel sand & gravel	17,405 45,134 87,500	17,405 45,134 87,500	Ald-7 Ald-15 Ald-Y	IM-392 IM-944 IM-1216
Yuhasz Bros. Sand & Gravel, Inc. 8549 State Route 46 Orwell, OH 44076 (440) 422-3353 Thomas R. Yuhasz, pres.	TJPK Corp.	Trumbull	sand & gravel			TI-Y	IM-2374
Zemba Farms, Ltd. 3401 East Pike Zanesville, OH 43701 (740) 452-1880 Scott Zemba, pres.	Zemba Brothers, Inc.	Muskingum	sand & gravel	3,605	3,605	Mum-Z	IM-2173

2011 OHIO ALPHABETICAL DIRECTORY OF INDUSTRIAL-MINERAL MINE OPERATORS (cont.)

Name, address, telephone number, and president/owner/manager of company	Name of mine	County	Commodity	2011 sales (tons)	2011 production (tons)	State mine number	Mineral Resources permit number
Zollinger Sand & Gravel Co. 11899 Easton Rd. Rittman, OH 44270 (330) 855-2464 Carl Zollinger, pres.	Zollinger Sand & Gravel Co.	Wayne	sandstone sand & gravel	7,798 2,724	7,798 2,724	We-15	IM-398

2011 LIMESTONE/DOLOMITE COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Anthony Mining Co., Inc.	1	54,360	54,360	Marshall Quarry, Inc.	1	12,896	7,900
Arch Materials, LLC	1	1,001,211	996,224	Martin Marietta Aggregates	4	1,173,428	1,071,027
Area Aggregates, LLC	1	476,320	682,317	Martin Marietta Magnesia Specialties, Inc.	1	1,817,804	1,767,388
Barrett Paving Materials, Inc.	4	846,755	716,104	The Melvin Stone Co., LLC	4	1,937,160	1,937,160
Belden Brick Co.	3	31,938	31,938	Ed Miller	1	4,000	5,000
Bluffton Stone Co.	1	276,520	311,284	National Lime & Stone Co.	9	7,976,000	7,976,000
Bowerston Shale Co.	1	21,741	21,741	North Shore Stone Quarries, Inc.	1	1,159	1,159
C. F. Poeppelman, Inc.	1	239,840	239,840	Ohio Asphaltic Limestone Corp.	1	225,560	225,560
Cardinal Aggregates, Inc.	1	559,311	559,311	Olen Corp.	1	559,133	496,792
Carmeuse Lime, Inc.	2	1,759,912	1,779,610	Oxford Resource Partners, LP	2	923,003	923,003
CEMEX, Inc.	2	356,251	356,251	Piqua Materials, Inc.	1	511,089	511,089
Christman Quarries	1	62,433	62,433	Precision Aggregates I, LLC	1	689	689
Clinton Stone, LLC	1	423,893	423,893	Precision Aggregates II, LLC	1	169,990	169,223
Con-Ag, Inc.	1	210,000	210,000	Precision Aggregates III, LLC	1	122,732	122,732
Cumberland Limestone, LLC	1	477,637	477,637	Putnam Stone Co.	1	236,731	218,804
Custar Stone Co., Inc.	1	529,712	638,591	Ridge Township Quarry	1	160,943	160,943
Diamond Stone Quarries	1	17,882	17,882	Rohr Excavating, Ltd.	1	9,548	9,548
Duff Quarry, Inc.	1	431,102	431,102	Shamrock Materials, Inc.	1	229,427	229,427
East Fairfield Coal Co.	2	592,798	494,075	Sharon Stone Co.	1	123,060	123,060
Egypt Valley Stone, LLC	1	445,564	445,564	Shelly Materials, Inc.	9	7,263,884	6,969,241
Erie Blacktop, Inc.	1	204,857	204,857	Sidwell Materials, Inc.	2	411,664	406,522
Gerken Materials, Inc.	1	262,712	285,324	Stansley Mineral Resources, Inc.	1	320,000	320,000
Graymont Dolime, (OH) Inc.	1	530,141	530,141	Stoneco, Inc.	8	5,873,283	5,596,139
Hanson Aggregates, LLC	2	2,110,464	2,329,135	Subtropolis Mining	1	1,347,385	1,131,233
Hanson Aggregates Midwest, Inc.	7	5,155,188	4,925,726	Thompson Mining Co.	1	119,449	119,449
J. McCoy Lumber Co., Ltd.	1	90	90	Waterloo Coal Co., Inc.	1	523,350	523,350
King Quarries, Inc.	1	74,356	74,356	Wysong Stone Co.	1	84,312	85,000
Lafarge Corp.	1	539,601	544,895				
Lafarge North America	1	3,337,136	3,337,136				
Latham Limestone, LLC	1	420,920	420,920	TOTAL: 57 companies	103	53,588,324	52,710,175

2011 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Cn-A).

County	Name of operator	Name of mine or quarry	Township	Geological unit (age)	Type and principal use	State mine number
Adams	Hanson Aggregates, LLC	Plum Run Quarry	Meigs	Peebles, Greenfield, & Tymochtee Dolomites (Silurian)	crushed stone—unspecified	Ads-1
	J. McCoy Lumber Co., Ltd.	Adams County Quarry	Tiffin		crushed stone—unspecified	Ads-H
Allen	Bluffton Stone Co.	Bluffton Stone Co.	Richland	Tymochtee Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, extenders/fillers, aglime	An-1
	National Lime & Stone Co.	Lima Plant	Bath	Greenfield Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, railroad ballast, asphaltic concrete, aglime	An-3
Athens	Diamond Stone Quarries	Diamond Stone	Lee	Brush Creek (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing	As-533
Auglaize	Con-Ag, Inc.	Con-Ag, Inc.	Noble	Cedarville Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, aglime	Ae-31
	National Lime & Stone Co.	Buckland Plant	Moulton	unknown (Silurian)	crushed stone—riprap, portland cement concrete, asphaltic concrete, aglime	Ae-10
Belmont	Egypt Valley Stone, LLC	Shugert	Kirkwood, Union	Fishpot (Pennsylvanian)	crushed stone—riprap	Bt-E
Brown	Hanson Aggregates, LLC	Eagle Crushed Stone	Eagle	Brassfield Limestone (Silurian)	crushed stone—unspecified	Bn-EC
Clermont	Arch Materials, LLC	Batavia	Jackson	Black River Group (Ordovician)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, aglime	Ct-A
Clinton	Martin Marietta Aggregates	Clinton Limestone	Wilson	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing	CIn-W
	The Melvin Stone Co., LLC	The Melvin Stone Co., LLC	Richland	Cedarville Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified, aglime	CIn-1
Crawford	National Lime & Stone Co.	Bucyrus Plant	Holmes	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, portland cement concrete, asphaltic concrete, extenders/fillers, aglime	Cd-1
Darke	Shamrock Materials, Inc.	Walls Material	Butler	Cedarville Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing, asphaltic concrete, commercial building	Dke-1
Delaware	National Lime & Stone Co.	Delaware Plant	Scioto	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, portland cement concrete, asphaltic concrete, aglime	Del-5

Erie	Erie Blacktop, Inc.	Erie Blacktop Quarry	Margaretta		crushed stone—portland cement concrete, road construction/resurfacing, asphaltic concrete	Ee-27
	Hanson Aggregates Midwest, Inc.	Sandusky Crushed Stone	Groton	Columbus & Delaware Limestones (Devonian) Detroit River Group (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, aglime	Ee-11
		Wagner Quarry	Perkins	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, commercial building, aglime	Ee-1
Franklin	Shelly Materials, Inc.	Columbus Limestone #331	Franklin, Jackson, Marion	Columbus Limestone (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified	Fn-53
		Marble Cliff Plant #0332	Norwich	Columbus Limestone (Devonian) Salina Dolomite (Silurian)	crushed stone—portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Fn-2
Greene	CEMEX, Inc.	Miller, Schieder, Batdorf, Stewart Cedarville	Bath	Brassfield Limestone (Silurian)	crushed stone—portland cement	Ge-8
	Martin Marietta Aggregates		Cedarville	Cedarville Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Ge-17
	The Melvin Stone Co., LLC	Bowersville	Jefferson	Cedarville Dolomite (Silurian)	crushed stone—road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Ge-M
Guernsey	Cumberland Limestone, LLC	Cumberland Limestone, LLC	Spencer	Fishpot limestone (Pennsylvanian)	crushed stone—road construction/resurfacing, aglime	Gy-309
Hancock	National Lime & Stone Co.	Findlay Plant	Liberty	Salina Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, railroad ballast, asphaltic concrete	Hk-7
Hardin	Shelly Materials, Inc.	Forest Quarry	Jackson	Tymochtee Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Hdn-S
		Hardin Quarry	Pleasant	Tymochtee Dolomite (Silurian)	crushed stone—unspecified	Hdn-2
Harrison	Anthony Mining Co., Inc.	Patton-Mader	German	Ames limestone (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing, aglime	Hn-A
	Oxford Resource Partners, LP	Standingstone Mine	Cadiz	Redstone limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Hn-O2
Highland	Marshall Quarry, Inc.	Marshall Quarry, Inc.	Marshall	Peebles Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing, aglime	Hd-4
	Martin Marietta Aggregates Ohio Asphaltic Limestone Corp.	Lynchburg Quarry Ohio Asphaltic Limestone Corp.	Union Union	Brassfield Limestone (Silurian) Peebles Dolomite (Silurian)	crushed stone—unspecified crushed stone—riprap, portland cement concrete, asphaltic concrete, aglime	Hd-M Hd-3

**2011 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)**

County	Name of operator	Name of mine or quarry	Township	Geological unit (age)	Type and principal use	State mine number
Holmes	Ed Miller	Miller	Prairie		crushed stone—road construction/resurfacing	Hs-M
	Rohr Excavating, Ltd.	Rohr	Hardy		crushed stone—road construction/resurfacing	Hs-R1
Jackson	Clinton Stone, LLC	Clinton Stone, LLC	Milton	Vanport (Pennsylvanian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast	Jkn-S2
	Waterloo Coal Co., Inc.	Waterloo Coal Stone Plant	Madison	Vanport limestone (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing, commercial building, unspecified	Jkn-367
Logan	Duff Quarry, Inc.	Duff Quarry, Inc.	Richland	Lockport Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, commercial building	Lgn-15
	Shelly Materials, Inc.	Belle Center	McArthur, Richland	Lockport Dolomite (Silurian) Tymochtee Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, unspecified	Lgn-2
Lucas	Hanson Aggregates Midwest, Inc.	Sylvania	Sylvania	Detroit River Group & upper Dundee Limestone (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified, aglime	Ls-3
		Sylvania Quarry	Sylvania	Detroit River Group & Dundee Limestone (Devonian)	crushed stone—road construction/resurfacing	Ls-12
Mahoning	East Fairfield Coal Co.	Waterville	Waterville	Greenfield & Tymochtee Dolomites and Salina Group (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building	Ls-1
	Stoneco, Inc.	Maumee Quarry	Waynesfield	Tymochtee Dolomite (Silurian)	crushed stone—unspecified	Ls-2
Mahoning	Withers Petersburg - Surface	Withers Petersburg - Surface	Springfield	Vanport limestone (Pennsylvanian)	crushed stone—unspecified	Mg-EF
	Shelly Materials, Inc.	Petersburg	Springfield	Vanport limestone (Pennsylvanian)	crushed stone—unspecified	Mg-631
Marion	Subtropolis Mining	Kemp Mine	Springfield	Vanport limestone (Pennsylvanian)	crushed stone—riprap, road construction/resurfacing	Mg-L
	National Lime & Stone Co.	Marion Plant	Grand Prairie, Marion	Vanport limestone (Pennsylvanian)	crushed stone—unspecified	Mg-EF1
Mercer	Stoneco, Inc.	Celina Quarry	Jefferson	Columbus & Delaware Limestones (Devonian)	crushed stone—riprap, portland cement concrete, asphaltic concrete, aglime	Mn-3
			Jefferson	Lockport Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Mr-1
Miami	Barrett Paving Materials, Inc.	Barrett Paving Materials Inc., #231	Union	Brassfield Limestone (Silurian)	crushed stone—riprap, road construction/resurfacing	Mi-BPM
		Bed Rock Properties	Union	Brassfield Limestone (Silurian)	crushed stone—riprap, road construction/resurfacing	Mi-502

Monroe	C. F. Poeppelman, Inc.	C. F. Poeppelman, Inc.	Newberry	Cedarville Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, commercial building, aglime	Mi-10
Montgomery	Piqua Materials, Inc.	Piqua Minerals Division	Springcreek, Staunton	Brassfield & Dayton Limestones, Laurel Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, flux, commercial building, aglime	Mi-1
Muskingum	Christman Quarries	Christman Quarry	Franklin, Seneca	Fishpot limestone (Pennsylvanian)	crushed stone—riprap	Me-C
	CEMEX, Inc. Martin Marietta Aggregates	G-Tract Phillipsburg	Wayne Clay	Brassfield Limestone (Silurian) Cedarville Dolomite (Silurian)	crushed stone—portland cement crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	My-58 My-1
	Bowerston Shale Co.	Frazeysburg	Jackson	Middle Mercer (Pennsylvanian)	crushed stone—road construction/ resurfacing	Mum-776
	Shelly Materials, Inc.	East Fultonham	Newton	Maxville Limestone (Mississippian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified	Mum-106
	Sidwell Materials, Inc.	Dupler/Ford	Newton	Maxville Limestone (Mississippian)	crushed stone—road construction/ resurfacing	Mum-SB
	Thompson Mining Co.	White Cottage	Newton	Maxville Limestone (Mississippian)	crushed stone—road construction/ resurfacing	Mum-104
Noble	King Quarries, Inc. Sharon Stone Co.	Pleasant Valley Limestone King Quarries, Inc. Sharon Stone Co.	Hopewell Olive Noble, Sharon	Maxville Limestone (Mississippian) Fishpot limestone (Pennsylvanian) Fishpot limestone (Pennsylvanian)	crushed stone—riprap, unspecified crushed stone—riprap crushed stone—riprap, road construction/ resurfacing	Mum-907 Ne-K1 Ne-S
Ottawa	Graymont Dolime (OH), Inc. Lafarge North America	Graymont Dolime (OH), Inc. Marblehead	Clay Danbury	Lockport Dolomite (Silurian) Columbus Limestone & Detroit River Group (Devonian)	crushed stone—road construction/ resurfacing crushed stone—road construction/ resurfacing, commercial building, extenders/fillers, dimension stone	Oa-1 ¹ Oa-7
	Stansley Mineral Resources, Inc.	Stansley Mineral Resources, Inc. Plant 301	Clay	Lockport Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete	Oa-1 ¹
	Stoneco, Inc.	White Rock Quarry	Allen	Lockport Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Oa-6
Paulding	Lafarge Corp. Stoneco, Inc.	Paulding Quarry Auglaize Quarry	Crane Auglaize	Dundee Limestone (Devonian) Detroit River Group & Dundee Limestone (Devonian)	crushed stone—road construction/ resurfacing, portland cement crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Pg-1 Pg-2
Pickaway	The Melvin Stone Co., LLC	Williamsport	Perry	Columbus Limestone (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified	Pky-4

¹Graymont and Stansley operate from the same quarry.

**2011 OHIO DIRECTORY OF LIMESTONE/DOLOMITE MINE OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)**

County	Name of operator	Name of mine or quarry	Township	Geological unit (age)	Type and principal use	State mine number
Pike	Latham Limestone, LLC	Latham Limestone	Mifflin	Greenfield Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, unspecified	Pke-13
Preble	Wysong Stone Co.	Wysong Stone Co.	Twin	Brassfield Limestone (Silurian)	crushed stone—riprap, road construction/resurfacing, dimension stone	Pre-5
Putnam	National Lime & Stone Co.	Rimer Plant	Sugar Creek	Greenfield Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, asphaltic concrete	Pm-N
	Putnam Stone Co.	Putnam Stone Co.	Pleasant, Riley	Greenfield Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing	Pm-2
Ross	The Melvin Stone Co., LLC	Plano Road	Concord	Salina Dolomite (Silurian)	crushed stone—road construction/resurfacing, commercial building, unspecified	Rs-MC1
Sandusky	Area Aggregates, LLC	Area Aggregates, LLC	Woodville	Lockport Dolomite (Silurian)	crushed stone—portland cement concrete, road construction/resurfacing, asphaltic concrete, aglime	Sy-A
	Carmeuse Lime, Inc. Martin Marietta Magnesia Specialties, Inc. Precision Aggregates III, LLC	Millersville Plant Woodville Quarry Precision Aggregates III, LLC	Jackson Woodville Sandusky	Lockport Dolomite (Silurian) Lockport Dolomite (Silurian) Lockport Dolomite (Silurian)	crushed stone—unspecified, aglime crushed stone—asphaltic concrete, lime crushed stone—asphaltic concrete	Sy-4 Sy-1 Sy-5
Seneca	Carmeuse Lime, Inc.	Maple Grove	Liberty	Lockport Dolomite (Silurian)	crushed stone—road construction/resurfacing, asphaltic concrete, extenders/fillers	Sa-2
	Hanson Aggregates Midwest, Inc.	Bloomville	Bloom	Columbus & Delaware Limestones, Detroit River Group (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, commercial building, unspecified, aglime dimension stone	Sa-3 Sa-1
	North Shore Stone Quarries, Inc.	Flat Rock	Thompson	Columbus & Delaware Limestones (Devonian) Greenfield Dolomite (Silurian)	crushed stone—riprap, dimension stone	Sa-8
Shelby	Barrett Paving Materials, Inc.	Miami River Quarry #261 Vandemark Quarry #221	Orange Clinton	Lockport Dolomite (Silurian) Lockport Dolomite (Silurian)	crushed stone—riprap, road construction/resurfacing crushed stone—road construction/resurfacing,	Shy-17 Shy-15
Tuscarawas	Belden Brick Co.	Moomaw Pit	Sugar Creek	Vanport limestone (Pennsylvanian)	crushed stone—road construction/resurfacing	Ts-1517
		Shanesville Pit Wallick Pit	Sugarcreek Franklin, Wayne Franklin, Lawrence	Pennsylvanian Pennsylvanian	crushed stone—unspecified crushed stone—unspecified	Ts-1939 Ts-1841
	Oxford Resource Partners, LP	Strasburg Slurry			crushed stone—road construction/resurfacing	Ts-HC

Union	Shelly Materials, Inc.	Ostrander Quarry	Mill Creek	Columbus Limestone (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Un-2
		York Center Quarry	York	Salina Dolomite (Silurian)	crushed stone—portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building, unspecified	Un-1
Van Wert	National Lime & Stone Co.	Delphos Quarry	Washington	Tymochtee Dolomite (Silurian)	crushed stone—portland cement concrete, asphaltic concrete	Vt-1
	Ridge Township Quarry Stoneco, Inc.	Ridge Township Quarry Scott Quarry	Ridge Union	Tymochtee Dolomite (Silurian) Salina Dolomite (Silurian)	crushed stone—unspecified crushed stone—unspecified	Vt-7 Vt-3
Wood	Cardinal Aggregates, Inc.	Cardinal Aggregates, LLC	Perrysburg		crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, commercial building	Wd-C
	Custar Stone Co., Inc.	Custar Stone Co., Inc.	Milton	Detroit River Group (Devonian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, extenders/fillers	Wd-5
	Gerken Materials, Inc.	Gerken Materials, Inc.	Perry	Lockport & Salina Dolomites (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, asphaltic concrete, extenders/fillers, aglime	Wd-1
	Precision Aggregates II, LLC Stoneco, Inc.	Precision Aggregates II, LLC Lime City Quarry	Portage Perrysburg	Lockport Dolomite (Silurian) Lockport Dolomite (Silurian)	crushed stone—riprap, asphaltic concrete	Wd-14 Wd-6
		Portage Quarry	Portage	Greenfield & Lockport Dolomites (Silurian)	crushed stone—road construction/resurfacing	Wd-11
Wyandot	National Lime & Stone Co.	Carey Plant	Crawford	Lockport Dolomite (Silurian)	crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, flux, asphaltic concrete, extenders/fillers, aglime	Wt-1
	Olen Corp.	Upper Sandusky	Pitt	Salina Group (Silurian)	crushed stone—portland cement concrete, road construction/resurfacing, asphaltic concrete, commercial building	Wt-3
	Precision Aggregates I, LLC Stoneco, Inc.	Precision Aggregates I, LLC Carey Quarry	Eden Crawford	Greenfield & Lockport Dolomites (Silurian)	crushed stone—asphaltic concrete crushed stone—riprap, portland cement concrete, road construction/resurfacing, railroad ballast, asphaltic concrete, commercial building, unspecified	Wt-4 Wt-8

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2011 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Agg Rok Materials	1	6,000	6,000	Hocking Valley Concrete, Inc.	1	48,299	54,000
Allgeier & Son, Inc.	1	45,000	45,000	William A. Hoffman, Jr.	1	1,328	1,328
American Sand & Gravel, Inc.	2	603,838	603,838	Holmes Redimix, Inc.	1	116,308	116,308
Ashcraft Sand & Gravel, Inc.	1	3,707	3,707	Holmes Supply Corp.	1	226,250	229,250
Atlas Towing Co.	1	5,573	5,573	JALIP, Ltd.	1	8,242	8,242
Baker Sand, Inc.	1	230,000	230,000	Jaymar, Inc.	1	611,449	611,449
Ballentine Sand & Gravel, LLC	1	57,839	57,839	JBM, Ltd.	1	66,803	66,803
Barrett Paving Materials, Inc.	9	1,049,421	1,053,567	J.J.J. Properties, LLC	1	1,156	1,156
Bartley & Bolin Excavating	1	58,086	58,036	Joe Simak & Sons Trucking, Inc.	2	18,450	18,450
Beck Sand & Gravel, Inc.	1	268,640	268,640	John L. Garber Materials, Inc.	1	107,284	107,999
Boyas Excavating, Inc.	1	7,281	7,281	KCI Sand & Gravel	1	81,971	81,971
Boyd Excavating	1	3,904	3,904	Kinsman Materials, Ltd.	1	20,769	20,770
Briggs Sand & Gravel, Inc.	1	4,081	4,081	Kipp's Gravel Co., Inc.	1	2,396	0
Brookside Materials, LLC	1	110,000	110,000	Kirby's Sand & Gravel, Inc.	1	154,000	154,000
Broshear Contractors, Inc.	1	10,707	10,707	Knox County Board of Commissioners	1	3,749	3,749
Richard & Kathy Burwinkel	1	121,233	121,233	L & I Natural Resources, Inc.	1	53,264	53,264
C. F. Poeppelman, Inc.	1	12,364	12,364	Lakeside Sand & Gravel Co.	2	526,841	526,841
Calvins Hauling, Inc.	1	2,180	2,180	Link Trucking Co., Inc.	1	20,471	20,471
Carl E. Oeder and Sons Sand & Gravel	1	351,309	351,309	Little Miami Sand & Gravel	2	0	850
Joe E. Carter	1	1,500	1,500	Loxley Aggregates, Inc.	1	509	509
Carter & Carter, Inc.	1	500	500	LUB, Inc.	1	12,787	12,787
Central-Allied Enterprises, Inc.	4	722,801	722,801	M. J. Coates Construction Co., Inc.	1	66,728	66,728
Central Ready Mix, LLC	3	178,383	172,131	Martin Marietta Aggregates	12	2,720,068	2,436,777
Chesterville Sand & Gravel Co., Inc.	1	177,763	177,763	MAR-ZANE Materials, Inc.	1	10,127	23,910
Harlen D. & Barbara L. Clark	1	8,500	8,500	Mason's Sand & Gravel Co.	1	24,518	24,518
Cochran Transportation Services, Inc.	1	31,149	31,149	Massillon Materials, Inc.	2	449,693	449,693
Bill D. Colwell	1	384	384	Mathews Sand & Gravel	1	750	750
Cremeans Concrete & Supply	1	675	675	The Melvin Stone Co., LLC	1	88,200	88,200
D & K Materials, Inc.	1	97,607	97,607	Miami View Mining Co., Ltd.	1	351,438	351,438
Demmy Sand & Gravel	1	11,540	11,540	Mid Ohio Resources	1	82,946	196,609
D.G.M., Inc.	2	81,303	81,303	Miller's Sand & Gravel, Inc.	1	107	107
Dingledine Basic Materials, Inc.	1	37,819	52,000	Milton Materials, LLC	1	55,406	55,406
John R. Doherty	1	500	500	Jerry Mock	1	19,042	19,042
James E. Downard	1	9,971	9,971	Morrow Gravel Co.	2	361,936	361,936
Duff Quarry, Inc.	1	17,616	17,616	Muskingum River Gravel Co.	4	398,436	372,868
E. E. Blair Construction Co.	1	35,684	35,684	National Lime & Stone Co.	2	369,000	369,000
David E. Edgington	1	3,781	3,781	Neer's Sand & Gravel	1	95,416	95,416
Enon Sand & Gravel, LLC	1	355,500	355,500	Nelson Sand & Gravel, Inc.	1	35,130	35,130
Erie Materials, Inc.	1	439	439	Newton Asphalt Paving, Inc.	1	100,499	100,499
Ervin Hill Enterprises, Inc.	1	90,559	90,559	Northwest Ohio Property Developments, Ltd.	1	7,417	7,417
Evans Gravel, Inc.	2	70,418	186,214	Olen Corp.	5	2,296,645	2,645,744
Feikert Sand & Gravel, Inc.	1	151,392	151,392	Oscar Brugmann Sand & Gravel, Inc.	1	435,450	435,450
Fleming Construction Co., Inc.	2	12,973	12,973	Oster Sand & Gravel, Inc.	2	596,837	596,837
Foureman's Sand & Gravel, Inc.	1	41,420	41,420	Ours Sand & Gravel	1	3,003	3,003
Friendsville Sand, L.P.	1	20,250	25,600	Paul D. Beery Trucking Co.	1	1,936	1,936
Lloyd B. Fry	1	3,122	3,122	Phillips Companies	1	100,586	100,586
G. E. Baker Construction, Inc.	1	21,186	23,300	Phillips Sand & Gravel	1	206,500	230,000
GANS Ltd.	1	3,520	3,500	Phoenix Asphalt Company, Inc.	1	30,906	30,996
George J. Igel & Co., Inc.	1	920	920	Portage Aggregate & Supply, LLC	1	69,304	69,304
Grimes Excavating	1	26,275	26,275	Precision Aggregates I, LLC	1	25,816	25,816
Hanson Aggregates, LLC	2	956,680	1,001,084	Precision Aggregates III, LLC	1	13,427	13,427
Norman Harpster	1	450	450	Quality Ready Mix, Inc.	1	82,800	82,800
Harvest Sand & Gravel, Inc.	1	25,147	25,147	R. J. Martin Service & Excavating	1	190	190
Heiser Sand & Gravel Corp.	1	5,705	5,705	R. L., Ltd.	1	360	360
Highlanders Enterprises, LLC	1	1,043	1,043	R. W. Sidley, Inc.	2	37,702	49,640

2011 SAND AND GRAVEL COMPANIES WITH SALES OR PRODUCTION (cont.)

Company	No. of operations	Sales (tons)	Production (tons)	Company	No. of operations	Sales (tons)	Production (tons)
Razor Lake S. & G., LLC	1	63,000	63,000	Thomas Sand & Gravel	1	20	80
Rockwell Sand & Gravel, Inc.	1	14,663	14,663	Tiger Sand & Gravel, LLC	1	26,818	8,000
Roy M. Roush	1	589	589	Tipp Stone Co., Inc.	1	13,217	13,217
Rupp Construction, Inc.	1	101,509	101,509	Top Dog Service Company	1	1,250	1,250
S & S Aggregate, Inc.	3	542,617	514,390	Triple B of Lakeville, Ltd.	1	99,984	99,984
Sams Excavating Unlimited, Inc.	1	6,920	6,920	Trout Sand & Gravel Co.	1	8,943	7,295
Scassa Asphalt, Inc.	1	6,000	60,000	Tuffco Sand & Gravel, Inc.	1	95,783	95,783
Guy Schieve	1	3,549	3,549	U.S. Aggregates, Inc.	1	128,935	206,384
Mark E. Scott	1	26,564	26,564	United Aggregates, Inc.	2	175,689	185,186
Shamrock Materials, Inc.	1	167,900	167,900	Walhonding Sand & Gravel	1	52,697	52,697
Sharon Stone Co.	1	448,023	448,023	Watson Gravel, Inc.	7	1,658,876	1,658,876
Shelly Materials, Inc.	8	2,861,615	2,769,578	Weber Sand & Gravel, Inc.	1	259,896	259,896
Sidco Development, Inc.	1	158,151	158,151	Welch Sand & Gravel, Inc.	3	741,087	741,087
Small's Sand & Gravel, Inc.	3	219,920	219,920	Westfall Aggregate & Materials, Inc.	1	80,095	80,095
Sober Sand & Gravel Co.	1	158,417	158,417	William Albert, Inc.	1	16,643	19,643
Soehnen Bros. Sand & Gravel, Inc.	1	323,818	323,818	Willowbrook Sand & Gravel, LLC	1	42,629	42,629
Solomon's Mines, Inc.	1	41,034	41,034	Wysong Gravel Co.	2	159,455	159,455
Soltis Sand & Gravel	1	376	400	X. L. Sand & Gravel Co., Inc.	1	46,100	46,100
South Central Sand & Gravel	1	7,044	7,044	Xenia Sand & Gravel, Inc.	1	6,665	6,665
Southern Ohio Aggregates, Inc.	1	55,000	55,000	Young's Sand & Gravel Co.	3	150,039	150,039
St. Joe Sand & Gravel, LLC	1	111,000	158,000	Zemba Farms, Ltd.	1	3,605	3,605
Stocker Sand & Gravel Co.	2	832,136	832,136	Zollinger Sand & Gravel Co.	1	2,724	2,724
Sunshine Sand Co.	1	900	900				
Joseph N. Sypniewski	1	192	192	TOTAL: 157 compnaies	225	27,301,135	27,742,189
Thiel Construction Co.	1	2,765	2,765				

2011 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Ald-G).

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Ashland	Bartley & Bolin Excavating	Bartley & Bolin, Inc., James Plant	Lake	sand—building	Ald-B
	G. E. Baker Construction, Inc.	Humphrey	Lake	gravel—building sand—road construction/resurfacing	Ald-GB
	Young's Sand & Gravel Co.	Sprang & Youngs	Green	gravel—road construction/resurfacing	Ald-7
		Ayers	Green	gravel—building, road construction/resurfacing	Ald-15
		Spreng	Green	sand—building, road construction/resurfacing gravel—building, road construction/resurfacing	Ald-Y
Ashtabula	John R. Doherty	Doherty	Richmond	gravel—screened bank gravel	Asa-JD
	Joe Simak & Sons Trucking, Inc.	Amboy Pit	Kingsville	sand—building, portland cement concrete, fill, ice control	Asa-ST
	Kinsman Materials, Ltd.	North Ridge Pit	Kingsville	gravel—building, filtration, pipe bedding	Asa-18
		Kinsman Materials, Ltd.	Wayne	sand—building, fill	Asa-20
	Mathews Sand & Gravel	Mathews Sand & Gravel	N. Kingsville	gravel—building, filtration	Asa-M
	Nelson Sand & Gravel, Inc.	Nelson Sand & Gravel, Inc.	Kingsville	sand—building	Asa-N1
	R. W. Sidley, Inc.	Sidley-Kingsville Plant	Kingsville	gravel—building	Asa-15
	Joseph N. Sypniewski	Sypniewski	Trumbull	sand—building, portland cement concrete gravel—building	Asa-SY
	Cochran Transportation Services, Inc.	Circle Hill	Dover	gravel—unspecified	As-595
	Quality Ready Mix, Inc.	Quality Pit	Pusheta	sand—building gravel—building	Ae-16
Butler	Broshear Contractors, Inc.	Green Heron	Ross	sand—fill	Br-B
	Central Ready Mix, LLC	Middletown Plant #22	Madison	gravel—filtration sand—building	Br-6
	Bill D. Colwell	Bill D. Colwell Gravel	St. Clair	gravel—building	Br-36
	Dingledine Basic Materials, Inc.	Dingledine Basic Materials, Inc.	Milford	gravel—building	Br-50
	Martin Marietta Aggregates	Fairfield Sand & Gravel	Fairfield, Ross	sand—building, road construction/resurfacing sand—unspecified	Br-35
		Hamilton Gravel	St. Clair	gravel—unspecified	Br-5
		Ross Sand & Gravel	Fairfield, Ross	sand—unspecified	Br-29
	Shamrock Materials, Inc.	Shamrock	Madison	gravel—unspecified	Br-52
	Southern Ohio Aggregates, Inc.	New Miami Plant	St. Clair	sand—building, asphaltic concrete, road construction/resurfacing gravel—building, asphaltic concrete, road construction/resurfacing	Br-S
	Watson Gravel, Inc.	Mecco, Inc.	Lemon	sand—unspecified sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Br-15

2011 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Butler (cont.)	Watson Gravel, Inc.	Ongais Plant #1 River Pit Watson Pit	Madison Ross Fairfield, Ross	gravel—unspecified	Br-O
				gravel—unspecified	Br-57
				sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Br-47
Carroll	Welch Sand & Gravel, Inc.	Schlichter Pit	Fairfield	sand—building gravel—building	Br-38
				sand—asphaltic concrete	Cl-P
				gravel—asphaltic concrete, road construction/resurfacing	
Champaign	Morrow Gravel Co.	Urbana	Urbana	sand—building, portland cement concrete, asphaltic concrete gravel—building, asphaltic concrete, road construction/resurfacing	Cpn-1
Clark	Demmy Sand & Gravel Enon Sand & Gravel, LLC	Demmy Sand & Gravel Enon Sand & Gravel, LLC	Mad River Bethel, Mad River	sand—building gravel—filtration	Clk-502
				sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Clk-3
				sand—unspecified gravel—unspecified	Clk-13
Clermont	Evans Gravel, Inc. Kipp's Gravel Co., Inc.	Evans Gravel, Inc. Kipp's Gravel Co., Inc.	Union Stonelick	sand—asphaltic concrete gravel—asphaltic concrete	Ct-9
				sand—unspecified gravel—unspecified	Ct-7
Columbiana	Harvest Sand & Gravel, Inc. Solomon's Mines, Inc. Willowbrook Sand & Gravel, LLC	Eberly Solomon's Mines, Inc. Willowbrook Sand & Gravel	Salem Salem Elk Run	sand—asphaltic concrete, backfill gravel—building, portland cement concrete	Ca-H2
				sand—road construction/resurfacing, fill gravel—building, road construction/resurfacing, filtration	Ca-S
				sand—unspecified gravel—unspecified sand—unspecified gravel—unspecified	Ca-993
Coshocton	Razor Lake S. & G., LLC Shelly Materials, Inc.	X. L. Sand & Gravel Co., Inc. Razor Lakes S. & G., LLC Shelly Materials, Inc. Plant #1305	Middleton Oxford Bethlehem	sand—unspecified gravel—unspecified	Ca-881
				sand—road construction/resurfacing gravel—road construction/resurfacing	Cn-R
				sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Cn-694
Cuyahoga	Walhonding Sand & Gravel William Albert, Inc.	Walhonding Valley Sand & Gravel William Albert, Inc. Pit 2	New Castle Lafayette	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Cn-WL
				sand—fill gravel—road construction/resurfacing	Cn-WA
				sand—building, unspecified gravel—building, filtration, unspecified	
Darke	Boyas Excavating, Inc. Foureman's Sand & Gravel, Inc.	Boyas Excavating, Inc. Foureman's Sand & Gravel, Inc.	Independence Greenville	sand—fill	Cya-42
				sand—unspecified gravel—unspecified	Dke-4

Defiance	Weber Sand & Gravel, Inc.	Weber Sand & Gravel, Inc.	Milford	sand—building, portland cement concrete gravel—building, decorative	Ws-11
Erie	Erie Materials, Inc.	Borchardt	Groton, Margaretta	gravel—fill	Ee-18
Fairfield	James E. Downard Paul D. Beery Trucking Co.	Downard Pit Paul D. Beery Trucking Co.	Rush Creek Berne	sand—fill sand—unspecified gravel—unspecified	Fd-16 Fd-14
Franklin	Agg Rok Materials	Agg Rok	Franklin	sand—building gravel—building	Fn-36
	Mason's Sand & Gravel Co.	Mason's Sand & Gravel Co.	Hamilton	sand—building gravel—building	Fn-11
	National Lime & Stone Co.	Columbus Plant	Hamilton	sand—building, portland cement concrete gravel—portland cement concrete, fill	Fn-52
	Olen Corp.	Columbus Plant #3	Hamilton	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Fn-58
Fulton	Harlen D. & Barbara L. Clark Northwest Ohio Property Developments, Ltd.	Clark NOPD, Ltd.	Chesterfield Dover	sand—building sand—building, agricultural	Ftn-C Ftn-NW
Gallia	Cremeans Concrete & Supply	Cremeans Concrete & Supply Co., Inc.	Addison	gravel—fill	Ga-626
	Ours Sand & Gravel	Ours Sand & Gravel	Ohio	sand—unspecified	Ga-O
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman	sand—unspecified gravel—unspecified	Gea-9
Greene	Barrett Paving Materials, Inc.	Fairborn Aggregate Plant	Bath	sand—building gravel—portland cement concrete	Ge-4
	M. J. Coates Construction Co., Inc. Martin Marietta Aggregates	Haddix Road Aggregates Plant #341 M. J. Coates Construction Co., Inc. Cook Rd.	Mad River Spring Valley Spring Valley	sand—portland cement concrete, asphaltic concrete, unspecified gravel—portland cement concrete, asphaltic concrete, unspecified gravel—road construction/resurfacing sand—unspecified	Clk-28 Ge-47 Ge-MM
	Phillips Sand & Gravel	Xenia S & G Phillips Sand & Gravel	Beaver Creek, Xenia Beaver Creek	gravel—unspecified sand—unspecified gravel—unspecified	Ge-33
	R. J. Martin Service & Excavating Xenia Sand & Gravel, Inc.	Horseshoe Bend Sand & Gravel, Inc. Xenia Sand & Gravel, Inc.	Spring Valley Xenia	sand—building, road construction/resurfacing, fill gravel—building, asphaltic concrete gravel—pit run sand—building gravel—building	Ge-36 Ge-40 Ge-10
Hamilton	Allgeier & Son, Inc.	Allgeier & Son, Inc. Pit 2	Whitewater	sand—fill gravel—filtration	Hmn-AS
	Ashcraft Sand & Gravel, Inc.	Ashcraft Sand & Gravel, Inc.	Whitewater	sand—building gravel—building	Hmn-54
	Richard & Kathy Burwinkler	Burwinkler	Crosby	sand—building gravel—building	Hmn-RB
	Joe E. Carter	Lost Bridge	Whitewater	sand—building gravel—building	Hmn-JC
	Evans Gravel, Inc.	Evans Gravel, Inc.	Anderson	gravel—building sand—asphaltic concrete gravel—asphaltic concrete	Hmn-E

2011 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Hamilton (cont.)	Hanson Aggregates, LLC	Dry Fork Sand & Gravel	Harrison, Whitewater	sand—building, portland cement concrete, road construction/ resurfacing gravel—building, portland cement concrete, road construction/ resurfacing	Hmn-50
	Martin Marietta Aggregates	E-town Sand & Gravel	Whitewater	sand—unspecified gravel—unspecified	Hmn-71
	R. L., Ltd.	Harrison Sand & Gravel	Harrison	sand—unspecified	Hmn-37
	Top Dog Service Company	R. L., Ltd.	Crosby	gravel—building	Hmn-67
	Watson Gravel, Inc.	Whitewater Reclamation Company	Whitewater	gravel—fill	Hmn-G
		Dry Fork	Whitewater	sand—building	Hmn-68
		Harrison #2	Whitewater	gravel—building	Hmn-ARH
		Minges-Getz	Miami	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	
	Welch Sand & Gravel, Inc.	East Miami Pit	Colerain	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Hmn-64
		Fernald Pit	Crosby	sand—building gravel—building	Hmn-48
Hardin	Norman Harpster	Harpster Pit	Roundhead	sand—building gravel—building	Hmn-42
Highland	Ervin Hill Enterprises, Inc.	Ervin Hill Enterprises, Inc.	New Market	gravel—fill sand—portland cement concrete, fill gravel—building, asphaltic concrete, filtration	Hdn-H Hd-L
Hocking	Hocking Valley Concrete, Inc.	Hocking Valley Concrete, Inc.	Green	sand—building, portland cement concrete gravel—building, portland cement concrete	Hg-262
	KCI Sand & Gravel	SAA	Green	sand—landfill	Hg-HA
	MAR-ZANE Materials, Inc.	Enterprise Pit	Falls	gravel—road construction/resurfacing sand—road construction/resurfacing	Hg-HV
	Muskingum River Gravel Co.	S & S Aggregate #8	Green, Starr	gravel—asphaltic concrete sand—asphaltic concrete, road construction/resurfacing gravel—asphaltic concrete	Hg-301
	Feikert Sand & Gravel, Inc.	Feikert Sand & Gravel, Inc.	Salt Creek	sand—building, portland cement concrete, road construction/ resurfacing gravel—building, portland cement concrete, road construction/ resurfacing	Hs-511
Holmes	Holmes Redimix, Inc.	Holmes Redimix, Inc.	Hardy	sand—unspecified gravel—unspecified	Hs-82
	Holmes Supply Corp.	Holmes Supply Corp.	Prairie	sand—portland cement concrete, asphaltic concrete, road construction/ resurfacing, fill gravel—building, asphaltic concrete, road construction/resurfacing, filtration	Hs-J
	Triple B of Lakeville, Ltd.	Schlabach Lakeville Sand & Gravel, Ltd.	Killbuck Washington	gravel—unspecified sand—building gravel—building	Hs-H1 Hs-C
	Knox County Board of Commissioners	Apple Valley	Brown	gravel—building	Kx-K

	Olen Corp.	Fredericktown Plant #2	Morris	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Kx-O
	Small's Sand & Gravel, Inc.	Small's Sand & Gravel, Inc.	Howard	sand—unspecified	Kx-S
		Small's Sand & Gravel, Inc.	Harrison	gravel—unspecified	Kx-15
	United Aggregates, Inc.	Small's Sand & Gravel, Inc. United Aggregates, Inc.	Harrison Clinton	sand—unspecified gravel—unspecified	Kx-17 Kx-3
		United Aggregates, Inc.	Union	sand—portland cement concrete gravel—building, road construction/resurfacing, filtration sand—portland cement concrete gravel—building, road construction/resurfacing, filtration	Kx-5
Lake	J.J.J. Properties, LLC R. W. Sidley, Inc.	J.J.J. Properties, LLC Sidley-Painesville Plant	Painesville Painesville	sand—fill sand—fill	Lke-P Lke-7
Licking	Brookside Materials, LLC	Brookside Materials, LLC	St. Albans	sand—building, portland cement concrete	Lg-B
	Jerry Mock	Jerry Mock	Madison	gravel—building	Lg-504
	Olen Corp.	St. Louisville Plant #5	Washington	gravel—building	Lg-31
	Shelly Materials, Inc.	St. Louisville	Newton	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Lg-10
Logan	Boyd Excavating Duff Quarry, Inc. Neer's Sand & Gravel	Boyd Excavating Duff Sand Co. Neer's Sand & Gravel	Monroe Washington Union	sand—building, portland cement concrete sand—unspecified gravel—unspecified	Lgn-B Lgn-31 Lgn-6
Lorain	Guy Schieve	Schieve Pit	Henrietta	sand—unspecified	Ln-12
Madison	Tuffco Sand & Gravel, Inc.	Tuffco Sand & Gravel, Inc.	Darby	sand—building, road construction/resurfacing gravel—building	Mdn-11
Marion	Fleming Construction Co., Inc.	Pit #1 Pit #2	Prospect Prospect	sand—building, portland cement concrete gravel—filtration, unspecified sand—portland cement concrete, fill gravel—fill	Mn-16 Mn-19
Medina	Baker Sand, Inc.	Baker Sand, Inc.	Harrisville, Westfield Harrisville	sand—portland cement concrete, masonry gravel—building sand—building gravel—building	Ma-20 Ma-F
	Friendsville Sand, L.P.	Klotzsche & Associates			
Meigs	Jaymar, Inc.	Plant #4	Olive	sand—unspecified	Ms-308
	Martin Marietta Aggregates	Apple Grove Plant	Letart	gravel—unspecified sand—unspecified	Ms-205
	Shelly Materials, Inc.	Portland Plant	Lebanon	gravel—unspecified sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Ms-S

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Miami	C. F. Poepelman, Inc.	C. F. Poepelman, Inc.	Newberry	sand—portland cement concrete	Mi-10
	Lloyd B. Fry	Ticon	Washington	gravel—road construction/resurfacing, filtration sand—unspecified	Mi-T
	Martin Marietta Aggregates	Troy Sand & Gravel	Concord	gravel—unspecified	Mi-3
	Milton Materials, LLC	Milton Materials Fenner Pit	Newton	gravel—unspecified sand—portland cement concrete gravel—building	Mi-4
Montgomery	Barrett Paving Materials, Inc	West Carrollton Aggregate Plant	Jefferson, Miami	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	My-19
	Carter & Carter, Inc.	Carter & Carter, Inc.	Miami	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	My-CW
	Central Ready Mix, LLC	Germantown Plant #21	German	sand—road construction/resurfacing	My-41
	Martin Marietta Aggregates Phillips Companies	Rip Rap Rd. Miller Bros. Gravel, Inc.	Wayne Butler	gravel—building gravel—unspecified sand—building gravel—building sand—fill gravel—fill	My-66 My-52 My-61
Morgan	Link Trucking Co., Inc.	Matthew	Bloom	gravel—unspecified	Mon-L
Morrow	Chesterville Sand & Gravel Co., Inc.	Chesterville Sand & Gravel Co., Inc.	Chester	sand—building, fill gravel—building, road construction/resurfacing, filtration, ice control, landscaping	Mw-10
	Highlanders Enterprises, LLC	Highlander Enterprises, LLC	Chester	gravel—road construction/resurfacing	Mw-H
Muskingum	LUB, Inc.	LUB, Inc.	Muskingum	sand—building gravel—building	Mum-LB
	Muskingum River Gravel Co.	S & S Aggregate #1	Wayne	sand—asphaltic concrete, road construction/resurfacing	Mum-228
	Zemba Farms, Ltd.	Zemba Brothers, Inc.	Muskingum	gravel—asphaltic concrete, road construction/resurfacing sand—unspecified gravel—unspecified	Mum-Z
	George J. Igel & Co., Inc. William A. Hoffman, Jr.	George J. Igel & Co., Inc. Hoffman Pit	Darby Wayne	gravel—road construction/resurfacing sand—unspecified gravel—unspecified	Pky-C Pky-H
Pickaway	The Melvin Stone Co., LLC	Circleville	Wayne	sand—building, portland cement concrete, asphaltic concrete gravel—building, asphaltic concrete, road construction/resurfacing	Pky-R
	Roy M. Roush	R Farm S & G	Darby	sand—driveway topper gravel—driveways, unspecified	Pky-RR
	Sam's Excavating Unlimited, Inc.	Scioto Aggregates-Sam's Excavating Unlimited	South Bloomfield	sand—building gravel—building	Pky-S
	Westfall Aggregate & Materials, Inc.	Hill Road Pit	Jackson	sand—unspecified gravel—unspecified	Pky-WA
Pike	Hanson Aggregates, LLC	Piketon Sand & Gravel	Scioto	sand—unspecified gravel—unspecified	Pke-24

Portage	South Central Sand & Gravel	South Central Sand & Gravel	Scioto	sand—road construction/resurfacing gravel—road construction/resurfacing	Pke-30
	Ballentine Sand & Gravel, LLC	Ballentine Lake	Shalersville	sand—portland cement concrete gravel—building	Pe-BA
	Beck Sand & Gravel, Inc.	Beck Sand & Gravel, Inc.	Portage, Shalersville	sand—building, portland cement concrete, road construction/ resurfacing, fill, landscape gravel—building, portland cement concrete, road construction/ resurfacing, filtration, landscape	Pe-50
	D & K Materials, Inc.	D & K Materials, Inc.	Brimfield	sand—building, portland cement concrete, asphaltic concrete, masonry gravel—building, road construction/resurfacing	Pe-101
	GANS, Ltd.	Gans, Ltd.	Brimfield	sand—unspecified gravel—unspecified	Pe-102
	Lakeside Sand & Gravel Co.	dba Brimfield Sand & Soils Lakeside Sand & Gravel Co. Plant 1	Shalersville	sand—building, portland cement concrete, asphaltic concrete gravel—building, asphaltic concrete, road construction/resurfacing, landscaping	Pe-LS
	Miller's Sand & Gravel, Inc. Olen Corp.	Solak Miller Sand & Gravel, Inc. Lucky Sand & Gravel Co.	Shalersville Windham Mantua	sand—fill sand—asphaltic concrete, unspecified gravel—building, asphaltic concrete	Pe-A Pe-39 Pe-L
	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Pe-9
	Portage Aggregate & Supply, LLC	Portage Aggregate & Supply, LLC	Shalersville	sand—building, portland cement concrete	Pe-M
	Rockwell Sand & Gravel, Inc.	Suffield Aggregate, LLC	Suffield	gravel—building sand—portland cement concrete, fill gravel—filtration	Pe-R
	S & S Aggregate, Inc.	S & S Aggregate #16	Ravenna	sand—asphaltic concrete, road construction/resurfacing gravel—asphaltic concrete, road construction/resurfacing	Pe-15
	Shelly Materials, Inc.	Jefferson Materials Plant #1302	Streetsboro	sand—portland cement concrete, asphaltic concrete gravel—portland cement concrete	Pe-63
	Sober Sand & Gravel Co.	Shalersville North	Shalersville	sand—building, portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	Pe-La
Preble	Sober Sand & Gravel Co.	Sober Sand & Gravel Co.	Rootstown	sand—building, portland cement concrete, road construction/ resurfacing	Pe-18
	Sunshine Sand Co.	Sunshine Sand Co.	Franklin	gravel—building sand—building gravel—building	Pe-SSC
	Loxley Aggregates, Inc. Thomas Sand & Gravel	Loxley Aggregates, Inc. Howard Thomas	Twin Lanier	sand—building sand—unspecified gravel—unspecified	Pre-9 Pre-T
	U.S. Aggregates, Inc.	U.S. Aggregates/Richmond Plant	Jefferson	sand—building, road construction/resurfacing gravel—building, road construction/resurfacing	Pre-AAC
	Wysong Gravel Co.	Wysong Gravel Co.	Somers	sand—unspecified gravel—unspecified	Pre-4
		Wysong Gravel Co.-West Alexandria Plant	Twin	sand—unspecified gravel—unspecified	Pre-6
	John L. Garber Materials, Inc.	John L. Garber Materials, Inc.	Washington	sand—building gravel—building	Rd-G
Richland	Mid Ohio Resources	Bellville West	Jefferson	sand—building, portland cement concrete gravel—building, road construction/resurfacing	Rd-M1
	S & S Aggregate, Inc.	S & S Aggregate #14	Monroe	sand—asphaltic concrete gravel—asphaltic concrete, road construction/resurfacing	Rd-5

2011 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Ross	Calvins Hauling, Inc.	Calvins Hauling, Inc.	Concord	sand—unspecified gravel—unspecified	Rs-C
	D.G.M., Inc.	Towpath-Warwick	Twin	sand—building, portland cement concrete	Rs-D
	David E. Edgington	Edgington Pit	Concord	gravel—building, portland cement concrete	Rs-E
	Muskingum River Gravel Co.	S & S Aggregate Plant #7	Jefferson	gravel—building	Rs-M
	Mark E. Scott	Scott Pit	Green	sand—asphaltic concrete, road construction/resurfacing	Rs-P
	Shelly Materials, Inc.	Shelly Material, Inc.-Chillicothe	Springfield	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Rs-27
Sandusky	Precision Aggregates III, LLC	Precision Aggregates III, LLC	Sandusky	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	Sy-5
Scioto	D.G.M., Inc.	Tow Path Ready Mix	Morgan	sand—asphaltic concrete	So-DGM
	E. E. Blair Construction Co.	Cab Pit	Porter	sand—building, portland cement concrete	So-98
Shelby	Barrett Paving Materials, Inc.	Hardin Sand & Gravel	Washington	sand—building, portland cement concrete	Shy-SC
		Jones Deposit	Washington	gravel—portland cement concrete, asphaltic concrete, unspecified	Shy-18
		Miami River Quarry #261	Orange	sand—unspecified	Shy-17
		Pence Deposit	Washington	gravel—road construction/resurfacing	Shy-11
		Schmidt Deposit	Washington	sand—unspecified	Shy-SC1
		Staley Pit	Clinton, Salem	gravel—unspecified	Shy-SS
Stark	American Sand & Gravel, Inc.	Plant #4	Jackson	gravel—unspecified	Sk-243
		Plant #6	Jackson	sand—road construction/resurfacing	Sk-RO
		Canton Aggregate Div.	Plain	gravel—road construction/resurfacing	Sk-681
		Central Sand & Gravel Div.	Plain	sand—unspecified	Sk-CA1
		Massillon Washed Gravel Div.	Bethlehem	gravel—unspecified	Sk-607
			Bethlehem	sand—asphaltic concrete, road construction/resurfacing	Sk-MW
	Heiser Sand & Gravel Corp.	Heiser Sand & Gravel Corp.	Jackson	sand—asphaltic concrete, road construction/resurfacing	Sk-HS1
	Massillon Materials, Inc.	Massillon Materials, Inc.	Perry	sand—building	Sk-M
		MMI Warmington Plant	Perry	gravel—building	Sk-M1
				sand—asphaltic concrete, road construction/resurfacing	

Summit	Oster Sand & Gravel, Inc.	Massillon Plant	Jackson, Perry	sand—building, portland cement concrete, asphaltic concrete, fill gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill sand—building gravel—building sand—portland cement concrete, asphaltic concrete gravel—asphaltic concrete, road construction/resurfacing gravel—road construction/resurfacing	Sk-165
	Scassa Asphalt, Inc.	Roio Sand & Gravel	Lawrence		Sk-S
	Shelly Materials, Inc.	Allied Corp., Inc.	Perry		Sk-173
	Tiger Sand & Gravel, LLC	Tiger Sand & Gravel, LLC	Perry		Sk-T
	S & S Aggregate, Inc.	Twin Lakes-S & S Aggregate #9	Coventry	sand—asphaltic concrete gravel—asphaltic concrete, road construction/resurfacing	St-44
	JBM, Ltd.	State Rt. 416 Sand & Gravel	Goshen	sand—building gravel—building	Ts-2018
	Newton Asphalt Paving, Inc.	516	Dover	sand—asphaltic concrete gravel—asphaltic concrete	Ts-2001
	Oster Sand & Gravel, Inc.	Oster Sand & Gravel, Inc.-Bolivar	Sandy	sand—building, portland cement concrete, asphaltic concrete, fill gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	Ts-2036
	Sidco Development, Inc.	Midvale Sand & Gravel	Goshen	sand—portland cement concrete, asphaltic concrete gravel—portland cement concrete, asphaltic concrete	Ts-S2
	Soehnlen Bros. Sand & Gravel, Inc.	Soehnlen Bros. Sand & Gravel, Inc.	Wayne	sand—portland cement concrete, industrial sand gravel—building, road construction/resurfacing	Ts-1826
Warren	Stocker Sand & Gravel Co.	Stocker Sand & Gravel Co.-Gnaden	Clay	sand—building, road construction/resurfacing gravel—building, road construction/resurfacing	Ts-69
		Stocker Sand & Gravel Co.-Island	Clay	sand—building, road construction/resurfacing gravel—building, road construction/resurfacing	Ts-125
	Carl E. Oeder and Sons Sand & Gravel Central Ready Mix, LLC	Carl E. Oeder and Sons Sand & Gravel Carlisle Plant #27	Turtle Creek	sand—building gravel—building	Wan-41
	L & I Natural Resources, Inc.	L & I Pit & Mill	Franklin	sand—building gravel—building	Wan-7
	Little Miami Sand & Gravel	Little Miami Sand & Gravel Plant #1 Little Miami Sand & Gravel Plant #2	Union	sand—building gravel—building	Wan-50
	Martin Marietta Aggregates	Franklin Gravel	Salem Salem Franklin	gravel—unspecified gravel—unspecified gravel—unspecified	Wan-B Wan-46 Wan-38
	Miami View Mining Co., Ltd.	Miami View	Union	sand—unspecified gravel—unspecified	Wan-MV
	Morrow Gravel Co.	Morrow Gravel Co.	Hamilton, Salem	sand—unspecified gravel—unspecified sand—portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, unspecified	Wan-M
	Atlas Towing Co. Briggs Sand & Gravel, Inc.	Belpre Bank Run Briggs Sand & Gravel, Inc.	Belpre Warren	sand—unspecified sand—building gravel—road construction/resurfacing	Wn-54 Wn-508
	Grimes Excavating	Grimes Sand and Gravel	Grandview	sand—building gravel—building	Wn-1008
Washington	Muskingum River Gravel Co. Sharon Stone Co.	Plant #2 Belpre Sand & Gravel	Grandview Belpre	gravel—asphaltic concrete sand—building, portland cement concrete, asphaltic concrete gravel—portland cement concrete, asphaltic concrete	Wn-38 Wn-SS
	Shelly Materials, Inc.	Willow Island	Newport	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, unspecified	Wn-C

2011 OHIO DIRECTORY OF SAND AND GRAVEL MINING OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY (cont.)

County	Name of operator	Name of pit	Township	Type and principal use	State mine number
Washington (cont.)	Trout Sand & Gravel Co.	Trout Sand & Gravel Co.	Warren	sand—unspecified gravel—unspecified	Wn-510
	Olen Corp	The Olen Corp.-Wooster	Franklin, Wooster	sand—portland cement concrete, asphaltic concrete gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing	We-11
	Rupp Construction, Inc.	Rupp Construction, Inc.	Baughman	sand—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, fill	We-7
Williams	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa	gravel—building, portland cement concrete, asphaltic concrete, road construction/resurfacing, filtration	We-15
	St. Joe Sand & Gravel, LLC	St. Joe Sand & Gravel, LLC	Superior	sand—portland cement concrete	Ws-S
	Thiel Construction Co.	Thiel Construction Co.	Superior	sand—unspecified gravel—unspecified gravel—building	Ws-21
Wyandot	JALIP, Ltd.	JALIP, Ltd.	Pitt	sand—pipe bedding	Wt-J
	Kirby's Sand & Gravel, Inc.	Kirby's Sand & Gravel, Inc.	Crane, Eden	sand—building, fill	Wt-17
	National Lime & Stone Co.	Sammet	Antrim	gravel—building, filtration	Wt-N
	Precision Aggregates I, LLC	Precision Aggregates I, LLC	Eden	sand—building, portland cement concrete, asphaltic concrete gravel—fill	
				sand—asphaltic concrete gravel—asphaltic concrete	Wt-4

**2011 SANDSTONE/CONGLOMERATE
COMPANIES WITH SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
Best Sand Corp.	1	547,080	675,549
Briar Hill Stone Co.	3	7,832	7,832
Carmeuse Lime & Stone Inc.	2	237,424	274,597
City Stone, LLC	1	137,659	137,659
IRG Operating, LLC dba Cleveland Quarries	1	5,623	12,172
Johnson Stone Products, Inc.	1	6,530	6,530
Keeney Sand & Stone, Inc.	1	45,379	45,380
Mesenburg Bros., Inc.	1	7,344	7,344
Ohio Basic Minerals, LLC	1	30,000	30,000
Oscar Brugmann Sand & Gravel, Inc.	1	24,472	24,472
The Parry Company, Inc.	1	327	327
Precision Aggregates III, LLC	1	1,803	0
R. W. Sidley, Inc.	1	112,580	180,000
Regeneration Materials	1	2,038	7,425
Riverside Sand & Gravel Co., Inc.	1	253	253
Romig Excavating	1	1,668	1,668
Sidwell Materials, Inc.	1	3,998	3,998
Solomon's Mines, Inc.	1	6,671	6,671
Waller Bros. Stone Co.	1	3,853	3,853
Zollinger Sand & Gravel Co.	1	7,798	7,798
TOTAL: 20 companies	23	1,190,332	1,433,528

2011 OHIO DIRECTORY OF SANDSTONE/CONGLOMERATE MINE OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Gea-N).

County	Name of operator	Name of mine or quarry	Township	Geological unit (age)	Type and principal use	State mine number
Belmont	Sidwell Materials, Inc.	Bellaire Stone	Pultney	unknown Pennsylvanian	crushed or broken stone—riprap	Bt-1190
Carroll	Romig Excavating	Romig Excavating	Monroe	unknown Pennsylvanian	crushed or broken stone—riprap	Cl-R
Columbiana	Solomon's Mines, Inc.	Solomon's Mines, Inc.	Salem	unknown Pennsylvanian	crushed or broken stone—aggregate, construction	Ca-S
Coshocton	Briar Hill Stone Co.	Quarry #32	Monroe	Massillon Sandstone (Pennsylvanian)	dimension stone—rough construction	Cn-686
		Quarry #54	Monroe	Massillon Sandstone (Pennsylvanian)	dimension stone—rough construction	Cn-809
		Quarry #55	Monroe	Massillon Sandstone (Pennsylvanian)	dimension stone—rough construction	Cn-815
Erie	IRG Operating, LLC dba Cleveland Quarries	IRC Operating	Florence	Berea Sandstone (Devonian)	dimension stone—rough construction, rubble, finished stone	Ee-21
Geauga	Best Sand Corp.	Best Sand Corp.	Munson	Sharon conglomerate (Pennsylvanian)	crushed or broken stone—glass sand, construction, industrial, other	Gea-3
	R. W. Sidley, Inc.	Thompson Pit	Thompson	Sharon sandstone (Pennsylvanian)	crushed or broken stone—aggregate, polishing and grinding sand, construction, industrial, other	Gea-1
Huron	Mesenburg Bros., Inc.	Mesenburg Bros., Inc.	Townsend	Berea Sandstone (Devonian)	dimension stone—rough construction	Hrn-8
Knox	Carmeuse Lime & Stone, Inc.	Millwood Plant	Butler, Union	Black Hand Sandstone (Mississippian)	crushed or broken stone—foundry sand, glass sand, construction	Kx-1
Lake	Keeney Sand & Stone, Inc.	Keeney Sand & Stone, Inc.	Leroy	Berea Sandstone (Devonian)	crushed or broken stone—aggregate construction	Lke-K
Lorain	Johnson Stone Products, Inc.	Johnson Stone Products	Camden	Berea Sandstone (Devonian)	dimension stone—rubble, architecture	Ln-J
Mahoning	City Stone, LLC	City Stone, LLC	Milton	Sharon sandstone (Pennsylvanian)	crushed or broken stone—construction	Mg-62
Perry	Carmeuse Lime & Stone, Inc.	Glass Rock Plant	Hopewell	Massillon Sandstone (Pennsylvanian)	crushed or broken stone—foundry sand, glass sand, refractory, silica flour, construction	Py-344
Pike	Ohio Basic Minerals, LLC The Parry Company, Inc.	Scioto Mine Jackson-Grandview Builders	Jackson Jackson	Sharon sandstone (Pennsylvanian) Sharon sandstone (Pennsylvanian)	crushed or broken stone—other crushed or broken stone—other	Pke-O Pke-P
Portage	Oscar Brugmann Sand & Gravel, Inc.	Oscar Brugmann Sand & Gravel, Inc.	Shalersville		crushed or broken stone—construction	Pe-9
Sandusky	Precision Aggregates III, LLC	Precision Aggregates III, LLC	Sandusky		crushed or broken stone—riprap	Sy-5
Scioto	Waller Bros. Stone Co.	Crabtree Quarry	Union	Buena Vista Sandstone (Mississippian)	dimension stone—finished stone	So-76

Summit	Riverside Sand & Gravel Co., Inc.	Riverside Sand & Gravel Co., Inc.	Stow, Tallmadge		dimension stone—rough construction	St-24
Tuscarawas	Regeneration Materials	Dundee Mine	Wayne	Massillon Sandstone (Pennsylvanian)	crushed or broken stone—other	Ts-1660
Wayne	Zollinger Sand & Gravel Co.	Zollinger Sand & Gravel Co.	Chippewa		crushed or broken stone—construction	We-15

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2011 CLAY COMPANIES WITH SALES OR PRODUCTION

Company	No. of operations	Sales (tons)	Production (tons)
A. P. Green Refractories, Inc.	1	2,300	2,300
Bear Creek Clay Co.	1	11,231	11,231
Belden Brick Co.	4	106,071	106,071
Bowerston Shale Co.	1	4,628	4,628
Boyas Excavating, Inc.	1	156	156
Cedar Heights Clay Co.	1	14,739	14,739
D & K Materials, Inc.	1	41	41
East Fairfield Coal Co.	1	61,025	61,025
Envirosafe Services of Ohio, Inc.	1	14,700	0
Friendsville Sand, L.P.	1	1,500	1,500
Joe Simak & Sons Trucking, Inc.	1	704	704
L & M Mineral Co.	1	2,678	2,678
Loxley Aggregates, Inc.	1	390	390
Nuway Services	1	2,475	2,475
Oxford Resource Partners, LP	1	2,842	2,842
Patrick Excavating, Inc.	1	221	221
Rosebud Mining Company	1	80	80
Sandkuhl Clay Works, Inc.	1	305	305
Sober Sand & Gravel Co.	1	5,964	5,964
Soltis Sand & Gravel	1	106	110
State Line Resources, Inc.	1	50,870	50,870
Joseph N. Sypniewski	1	720	720
Valley Clay Mining Co.	1	5,260	5,260
TOTAL: 23 companies	26	289,006	274,310

2011 OHIO DIRECTORY OF CLAY MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Ch-B).

County	Name of operator	Name of mine or quarry	Township	Geological unit (age)	Type and principal use	State mine number
Ashtabula	Joe Simak & Sons Trucking, Inc Joseph N. Sypniewski	North Ridge Pit Sypniewski	Kingsville Trumbull		refractories construction	Asa-18 Asa-SY
Auglaize	Sandkuhl Clay Works, Inc.	Sandkuhl Clay Works, Inc.	Salem	Pleistocene glacial clay	common clay products	Ae-7
Columbiana	Rosebud Mining Company State Line Resources, Inc.	Peters Road State Line Resources, Inc.	Madison Middleton	Lower Kittanning clay (Pennsylvanian)	common clay products common clay products	Sk-BIM Ca-505
Cuyahoga	Boyas Excavating, Inc.	Boyas Excavating, Inc.	Independence	Bedford Shale (Mississippian)	baseball diamonds	Cya-42
Geauga	Soltis Sand & Gravel	Soltis Sand & Gravel	Parkman		landfill	Gea-9
Jackson	A. P. Green Refractories, Inc. Cedar Heights Clay Co.	Boggs/Smith Phillips	Jefferson Madison	Allegheny Group (Pennsylvanian)	refractories common clay products	Jkn-G Jkn-CH3
Licking	Nuway Services	Hopewell	McKean	Pleistocene glacial clay	construction	Lg-NU
Lucas	Envirosafe Services of Ohio, Inc.	Johlin Property Clay Mine	Oregon	Pleistocene glacial clay	landfill	Ls-E
Mahoning	East Fairfield Coal Co.	Withers Petersburg - Surface	Springfield	Pennsylvanian	unspecified	Mg-EF
Medina	Friendsville Sand, L.P.	Klotzsche & Associates	Harrisville		construction	Ma-F
Muskingum	Bowerston Shale Co. Valley Clay Mining Co.	Frazeysburg Spring Pit	Jackson Newton	Flint Ridge & Middle Mercer clays (Pennsylvanian) Tionesta clay (Pennsylvanian)	common clay products common clay products	Mum-776 Mum-904
Perry	Bear Creek Clay Co. Oxford Resource Partners, LP	Salttillo New Lex-North 2	Clayton Clayton	Middle Kittanning clay (Pennsylvanian)	common clay products construction	Py-D1 Py-O2
Portage	D & K Materials, Inc. Patrick Excavating, Inc. Sober Sand & Gravel Co.	D & K Materials, Inc. Patrick Sober Sand & Gravel Co.	Brimfield Charlestown Rootstown		construction construction construction	Pe-101 Pe-P Pe-18
Preble	Loxley Aggregates, Inc.	Loxley Aggregates, Inc.	Twin		construction	Pre-9
Tuscarawas	Belden Brick Co.	Belden Pit	Sugar Creek	Newland-Brookville, Lower Kittanning & Tionesta clays (Pennsylvanian)	common clay products	Ts-1646
		Moonaw Pit	Sugar Creek	Newland-Brookville & Tionesta clays (Pennsylvanian)	common clay products	Ts-1517
		Shanesville Pit	Sugarcreek	Newland-Brookville clay (Pennsylvanian)	common clay products	Ts-1939
		Wallick Pit	Franklin, Wayne	Newland-Brookville & Lower Kittanning clays (Pennsylvanian)	common clay products	Ts-1841
	L & M Mineral Co.	Spring	Mill, Warwick	Lower Kittanning clay (Pennsylvanian)	common clay products	Ts-1982

**2011 SHALE COMPANIES WITH
SALES OR PRODUCTION**

Company	No. of operations	Sales (tons)	Production (tons)
Bear Creek Clay Co.	1	16,339	16,339
Belden Brick Co.	3	243,643	243,643
Bowerston Shale Co.	2	43,204	43,204
CEMEX, Inc.	1	22,151	22,151
D. & D. Mining Co.	2	1,950	1,950
DiGeronimo Aggregates, LLC	1	128,297	161,554
East Fairfield Coal Co.	1	159	159
Glen-Gery Corp.	1	46,068	46,068
Kimble Clay & Limestone Co.	1	100,348	100,348
L & M Mineral Co.	1	21,977	21,977
Lafarge Corp.	1	61,867	54,837
The Logan Clay Products Co.	1	8,150	8,150
Rosebud Mining Company	1	14,445	14,445
Sereday Trucking, Inc.	1	1,500	1,500
Summitville Tiles, Inc.	1	20,232	20,232
Thompson Mining Co.	1	462	462
Walhonding Sand & Gravel	1	3,466	3,466
TOTAL: 17 companies	21	734,258	760,485

2011 OHIO DIRECTORY OF SHALE MINE OPERATORS REPORTING SALES OR PRODUCTION, BY COUNTY

For those mines for which a state mine number has not been assigned, a letter designation is used (example: Kx-K).

County	Name of operator	Name of mine or quarry	Township	Geological unit	Type and principal use	State mine number
Columbiana	D. & D. Mining Co. Rosebud Mining Company Summitville Tiles, Inc.	D. & D. Strip Peters Road Summitcrest, Inc.	Unity Madison Franklin	Conemaugh Group (Pennsylvanian)	construction cement manufacture common clay products	Ca-888 Sk-BIM Ca-SU
Coshocton	Walhonding Sand & Gravel	Walhonding Valley Sand & Gravel	New Castle	Logan Formation (Mississippian)	lightweight aggregate	Cn-WL
Cuyahoga	DiGeronimo Aggregates, LLC	DiGeronimo Aggregates, LLC	Independence	Chagrin Member (Devonian)	lightweight aggregate	Cya-19
Greene	CEMEX, Inc.	Miller, Schieder, Batdorf, Stewart	Bath		cement manufacture	Ge-8
Harrison	Bowerston Shale Co.	Bowerston	Monroe	Conemaugh Group (Pennsylvanian)	common clay products	Hn-152
Licking	Bowerston Shale Co.	Hanover Pit	Hanover	Logan Formation (Mississippian)	common clay products	Lg-501
Mahoning	D. & D. Mining Co. East Fairfield Coal Co.	D. & D. Strip Withers Petersburg - Surface	Springfield Springfield	Allegheny Group (Pennsylvanian) unknown (Pennsylvanian)	construction unspecified	Mg-D Mg-EF
Marion	Glen-Gery Corp.	Iberia Quarry	Tully	Bedford Shale (Mississippian)	common clay products	Mn-7
Muskingum	Thompson Mining Co.	Pleasant Valley Limestone	Hopewell		landfill	Mum-907
Paulding	Lafarge Corp.	Paulding Quarry	Crane	Silica Shale (Devonian)	cement manufacture	Pg-1
Perry	Bear Creek Clay Co. The Logan Clay Products Co.	Salttillo Webb Summit	Clayton Monday Creek	Middle Kittanning (Pennsylvanian)	common clay products common clay products	Py-D1 Py-L
Trumbull	Sereday Trucking, Inc.	Sereday	Brookfield		construction	TL-SE
Tuscarawas	Belden Brick Co.	Belden Pit	Sugar Creek	Newland-Brookville, Lower Kittanning & Tionesta shales (Pennsylvanian)	common clay products	Ts-1646
		Plotner Pit	Sugar Creek	Newland-Brookville shale (Pennsylvanian)	common clay products	Ts-B
		Shanesville Pit	Sugar Creek	Newland-Brookville shale (Pennsylvanian)	common clay products, construction	Ts-1939
	Kimble Clay & Limestone Co. L & M Mineral Co.	Kimble Clay & Limestone Co. Heil	Dover Warwick	unknown (Pennsylvanian)	common clay products common clay products	Ts-K1 Ts-1884

**2011 OHIO DIRECTORY OF SALT MINE AND SALT-BRINING PLANT OPERATORS
REPORTING SALES OR PRODUCTION, BY COUNTY**

County	Name of operator	Name of mine or quarry	Township	Geological unit and product	State mine number
Cuyahoga	Cargill, Incorporated	Cargill Deicing Technology	City of Cleveland	Salina (Silurian)—rock salt	Cya-30
Lake	Morton International, Inc.	Fairport Mine	Painesville	Salina (Silurian)—rock salt	Lke-6
Licking	Royalty Enterprises, Inc. R. H. Penick Co., Ltd.	King #1 R. H. Penick Co.	Madison Newark	“Newburg” (Silurian)—natural brine “Newburg” (Silurian)—natural brine	Lg-4484 Lg-45
Summit	Cargill Salt	Cargill, Inc.	Coventry	Salina (Silurian)—artificial brine	St-9127
Wayne	Morton International, Inc.	Morton Salt Well Field 9129	Milton	Salina (Silurian)—artificial brine	We-9129

MAP OF ACTIVE MINERAL INDUSTRY OPERATIONS IN OHIO 2011

By
Mark E. Wolfe
GIS Database Administration by Joseph G. Wells
GIS Cartography by Dean R. Martin

ABOUT THE MAP

This map is based on operators listed in the 2011 *Report on Ohio Mineral Industries* and is intended for general reference. Locations of mineral extraction operations are approximate and are based on permitting information on file at the Ohio Department of Natural Resources (ODNR), Division of Mineral Resources Management. The letters and numbers opposite the symbols are the state mine numbers assigned to operations listed in the alphabetical directories of the 2011 *Report on Ohio Mineral Industries*. Operator and other information can be accessed by using the state mine number and commodity to refer to the directories of operators reporting sales or production, by county, in the *Report on Ohio Mineral Industries*. Operator information for industrial/mineral operations that reported no production during the year can be accessed by searching the alphabetical directories for the state mine number. An interactive mineral industry map also is available on the ODNR Division of Geological Survey Web site. The interactive map is an improved tool for accessing company and production information and should be used (if available). The *Report on Ohio Mineral Industries* and the interactive map are available via the ODNR Division of Geological Survey Web site at www.ohiogeology.com.

2011 OHIO ECONOMIC GEOLOGY IN BRIEF

Reports were filed in 2011 for 142 coal mining operations, including 5 mines with their own coal-washing facilities. Coal production was reported from 74 of these 142 operations. Reports also were filed for 15 separate coal-washing plants and associated facilities. Of the 549 industrial-mineral-mining operations known to be operating in 2011, 367 operations were reported active. A total of 26 mines reported production of multiple mineral commodities, including coal and/or one or more industrial minerals. There were 365 new wells completed for oil and gas in 2011, of which 335 were productive and 27 were dry.

The total tonnage of coal and industrial minerals produced in Ohio during 2011 was 116,485,488 tons or approximately 10.1 tons per capita. The total value¹ of coal was \$1,194,931,060 in 2011; the value of oil and gas was \$747,714,808 and the total value² of all industrial minerals was \$886,417,044 in 2011. The combined total value of fuel and nonfuel minerals produced in Ohio during 2011 was \$2,829,062,912 or approximately \$245 per capita. Reported and estimated total employment in the extractive industries of Ohio in 2011 was more than 10,000 people.

¹Includes reported and estimated values. Some operations reporting sales did not report a value for those sales. A countywide or statewide average price per ton was calculated for each industrial-mineral commodity based on sales for which the value was reported. A comparable average price per ton was calculated for coal based on sales for which the value was reported and estimated production. These calculated averages were used to estimate the value of the sales for which the actual values were not reported.

2011 Fuel and nonfuel mineral sales and production in Ohio

Commodity	Production ¹	Sales ²	Value ³	Change in value from 2010 (percent)
Coal	27,929,089 tons	26,948,302 tons	\$1,194,931,060	+4.0
Limestone and dolomite	52,710,175 tons	53,588,324 tons	\$476,512,973	+9.2
Sand and gravel	27,742,189 tons	27,301,135 tons	\$178,653,043	+4.5
Salt	5,655,712 tons	5,576,847 tons	\$176,664,764	-16.5
Sandstone and conglomerate	1,433,528 tons	1,190,332 tons	\$42,922,481	+25.0
Clay	274,310 tons	289,006 tons	\$2,424,933	-20.5
Shale	760,485 tons	734,258 tons	\$9,238,850	+9.0
Gas	73,280,858 MCF ⁴	73,280,858 MCF ⁴	\$310,659,568	+14.2
Oil	4,852,964 bbl ⁵	4,852,964 bbl ⁵	\$437,055,240	+22.7

¹The production figures for industrial minerals are estimates. Many operators do not know actual production. Some operators report estimates; other operators do not report any production. For those operators who do report production, production is assumed to equal sales. Timely completion of this report requires that when production and sales information are not available, production figures may be gathered from the ODNR Division of Mineral Resources Management or be estimated or be excluded.

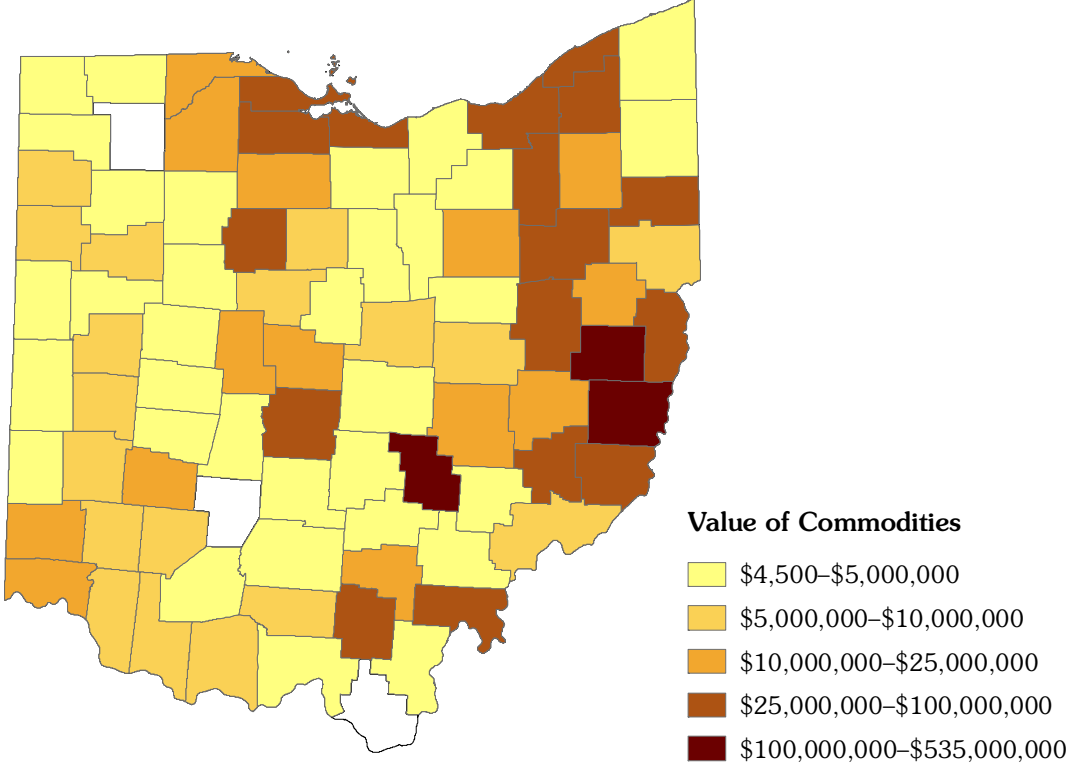
²Includes material for captive use.

³The FOB value of industrial minerals sold was estimated for mines that failed to report this information and for those producing material for captive use. These estimates were calculated using a countywide- or statewide-average price per ton calculated on reported FOB values.

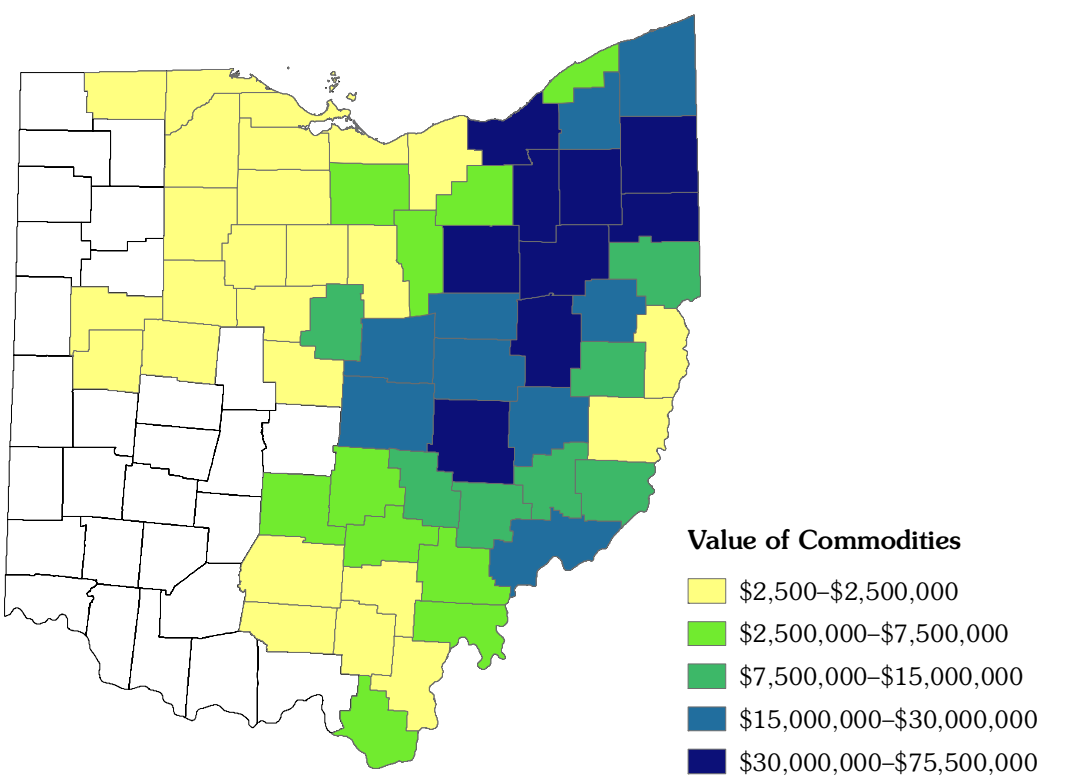
⁴Thousand cubic feet.

⁵Barrels.

⁶Figure not available.



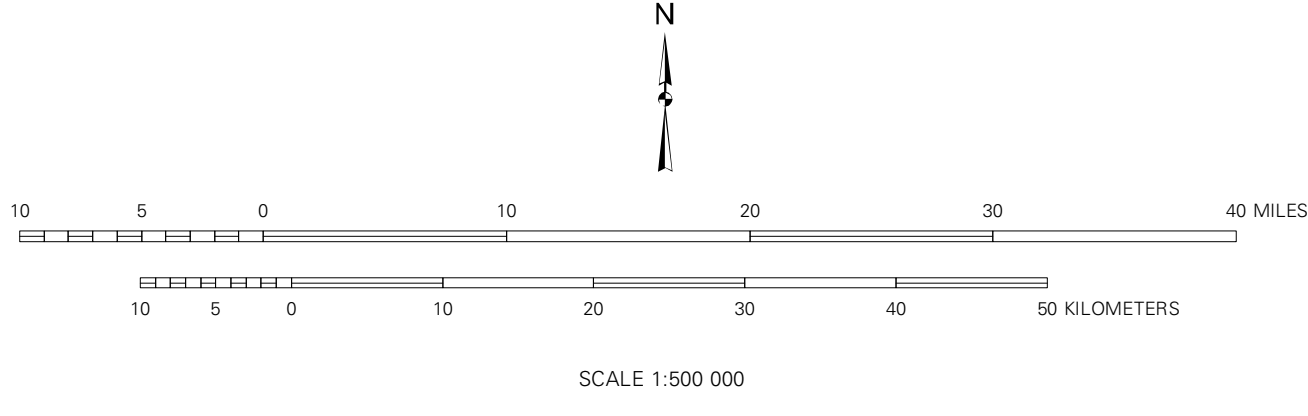
Total value of produced coal and/or industrial minerals in Ohio in 2011, by county.



Total value of oil and gas produced in Ohio in 2011, by county.

EXPLANATION OF SYMBOLS

- Clay and shale
- Multiple commodities
- Limestone and dolomite
- Salt, gypsum, and/or peat
- Sand and gravel
- Sandstone and conglomerate
- Coal, surface
- Coal, underground
- State mine number



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