

DIRECTORY OF PRODUCERS AND CONSUMERS
OF CLAY AND SHALE IN INDIANA

by
HAYDN H. MURRAY

Indiana Department of Conservation
GEOLOGICAL SURVEY
Directory No. 3

1955

STATE OF INDIANA
George N. Craig, Governor

DEPARTMENT OF CONSERVATION
Harley G. Hook, Director

GEOLOGICAL SURVEY
Charles F. Deiss, State Geologist
Bloomington

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INTRODUCTION

This directory is a revision of the section on clays and shales in Directory No. 1, Directory of mineral raw materials, exclusive of oil and gas, in Indiana (Callaghan and Ecker, 1948). In Directory No. 1, 30 operations which are no longer active are listed and 32 active operations are not listed. A directory of clays and shales is needed by producers and consumers to aid in evaluating a particular operation. Information concerning production of underclay and shale by coal companies is given in Directory No. 2, Directory of coal producers in Indiana (Wier, 1951). Two earlier publications, the first by Blatchley (1904) and the second by Whitlatch (1933), described the clay industry in Indiana.

In preparing this directory all clay and shale producers and consumers except foundries have been visited personally since 1950. (See plate 1 for a map of Indiana showing the location of producers and consumers of clay and shale.) During 1954, data sheets containing pertinent information about each operation were sent to plants and mines for checking. The author expresses his thanks to the owners, superintendents, and managers for their cooperation in checking and returning the information. Mr. John M. Smith, geologist in the clay mineralogy laboratory of the Indiana Geological Survey, aided in obtaining and checking the data.

NOMENCLATURE AND STRATIGRAPHY

In general, clays used commercially in Indiana can be classified under one of three types: (1) underclays, (2) shales, and (3) glacial materials.

Underclays are clays lying immediately beneath coal beds of Pennsylvanian age (fig. 1). Refractory underclays are called fireclays in the ceramic industry. Underclays are fine-grained, gray, dense, plastic, and massive and are composed essentially of hydrous aluminum silicate minerals.

Most underclays have a higher Al_2O_3 content and a lower Fe_2O_3 content than other ceramic raw materials found in Indiana. Mineralogically underclays contain a relatively high ratio of kaolinite $[OH]_8Al_4Si_4O_{10}$ to illite $[OH]_4Ky(Mg_4Mg_6Al_4Fe_4)(Si_{8-y}Al_y)O_{20}$ and chlorite $[OH]_4(Si, Al)_8(Mg, Fe)_6O_{20}Mg_4Al_2(OH)_{12}$. Underclays generally are more refractory and fire to a lighter color than shales and glacial clays. The range of temperatures over which most under-












SYSTEM	SERIES			FORMATION	MEMBER
	MID-CONTINENT	APPALACHIAN			
PENNSYLVANIAN	MISSOURI	CONEMAUGH		Merom sandstone 30-70 ft.	
	DES MOINES			Ditney formation 1-35 ft.	
				West Franklin limestone 2-20 ft.	
				Shelburn formation 210-300 ft.	Hayden Branch Murphy's Bluff sandstone Vigo limestone Maria Creek limestone Busseron sandstone
	ALLEGHENY		Dugger formation 90-120 ft.	Coal VII Providence limestone (Universal) Coal VI	
			Petersburg formation 90-120 ft.	Alum Cave limestone Coal V (Petersburg) Coal IVa	
			Linton formation 40-60 ft.	Coal IV (Linton) Coal IIIa	
			Staunton formation 50-70 ft.	Coal III (Seelyville)	
	ATOKA	POTTSVILLE		Brazil formation 75-90 ft.	Coal II (Silverwood) Minshall limestone Minshall coal Upper Block coal Lower Block coal
	MORROW			Mansfield formation 150-300 ft.	
MISSISSIPPIAN	CHESTER			Cypress sandstone 30 ft.	

Figure 1. Generalized stratigraphic column of Pennsylvanian formations in west-central Indiana.

Compiled by C.E. Wier

clays vitrify is 100° F. or more.

Shales, fine-grained, earthy materials that have a layered structure, are the most common rock type found on the earth's surface. They are found in association with coals, limestones, and sandstones.

Ratios of SiO_2 to Al_2O_3 and percentages of K_2O and Fe_2O_3 are higher in shales than in underclays. Shales generally contain a relatively high ratio of the minerals illite and chlorite to kaolinite. Most shales burn to a red color and fire at temperatures 100° to 200° F. lower than those of underclays. The range of temperatures over which shales vitrify is 50° to 100° F. Ceramic products are made from shales of Pennsylvanian and Mississippian age (fig. 2).

Glacial materials are the most variable of commercially used clays in Indiana. These materials can be subdivided on the basis of origin into three types: (1) till, (2) lake deposits, and (3) river deposits. Tills are glacial sediments deposited directly by ice, whereas lake and river deposits were laid down by meltwaters from glaciers. Lake sediments were deposited in lakes associated with a glacier, and river muds were deposited by meltwaters flowing down major drainage channels away from the ice.

Glacial clays contain relatively more CaO , MgO , and Na_2O than do underclays and shales, whereas underclays and shales contain more Al_2O_3 . Glacial clays contain a relatively low percentage of clay minerals and a high percentage of quartz (SiO_2) and feldspar ($\text{NaAlSi}_3\text{O}_8$) and a significant amount of calcite (CaCO_3) and dolomite ($\text{CaMg}(\text{CO}_3)_2$). Glacial clays fire at approximately 100° F. below the temperature for shale, and the vitrification range is short, as for most glacial clays it is less than 50° F. The fired color of glacial clays is variable; generally it is some shade of red or tan.

All underclays are Pennsylvanian in age and are restricted geographically to the southwestern part of the state (pl. 1). Ashley (1899, pp. 85-91) divided the "Coal Measures" into nine divisions. Each division except I and IX contained a coal of economic importance. In general, the lower coals (including Coal II) are found in localized basins in only a few areas of Indiana. In contrast, Coals III to VII underlie extensive areas in continuous thick beds. Most underclays have about the same distribution as the coals.

Commercial underclays in Indiana are mined from beneath the Upper Cannelton coal near Cannelton, the Block coals near Brazil, the Minshall coal near Huntingburg, and Coals III and IIIa near Montezuma, Mecca, and Bloomington. Only underclays from the Minshall coal and Coal IIIa are used in making refractory brick. Others are the raw materials for structural clay products and, at two locations, for pottery. Still other underclays may become raw materials for manufacturing structural clay products, for bonding clays in foundries, and for other more specialized purposes.

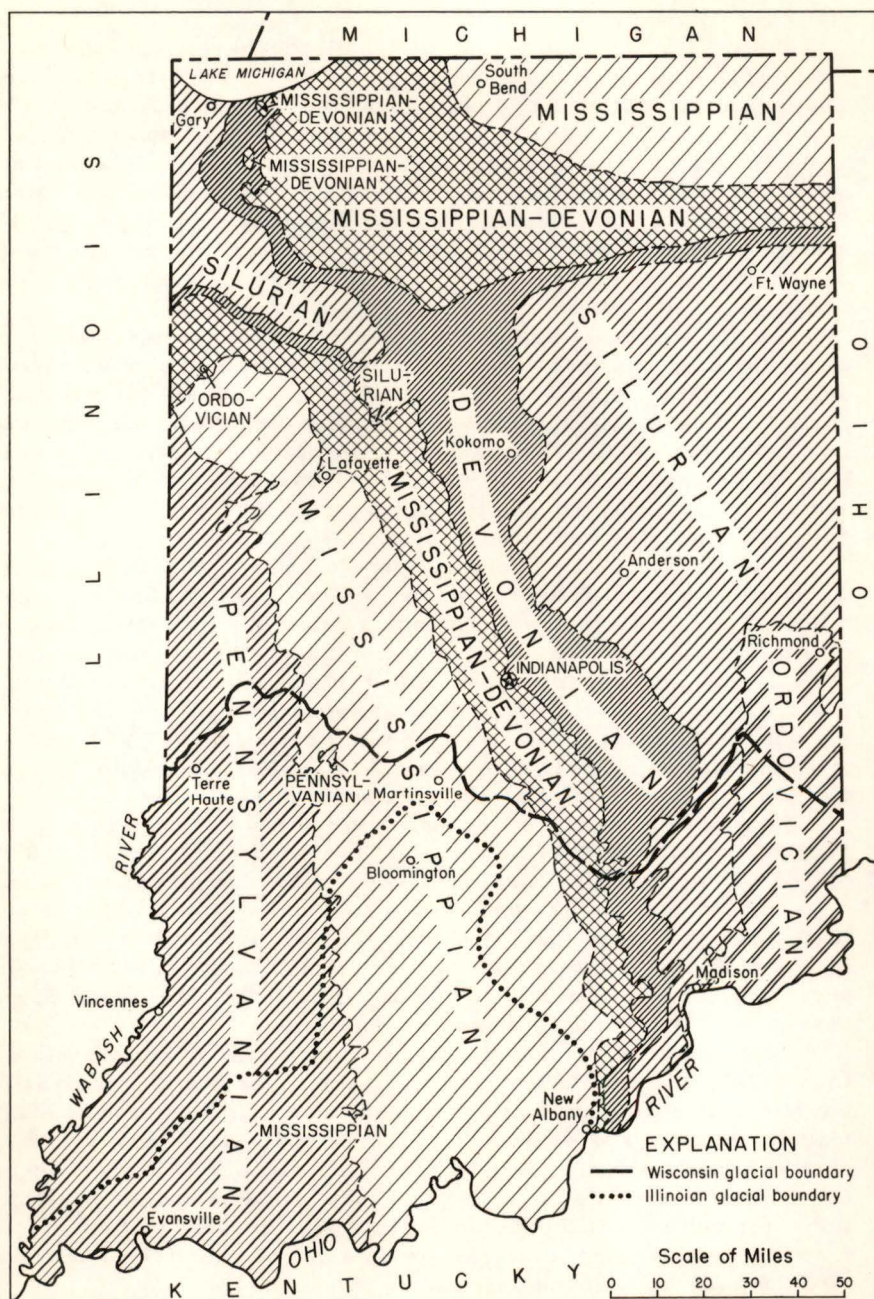


Figure 2. Generalized bedrock map of Indiana.

Compiled by J. B. Patton

Shales that are now used commercially in Indiana are Pennsylvanian and early Mississippian in age (figs. 1 and 2). Some Devonian and Silurian shales also were utilized. Eight plants use shale from the Borden formations (early Mississippian) (fig. 2). Shales are present in every Pennsylvanian formation, but only those from the Mansfield, Brazil, Linton, Dugger, and Shelburn formations are used currently (fig. 1).

In making structural clay products Wisconsin tills are used largely in northern Indiana and Wisconsin lake clays in northwestern Indiana. Similar clay products are manufactured from Wisconsin river clays in three plants in the Ohio Valley and from Illinoian till at a plant in Batesville (pl. 1).

PRODUCTION AND USES

In the latest report of the U. S. Bureau of Mines, 397,336 short tons of underclay valued at \$732,025 and 933,956 short tons of shales and glacial clays valued at \$968,184 were produced in Indiana in 1952. The total value for clay and shale was \$1,700,209. Annual production in tons increased 30 times for underclays and 40 times for shales and glacial clays from 1938 through 1952 (figs. 3 and 4). Most ceramic plants in Indiana reflect this startling expansion in production since World War II.



Figure 3. Graph showing annual production of underclay in Indiana, 1938-1952.

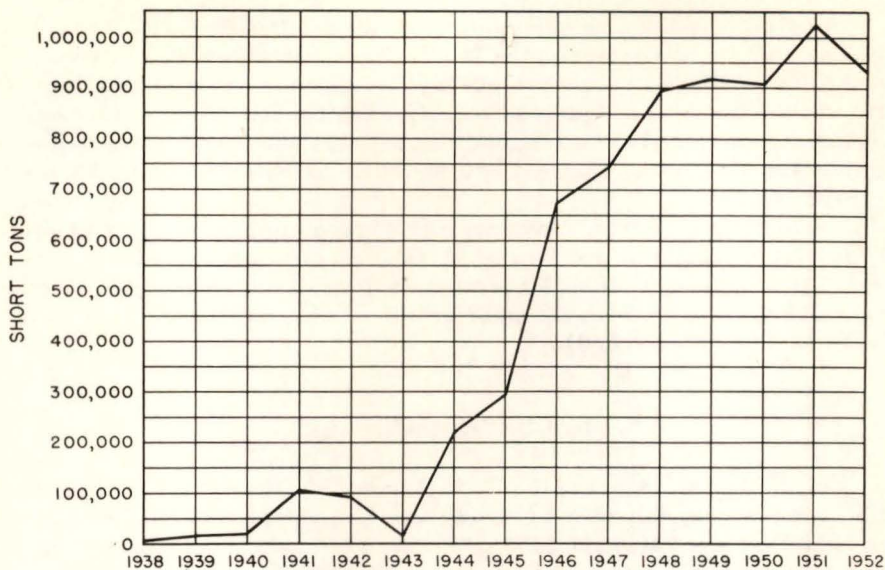


Figure 4. Graph showing annual production of shale and glacial clay in Indiana, 1938-1952.

Indiana's clays and shales are manufactured into many products. Any single clay material is not satisfactory for all purposes, as the requirements for some products are specific and limited. Many clays can be used for structural clay products which do not require rigid specifications (see table below).

Raw materials used in making ceramic products in Indiana

Product	Fireclay	Shale	Glacial clay
Refractory brick	X		
Pottery	X		
Cement		X	
Structural tile	X	X	
Farm drain tile	X	X	X
Face brick	X	X	
Back-up brick		X	X
Sewer pipe	X	X	
Flue linings	X		X
Conduit pipe	X		
Paving brick		X	
Insulators	X	X	
Lightweight aggregate		X	

PRODUCERS AND CONSUMERS OF CLAY AND SHALE

1. Adams Clay Products Company
Martinsville

Pit location: Morgan County

Half a mile southwest of Brooklyn on Highway 67

NE1/4SW1/4 sec. 34, T. 13 N., R. 1 E.

Owner: corporation

General manager: James A. Cunningham

Products: face brick

Fired colors: buff and red

Fired temperature: 2150° F. (buff) and 1850° F. (red)

Type of kiln: periodic and continuous

Capacity: 90,000 units daily

Employees: 70

Raw material: Borden shale from captive pit and underclay purchased
from Brazil area

2. Albion Tile Company
Albion

Pit location: Noble County

NW1/4SE1/4 sec. 24, T. 34 N., R. 9 E.

Owner and general manager: Fred Landgraff

Products: drain tile

Fired color: light red

Fired temperature: 1800° F.

Type of kiln: periodic

Capacity: 15,000 units per year

Employees: 5

Raw material: glacial till

3. American Art Clay Company, Inc.
Speedway City, Marion County

Owner: corporation

General manager: T. O. Philpott

Products: modeling clay, crayons, chalks, and other special art
products

Fired color: buff

Fired temperature: 1900° to 2381° F.

Type of kiln: periodic

Employees: 200

Raw material: Minshall underclay purchased from Huntingburg and
imported domestic clays

4. American Radiator and Standard Corporation

Kokomo, Howard County

Owner: corporation

General manager: V. S. Schory

Products: tanks, bowls, lavatories, and urinals

Fired colors: white and seven colors

Fired temperature: 2200° F.

Type of kiln: continuous

Capacity: 1,200 pieces per day

Employees: 289

Raw material: imported domestic and foreign clays

5. American Vitriified Products Company

Brazil, Clay County

Owner: corporation

General manager: Charles Wilson

Products: sewer pipe, flue liners, and glazed drain tile

Fired color: tan

Fired temperature: 2050° to 2100° F.

Type of kiln: periodic

Capacity: 3,000 tons per month

Employees: 140

Raw material: Upper Brazil Block underclay and Borden shale from
Crawfordsville

6. Arketex Ceramic Corporation

Brazil, Clay County

Pit location: Vermillion County

2 miles south of Newport

SE1/4SE1/4 sec. 10, T. 16 N., R. 9 W.

Pit manager: J. Britton

Employees: 6

Capacity: 125 tons per day

Raw material: underclay of Coal IIIa

7. Arketex Ceramic Corporation Plant No. 2

Brazil, Clay County

Owner: corporation; John Stelle, Chairman of the Board

John A. Stelle, President

Production manager: Ralph Weston

Ceramist: Ross Evans

Products: ceramic glazed structural tile

Fired color: buff

Fired temperature: 2040° F.

Type of kiln: continuous

Capacity: 260 tons per day

Employees: 150

Raw material: underclay of Coal IIIa from captive pit and Upper Block
underclay purchased from Brazil area

8. Arketex Ceramic Corporation Plant No. 3

Brazil, Clay County

Owner: corporation; John Stelle, Chairman of the Board

John A. Stelle, President

Production manager: Ralph Weston

Ceramist: Ross Evans

Products: ceramic glazed structural tile

Fired color: buff

Fired temperature: 2040° F.

Type of kiln: continuous

Capacity: 350 tons per day

Employees: 300

Raw material: underclay of Coal IIIa from captive pit and Upper Block
underclay purchased from Brazil area

9. Arketex Ceramic Corporation Plant No. 4

Brazil, Clay County

Owner: corporation; John Stelle, Chairman of the Board

John A. Stelle, President

Production manager: Ralph Weston

Ceramist: Ross Evans

Products: ceramic glazed structural tile

Fired color: buff

Fired temperature: 2040° F.

Type of kiln: continuous

Capacity: 100 tons per day

Employees: 100

Raw material: underclay of Coal IIIa from captive pit and Upper Block
underclay purchased from Brazil area

10. Art Chemical Products, Inc.

Huntington, Huntington County

Owners: G. J. Bippus, W. H. Ball, and W. V. Clipp

General manager: G. J. Bippus

Products: modeling clay

Employees: 18

Raw material: imported domestic clays

11. Ayer-McCarel-Reagen Clay Company

Carbon, Clay County

P. O. address: Brazil

Owner: corporation

16 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

General manager: J. C. Hutchinson

Products: building tile and special tile for sewage disposal plants

Fired color: buff

Fired temperature: 2050° F.

Type of kiln: periodic

Capacity: 100 tons per day

Employees: 38

Raw material: Upper Block underclay purchased from Brazil area

12. Big Bend Collieries

Box 293, Brazil

Pit location: Clay County

Two strip pits near Asherville and Billville

Owner: corporation

General manager: Milton Goodman

Products: clay, coal, and shale

Employees: 150

Capacity: 5,000 to 6,000 tons per month

Raw material: Upper Block underclay and shale

13. Bloomfield Brick Company

Bloomfield

Pit location: Greene County

On east edge of Bloomfield

SE1/4NE1/4 sec. 23, T. 7 N., R. 5 W.

Owner: corporation

General manager: H. Sparks

Products: face brick and common brick

Fired color: red

Fired temperature: 1850° F.

Type of kiln: periodic

Capacity: 60,000 units per day

Employees: 50

Raw material: shale from Mansfield formation

14. Boonville Clay Products, Inc.

Boonville

Pit location: Warrick County

On east edge of Boonville

SE1/4SE1/4 sec. 25, T. 5 S., R. 8 W.

Owner and general manager: John E. Richard

Products: building tile, drain tile, and face brick

Fired color: red

Fired temperature: 2200° F.

Type of kiln: periodic

Capacity: 20,000 units per day

Employees: 10 to 15

Raw material: shale above Coal V

15. Brazil Clay Company Plant No. 1

Box 331, Brazil, Clay County

Owner: corporation

Leo Girton, President

General manager: George Barnhardt

Products: face brick

Fired colors: buff, gray, tan, and brown

Fired temperature: 1900° F. (average); varies from 1860° to 1960° F.

Type of kiln: periodic

Capacity: 55,000 to 65,000 units per day

Employees: 80

Raw material: Upper Block underclay purchased from Brazil area

16. Brazil Clay Company Plant No. 2

Box 331, Brazil, Clay County

Owner: corporation

Leo Girton, President

General manager: George Barnhardt

Products: face brick

Fired colors: buff, gray, tan, and brown

Fired temperature: 1900° F. (average); varies from 1860° to 1960° F.

Type of kiln: periodic

Capacity: 40,000 to 50,000 units per day

Employees: 40

Raw material: Upper Block underclay purchased from Brazil area

17. Brazil Hollow Brick and Tile Company, Inc.

Brazil, Clay County

Owner: corporation

General manager: John Price

Products: telephone conduit tile

Fired color: buff

Fired temperature: 2000° F.

Type of kiln: periodic

Capacity: 100 tons per day

Employees: 100

Raw material: Upper Block underclay purchased from Brazil area

18. Bremen Clay Products Company

Bremen

Pit location: Marshall County

18 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

3 miles southwest of Bremen
SE1/4NE1/4 sec. 9, T. 34 N., R. 3 E.
Owners: T. J. Thomas and K. Thomas
General manager: T. J. Thomas
Products: farm drain tile, building tile, and common brick
Fired color: light tan to red
Fired temperature: 1850° F.
Type of kiln: periodic
Capacity: 2 kilns per week
Employees: 6 to 10
Raw material: Pleistocene lake clay

19. Brooklyn Brick Company, Inc.
Brooklyn
Pit location: Morgan County
South edge of Brooklyn
NE1/4NE1/4 sec. 35, T. 13 N., R. 1 E.
Owner: corporation
General manager: Oliver D. Webb
Products: face and common brick, modular and standard size Roman,
Norman and SCR brick
Fired color: red
Fired temperature: 1880° F.
Type of kiln: periodic
Capacity: 65,000 units per day
Employees: 60
Raw material: Borden shale

20. Brown Coal Company
R. R. 2, Centerpoint
Pit location: Clay County
2 1/2 miles south of junction of Indiana Highways 46 and 59
NW1/4SW1/4 sec. 32, T. 11 N., R. 6 W.
Owner and general manager: William Brown and Son
Products: coal and clay
Employees: 5
Capacity: 700 to 1,500 tons per month
Raw material: Upper Block underclay

21. Cannelton Sewer Pipe Company
Cannelton
Mine location: Perry County
1 mile northeast of Cannelton
SW1/4SE1/4 sec. 3, T. 7 S., R. 3 W.
Owner: corporation
E. F. Clemens, President

General manager: E. C. Clemens

Products: sewer pipe, flue linings, wall coping

Fired color: tan

Fired temperature: 2100° F.

Type of kiln: periodic

Capacity: 150 tons per day

Employees: 130

Raw material: Cannelton underclay and shale (Mansfield formation)

22. Cayuga Brick and Tile Corporation

Bloomingtondale, Parke County

Pit location: Parke County

NE1/4NE1/4 sec. 9, T. 16 N., R. 8 W.

Manager: Herbert Miller

Employees: 4

Capacity: 50,000 tons per year

Raw material: underclay of Coals III and IIIa

23. Cayuga Brick Corporation

Cayuga

Pit location: Vermillion County

South of Cayuga

NW1/4NE1/4 sec. 7, T. 17 N., R. 9 W.

Owner: corporation

General manager: Ray Koester

Products: brick and tile

Fired colors: red and buff

Fired temperature: 2000° F.

Type of kiln: periodic

Capacity: 85 to 100 tons per day

Employees: 30

Raw material: underclay of Coals III and IIIa purchased near Bloomingtondale and shale from Staunton formation from captive pit

24. Clay City Pipe Company

Box 161, Rockville

Pit and plant location: Mecca, Parke County

On south edge of Mecca

NE1/4SE1/4 sec. 20, T. 15 N., R. 8 W.

Owner: corporation

General manager: H. D. Cumings

Superintendent: Paul Insley

Products: sewer pipe

Fired color: tan

Fired temperature: 2100° F.

20 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

Type of kiln: periodic
Capacity: 90 tons per day
Employees: 85
Raw material: underclay of Coals III and IIIa purchased near Bloom-
ingdale and shale above Coal IIIa from captive pit

25. Clay City Pipe Company
Box 127, Montezuma
Pit and plant location: Vermillion County
Half a mile west of Montezuma
SE1/4SE1/4 sec. 27, T. 16 N., R. 9 W.
Owner: corporation
General manager: H. D. Cumings
Superintendent: Paul Insley
Products: fire brick, face brick, flue lining
Fired color: buff
Fired temperature: 2000° F.
Type of kiln: periodic
Capacity: 90 tons per day
Employees: 25
Raw material: underclay of Coal IIIa

26. Clay City Pottery
Clay City, Clay County
Owner and general manager: Lloyd Griffith
Products: flower pots, stoneware, jugs, crocks, bird baths, garden
ware, etc.
Fired color: buff
Fired temperature: 2150° to 2180° F.
Type of kiln: periodic
Capacity: 40,000 units per year
Employees: 5
Raw material: Upper Block underclay purchased from Brazil area

27. Crown Potteries Company, Inc.
Evansville, Vanderburgh County
Owner: corporation
General manager: L. A. Lundquist
Products: dinnerware and miscellaneous pieces
Fired color: white
Fired temperature: 2000° F.
Type of kiln: continuous
Capacity: 102,000 units per week
Employees: 190
Raw material: domestic and foreign clays

28. Dee Clay Products Company, Inc.

Bloomingtondale, Parke County

Owner: corporation

General manager: Herbert Miller

Products: drain tile, sewer pipe, flue linings

Fired colors: red and buff

Fired temperature: 1900° F.

Type of kiln: periodic

Capacity: 50 tons per day

Employees: 50

Raw material: underclay of Coals III and IIIa purchased near Bloomingtondale

29. Durham and Heidbrieder Clay Company

Cayuga

Pit location: West Union, Parke County

NW1/4NW1/4 sec. 8, T. 16 N., R. 8 W.

Owners and general managers: Russell Durham and Fred Heidbrieder

Employees: 7

Capacity: 150 tons per day

Raw material: underclay of Coals III and IIIa

30. Engle Studio, Inc.

Newburgh, Warrick County

Owners: Mr. and Mrs. Walter Messich

General manager: Walter Messich

Products: decorative art ware

Fired colors: all colors

Fired temperature: 2000° F.

Type of kiln: periodic

Capacity: 100 units per day

Employees: 9

Raw material: imported domestic clays

31. Francesville Drain Tile Company

Francesville

Pit location: Pulaski County

Half a mile north of Francesville

SE1/4NE1/4 sec. 33, T. 30 N., R. 4 W.

Owner: E. C. Overmyer and Sons

General manager: E. C. Overmyer

Products: drain tile

Fired color: tan

Fired temperature: 1700° F.

Type of kiln: periodic

Capacity: 4,000 tons per year

22 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

Employees: 7

Raw material: Pleistocene till

32. G. and F. Coal Company

Brazil

Pit location: three pits in Clay and Parke Counties

Owner and general manager: Leo Girton

Products: coal, underclay, and shale

Employees: 30

Capacity: 500 tons per day

Raw material: Upper Block underclay and shale

33. Gill Clay Pottery Company

Muncie, Delaware County

Owner: corporation

General manager: John H. Gill

Products: refractory glass pots, lids, and furnace linings

Fired color: buff (glass pots unfired)

Fired temperature: 2400° F.

Type of kiln: periodic

Capacity: 50 pots per month

Employees: 30 to 50

Raw material: imported domestic and foreign clays

34. Hannell Pottery Company

R. R. 2, Chesterton, Porter County

Owners and general managers: Mr. and Mrs. Venol Hannell

Products: pottery

Fired colors: buff, white, and red

Fired temperature: 1800° to 2000° F.

Type of kiln: periodic

Capacity: 25 to 50 units per week

Employees: 2

Raw material: imported domestic clays

35. Harbison-Walker Refractory Company

East Chicago, Lake County

Owner: corporation

General manager: F. M. Hiles

Products: refractory brick

Type of kiln: continuous

Capacity: 300 tons per day

Employees: 200

Raw material: imported ganister

36. Huntingburg Brick Company
Huntingburg

Pit and mine location: Dubois County

Half a mile southwest of Huntingburg

NE1/4SE1/4 sec. 33, T. 2 S., R. 5 W.

Owner and general manager: Mrs. G. C. Landgrebe

Products: fire brick, face brick, and common brick

Fired colors: buff and red

Fired temperature: 1960° F. for buff-colored and 1900° F. for red-colored

Type of kiln: periodic

Capacity: 21,000 units per day

Employees: 30

Raw material: underclay of Minshall coal and shale above Minshall coal

37. Hydraulic Press Brick Company
Crawfordsville

Pit location: Montgomery County

Half a mile north of Crawfordsville

NW1/4NW1/4 sec. 29, T. 19 N., R. 4 W.

Owner: corporation

General manager: R. Z. Strouse

Products: brick

Fired colors: buff and red

Fired temperature: 1850° F.

Type of kiln: periodic

Capacity: 60,000 units per day

Employees: 60

Raw material: Borden shale from captive pit and underclay of Coals III and IIIa purchased in Bloomingdale area

38. Indiana Drain Tile Company
Brooklyn

Pit location: Morgan County

Half a mile south of Brooklyn

NW1/4NW1/4 sec. 36, T. 13 N., R. 1 E.

Owners: J. M. Powell Heirs

General manager: O. E. Powell

Products: building tile, drain tile, back-up tile, and facing tile

Fired color: red

Fired temperature: 1800° F.

Type of kiln: periodic

Capacity: 80 tons per day

Employees: 43

Raw material: Borden shale

24 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

39. Indiana State Farm

Putnamville

Pit location: Putnam County

1 mile south of State Police Station on U. S. Highway 40
NW1/4SE1/4 sec. 19, T. 13 N., R. 4 W.

Owner: state of Indiana

General manager: R. Cramer

Products: brick

Fired color: red

Fired temperature: 1860° F.

Type of kiln: periodic

Capacity: 35,000 units per day

Employees: 60 to 100

Raw material: shale from Mansfield formation

40. Inman Tile Company

R. R. 4, Hartford City

Pit location: Blackford County

1 3/4 miles west of Mill Grove

NW1/4SE1/4 sec. 31, T. 23 N., R. 11 E.

Owner and general manager: Neil Inman

Products: farm drain tile and back-up tile

Fired color: light red

Fired temperature: 1750° F.

Type of kiln: periodic

Capacity: 2 kilns per month

Employees: 7

Raw material: glacial till

41. Jackson Brick and Hollow Ware Company

Brownstown

Pit location: Jackson County

Northeast edge of Brownstown

SW1/4NE1/4 sec. 11, T. 5 N., R. 4 E.

Owner: corporation

General manager: James Heller

Products: drain tile, brick, back-up tile, building tile

Fired color: red

Fired temperature: 1800° F.

Type of kiln: periodic

Capacity: 75 tons per day

Employees: 30

Raw material: Borden shale

42. Jones Tile Company

Berne

Pit location: Adams County

East side of Berne

NE1/4SE1/4 sec. 33, T. 26 N., R. 14 E.

Owner and general manager: Rawley D. Jones

Products: farm drain tile

Fired color: light red

Fired temperature: 1750° F.

Type of kiln: periodic

Capacity: 25 kilns per year

Employees: 5

Raw material: glacial till

43. Kalamazoo Clay Company

Carbon, Clay County

Owner: corporation

General manager: George MacFarland

Products: building tile, silo tile, acid tank tile

Fired colors: brown, buff, and gray

Fired temperature: 2050° to 2100° F.

Type of kiln: periodic

Capacity: 50 tons per day

Employees: 45

Raw material: Upper Block underclay purchased from Brazil area

44. Klopfenstein Tile Company

Grabill

Pit location: Allen County

South edge of Grabill

SE1/4NE1/4 sec. 25, T. 32 N., R. 13 E.

Owner and general manager: Aaron Klopfenstein

Products: farm drain tile

Fired color: light red

Fired temperature: 1750° F.

Type of kiln: periodic

Capacity: 8 kilns per year

Employees: 5

Raw material: glacial till

45. Kokomo Sanitary Pottery Company

Kokomo, Howard County

Owner: corporation

General manager: Frank Burley

Products: bowls, lavatories, and tanks

Fired color: white

Fired temperature: 2450° F.

Type of kiln: continuous

26 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

Capacity: 1,000 units per day
Employees: 195
Raw material: imported domestic and foreign clays

46. Kretz Brick Company

Washington

Pit location: Daviess County

Half a mile south of Montgomery

NE1/4NW1/4 sec. 35, T. 3 N., R. 6 W.

Owners: E. A. and J. H. Kretz

General manager: E. A. Kretz

Products: drain tile, building tile, brick

Fired colors: buff and red

Fired temperature: 1800° F. (red) and 1900° F. (buff)

Type of kiln: periodic

Capacity: 6,000 units per day

Employees: 13

Raw material: underclay of Coal IVa, shale above Coal IVa, and Illinoisian glacial till

47. Krick-Tyndall Company

Decatur

Pit location: Adams County

1 mile southwest of Decatur

NE1/4NE1/4 sec. 9, T. 27 N., R. 14 E.

Owner: corporation

General manager: V. M. Krick

Products: farm drain tile

Fired color: red

Fired temperature: 1900° F.

Type of kiln: periodic

Capacity: 750 tons per week

Employees: 90

Raw material: glacial till

48. Lehigh Cement Company

Mitchell, Lawrence County

Pit location: Jackson County

2 1/2 miles east of Brownstown

SW1/4NW1/4 sec. 6, T. 5 N., R. 5 E.

Owner: corporation

General manager: John Pillman

Capacity: 400 tons of shale per day

Raw material: Borden shale

49. Log Cabin Coal Company

316 East Vermont, Brazil

Pit locations: Clay County (one north of Brazil and one east of Asher-ville)

Owner: corporation

General manager: James Eden

Products: underclay of Upper and Lower Block coal

Capacity: 10,000 tons per month

Employees: 12

50. Lone Star Cement Corporation

Box 482, Greencastle, Putnam County

Owner: corporation

General manager: J. J. Van Alstyne

Capacity: 100 tons per day

Raw material: shale above Upper Block coal purchased in Brazil area

51. Loogootee Clay Products Corporation

Loogootee

Pit location: Martin County

East edge of Loogootee

NW1/4NW1/4 sec. 19, T. 3 N., R. 4 W.

Owner: corporation

General manager: Walter X. Brown

Products: drain tile, building tile, and brick

Fired color: red

Fired temperature: 1900° F.

Type of kiln: periodic

Capacity: 75,000 units per week

Employees: 35

Raw material: shale from Brazil formation

52. Louisville Cement Company

Speed

Pit location: Clark County

3 1/2 miles northwest of Speed

NE1/4 donation 148 (Clark Military Grant)

Owner: corporation

General manager: Arthur Beckel

Capacity: 250 tons per day

Raw material: Borden shale

53. Louisville Pottery Company

Louisville, Ky.

Mine location: Dubois County

Southwest edge of Huntingburg

NW1/4SE1/4 sec. 4, T. 3 S., R. 5 W.

Owner: corporation

John B. Taylor, President

General manager: Charles Rafferty

Products: stoneware

Fired color: buff

Fired temperature: 2250° F.

Type of kiln: periodic and continuous

Capacity: 100 tons per month

Employees: 65

Raw material: underclay of Minshall coal

54. Majenica Tile Company

R. R. 5, Huntington

Pit location: Huntington County

Southeast edge of Majenica

SW1/4NE1/4 sec. 30, T. 27 N., R. 10 E.

Owner and general manager: Joe Mills

Products: farm drain tile

Fired color: light red

Fired temperature: 1700° F.

Type of kiln: periodic

Capacity: 40 kilns per year

Employees: 7

Raw material: glacial till

55. Martin Tile Company

Dunkirk

Pit location: Jay County

SW1/4NW1/4 sec. 8, T. 22 N., R. 12 E.

Owners and general managers: Martin Brothers

Products: farm drain tile, building tile, and brick

Fired color: red

Fired temperature: 1800° F.

Type of kiln: periodic

Capacity: 200 tons per month

Employees: 6

Raw material: glacial till

56. Martinsville Brick Company

Martinsville, Morgan County

Owner: Poston Brick and Concrete Products, Springfield, Ill.

General manager: T. D. Fleming

Products: brick

Fired color: buff

Fired temperature: 1900° F.

Type of kiln: periodic
 Capacity: 50,000 units per day
 Employees: 40
 Raw material: Upper Block underclay purchased from Brazil area

57. Maumee Collieries Company
 Terre Haute, Vigo County
 Pit location: Owen County
 Southwest edge of Coal City
 SE1/4SE1/4 sec. 11, T. 9 N., R. 6 W.
 Owner: corporation
 Hugh B. Lee, President
 General manager: Hugh B. Lee
 Products: Upper Block coal and underclay
 Capacity: 1,500 tons of clay per day

58. McCool Loam Company
 Chesterton
 Pit location: Porter County
 1 mile west of junction of Indiana Highway 149 and U. S. Highway 20
 NW1/4NW1/4 sec. 5, T. 36 N., R. 6 W.
 Owner and general manager: C. O. Johnson
 Products: pottery and furnace-lining clays
 Employees: 2
 Capacity: two railroad cars per week
 Raw material: glacial lake clay

59. Medaryville Tile Company
 Medaryville
 Pit location: Pulaski County
 Southeast edge of Medaryville
 NE1/4SW1/4 sec. 4, T. 30 N., R. 4 W.
 Owner and general manager: Glen A. Howe
 Products: farm drain tile
 Fired color: red
 Fired temperature: 1700° F.
 Type of kiln: periodic
 Capacity: 10,000 units per week
 Employees: 7
 Raw material: glacial till

60. Medora Brick and Tile Company
 Medora
 Pit location: Jackson County
 1 mile north of Medora

NE1/4NE1/4 sec. 27, T. 5 N., R. 3 E.

Owner: corporation

General manager: James Heller

Products: face brick and back-up brick

Fired color: red

Fired temperature: 1800° F.

Type of kiln: periodic

Capacity: 54,000 units per day

Employees: 50

Raw material: Borden shale

61. Midwest Aggregates, Inc.

Brooklyn

Pit location: Morgan County

Half a mile southwest of Brooklyn

SE1/4NE1/4 sec. 35, T. 13 N., R. 1 E.

Owner: corporation

General manager: W. G. Brierley, Jr.

Products: expanded shale

Type of kiln: rotary

Capacity: 350 cu. yds.

Employees: 20

Raw material: New Providence shale

62. Natco Corporation

Brazil, Clay County

Owner: corporation

General manager: Roy Hunter

Products: sewer tile and flue tile

Fired color: brown

Fired temperature: 2100° F.

Type of kiln: periodic

Capacity: 100 tons per day

Employees: 100

Raw material: Upper Block underclay purchased in Brazil area

63. Natco Corporation

Hobart

Pit location: Lake County

NW1/4SW1/4 sec. 20, T. 36 N., R. 7 W.

Owner: corporation

General manager: L. E. Matheny

Products: building tile, drain tile, brick

Fired color: light red

Fired temperature: 1850° F.

Type of kiln: periodic

Capacity: 200 tons per day
Employees: 65
Raw material: glacial lake clay

64. National Brick Company
3150 West Touhy Avenue, Chicago, Ill.
Pit and plant location: Maynard, Lake County
NE1/4SW1/4 sec. 31, T. 36 N., R. 9 W.
Owner: corporation
General manager: Jack Oehmke
Products: common brick
Fired color: salmon
Fired temperature: 1800° F.
Type of kiln: periodic
Capacity: 300,000 units per day
Employees: 120
Raw material: glacial lake clay

65. National Tile and Manufacturing Company
Anderson, Madison County
Owner: corporation
General manager: Richard B. Alexander
Products: floor and wall tile
Fired colors: white and red
Fired temperature: 2100° F.
Type of kiln: continuous
Capacity: 20,000 to 25,000 sq. ft. per day
Employees: 350
Raw material: imported domestic clays

66. Oriental Brick Company
Crawfordsville
Pit location: Montgomery County
North edge of Crawfordsville
NE1/4NE1/4NW1/4 sec. 28, T. 19 N., R. 4 W.
Owner: corporation (American Vittrified)
General manager: George Pocok
Products: brick
Fired colors: red and buff
Fired temperature: 1840° F.
Type of kiln: periodic
Capacity: 45,000 units per day
Employees: 45
Raw material: Borden shale from captive pit and underclay of Coals
III and IIIa purchased near Bloomington

67. Peerless Pottery, Inc.

Evansville, Vanderburgh County

Owner: corporation

General manager: Charles S. Weaver

Products: sanitary ware

Fired color: white

Fired temperature: 2200° F.

Type of kiln: continuous

Capacity: 512 units per day

Employees: 130

Raw material: imported domestic and foreign clays

68. Poston and Herron Brick Company

Attica

Pit location: Fountain County

Half a mile east of Attica

SW1/4SW1/4 sec. 32, T. 22 N., R. 7 W.

Owners: Floyd Poston, W. I. Poston, and F. P. Herron

General manager: Floyd Poston

Products: brick

Fired color: red

Fired temperature: 1800° to 1850° F.

Type of kiln: periodic

Capacity: 30,000 units per day

Employees: 40

Raw material: Borden shale

69. Quality Coal Company

Brazil

Pit locations: Clay County near Cardonia and Perth

Owner: corporation

General manager: Carl F. Kumpf (President)

Products: Upper Brazil Block coal and underclay

Capacity: 65,000 tons of clay per year

Employees: 60

70. Rockport Drain Tile Company

Rockport

Pit location: Spencer County

Half a mile north of Rockport

NW1/4NW1/4 sec. 23, T. 7 S., R. 6 W.

Owner: corporation

General manager: Robert W. Richard

Products: drain and building tile and brick

Fired color: red

Fired temperature: 1800° to 1900° F.

Type of kiln: periodic
Capacity: 25 tons per day
Employees: 16
Raw material: glacial river clay

71. Rockport Sanitary Pottery, Inc.
Rockport, Spencer County
Owner: corporation
General manager: G. M. Pounds
Products: tanks, bowls, and lavatories
Fired color: white
Fired temperature: 2250° F.
Type of kiln: continuous
Capacity: 2,500 units per week
Employees: 72
Raw material: imported domestic clays

72. Rostone Corporation
Lafayette
Pit location: Fountain County
2 1/2 miles northeast of Riverside
SE1/4SE1/4 sec. 19, T. 22 N., R. 6 W.
Owner: corporation
General manager: P. W. Jones
Products: inorganic molded plastics and molded building stone
Capacity: 850 tons per year
Employees: 180
Raw material: Borden shale

73. Rostone Corporation
Lafayette
Plant location: Spencer, Owen County
Owner: corporation
General manager: Willis Sampson
Products: inorganic molded plastics
Employees: 50
Capacity: 1 ton per day
Raw material: Borden shale from Fountain County

74. Simpson Clay Works
R. R. 3, Huntington
Pit location: Huntington County
East edge of Simpson
SE1/4NW1/4 sec. 28, T. 28 N., R. 10 E.
Owner: Majenica Tile Company
General manager: Louie Mills

Products: farm drain tile

Fired color: light red

Fired temperature: 1700° F.

Type of kiln: periodic

Capacity: 1,400 tons per year

Employees: 6

Raw material: glacial till

75. Square D Company, Molded Insulation Division

Peru, Miami County

Owner: corporation

General manager: C. H. Brittenham

Products: porcelain insulators, heat-shock specialities, and electrical porcelain

Fired colors: white and gray

Fired temperature: 2250° F.

Type of kiln: continuous

Capacity: 50,000 pieces per day

Employees: 400

Raw material: imported domestic clays

76. Standard Brick and Tile Corporation Plant No. 1

Evansville

Pit location: Vanderburgh County

Northwest edge of Evansville

SW1/4NE1/4 sec. 22, T. 6 S., R. 11 W.

Owner: corporation

General manager: Ralph Kleymeyer

Products: brick

Fired color: red

Fired temperature: 1950° F.

Type of kiln: continuous and periodic

Capacity: 60,000 units per day

Employees: 65

Raw material: shale from Shelburn formation

77. Standard Brick and Tile Corporation Plant No. 4

Evansville

Pit location: Vanderburgh County

Southeast edge of Evansville

SE1/4NE1/4 sec. 4, T. 7 S., R. 10 W.

Owner: corporation

General manager: Harvey Lambert

Products: face brick and drain tile

Fired color: red

Fired temperature: 1900° F.

Type of kiln: periodic
Capacity: 32,000 units per day
Employees: 33
Raw material: glacial river clay

78. Stringtown Tile Company
R. R. 2, Monroeville
Pit location: Allen County
3 miles west of Monroeville
SE1/4SE1/4 sec. 10, T. 29 N., R. 14 E.
Owner and general manager: W. A. Bolyard
Products: farm drain tile
Fired color: light red
Fired temperature: 1800° F.
Type of kiln: periodic
Capacity: 7,000 tiles per day
Employees: 6
Raw material: glacial till

79. Terre Haute Vitrified Brick Works
West Terre Haute
Pit location: Vigo County
North of West Terre Haute on U. S. Highway 150
NE1/4NE1/4 sec. 18, T. 12 N., R. 9 W.
Owner: corporation
General manager: C. Price, Jr.
Products: brick
Fired colors: red and buff
Fired temperature: 1900° F.
Type of kiln: periodic
Capacity: 50,000 units per day
Employees: 50
Raw material: Upper Block underclay purchased from Brazil area
and shale above Coal VII from captive pit

80. U. S. Brick Company
Tell City
Pit location: Perry County
Half a mile north of Tell City
SE1/4SE1/4 sec. 19, T. 6 S., R. 3 W.
Owner: corporation
General manager: W. Eckley
Products: face brick, common brick, and tile
Fired color: red
Fired temperature: 2000° F.
Type of kiln: periodic

- Capacity: 67 tons per day
 Employees: 25
 Raw material: glacial river clay
~~Hydraulic Press Brick Co.~~
 81. ~~Veedersburg Clay Products Company~~
 Veedersburg
 Pit location: Fountain County
 1 mile north of Veedersburg
 NW1/4NW1/4 sec. 31, T. 20 N., R. 7 W.
 Owner: corporation
 General manager: R. E. Glover
 Products: face and common brick, paving brick, and back-up tile
 Fired color: red
 Fired temperature: 1750° to 1850° F.
 Type of kiln: periodic
 Capacity: 35,000 units per day
 Employees: 45 to 47
 Raw material: shale from Brazil formation
82. Herman Wessel Company
 R. R. 3, Batesville
 Pit location: Franklin County
 West edge of Batesville
 SW1/4SE1/4 sec. 18, T. 10 N., R. 12 E.
 Owners and general managers: Wessel Brothers
 Products: farm drain tile, brick, and building tile
 Fired color: red
 Fired temperature: 2000° F.
 Type of kiln: periodic
 Capacity: 700 tons per year
 Employees: 3
 Raw material: glacial till

PRODUCERS AND CONSUMERS OF CLAY AND SHALE
LISTED BY COUNTIES

Adams County

- 42. Jones Tile Company
- 47. Krick-Tyndall Company

Allen County

- 44. Klopfenstein Tile Company
- 78. Stringtown Tile Company

Blackford County

- 40. Inman Tile Company

Clark County

- 52. Louisville Cement Company

Clay County

- 5. American Vitrified Products Company
- 6. Arketex Ceramic Corporation
- 7. Arketex Ceramic Corporation Plant No. 2
- 8. Arketex Ceramic Corporation Plant No. 3
- 9. Arketex Ceramic Corporation Plant No. 4
- 11. Ayer-McCarel-Reagen Clay Company
- 12. Big Bend Collieries
- 15. Brazil Clay Company Plant No. 1
- 16. Brazil Clay Company Plant No. 2
- 17. Brazil Hollow Brick and Tile Company, Inc.
- 20. Brown Coal Company
- 26. Clay City Pottery
- 32. G. and F. Coal Company
- 43. Kalamazoo Clay Company
- 49. Log Cabin Coal Company
- 62. Natco Corporation
- 69. Quality Coal Company

Daviess County

- 46. Kretz Brick Company

38 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

Delaware County

33. Gill Clay Pottery Company

Dubois County

36. Huntingburg Brick Company
53. Louisville Pottery Company

Fountain County

68. Poston and Herron Brick Company
72. Rostone Corporation (pit)
81. Veedersburg Clay Products Company

Franklin County

82. Herman Wessel Company

Greene County

13. Bloomfield Brick Company

Howard County

4. American Radiator and Standard Corporation
45. Kokomo Sanitary Pottery Company

Huntington County

10. Art Chemical Products, Inc.
54. Majenica Tile Company
74. Simpson Clay Works

Jackson County

41. Jackson Brick and Hollow Ware Company
48. Lehigh Cement Company (pit)
60. Medora Brick and Tile Company

Jay County

55. Martin Tile Company

Lake County

35. Harbison-Walker Refractory Company

Lake County--Continued

- 63. Natco Corporation
- 64. National Brick Company

Lawrence County

- 48. Lehigh Cement Company

Madison County

- 65. National Tile and Manufacturing Company

Marion County

- 3. American Art Clay Company, Inc.

Marshall County

- 18. Bremen Clay Products Company

Martin County

- 51. Loogootee Clay Products Corporation

Miami County

- 75. Square D Company, Molded Insulation Division

Montgomery County

- 37. Hydraulic Press Brick Company
- 66. Oriental Brick Company

Morgan County

- 1. Adams Clay Products Company
- 19. Brooklyn Brick Company, Inc.
- 38. Indiana Drain Tile Company
- 56. Martinsville Brick Company
- 61. Midwest Aggregates, Inc.

Noble County

- 2. Albion Tile Company

40 PRODUCERS AND CONSUMERS OF CLAY AND SHALE

Owen County

- 57. Maumee Collieries Company (pit)
- 73. Rostone Corporation

Parke County

- 22. Cayuga Brick and Tile Corporation
- 24. Clay City Pipe Company
- 28. Dee Clay Products Company, Inc.
- 29. Durham and Heidbrieder Clay Company
- 32. G. and F. Coal Company

Perry County

- 21. Cannelton Sewer Pipe Company
- 80. U. S. Brick Company

Porter County

- 34. Hannell Pottery Company
- 58. McCool Loam Company

Pulaski County

- 31. Francesville Drain Tile Company
- 59. Medaryville Tile Company

Putnam County

- 39. Indiana State Farm
- 50. Lone Star Cement Corporation

Spencer County

- 70. Rockport Drain Tile Company
- 71. Rockport Sanitary Pottery, Inc.

Tippecanoe County

- 72. Rostone Corporation
- 73. Rostone Corporation

Vanderburgh County

- 27. Crown Potteries Company, Inc.
- 67. Peerless Pottery, Inc.

Vanderburgh County--Continued

- 76. Standard Brick and Tile Corporation Plant No. 1
- 77. Standard Brick and Tile Corporation Plant No. 4

Vermillion County

- 6. Arketex Ceramic Corporation (pit)
- 23. Cayuga Brick Corporation
- 25. Clay City Pipe Company

Vigo County

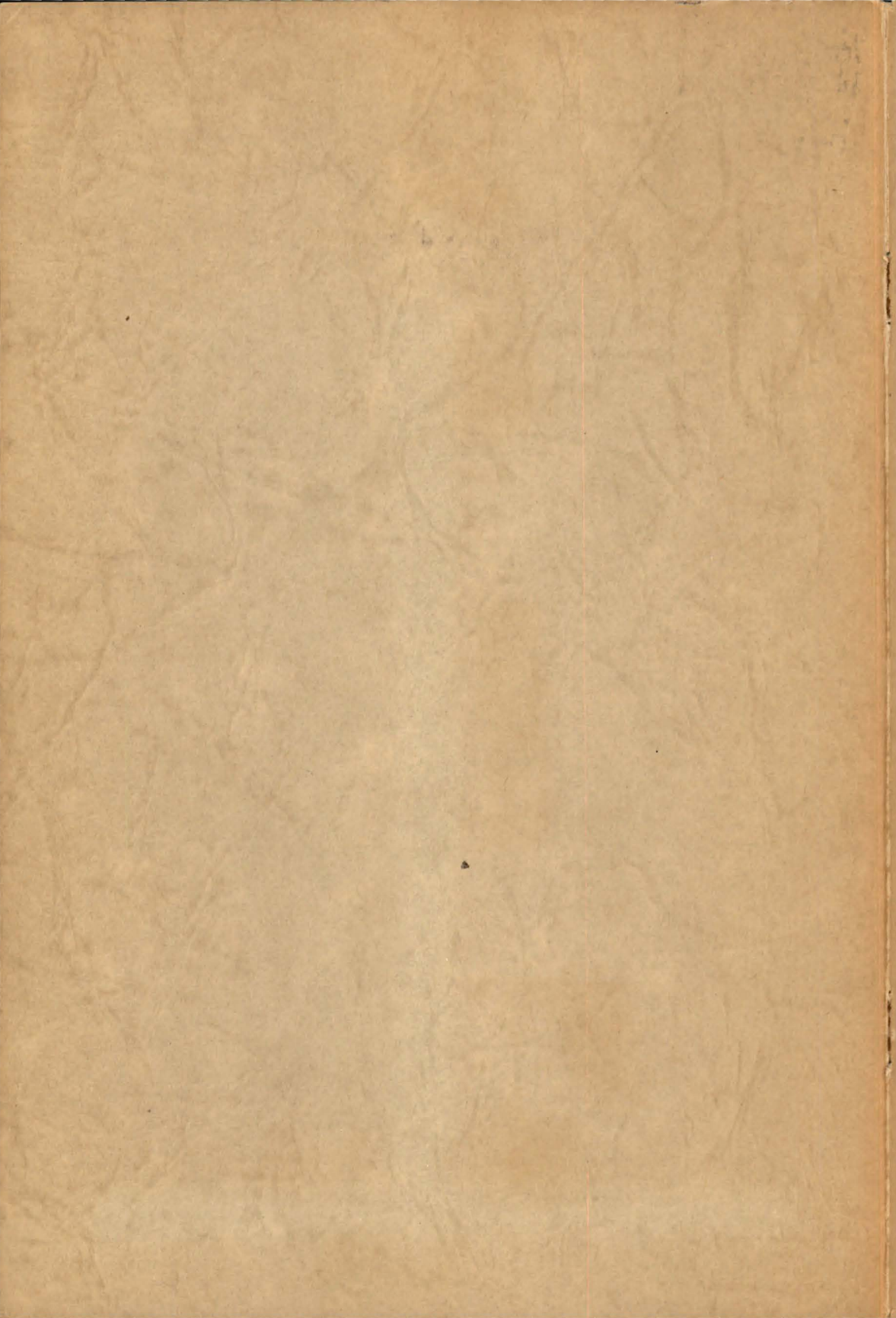
- 57. Maumee Collieries Company
- 79. Terre Haute Vitrified Brick Works

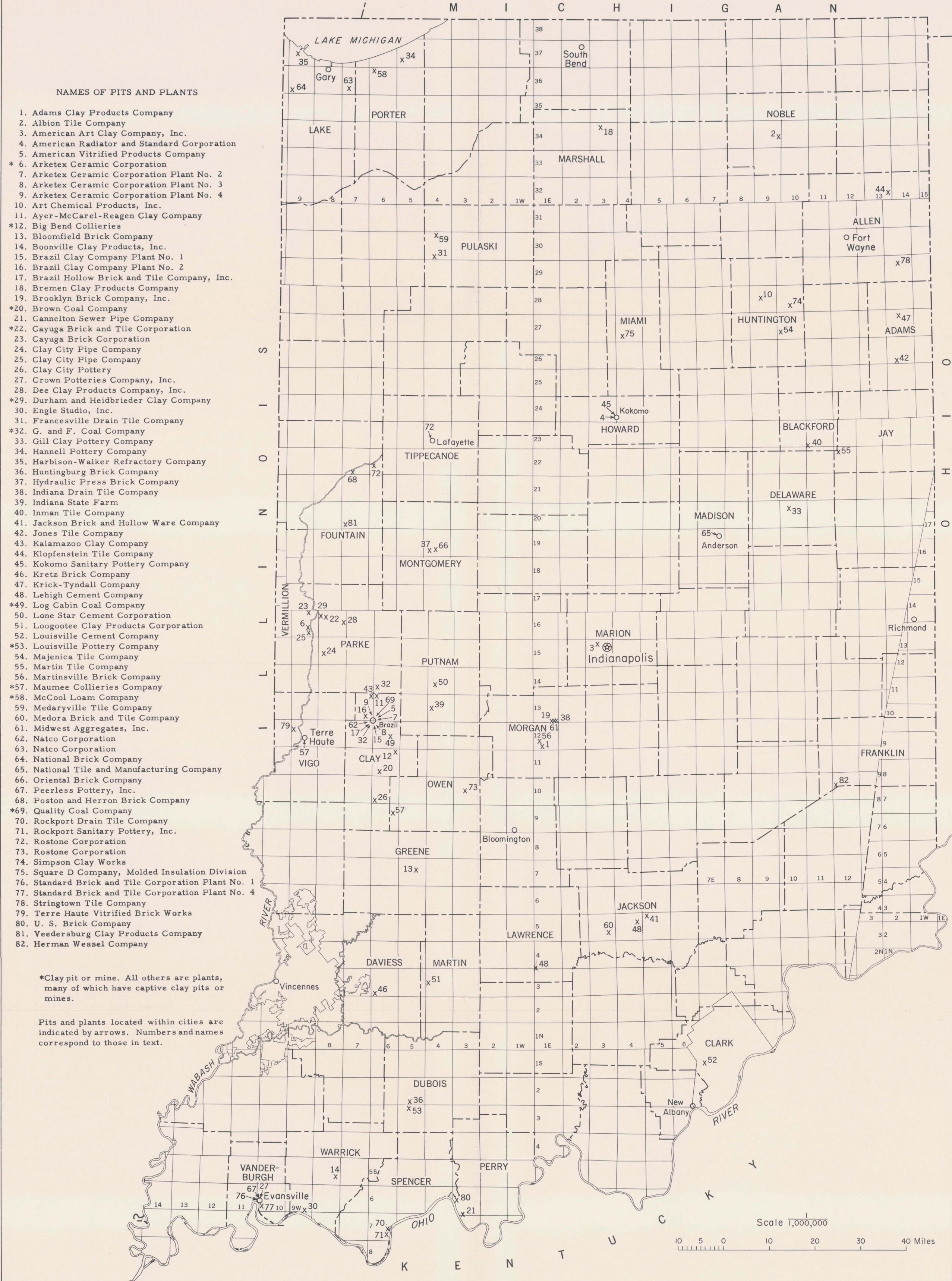
Warriek County

- 14. Boonville Clay Products, Inc.
- 30. Engle Studio, Inc.

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Base from Map of Indiana, 1950 edition, published by U.S. Geological Survey. Minor revisions and additions made from Indiana Department of Conservation, Geological Survey, county base maps.

MAP OF INDIANA SHOWING LOCATION OF PRODUCERS AND CONSUMERS OF CLAY AND SHALE