INDUSTRIAL MINERALS NOTES 47

SELECTED AND ANNOTATED LIST OF
INDUSTRIAL MINERALS PUBLICATIONS OF THE
ILLINOIS STATE GEOLOGICAL SURVEY

Compiled by J. E. Lamar

ABSTRACT

Selected publications relating to the resources, occurrence, character, or uses of Illinois industrial minerals, including lead and zinc, are listed. Reports are briefly annotated when the title does not adequately indicate the content. Several statistical reports and directories of the mineral industries are also included.

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In addition to publications concerning industrial minerals, the Illinois Geological Survey has available for reference a considerable volume of information, including many well logs, pertaining to industrial mineral resources. Out-of-print publications (*) may be consulted at the Survey library and in other libraries; some may be borrowed for limited periods. Members of the Survey staff will confer with visitors on questions regarding mineral resources and their uses.


LIMESTONE AND DOLOMITE

Bull. 17 Portland-Cement Resources of Illinois. 1912. 121 p., 19 pls., 3 tables.
Raw materials in selected areas; cement manufacture.

Bull. 46 Limestone Resources of Illinois. 1925. 392 p., 70 figs., 19 tables.
Resources by counties; chemical analyses and physical tests.

*Bull. 61 Rock Wool from Illinois Mineral Resources. 1934. 262 p., 34 figs., 39 tables.
Occurrence of suitable materials, chemistry of rock wool production, and economic factors influencing the Illinois market.
Bull. 68B Resistance of Chicago Area Dolomites to Freezing and Thawing. 1944. p. 249-262, 14 figs., 2 tables.


A wide-ranging discussion of the properties and characteristics of limestone and dolomite. Of general interest.


Deals especially with limestone, shale, and sandstone.


*R. I. 17 The Limestone Resources of the Pontiac-Fairbury Region. 1929. 27 p., 7 figs.

R. I. 23 High-Calcium Limestone near Morris, Illinois. 1931. 26 p., 4 figs.

(See also Supplement, Circ. 4.)

*R. I. 49 A Summary of the Uses of Limestone and Dolomite. 1938. 50 p.

(See Circ. 321.)

R. I. 65 Agricultural Limestone Resources of Cumberland, Effingham, Clay, Richland, and Jasper Counties. 1940. 44 p., 8 figs., 12 tables.

R. I. 90 High-Purity Dolomite in Illinois. 1943. 89 p., 34 figs.

Deposits in the Chicago, Kankakee, Rockford, Savanna, Port Byron, and Grafton-Hardin regions; chemical analyses.

*R. I. 164 Water Soluble Salts in Limestones and Dolomites. 1953. 16 p., 1 fig., 7 tables.

Fluid inclusions in Illinois limestones and dolomites and their probable composition.


Limestone, dolomite, marble, and sandstone.


Limestone, shale, and clay resources; chemical analyses.


670 analyses from 43 counties.

R. I. 211 Limestone Resources of Extreme Southern Illinois. 1959. 81 p., 8 pls., 4 figs., 7 tables.

Resources by county and by geological formation; chemical analyses and physical tests.
Results of Test-Drilling of Limestone near Morris, Illinois. 1933. 6 p., 1 table. (See also R. I. 23.)

Agricultural Limestone Resources of Illinois—Their Character and Occurrence and Methods of Examination. 1943. 33 p., 7 figs.

Acid Etching in the Study of Limestones and Dolomites. 1950. 47 p., 22 figs.

A means of studying the texture and impurities in relation to utilization.


Chiefly of significance to mineralogists or collectors.

Sampling Limestone and Dolomite Deposits for Trace and Minor Elements. 1956. 18 p., 5 figs., 6 tables.

Subsurface Dolomite and Limestone Resources of Grundy and Kendall Counties. 1957. 25 p., 7 figs.

Trace Elements in Illinois Pennsylvanian Limestones. 1957. 34 p., 4 figs., 5 tables.

Data on boron, barium, chromium, copper, iron, potassium, manganese, molybdenum, sodium, nickel, lead, strontium, titanium, vanadium, and zinc.

Some Plastic Properties of Pastes Made from Hydrated Dolomitic and High-Calcium Limes. 1958. 9 p., 2 pls., 3 figs., 7 tables.


Resources in Mississippi bluff area; textural details, stratigraphy, and chemical analyses.

Uses of Limestone and Dolomite. 1961. 41 p., 2 tables, index. (Reprinted with addenda, 1965.)

Describes 75 uses; extensive bibliography.


Laboratory tests with falling weight.
Circ. 346 Limestone Resources of the Lower Kaskaskia Valley. 1963. 22 p., 1 pl., 2 figs., 3 tables.
   Resources, chemical analyses, and physical tests.

Circ. 370 Mississippian Limestone Resources in Fulton, McDonough, and Schuyler Counties, Illinois. 1964. 27 p., 5 figs., 8 tables, app.
   Resources, chemical analyses, and physical tests.

Circ. 379 Dolomite Resources of Boone and De Kalb Counties. 1965. 22 p., 5 figs., 3 tables.
   Resources, depth to unexposed deposits, and chemical analyses.

*Circ. 389 Grand Tower Limestone (Devonian) of Southern Illinois. 1965. 34 p., 7 figs., app.

Circ. 390 Limestone Resources of Madison County, Illinois. 1965. 39 p., 1 pl., 6 figs., 2 tables.
   Resources, geologic map, stratigraphy, underground mining, and chemical analyses.


Circ. 408 One-Dimensional Disorder in Carbonates. 1967. 61 p., 12 figs., 5 tables, app.


Circ. 422 Geology Related to Land Use in the Hennepin Region. 1968. 24 p., 10 figs., 2 tables.
   Data on limestone are given.

Circ. 438 Geology for Planning in McHenry County. 1969. 31 p., 2 figs., 1 table, app.
   Contains data on stone.

Circ. 448 Limestone and Dolomite Resources in Jersey County, Illinois. 1970. 28 p., 1 pl., 3 figs., 2 tables.

   Includes data on dolomite and limestone.

   Includes discussion of limestone resources.

*IMN 4 Subsurface Dolomite in Lake, McHenry, and part of Northwestern Cook Counties. 1956. 7 p.
   Data from well records.

Data from well records.


Chemical Composition of Some Deep Limestones and Dolomites in Livingston County, Illinois. 1964. 5 p., 2 tables.

Limestone Resources of Jefferson and Marion Counties, Illinois. 1965. 15 p., 3 figs., 2 tables, app.

Resources; chemical analyses.

Thermal Expansion of Certain Illinois Limestones. 1966. 6 p., 1 fig., 1 table.

Expansion in range \(-4^\circ\) to \(140^\circ\) F.

High-Purity Limestones in Illinois. 1966. 20 p., 3 figs., 1 table.

Alumina Content of Carbonate Rocks as an Index to Sodium Sulfate Soundness—A Preliminary Report. 1969. 10 p., 2 figs., 1 table.

Two-Dimensional Shape of Sand Made by Crushing Illinois Limestones of Different Textures. 1970. 23 p., 8 figs., 5 tables.


Data on dolomite are included.


Properties of Calcium and Magnesium Carbonates and Their Bearing on Some Uses of Carbonate Rocks. 1955. 7\(\frac{1}{4}\) p., 1 table.

Extensive bibliography.
Reprint 1966-M  

*Reprint 1967-0  
Nonlinear Thermal Expansion of Coarse Grain Limestone. 1967. 5 p., 2 figs., 4 tables.

Reprint 1970-V  

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**SAND AND GRAVEL**

Bull. 50  

- Resources in 40 counties; sieve, bond strength, permeability, and other tests.

Bull. 53  
Geology and Economic Resources of the St. Peter Sandstone of Illinois. 1928. 175 p., 3 pls., 43 figs., 15 tables.

- Resources, distribution, mineralogy, sieve tests, and uses; silica sand.

*Bull. 66  

- Resources, distribution, chemical analyses, and uses of St. Peter Sandstone (source of silica sand).

*R. I. 57  

- Sand for nonferrous and gray iron castings, especially in Cook, Henry, Jo Daviess, Mason, and Whiteside Counties; sieve tests.

*R. I. 79  
Feldspar in Illinois Sands—A Study of Resources. 1942. 87 p., 13 figs., 5 tables.

- Occurrence of sands, feldspar content, and sieve tests.

*Circ. 3  

*Circ. 100  
Early Ordovician Strata Along Fox River in Northern Illinois. 1943. 11 p., 4 figs.

- Data on silica sand deposits.

*Circ. 179  

- Particle size, pebble counts, shape, roundness, polish, and fossils.

*Circ. 184  

- Deposits, chemical composition, and sieve tests.

Sand and Gravel Resources of Kane County, Illinois. 1960. 11 p., 1 map pl., 1 fig., 5 tables.

Silica Brick from Northern Illinois Silica Sand. 1962. 18 p., 6 figs., 7 tables.

Calcium and aluminum phosphates used as binders.


Deposits; sieve tests.

Sand and Gravel Resources of Northeastern Illinois. 1964. 8 p., 1 map pl., 2 figs.

Covers greater Chicago area.

Sand and Gravel Resources of De Kalb County. 1964. 16 p., 1 map pl., 1 fig., 4 tables.

Deposits; sieve tests.

Sand and Gravel Resources of Peoria County. 1965. 16 p., 1 map pl., 2 figs., 4 tables.

Deposits; sieve tests.


Sand and Gravel Resources of Tazewell County, Illinois. 1966. 22 p., 1 pl., 3 figs., 4 tables.

Heavy Minerals in Sands Along the Wabash River. 1966. 24 p., 3 figs., 5 tables.


Geology Related to Land Use in the Hennepin Region. 1968. 24 p., 10 figs., 2 tables.

Gives data on sand and gravel.


Geology for Planning in McHenry County. 1969. 31 p., 2 figs., 1 table, app.

Data on sand and gravel are included.
Circ. 442 Glacial Geology of the Vandalia, Illinois, Region. 1969. 23 p., 8 figs., 4 tables, app.
Data on sand and gravel are given.

Circ. 446 Sand and Gravel Resources of Macon County, Illinois. 1969. 16 p., 1 pl., 1 fig., 4 tables.

Circ. 452 Sand and Gravel Resources of Sangamon County, Illinois. 1970. 20 p., 2 figs., 4 tables, app.

Includes data on sand and gravel.


Includes discussion of sand and gravel resources.

Circ. 466 Deltaic Sedimentation in Glacial Lake Douglas. 1971. 12 p., 5 figs., 1 table.


A simple, brief account on the origin of Illinois sand and gravel deposits.


IMN 43 Lower Mississippi River Terrace Sands as a Commercial Source of Feldspar. 1970. 18 p., 3 figs., 3 tables.

EGN 33 Geology for Planning in De Kalb County, Illinois. 1970. 26 p., 6 figs.
Includes data on sand and gravel.

Gives data on sand deposits.

Describes a means of determining the weight percentage of heavy minerals in sands.

The Petrography of Some Illinois Pleistocene and Recent Sands. 1967. 18 p., 4 figs., 2 tables.

Gives mineral composition of sands.

A New Method for Making Pebble Counts. 1968. 2 p., 1 fig.

A means of determining the kinds of rocks composing gravel.


SILICA SAND

Geology and Mineral Resources of the Hennepin and La Salle Quadrangles. 1919. 136 p., 6 pls., 36 figs.

Information on silica sand deposits.

Geology and Mineral Resources of the Dixon Quadrangle. 1926. 141 p., 5 pls., 20 figs.

Information on silica sand deposits.

Geology and Economic Resources of the St. Peter Sandstone of Illinois. 1928. 175 p., 3 pls., 43 figs., 15 tables.

Resources, distribution, mineralogy, sieve tests, and uses; silica sand.


Resources, distribution, chemical analyses, and uses of St. Peter Sandstone (source of silica sand).

Early Ordovician Strata Along Fox River in Northern Illinois. 1943. 11 p., 4 figs.

Data on silica sand deposits.

Silica Brick from Northern Illinois Silica Sand. 1962. 18 p., 6 figs., 7 tables.

Calcium and aluminum phosphates used as binders.

Geology Related to Land Use in the Hennepin Region. 1968. 24 p., 10 figs., 2 tables.

Includes data on silica sand.

IMN 32 Silica Sand Briquets and Pellets as a Replacement for Quartzite. 1968. 8 p., 1 pl., 2 figs.

IMN 36 Beneficiation of Kaolinite Clay from Silica Sand Washings. 1968. 10 p., 2 figs., 5 tables.

MOLDING SAND

Bull. 50 Natural-Bonded Molding Sand Resources of Illinois. 1925. 183 p., 49 figs., 32 tables.

Resources in 40 counties; sieve, bond strength, permeability, and other tests.

Bull. 53 Geology and Economic Resources of the St. Peter Sandstone of Illinois. 1928. 175 p., 3 pls., 43 figs., 15 tables.

Resources, distribution, mineralogy, sieve tests, and uses; silica sand.


Resources, distribution, chemical analyses, and uses of St. Peter Sandstone (source of silica sand).


Sand for nonferrous and gray iron castings, especially in Cook, Henry, Jo Daviess, Mason, and Whiteside Counties; sieve tests.

CLAY AND SHALE

*Bull. 4 Preliminary Investigation of Illinois Fire Clays. 1907. p. 129-175, 1 map, 3 figs., 1 table.

Resources, especially in extreme southern Illinois; chemical analyses and pyrometric tests.

*Bull. 9 Paving Brick and Paving Brick Clays of Illinois. 1908. 318 p., 3 pls., 33 figs.

Clay deposits, qualities of clays and bricks, and brick pavements.

Bull. 17 Portland-Cement Resources of Illinois. 1912. 121 p., 19 pls., 3 tables.

Raw materials including clays in selected areas; cement manufacture.

Bull. 30 Pennsylvanian Fireclays of Illinois. p. 61-73, 2 figs.; Relations of Loess and Drift in Canton Quadrangle. 1917. 1 pl., 1 fig.


Deposits in 20 counties; methods of testing; ceramic tests.
Notes on Illinois Bituminous Shales, Including Results of Their Experimental Distillation. 1922. 19 p., 14 figs., 17 tables.


Occurrences in 8 counties; distillation tests.


Burning tests on 106 samples from 20 counties.


Data on shale, clay, and other materials.

Preliminary Report on the Fuller's Earth Deposits of Pulaski County. 1928. 31 p., 8 figs.

Deposits in Pulaski, Massac, and Alexander Counties; specific volume and apparent acidity tests.

Refractory Clays in Calhoun and Pike Counties, Illinois. 1931. 43 p., 6 figs.

Deposits; ceramic tests on 22 samples.

Petrology of the Fuller's Earth Deposits, at Olmsted, Illinois, with a Brief Study of Some Non-Illinois Earths. 1933. 20 p., 15 figs., 4 tables

Occurrence; mineral composition of fuller's earth at Olmsted; petrographic data on 14 other earths.

Anna "Kaolin" as a New Decolorizing Agent for Edible Oils. 1933. 42 p., 7 figs.

Decolorization; rate of filtration; oil retained by earth.

A Unique Clay from the Goose Lake, Illinois, Area. 1939. 20 p., 4 figs.

Occurrence, constitution, properties, and uses.

Tests of Face Brick from Illinois and Other States. 1940. 32 p., 5 figs.

Tests on Illinois, Ohio, Indiana, and Pennsylvania brick.

Illinois Clays and Shales as Mortar Mix. 1944. 55 p., 12 figs., 20 tables.

The Bonding Action of Clays. Part I—Clays in Green Molding Sands. 1945. 55 p., 20 figs., 8 tables. (See also R. I. 110.)
R. I. 104 Illinois Surface Clays as Bonding Clays for Molding Sands—An Exploratory Study. 1945. 41 p., 3 figs., 11 tables.
Tests on clays, including till, gumbotil, lake clays, and residual clays.

R. I. 110 The Bonding Action of Clays. Part II—Clays in Dry Molding Sands. 1946. 36 p., 17 figs., 4 tables. (See also R. I. 102.)

Deposits; more than 50 ceramic tests; 32 chemical analyses.

R. I. 202 Vanadium Efflorescence and Its Control by the Use of Fluorspar. 1957. 29 p., 11 figs., 10 tables.

Mineral and chemical composition, differential thermal analyses, optical properties, and other data.

Data on 7 groups of clay minerals.

Circ. 39 Gumbotil as a Potential Source of Rotary Drilling Mud, Bonding Clay, and Bleaching Clay. 1938. 23 p., 4 figs.

*Circ. 83 Halloysite Clay in Illinois. 1942. 3 p.
Deposit in Pope County.

Circ. 162 Olmsted Fuller's Earth as a Bonding Clay for Foundry Use. 1950. 5 p., 3 tables.

Circ. 168 Reactions Accompanying the Firing of Brick. 1951. 6 p., 4 figs., 2 tables.

*Circ. 188 Ceramic Materials from Magnesium-Treated Clays. 1954. p. 165-168, 2 tables.

Circ. 208 Illinois Oil Shales. 1956. 22 p., 2 figs., 6 tables.
Oil content and other data on 120 samples.

Circ. 233 Pottery Clay Resources of Illinois. 1957. 8 p., 2 figs.
Preliminary tests; general distribution.

Circ. 266 Water-Sorption Characteristics of Clay Minerals. 1959. 20 p., 22 figs.
Data on kaolinite, illite, chlorite, and montmorillonite.

Circ. 277 Light-Burning Clay Resources in La Salle County, Illinois. 1959. 27 p., 3 figs.
Deposits, firing, and bonding tests.

Over 500 analyses.


Mineral and chemical composition; causes of bloating; tests on 76 samples.

Circ. 302  Lower Pennsylvanian Clay Resources of Knox County, Illinois. 1960. 19 p., 1 fig.

Ceramic and bonding tests on 39 samples.

Circ. 303  Ceramic Tests of Illinois Clays and Shales. 1960. 72 p., 1 fig.

More than 125 tests of samples from 59 counties.


Detailed study of chemical and physical characteristics of products produced by the retorting of 5 samples.


Ceramic and bonding tests on 95 samples.

*Circ. 334  Stratigraphy and Mineralogy of the Wisconsinan Loesses of Illinois. 1962. 55 p., 1 pl., 3 figs., 6 tables, 15 geol. secs.

*Circ. 347  Mineralogy of Glacial Tills and Their Weathering Profiles in Illinois. Part I—Glacial Tills. 1963. 55 p., 9 figs., 6 tables, 8 geol. secs. (See also Circ. 400.)

Circ. 352  Buff-Burning Clay Resources of Southwestern and Southern Illinois. 1963. 23 p., 4 figs., 3 tables, 3 apps.

Ceramic and bonding properties of 66 samples.

Circ. 353  Buff-Burning Clay Resources of Western Illinois. 1963. 23 p., 3 figs., 1 table, app.

Ceramic and bonding properties of 110 samples.

Circ. 371  Illinois Clay Resources for Lightweight Ceramic Block. 1964. 15 p., 5 figs., 1 table.

Tests of 7 shales and clays as bonding material for lightweight shale aggregate.

Circ. 400  Mineralogy of Glacial Tills and Their Weathering Profiles in Illinois. Part II—Weathering Profiles. 1966. 76 p., 6 figs., 32 tables. (See also Circ. 347.)

Circ. 405  Long-Term Dimensional Changes in Illinois Bricks and Other Clay Products. 1966. 44 p., 14 figs., app.
Circ. 422 Geology Related to Land Use in the Hennepin Region. 1968. 24 p., 10 figs., 2 tables.
   Gives data on clay and shale.

Circ. 427 Mineral Zonation of Woodfordian Loesses of Illinois. 1968. 44 p., 7 figs., 5 tables, app.

*Circ. 429 Petrography of Pennsylvanian Underclays in Illinois and Their Application to Some Mineral Industries. 1968. 36 p., 7 figs., 3 tables, app.


Circ. 438 Geology for Planning in McHenry County. 1969. 31 p., 2 figs., app.
   Contains data on clay.

Circ. 442 Glacial Geology of the Vandalia, Illinois, Region. 1969. 23 p., 8 figs., 4 tables, app.
   Data on glacial clay are included.


   Gives data on glacial clay.

   Includes data on clay and shale.

   Includes description of clay and shale resources.

*IMN 2 Lightweight Brick from Clay and Peat or Shredded Corn Cobs. 1955. p. 3-4.

*IMN 9 Shales as Source Material for Synthetic Lightweight Aggregate. 1959. 5 p.

*IMN 11 Rare Earth and Trace Element Content of an Unusual Clay on Hicks Dome in Hardin County, Illinois. 1960. 6 p., 1 fig., 3 tables.

   Tests of 12 clays, 4 shales, and 2 silicas.

*IMN 16 Refractory Clay Resources of Illinois. 1962. 4 p., 1 fig.
   A general discussion.
Permanent Expansion in Bricks. 1964. 5 p., 4 figs.
Tests of Illinois brick showed expansion not acute.

Illinois Clays as Binders for Iron Ore Pellets. 1965. 8 p., 1 fig., 4 tables.
Tests of 7 clays showed promise.


Uses of different types of clay for binders are described.


Beneficiation of Kaolinite Clay from Silica Sand Washings. 1968. 10 p., 2 figs., 5 tables.


Clay Mineralogy of Some Basal Pennsylvanian Sandstones, Clays, and Shales. 1956. 5 p., 4 figs.

Underclay Squeezes in Coal Mines. 1956. 5 p., 4 figs., 6 tables.
Clay mineralogy in squeeze and nonsqueeze areas.

Controlling Vanadium Efflorescence. 1957. 2 p., 3 figs.
A use for fluorspar.

Describes 3 soil profiles; exposure of Fithian illite.

Environment of deposition and clay mineralogy.

Clay Mineralogy as Applied to Secondary Recovery Problems. 1959. 4 p., 7 figs.

Contact Temperature of a Peridotite Dike with Pennsylvanian Shale Determined by Clay Mineral Alterations. 1963. 9 p., 5 figs., 1 table.

Indicates temperature of 525-550° C.

Clay Materials and Structural Clay Products. 1965. 6 p., 6 tables.

Mineralogy, chemical composition, organic matter, and chemical properties.

Middle and Late Pennsylvanian Flint Clays. 1965. 9 p., 6 figs.


Surface Area of Montmorillonite from the Dynamic Sorption of Nitrogen and Carbon Dioxide. 1968. 9 p., 1 fig., 4 tables.


Surface Area of Vermiculite with Nitrogen and Carbon Dioxide as Adsorbates. 1969. 5 p., 1 fig., 1 table.


SILICA, TRIPOLI, GANISTER, NOVACULITE, AND CALICO ROCK IN SOUTHERN ILLINOIS

Artificial Silicates with Reference to Amorphous Silica. 1909. p. 276-292, 11 tables.

Sand-lime brick from southern Illinois silica.


Decolorization of Southern Illinois Silica. 1937. 35 p., 14 figs., 6 tables.

Methods, costs, efficiency, corrosion problems.

Southern Illinois Novaculite and Novaculite Gravel for Making Silica Refractories. 1946. 55 p., 29 figs., 16 tables.

Materials offer promise when crushed, properly graded, bonded, and fired.

Silica (tripoli), novaculite, novaculite gravel, ganister, calico rock, and shale and chert gravels; deposits, occurrence, character, composition, and uses.


Tests of 12 clays, 4 shales, and 2 silicas.

Colloidal-Size Silica Produced from Southern Illinois Tripoli. 1970. 6 p., 3 figs.

SANDSTONE

Geology and Economic Resources of the St. Peter Sandstone in Illinois. 1928. 175 p., 3 pls., 43 figs., 15 tables.

Resources, distribution, mineralogy, sieve tests, and uses.


Sieve tests of 65 samples from 30 outcrops; 18 chemical analyses; uses.

Chemical and Physical Character of the Pennsylvanian Sandstones in Central Illinois. 1962. 43 p., 5 figs., 11 tables.

Deposits, 90 sieve tests, 71 chemical analyses, heavy minerals, clay minerals, and fusion tests.


CHERT


Cherts are epigenetic concretions.


IGNEOUS ROCKS


Dikes and sills and their relation to coal and fluorspar.
Circ. 330  Trace Elements, Rare Earths, and Chemical Composition of Southern Illinois Igneous Rocks. 1962. 12 p., 1 fig., 4 tables.
   Data on 16 samples.

Circ. 382  The Precambrian Basement of Illinois. 1965. 13 p., 3 figs., 2 tables.
   Nature of surface, petrography, relations, and ages of basement rocks.

GYPSUM AND ANHYDRITE

*Circ. 226  Gypsum and Anhydrite in Illinois. 1957. 26 p., 7 figs., 1 table, app.
   Subsurface deposits in southwestern and southern Illinois.

BRINES


FLUORSPAR, ZINC, AND LEAD IN SOUTHERN ILLINOIS

*Bull. 38  Optical Fluorite in Southern Illinois. 1922. p. 419-425, 1 fig.
   Properties, uses, and occurrence.

*Bull. 41  Geology of Hardin County and the Adjoining Part of Pope County. 1920. 416 p., 10 pls., 30 figs., 1 map.
   Geology; mineral resources, especially fluorspar, and lead and zinc ores.

   Occurrence, mineralogy, origin, mining, and processing.

Bull. 59  The Fluorspar Industry of the United States with Special Reference to the Illinois-Kentucky District. 1938. 128 p., 14 figs., 39 tables.
   Economic features.

*Bull. 76  Geology of the Fluorspar Deposits of Illinois. 1952. 147 p., 7 pls., 25 figs., 4 tables.
   Geology, history, production, mining, milling, prospecting.

*R. I. 68  Effect of Fluorspar on Silicate Melts with Special Reference to Mineral Wool. 1940. 15 p., 6 figs., 4 tables.
   Fiber diameter of wool and fluorspar content of melt.

Vanadium Efflorescence and Its Control by the Use of Fluorspar. 1957. 29 p., 11 figs., 10 tables.

Structures Due to Volume Shrinkage in the Bedding-Replacement Fluorspar Deposits of Southern Illinois. 1949. 11 p., 10 figs.


Areal Geology of the Illinois Fluorspar District. Part 1—Saline Mines, Cave in Rock, Dekoven, and Repton Quadrangles. 1963. 43 p., 2 pls., 7 figs., 1 table. (See also Circs. 385 and 413.)

Areal Geology of the Illinois Fluorspar District. Part 2—Karbers Ridge and Rosiclare Quadrangles. 1965. 40 p., 2 pls., 3 figs., 1 table. (See also Circs. 342 and 413.)

Areal Geology of the Illinois Fluorspar District. Part 3—Herod and Shetlerville Quadrangles. 1967. 41 p., 4 figs., 1 table. (See also Circs. 342 and 385.)

Fluorspar in Illinois. 1968. 64 p., 16 figs., 7 tables, app. Replaces Circ. 296, which is out of print. Geology, mining, milling, economic aspects, and uses; a semitechnical account.

Outlying Occurrences of Galena, Sphalerite, and Fluorite in Illinois. 1957. 5 p. Occurrences near Alto Pass and Anna and in Hancock and Kendall Counties.


Binders for Fluorspar Pellets. 1966. 9 p., 1 fig., 4 tables.

Experimental Replacement of Oolitic Limestone by Fluorite. 1963. 6 p., 2 figs.


BARITE


Chiefly of significance to mineralogists or collectors.
Barite in the Southern Illinois Fluorspar District. 1959. 14 p., 1 fig., 1 table.
Occurrence, distribution, and uses.

ZINC AND LEAD IN NORTHWESTERN ILLINOIS

*Bull. 21 Lead and Zinc Deposits of Northwestern Illinois. 1914. 120 p., 22 pls., 13 figs.
Geology, ore deposits, mines, and prospects.

*Bull. 26 Geology and Geography of the Galena and Elizabeth Quadrangles. 1916. 233 p., 25 pls., 50 figs.
Geology, mineral resources, and development of Jo Daviess County, including history of mining.

Includes descriptions of many mining properties.


Tests of soils by dithizone method.

Character, distribution, mineralogy, origin, mines, and future possibilities.

Map on scale of 2 inches to the mile.

*IMN 5 Relation of Sulfate and Chloride to Ore Deposits in the Ordovician Rocks of Jo Daviess County. 1957. p. 3-6, 1 fig.
No relation shown by tests of surface rocks.

*IMN 7 Outlying Occurrences of Galena, Sphalerite, and Fluorite in Illinois. 1957. 5 p.
Occurrences near Alto Pass and Anna and in Hancock and Kendall Counties.


URANIUM


No samples contained more than 0.1% U₃O₈.


None of 175 samples tested met minimum requirements for ore.

FIELDSPAR

*R. I. 79 Feldspar in Illinois Sands—A Study of Resources. 1942. 87 p., 13 figs., 5 tables. (See Circ. 391.)

Deposits, feldspar content, and sieve tests.


IMN 43 Lower Mississippi River Terrace Sands as a Commercial Source of Feldspar. 1970. 18 p., 3 figs., 3 tables.

Circ. 391 Feldspar in Illinois Sands: A Further Study. 1965. 19 p., 4 figs., 5 tables. (See R. I. 79.)

Iron content and particle size of feldspar.

PEAT AND HUMUS

Circ. 438 Geology for Planning in McHenry County. 1969. 31 p., 2 figs., 1 table, app.

Data on peat.


Map shows location of peat deposits.


Includes data on resources and uses of peat.

INDUSTRY STATISTICS AND DIRECTORIES


Includes producers of cement, clay and clay products, fluorspar, lead and zinc, natural bonded molding sand, silica sand, tripoli, ganister, and peat.

MISCELLANEOUS


Synthetic Cryolite. 1938. 3 p.

Uses and production from fluorspar.


Briefly describes reports dating from 1918, available for consultation at the Geological Survey, on the occurrence or uses of ocher, potash shale, silica (tripoli), ganister, novaculite, cement-making materials, fluorspar, limestone, zinc and lead ores, clay, gravel, and organic material in limestones.

Heavy Minerals in Sands Along the Wabash River. 1966. 24 p., 3 figs., 5 tables.

One-Dimensional Disorder in Carbonates. 1967. 61 p., 12 figs., 5 tables, app.


Trends in cement, glass, and clay products manufacture.

Rare Earth and Trace Element Content of an Unusual Clay on Hicks Dome in Hardin County, Illinois. 1960. 6 p., 1 fig., 3 tables.

Binding Materials Used in Making Pellets and Briquets. 1964. 46 p

A literature review; extensive bibliography.

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Year</th>
<th>Pages/Lines</th>
<th>Figures/Tables</th>
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<tr>
<td>IMN 46</td>
<td>Sideritic Concretions in Illinois Shale, Gravel, and Till.</td>
<td>1971</td>
<td>17 p., 6 figs., 1 table.</td>
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<tr>
<td>EGN 49</td>
<td>Environmental Quality Control and Minerals.</td>
<td>1971</td>
<td>10 p., 6 figs.</td>
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<tr>
<td>Ed. Ser. 8</td>
<td>A nontechnical account of the formation, occurrence, production, and uses of over 22 materials.</td>
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<tr>
<td>Reprint 1966-J</td>
<td>Calcium and Bromine Contents of Natural Waters.</td>
<td>1966</td>
<td>2 p., 1 fig.</td>
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<tr>
<td>Reprint 1968-I</td>
<td>A New Method for Making Pebble Counts.</td>
<td>1968</td>
<td>2 p., 1 fig.</td>
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<tr>
<td>A review covering clay, sand and gravel, feldspar-bearing sand, peat, natural bonded molding sand, glacial drift gas, boulders, marl, tufa, iron ore, and saltpeter.</td>
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Reprint 1970-P

Guide Leaflets
A series of geological science field trip guide leaflets providing a one-day tour of the geological features in a limited area. Approximately 80 leaflets are available for various parts of the state. Most of them describe the mineral resources in the area of study.

Quadrangle reports
The Illinois Geological Survey has issued many reports on specific quadrangles of the state, areas 13 miles wide and 18 miles long. Each report considers the geology and mineral resources of one such area. Information on these reports is available from the Illinois State Geological Survey, Natural Resources Building, Urbana, IL 61801.

MAPS

Blue-line prints of maps showing limestone or sand and gravel resources in various areas of Illinois are available separately. A small charge, plus 5 percent State Retailers' Occupation Tax, is made for these maps.

Limestone Resources Maps

Preliminary Map of Limestone Outcrops. 1950.
State map. Scale, 1 inch = 16 miles. 30 cents.

Road Materials Resources Maps.
County maps showing limestone outcrops. Most counties available. Scale, 1 inch = 1 mile. 50 cents each.

Sand and Gravel Resources Maps

Sand and Gravel Resources of Illinois.
Scale, 1 inch = 16 miles. 30 cents.

County maps.
Scale, 1 inch = 1 mile. 50 cents each.
Champaign (1960)
Cook (northwest part) (1962)
Du Page (1962)
Kendall (1962)
Lake (1960)

Road Materials Resources Maps.
County maps showing sand and gravel resources. Most counties available. Scale, 1 inch = 1 mile. 50 cents each.
2. Lightweight Brick from Clay and Peat or Shredded Corncohs. 1955.
32. Silica Sand Briquets and Pellets as a Replacement for Quartzite. 1968.
39. Alumina Content of Carbonate Rocks as an Index to Sodium Sulfate Soundness. 1969.

*Out of print