BIBLIOGRAPHY

of the

Geology of Missouri

By

DARLING K. GREGER

Vol. XXXI, Second Series

EDWARD L. CLARK, *State Geologist and Director*

MISSOURI GEOLOGICAL SURVEY
AND WATER RESOURCES

ROLLA, MISSOURI

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Letter of Transmittal

Rolla, Missouri
April 30, 1945

Honorable Phil M. Donnelly,
Governor of Missouri,
Jefferson City, Missouri.

Dear Governor Donnelly:

I have the honor and pleasure to transmit herewith THE BIBLIOGRAPHY OF THE GEOLOGY OF MISSOURI, by Darling K. Greger.

The publication of the bibliography is of paramount value at this time. Many requests are made of the Missouri Geological Survey and Water Resources for references on various geological subjects. This compilation will be of definite value to those interested in the economic development of the mineral resources of the State; it will also meet the need of the academic geologist who is interested in the science of geology. The first section of the bibliography lists the publications by authors. The second section is a cross reference to publications pertaining to specific subjects and economic products.

Respectfully submitted,

EDWARD L. CLARK,
State Geologist.

Preface

EDWARD L. CLARK

The compilation of the bibliography was started by Mr. Darling K. Greger[1] under the supervision of Dr. H. A. Buehler, deceased, State Geologist of Missouri. After the death of Dr. Buehler the compilation was continued and the preliminary manuscript submitted in May, 1944. To give greater utility to the bibliography the second section was expanded and reorganized by Dr. Percival Robertson[2] during the summer months of 1944. Final reorganization and editing were completed by Messrs. Albert Kidwell and Richard S. Watson[3].

The Missouri Geological Survey and Water Resources is indebted to many organizations and individuals for assistance in making this bibliography as complete as possible. Acknowledgements are especially due to: University of Missouri, Graduate School and Department of Geology for the availability of unpublished theses; University of Missouri School of Mines and Metallurgy for unpublished theses; Washington University, St. Louis, Missouri, for unpublished theses; and the United States Geological Survey for titles of recent date which have not been included in published bibliographies of that agency.

1Fulton, Missouri, retired. Mr. Greger temporarily stepped out of retirement to compile this bibliography.

2Professor of Geology, The Principia College, Elsah Illinois. Geologist, summer appointment, Mo. Geol. Survey.

3Geologists, Mo. Geol. Survey.

Introduction

This bibliography is concerned with the literature of the various branches of geology and some phases of its allied sciences as they are found in the State of Missouri. The present volume is the fourth bibliography to be published by the Missouri Geological Survey, previous ones having appeared in 1855, 1890 and 1896. The majority of the geological literature dealing with Missouri has been written since the publication of the last bibliography, and the need for a new, comprehensive bibliography has become acute.

It is believed that most of the important titles concerned with the geology of Missouri have been included. A limited number of references describing areas adjacent to Missouri have been listed. Unquestionably some references have been missed. Where such ommissions are apparent to the reader of the volume, the titles should be referred to the Missouri Geological Survey in order that they may be added to future revisions.

Suggestions on using the bibliography: When looking for an article in the bibliography one should find the name of the author in the first section of the book, the bibliography proper. In instances where a reference has two or more authors, it is listed only under the name of the senior author. Beneath the name of the author will be found a list of all the articles written by that person, each identified by a number at the left and arranged in chronological order. The name of the citation is followed by a statement indicating the publication in which it appeared. Next is indicated the series number—if it has been issued in several series, followed by the volume, the number, the page or pages, and the date of publication. The place of publication is shown where this is deemed necessary. If the article was published as a book, the city and the name of the publisher are both included. A large number of abbreviations have been used in accordance with *Suggestions to Authors of the United States Geological Survey,* and a list of these abbreviaations has been included.

In order to find what has been written about a given subject one should look for the topic in the second section of the bibliography. Under each topic will be found a list of references on that particular subject, each citation being followed by the name of the author and the number of the article. By referring back to the bibliography proper, the time and place of publication may be determined. It should be kept in mind that this index is not intended to be exhaustive. An attempt has been made to list only the more important references under each topic.

Much of the available information of the geology of Missouri has never been published. The Missouri Geological Survey is maintained for the benefit of the citizens of Missouri and is ready at all times to assist the public by giving information and assistance on geological subjects.

Abbreviations

Acad.—academy
Adj.—adjourned
Agri.—agriculture, agricultural
Am.—American
Ann.—annual
app.—appendix
apps.—appendices
approx.—approximate, approximately
Assoc.—association
Bibl.—bibliography
Bienn.—biennial
Bol.—Boletin
Bot.—botanical
Bull.—bulletin
Bur.—bureau
Can.—Canadian
Chem.—chemical
Circ.—Circular
Co.—county, company
Cos.—counties
Col.—collection
Coll.—college
Comm.—commercial
Comp.—comparative
Conf.—conference
Cong.—congress
Contr.—contributions
Conv.—convention
Dept.—department
Diss.—dissertation
Doc.—document
Econ.—economic
ed.—edited, edition
Eng.—engineers, engineering
Engl.—England
etc.—and so forth
et. seq.—et sequentes
Ex.—executive
Exp.—experiment, experimental
fasc.—fasciculus
fig.—figure
figs.—figures
fol.—folio
fold.—folded
front.—frontispiece
Gaz.—gazette
gen.—genus
Geog.—geographical
Geol.—geological
Geophys.—geophysical
Hist.—history, historical
il.—illustrated
ills.—illustrations
incl.—including
Ind.—industry
Indus.—industrial
Inf.—information
Inst.—institute
Internat.—international
Inv.—investigations
Jahrb.—Jahrbuch
Jour.—journal
Knowl.—knowledge
Mag.—magazine
Met.—metallurgy, metallurgical
Min.—mining
Misc.—miscellaneous
ms.—manuscript
Mtg.—meeting
Mus.—museum
Nat.—national, natural
no.—number
nos.—numbers
Occas.—occasional
opp.—opposite
Pan-Am.—Pan-American
Philos.—philosophical
Phys.—physical
pl.—plate
pls.—plates
Pop.—popular
portr.—portrait
p.—page
pp.—pages
Prest.—presented
Priv.—private
Proc.—proceedings

ABBREVIATIONS—Continued.

Prof.—professional
pt.—part
pts.—parts
Pub.—publication
Quart.—quarterly
Reg.—regents
Rept.—report
Rev.—review
Sci.—science
Seismol.—seismological
Sen.—senate
ser.—series
sess.—session
Soc.—society
sp.—species
Sta.—station
Summ.—summary
Suppl.—supplement
t.—tomo
Tech.—technical
Top.—topographic
Trans.—transactions
Univ.—university
U. S.—United States
vol.—volume

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Counties of Missouri—Their Geology

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QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

ATCHISON COUNTY.

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COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 30.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

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BARRY COUNTY.

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CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 42.
LIME resources: Buehler, 1.
MINERAL WATERS in Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND AND GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
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BATES COUNTY.
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SAND AND GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.

BENTON COUNTY.
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COAL deposits of Missouri: Hinds, 4.
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LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
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IRON ores of Missouri: Crane, G. W., 1: Nason, 2.
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LIME resources: Buehler, 1.
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BOONE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
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LIME resources: Buehler, 1.
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OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
ROCK WOOL resources: McQueen, 11.
SAND AND GRAVEL resources : Dake, 8.
Devonian of Missouri: Branson, 12.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
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BUCHANAN COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 1.
GAS in Gower area: Greene, F. C., 9.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 28.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Gower area: Greene, F. C., 9.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

BUTLER COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGY and bleaching CLAYS: Farrar, 2.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
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CALDWELL COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
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GAS in Missouri: Wilson, M. E., 2.
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GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series of Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

CALLAWAY COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Cheltenham CLAY: Allen, V. T., 10.
Fire CLAY districts: McQueen, 15.
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COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
LIME resources: Buehler, 1.
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BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
IRON ores of Missouri: Crane, J. W., 1; Nason, 2; Schmidt, 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
ZINC deposits: Winslow, 14.
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CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
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IRON ores of Missouri: Crane, J. W., 1.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
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CARROLL COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
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Pre-glacial drainage pattern: Greene, 7.

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CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
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IRON ores of Missouri: Crane, J. W., 1; Nason, 2.
LIME resources: Buehler, 1.
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QUARRYING industry: Buckley, 5.
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CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
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Pennsylvanian series in Missouri: Hinds, 5.
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CEDAR COUNTY.
CEMENT resources: Buehler, 1.
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COAL deposits of Missouri: Hinds, 4.
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LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
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CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
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OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

CHRISTIAN COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
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LEAD deposits: Winslow, 14.
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GAS in Missouri: Wilson, M. E., 2.
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Oil in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
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CLAY COUNTY.
CEMENT resources: Buehler, 1.
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QUARRYING industry: Buckley, 5.
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COAL deposits of Missouri: Hinds, 4.
GAS in Gower area: Greene, F. C., 9.
GAS in Missouri: Wilson, M. E., 2.
GAS pools: Greene, 4, 6, 8.
GEOLOGY of northwestern Missouri: McQueen, 12.
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LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Gower area: Greene, F. C., 9.
OIL in Missouri: Wilson, M. E., 2.
OIL pools: Greene, 4, 6, 8.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

COLE COUNTY.
BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
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COAL deposits of Missouri: Hinds, 4.
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ZINC deposits: Winslow, 14.
Devonian of Missouri: Branson, 12.
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CLAY deposits: Wheeler, 7.
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CEMENT resources: Buehler, 1.
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LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
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DALLAS COUNTY.
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MINERAL WATERS of Missouri: Schweitzer, 3.
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Pennsylvanian series in Missouri: Hinds, 2.
Pre-glacial drainage pattern: Greene, 7.

DEKALB COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.

QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

DENT COUNTY.
CEMENT resources: Buehler, 1.
IRON ores of Missouri: Crane, G. W., 1.
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IRON ores of Missouri: Schmidt, 1.
LIME resources: Buehler, 1.
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DOUGLAS COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGICAL reconnaissance work: Hughes, 2.
IRON ores of Missouri: Crane, G. W., 1: Nason, 2.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Large springs: Beckman, 1.

DUNKLIN COUNTY.
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FRANKLIN COUNTY.
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LIME resources: Buehler, 1.
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SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
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GASCONADE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
LIME resources: Buehler, 1.
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GENTRY COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
Pre-glacial drainage pattern: Greene, 7.
Pennsylvanian series in Missouri: Hinds, 5.

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CEMENT resources: Buehler, 1.
COAL fields: Arnold, A., 2.
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GEOLOGICAL report on Greene Co.: Shepard, E. M., 2.
GEOLOGICAL reconnaissance from Springfield to Arkansas: Schmitz, 1.
IRON ores of Missouri: Crane, G. W., 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
Pierson Creek MINES: Smith, O. M., 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
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ZINC deposits: Winslow, 14.
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Fossil wood in Reeds Spring formation: Cribbs, 1-8.
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GRUNDY COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.

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GAS in Missouri: Wilson, 2.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

HARRISON COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

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CEMENT resources: Buehler, 1.
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COAL deposits of Missouri: Hinds, 4.
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Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
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IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Henry Co.: Woodward, A. E., 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Coal floras: Round, 1.

HICKORY COUNTY.
CEMENT resources: Buehler, 1.
GAS in Missouri: Wilson, M. E., 2.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
Report on MINERAL lands: Broadhead, 90.
OIL in Missouri: Wilson, M. E., 2.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.

HOLT COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report on Holt Co.: Broadhead, 29.
GEOLOGY of Forest City basin: McQueen, 13; Osborn, 1; Potter, P. G., 1; Lee, 3.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

HOWARD COUNTY.
CEMENT resources: Buehler, 1.
COAL measures of Howard Co.: Norwood, C. J., 4.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 45.
GEOLOGY of Huntsville quadrangle: Marbut, 6.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.

HOWELL COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGICAL reconnaissance work: Hughes, 2.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
Meteorite from Lanton, Howell Co.: Cullison, 2.

IRON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGY of Iron Mountain sheet: Winslow, 15.
GEOLOGY of Potosi and Edgehill Quadrangles: Dake, 15.
GRANITE quarries near Graniteville: Anon., 5.
Missouri IRON, Pilot Knob: Harrison, C., 1.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
Magnetite from IRON Mountain and Pilot Knob: Harrison, E., 1.

Pilot Knob and vicinity: Pumpelly, 2, 4.
Pilot Knob and Iron Mountain, 1874: Frazer, 1.
Description of Iron Mountain and Pilot Knob, 1852: Shepard, C. U., 3.
LIME resources: Buehler, 1.
MANGANESE deposits: Grawe, 7.
QUARRYING industry: Buckley, 5.
Archean: Haworth, 4, 5, 6, 7, 10.
Topography of Granite and porphyry region: Lonsdale, 2.
Crystalline rocks of Missouri: Haworth, 10.

JACKSON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
GAS pools: Greene, 4, 6, 8.
GAS resources, Jackson Co.: Blair, 2, 3.
Effective porosity in GAS fields: Bartle, 5.
Blue Springs GAS field: Bartle, 1.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of Jackson Co.: McCourt, 1.
GEOLOGY of Kansas City: Spotswood, 1.
GEOLOGIC section at Kansas City: Haworth, 12.
Few notes on GEOLOGY of Jackson Co.: Broadhead, 84.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL resources, Jackson Co.: Blair, 2, 3.
OIL in Missouri: Wilson, M. E., 2.
OIL pools: Greene, 4, 6, 8.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Pennsylvanian series in Missouri: Hinds, 5.
Coal Measures faunal studies: Beede, 2, 4.
Coal Measure crinoids: Beede, 3.
Species of *Hydreionocrinus* from the Coal Measures of Kansas City: Weller, S., 5.
Sandstone in the Pennsylvanian: Bartle, 2.
Cherokee formation subsurface: Bartle, 4.
Traverse of upper Des Moines and lower Missouri series from Jackson Co., Mo., to Appanoose Co., Iowa: Cline, 4.
Fossils from Kansas City and vicinity: Lykins, 1.
Paleoniscid brains case (fish): Eaton, 1.
Meteorite at Kansas City, 1878: Merrill, 4; Parker, J. D., 1.
Following the pick and spade: West, E. P., 1.
Mastodon: Ballard, 1.
Pre-glacial valley in northeast Jackson Co.: Clair, 1.
Traces of a glacier at Kansas City: Case, E. C., 1.

JASPER COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GEOLOGICAL report: Broadhead, 41.
GEOLOGY of the Joplin quadrangle: Siebenthal, 2.
Development of Tri-State zinc and LEAD district: Harbaugh, 1, 2.
Joplin LEAD and zinc district: Haworth, 14, 15, 16.
LEAD and zinc deposits: Winslow, 14.
LIME resources: Buehler, 1.
List of MINERALS from Joplin district: Rogers, 3, 6, 7.
MINING interests in Joplin: Beatty, 1.
Joplin MINING district: Boyd, 1; Brittain, 1, 2, 3.
MINES of Carterville: Broadhead, 108.
Crane and Chenoweth MINES: U. S. Bureau of Mines, 4.
Oronogo-Webb City-Duenweg (MINE) district: U. S. Bureau of Mines, 3, 9.
Tailings on Troupe (MINING) tract, Eggert lease: U. S. Bureau of Mines, 8.
Little Mary (MINE) tailing pile, Neck City: U. S. Bureau of Mines, 7.
ORE deposits of Tri-State district: Dake, 17; Fowler, 1-11.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Development of Tri-State ZINC and lead district: Harbaugh, 1, 2.
Joplin lead and ZINC district: Haworth, 14, 15, 16.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.
Chertification in Tri-State district: Fowler, 4, 7; Gregory, F. E., 1.
Coal Measures of Jasper Co.: Norwood, C. J., 2.
Relations of cherts to stylolites at Carthage: Bastin, 1.
Ore deposits of Tri-State District; Sales, 1.

JEFFERSON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGICAL report: Shumard, 13.

GEOLOGY of Crystal City quadrangle: Pike, R. W., 1.
IRON ores of Missouri: Crane, G. W., 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
MINES in 1855: Litton, 1.
Valle MINES dumps: U. S. Bureau of Mines, 11.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
House Spring area: Engel, 1.
Plattin formation: Hinchey, 1.
Early Mississippian formations: Moore, R. C., 2.
Fossil remains: Koch, A. K., 3. (See also other titles by same author.)
Early man: Adams, R. M., 1.
Gypsum rosettes in a cave in Jefferson Co.: Robertson, P. 1.

JOHNSON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GAS pools: Greene, 4.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
MINERAL WATERS of Johnson Co.: Woodward, A. E., 1.
OIL pools: Greene, 4.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND and Gravel resources: Dake, 8.
Pennsylvanian series in Missouri: Hinds, 5.

KNOX COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and Gravel resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.

LACLEDE COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGICAL report: Shumard, 13.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
SAND and GRAVEL resources: Dake, 8.
Bennett Spring: Beckman, 1.

LAFAYETTE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL beds of Lafayette Co.: Winslow, 2.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of Lexington sheet: Marbut, 7.
GEOLOGY of Higginsville sheet: Winslow, 5.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
SAND and GRAVEL resources: Dake, 8.
Pennsylvanian series in Missouri: Hinds, 5.

LAWRENCE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGICAL report: Rutledge, R. B., 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
Capitol MINING Co.: Lawrence Co.: U. S. Bureau of Mines, 6.
Composition of cleaned ores produced at Aurora: Spencer, H. G., 2.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.
Carboniferous outlier: Albertson, 1.
Occurrence of Halloysite in Lawrence Co.: Smith, A. F., 1.
Large springs: Beckman, 1.

LEWIS COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Mississippi Valley area: Krey, 1.

LINCOLN COUNTY.
CEMENT resources: Buehler, 1.
Fire CLAY districts: McQueen, 15.
COAL deposits of Missouri: Hinds, 4.

GEOLOGY of Lincoln Co.: Potter, W. B., 1.
GEOLOGICAL section: Grohskopf, 5.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Auburn chert fauna: Branson, 1.
The Lincoln fold: McQueen, 13.
Mississippi Valley area: Krey, 1.
Lincoln Co. meteorite: Smith, J. L., 2.

LINN COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 48.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
Examination of MINERAL lands near Bucklin: Buckley, 10.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

LIVINGSTON COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 25.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

McDONALD COUNTY.
LIME and CEMENT resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
TRIPOLI deposits at Seneca, Mo.: Nelson, 1.
American "TRIPOLI": Hovey, 2.
The TRIPOLI industry: Plumb, 1.
Fayetteville quadrangle: Adams, G. I., 3.
Jacobs Cavern: Gould, 1.
Early Mississippian formations: Moore, R. C., 2.

MACON COUNTY.
CEMENT resources: Buehler, 1.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report, Macon Co.: Broadhead, 17; McGee, 1.
GEOLOGICAL report on Bevier sheet: Gordon, 3.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
The Missouri gold discovery: Reister, 1.
Gold in north Missouri: Williams, C. P., 10.
Pennsylvanian series in Missouri: Hinds, 5.

MADISON COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGICAL report: Broadhead, 52.
GEOLOGY of Silver Mine area: Tolman, 2, 3.
GEOLOGY of Iron Mountain sheet: Winslow, 15.
GEOLOGY of Mine La Motte sheet: Keyes, 29.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
Unique LEAD deposit: Johnson, R. D. O., 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MANGANESE deposits: Grawe, 7.
MINES in 1855: Litton, 1.
Remarks on MINE La Motte, 1874: Frazer, 1.
Topaz and associated minerals from Einstein silver MINE: Ross, C. S., 2.
St. Louis Smelting and Refining Co., property at Frederickown: U. S. Bureau of Mines, 1, 10.
MINERALS of Madison Co.: Tarr, 17.
MINERAL WATERS of Missouri: Schweitzer, 3.
ZINC deposits: Winslow, 14.
Crystalline rocks of Missouri: Haworth, 10.
Igneous rocks at Skrainka: Denham, 1.
Archaean (near Mine La Motte): Haworth, 13.
Dolomite in the Fredericktown area: McQueen, 14.

MARIES COUNTY.
CEMENT resources: Buehler, 1.
Fire CLAY districts: McQueen, 15.
GEOLOGICAL report: Broadhead, 13.
IRON ores of Missouri: Crane, G. W., 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Paydown Spring: Beckman, 1.

MARION COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposit of Missouri: Hinds, 4.
GEOLOGY of Marion Co.: Swallow, 3.
GEOLOGIC section at Hannibal: Grohskopf, 5.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL waters of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Area near Hannibal: Bumgardner, 1.
Early Mississippian formations: Moore, R. C., 2.
Crinoids and blastoids from Subcarboniferous: Rowley, 9.
Mississippi Valley area: Krey, 1.

MERCER COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

MILLER COUNTY.
BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GEOLOGY of Miller Co.: Ball, S. H., 1; with introduction by Buckley, 2.
GEOLOGIC report on Miller Co.: Meek, 20.
IRON ores of Missouri: Crane, G. W., 1; Schmidt, 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Glacial boulders at Tuscumbia: Wright, G. F., 3.

MISSISSIPPI COUNTY.
CEMENT resources: Buehler, 1.
Bleaching CLAYS: Farrar, 2.
GEOLOGY of Mississippi Co.: Farrar, 2.
LIME resources: Buehler, 1.
Southeastern Missouri lowlands: Marbut, 10, 11.

MONITEAU COUNTY.
BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GEOLOGICAL report, introduction: Buckley, 9.
GEOLOGICAL report on Moniteau Co.: Meek, 1; Van Horn, 1.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
ROCK WOOL resources: McQueen, 11.
ZINC deposits: Winslow, 14.
Resources of Moniteau Co.: Haywood, 1.
Devonian of Missouri: Branson, 12.
Early Mississippian formations: Moore, R. C., 2.

MONROE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.

MONTGOMERY COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Cheltenham CLAY: Allen, V. T., 10.
Fire CLAY districts: McQueen, 15.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.

LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Devonian of Missouri: Branson, 12.
Area near Mineola: Clark, J. M., 1.
Early Mississippian formations: Moore, R. C., 2.
Montgomery City quadrangle: Barnes, 1.
Pennsylvanian cyclothems: Wanless, 1.
Mineola dome: Whorton, 1.

MORGAN COUNTY.
BARITE deposits of Missouri: Tarr, 7.
Last Chance BARITE mine: Broadhead, 77.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GEOLOGY of Morgan Co.: Marbut, 15.
GEOLOGIC report on Morgan Co.: Meek, 21.
GEOLOGICAL report, introduction: Buckley, 14.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LEAD mines: Broadhead, 60.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINES of Morgan and Benton Cos., Broadhead, 58.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Description of Morgan Co. in 1887: Arnold, A., 1.
Large springs: Beckman, 1.

NEW MADRID COUNTY.
CEMENT resources: Buehler, 1.
Bleaching CLAYS: Farrar, 2.
GEOLOGY of New Madrid Co.: Farrar, 2.
LIME resources: Buehler, 1.
New Madrid earthquake: Broadhead, 132.
Reports on New Madrid earthquake area: Fuller, 2; Lyell, 1; Macelwane, 1; Macfarlane, 2; Morse, 1; Shepard, E. M., 7; Sampson, 5; Fuller, 4.
Lowlands of southeastern Missouri: Marbut, 10, 11.

NEWTON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGY of the Granby area: Buckley, 11.
GEOLOGY of the Joplin quadrangle: Siebenthal, 2.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINING and smelting at Granby: Perkins, 1.
Old Granby MINES: Broadhead, 101.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.
Big spring at Neosho: Beckman, 1.

NODAWAY COUNTY.
CEMENT resources: Buehler, 1.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 31.
Geology of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
Oil in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.
Fossil fish from Pennsylvanian: Hibbard, 1.

OREGON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
GEOLOGICAL reconnaissance work: Hughes, 2.
IRON ores of Missouri: Crane, G. W., 1.
IRON ores of Missouri: Nason, 2.
LIME resources: Buehler, 1.
Greer and other springs: Beckman, 1, 2.

OSAGE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
GEOLOGICAL report: Broadhead, 14.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.

OZARK COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGICAL report: Shumard, 13.
GEOLOGICAL reconnaissance work: Hughes, 2.

IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Large springs: Beckman, 1.

PEMISCOT COUNTY.
CEMENT resources: Buehler, 1.
Bleaching CLAYS: Farrar, 2.
GEOLOGY of southeast Missouri: Farrar, 2.
LIME resources: Buehler, 1.
Southeastern Missouri lowlands: Marbut, 10, 11.
Wells of Pemiscot Co.: Shepard, E. M., 5.

PERRY COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGY of parts of Perry and Cape Girardeau Co.: Flint, 3, 4.
GEOLOGICAL report: Shumard, 13.
IRON ores of Missouri: Crane, G. W., 1.
Grand Tower Iron works: King, 10.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Dutchtown, Ordovician formation: McQueen, 10.
Devonian of Missouri: Branson, 12.
Early Mississippian formations: Moore, R. C., 2.
Dickite and fluorite in Cambrian and Ordovician: Grohskopf, 2.
Strontium minerals: McQueen, 9.
Cote Sans Dessein (Missouri) and Grand Tower (Illinois): Marbut, 9.
Perryville meteorite: Merrill, 3.

PETTIS COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
ROCK WOOL resources: McQueen, 11.
Devonian of Missouri: Branson, 12.
Early Mississippian formations: Moore, R. C., 2.
Sub-Carboniferous series at Sedalia: Sampson, 2.
Natural history: Sampson, 1.

PHELPS COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
Fire CLAYS of Phelps Co.: Cronk, 1.
COAL deposits of Missouri: Hinds, 4.
COPPER banks of Phelps Co.: Fay, 1.
GEOLOGICAL report, 1874: Shumard, 13.
GEOLOGIC section, St. James to Cuba: Benham, 1.
GEOLOGY from Rolla to Newburg: Hughes, 1.
GEOLOGY of Rolla quadrangle: Lee, 2.
Topography and GEOLOGY of Panther Bluffs: Maveety, 1.
GEOLOGY of Beaver quadrangle, Phelps Co.: Paulette, 1.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2; Schmidt, 1.
IRON banks of Phelps Co.: Fay, 1.
IRON ores at Buckland's Bank: Garvans, 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
Phelps Co., ORES: Price, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Rolla WATER supply: Anderson, 1.
Revision of Jefferson City formation in Rolla quadrangle: Cullison, 1.
Sandstone member of Jefferson City and Cotter formations: Grawe, 3.
Roubidoux near Rolla: Schulty, J. E., 1.
Faunas of residual Mississippian: Bridge, 2.
Basal Cherokee in Rolla area: Murphy, 1.
Newburg district: Lee, 1.
Ankerite from Phelps Co.: Rogers, 1.
Salt peter cave, map and geology: Detweiler, 1.
Power utilization at Meramec Spring: Walsh, 1.
Meteorite fall at Little Piney (Arlington) 1839: Herrick, E. C., 1.
Analysis of Little Piney meteorite (Arlington): Shepard, 2.
Meramec and other large springs: Beckman, 1, 2.

PIKE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
COAL deposits of Missouri: Hinds, 4.
GEOLOGICAL report, introduction: Buckley, 15.
GEOLOGICAL cross section: Grohskopf, 5.
Subsurface GEOLOGY: Grohskopf, 3.
GEOLOGY of Pike Co.: Rowley, 24.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.

QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Trenton limestone and Hudson River shales of Pike Co.: Rowley, 6.
Inarticulate brachiopods from Grassy Creek shale: Greger, 24.
Edgewood limestone: Rowley, 25.
Early Mississippian formations: Moore, R. C., 2.
Keokuk limestone and Coal Measures of Pike Co.: Rowley, 5.
Fossil collecting in Burlington limestone: Rowley, 7.
Echinodermata from Sub-carboniferous: Rowley, 8.
Vertical range of fossils at Louisiana (Mo.): Rowley, 15.
Fauna of Burlington limestone at Louisiana: Rowley, 18.
Fossils at Louisiana, Missouri: Keys, 34.
The Lincoln fold: McQueen, 13.

PLATTE COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GAS pools: Greene, 4, 8.
GEOLOGICAL report: Broadhead, 27.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL pools: Greene, 4, 8.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

POLK COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Physical GEOLOGY of an area near Humansville: Rhodes, 1.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
Early Mississippian formations: Moore, R. C., 2.

PULASKI COUNTY.
CEMENT resources: Buehler, 1.
Fire CLAY districts: McQueen, 15.
GEOLOGICAL report: Shumard, 13.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Onyx deposits of Boiling Springs Cave: Stauber, 1.
Large springs: Beckman, 1.

PUTNAM COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report on Putnam Co.: Norwood, C. J., 5.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

RALLS COUNTY.
CEMENT resources: Buehler, 1.
Fire CLAY districts: McQueen, 15.
CLAY and COAL in the Perry area: McQueen, 3.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Mississippi Valley area: Krey, 1.
The Lincoln fold: McQueen, 13.
Cross section: Grohskopf, 5.

RANDOLPH COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 18.
GEOLOGICAL report on Bevier sheet: Gordon, 3.
GEOLOGY of Huntsville quadrangle: Marbut, 6.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.

RAY COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
Lexington COAL: Greene, 11.

GAS pools: Greene, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of Lexington sheet: Marbut, 7.
GEOLOGY of Richmond quadrangle: Marbut, 8.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
OIL pools: Greene, 4.
OIL in Missouri: Wilson, M. E., 2.
OIL springs in Missouri: Shumard, 10.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

REYNOLDS COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGY of Eminence-Cardareva quadrangle: Bridge, 6.
GEOLOGY of Potosi and Edgehill quadrangle: Dake, 15.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
MANGANESE deposits: Grawe, 7.
Geographical notes: Broadhead, 70.
Crystalline rocks of Missouri: Haworth, 10.
Large springs: Beckman, 1.

RIPLEY COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
IRON ores of Missouri: Crane, G. W., 1.
IRON ores of Missouri: Nason, 2.
LIME resources: Buehler, 1.
MANGANESE deposits: Grawe, 7.

ST. CHARLES COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
The loess near St. Louis: Robertson, P., 2.
Mississippi Valley area: Krey, 1.

ST. CLAIR COUNTY.
CEMENT resources: Buehler, 1.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2: Schmidt, 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
MINERAL waters of St. Clair Co.: Woodward, A. E., 1.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Early Mississippian formations: Moore, R. C., 2.

ST. FRANCOIS COUNTY.
BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
GEOLOGY of Iron Mountain: Winslow, 15.
GEOLOGY of Mine LaMotte sheet: Keyes, 29.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LEAD deposits: Winslow, 14.
Disseminated LEAD deposits: Buckley, 22.
Southeast Missouri LEAD district: Broadhead, 74.
LIME resources: Buehler, 1.
Mines in 1855: Litton, 1.
Valley MINE dumps: U. S. Bureau of Mines, 11.
QUARRYING industry: Buckley, 5.
ZINC deposits: Winslow, 14.
Crystalline rocks of Missouri: Haworth, 10.
Prismatic sandstone near Knob Lick: Haworth, 11.
Cambrian fossils: Beecher, 1.

STE. GENEVIEVE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Ste. Genevieve Co. COPPER mine: Gage, 5.
Ste. Genevieve COPPER deposit: Nicholson, 1.
Cornwall mines and primary COPPER: Rust, 1.
Another Missouri Copper mine: Anon., 4.
GEOLOGY of Ste. Genevieve Co.: Weller, S., 27.
GEOLOGY of Weingarten quadrangle: Bodman, 1.
GEOLOGY of Mine LaMotte sheet: Keyes, 29.
Igneous GEOLOGY of Ste. Genevieve Co.: Kidwell, 1.
GEOLOGY of Ste. Genevieve Co.; 1859: Shumard, 6.
GEOLOGICAL report, 1875: Shumard, 13.
IRON ores of Missouri: Crane, G. W., 1.
LEAD deposits: Winslow, 14.
LEAD ores from Ste. Genevieve Co., 1814: Meade, 1.
LIME resources: Buehler, 1.

Alnoite pipes, contact phenomena and ORE deposition near Avon: Singewald, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Crystalline rocks of Missouri: Haworth, 10.
Stratigraphy and larger fossils of Plattin formation: Fenton, 2.
Devonian of Missouri: Branson, 12.
Early Mississippian formations: Moore, R. C., 2.
Ozora district: Bailey, L., 1.
Review of Shumard's report: Worthen, A. H., 1.
Possible "pre-historic" man in southeastern Missouri: Croneis, 3.
Ste. Genevieve meteorite: Ward, 1.

ST. LOUIS, CITY and COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
CLAY resources of St. Louis area: Fenneman, 1.
Cheltenham CLAY: Allen, V. T., 10.
COAL deposits of Missouri: Hinds, 4.
Occurrence of GAS about St. Louis: Wheeler, 11.
GEOLOGY and resources of St. Louis quadrangle: Fenneman, 3, 4.
GEOLOGIC section along Mississippi River: Foster, V. M., 1.
GEOLOGIC section, Dupo, Ill., to Hannibal, Mo.: Grohskopf, 5.
GEOLOGY of part of St. Louis Co.: Tompson, J. P., 1.
Structural GEOLOGY of parts of St. Louis: Stringfield, 1.
Subsurface GEOLOGY of East St. Louis region: Ekblaw, 1.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
MINERAL resources of St. Louis district: Cuno, 1.
MINERALS in St. Louis: Magness, 1.
MINERAL notes, aerinite from St. Louis Co.: Robertson, P., 5.
MINERAL notes, barite from St. Louis: Koenig, 1.
MINERAL notes, dickite in St. Louis: Allen, V. T., 8.
MINERAL notes, mendozite (soda alum): Keller, 2.
MINERAL notes, millerite in St. Louis: Leonhard, 2.
Occurrence of OIL about St. Louis: Wheeler, 11.
PHYSIOGRAPHY of St. Louis area: Fenneman, 3.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Underground WATERS in St. Louis: Gleason, 2.
Plattin limestone: Hinchey, 1.
Early Mississippian formations: Moore, R. C., 2.
Mississippian exposure in St. Louis Co. Shipton, 1.
Mississippian chert: Barton, 1.
Breccia from the St. Louis formation: Grawe, 2.
St. Louis formation: Hinchey, 2.
Ste. Genevieve outlier in St. Louis: Gollhoffer, 1.
Carboniferous rock of St. Louis: Engelmann, 1.
Pennsylvanian outlier: Knight, 3.
Petrology of Pennsylvanian cycles: Frank, A. J., 1.
Septaria from Pennsylvanian shales: Grawe, 1.
Drift in St. Louis and vicinity: Drushell, 1, 2; Robertson, P., 3; Wheeler, 4.
Loess in vicinity of St. Louis: Nason, 1; Robertson, P., 2.
Stratigraphic work near East St. Louis: Fenneman, 2.
Structure of earth's crust east and north of St. Louis: Berkenhauer, 2.
Well at Insane Asylum: Broadhead, 64; Phillips, J. V., 2.
Belcher's artesian well: Litton, 2; Prout, 5; Anon., 1.
Bed rock topography: Thatcher, 1.
Meramecian Blastoidea: Greger, 30.
Ecological cross section of Mississippi River at St. Louis: Hies, 1.
General resources 1882: Bliss, 1.
Height of the St. Louis directrix: Broadhead, 66.

SALINE COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGIC report on Saline Co.: Meek, 23.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
MINERAL WATERS of Saline Co.: Woodward, A. E., 2.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Ordovician outcrop in Saline Co.: Grohskopf, 4.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.

SCHUYLER COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson M. E., 2.
GEOLOGICAL report on Schuyler Co.: Norwood, C. J., 5.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Pennsylvanian series in Missouri: Hinds, 5.

SCOTLAND COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.

SCOTT COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7; Davis, W. E., 1.
GEOLOGY and bleaching CLAYS: Farrar, 2.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND ond GRAVEL resources: Dake, 8.
Dutchtown, Ordovician formation: McQueen, 10.
Marine beds of Eocene age: Berry, 1.
Folded structure near Commerce: Stewart, D. R., 2.
Southeastern Missouri lowlands: Marbut, 10, 11.

SHANNON COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
COPPER deposits: Bowles, 1; Greason, 1.
GEOLOGY of Eminence-Cardareva quadrangle: Bridge, 6.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
MANGANESE deposits: Grawe, 7.
QUARRYING industry: Buckley, 5.
Crystalline rocks of Missouri: Haworth, 10.
Alley, Welsh and other large springs: Beckman, 1, 2.
Ebb and Flow Spring: Bridge, 4.

SHELBY COUNTY.
CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
COAL reposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GEOLOGICAL report: Broadhead, 16.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.

STODDARD COUNTY.
CEMENT resources: Buehler, 1.
BAUXITIC CLAY: Stewart, 1.
Geology and bleaching CLAYS: Farrar, 2.
CLAY deposits: Wheeler, 7; Davis, W. E., 1.
GEOLOGY of Stoddard Co.: Farrar, 3.
GEOLOGY of Crowley's Ridge: Branner, 1.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Marine beds of Eocene age: Berry, 1.
Lowlands of southeastern Missouri: Marbut, 10, 11.

STONE COUNTY.
CEMENT resources: Buehler, 1.
Galena-Joplin LEAD district: Haworth, 14-16.
LIME resources: Buehler, 1.
Galena-Joplin ZINC district: Haworth, 14-16.
Early Mississippian formations: Moore, R. C., 2.
Fossil wood in Reeds Spring formation: Cribbs, 1-8.
The Baxter meteorite: Nininger, 2, 3.
Eureka Springs-Harrison quadrangle: Purdue, 2.

SULLIVAN COUNTY.
CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
Preliminary report on COAL: Winslow, 3.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 46.
Subsurface GEOLOGY: Grohskopf, 3.
LIME resources: Buehler, 1.
OIL in Missouri: Wilson, M. E., 2.
QUARRYING industry: Buckley, 5.
Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

TANEY COUNTY.
CEMENT resources: Buehler, 1
Reconnaissance GEOLOGY work: Hughes, 2.

GEOLOGICAL reconnaissance from Springfield to Arkansas: Schmitz, 1.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
Early Mississippian formations: Moore, R. C., 2.
Marble Cave (Since known as Marvel Cave): Emery, 1.
Mincy meteorite: Farringon, 1; Kunz, 1; Shepard, C. U., 4.
Eureka Springs-Harrison quadrangle: Purdue, 2.

TEXAS COUNTY.

CEMENT resources: Buehler, 1.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
ZINC deposits: Winslow, 14.
Large springs: Beckman, 1.

VERNON COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Preliminary report on COAL: Winslow, 3.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Greene, 4; Wilson, M. E., 2.
GEOLOGICAL report: Broadhead, 43; Greene, F. C., 3; Norwood, C. J., 3.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Greene, 4; Wilson, M. E., 2.
SAND and GRAVEL resources: Dake, 8.
Early Mississippian formations: Moore, R. C., 2.
Pennsylvanian series in Missouri: Hinds, 5.
Early history and exploration of Vernon Co.: Shepard, E. M., 10.

WARREN COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
Fire CLAY districts: McQueen, 15.
COAL deposits of Missuori: Hinds, 4.
GEOLOGICAL report: Broadhead, 15.
IRON ores of Missouri: Crane, G. W., 1.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
Devonian of Missouri: Branson, 12.
Gore Area: Stephens, 1.
Early Mississippian formations: Moore, R. C., 2.
Warrenton meteorite: Broadhead, 80; Farrington, 1; Smith, J. L., 1.

WASHINGTON COUNTY.

Geology, mining and preparation of BARITE in Washington Co.: Steel, 1.
BARITE deposits of Missouri: Tarr, 7.
CEMENT resources: Buehler, 1.
CLAYS of Washington Co., 1848: Woolford, 1.
GEOLOGY of Potosi and Edgehill quadrangles: Dake, 15.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
Disseminated LEAD deposits: Buckley, 22.
LEAD mines: Ball, S. H., 3.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
MINERAL resources of Washington Co., 1858: Woodford, 3.
MINES in 1855: Litton, 1.
Crystalline rocks of Missouri: Haworth, 10.

WAYNE COUNTY.

CEMENT resources: Buehler, 1.
CLAY deposits: Wheeler, 7.
IRON ores of Missouri: Crane, G. W., 1; Nason, 2.
LIME resources: Buehler, 1.
QUARRYING industry: Buckley, 5.
SAND and GRAVEL resources: Dake, 8.
Southeastern Missouri lowlands: Marbut, 10, 11.
Large springs: Beckman, 1.

WEBSTER COUNTY.

CEMENT resources: Buehler, 1.
GEOLOGY of Greene Co., contains references to Webster Co.: Shepard, E. M., 9.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
Underground WATER: Shepard, E. M., 6.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.

WORTH COUNTY.

CEMENT resources: Buehler, 1.
COAL deposits of Missouri: Hinds, 4.
GAS in Missouri: Wilson, M. E., 2.
GEOLOGY of northwestern Missouri: McQueen, 12.
LIME resources: Buehler, 1.
MINERAL WATERS of Missouri: Schweitzer, 3.
OIL in Missouri: Wilson, M. E., 2.

Pennsylvanian series in Missouri: Hinds, 5.
Pre-glacial drainage pattern: Greene, 7.

WRIGHT COUNTY.
CEMENT resources: Buehler, 1.
GEOLOGICAL report: Shumard, 13.
LEAD deposits: Winslow, 14.
LIME resources: Buehler, 1.
SAND and GRAVEL resources: Dake, 8.
ZINC deposits: Winslow, 14.
Early Mississippian formations: Moore, R. C., 2.

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ASPHALT. Refer also to BITUMEN.
Quarry and plant of Reliance Rock Asphalt Co.: Crabtree, 1.
Sand and gravel resources of Missouri: Dake, 8.
Asphalt and bituminous rock deposits of the United States: Eldridge, 1.
Geology of Vernon Co.: Greene, F. C., 3.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

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Geology of Miller Co.: Ball, S. H., 1.
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Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
Story of Barites: Clark, A. W., 1.
Technical problems of barytes industries: Comins, 1.
Gopher-hole barite mining in Washington Co.: Cozzens, 5.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Barite mining in southern Missouri: Hopson, 1.
Geology of the Rolla Quadrangle: Lee, W., 2.
Geology of Morgan Co.: Marbut, 15.
Barite production in 1923: Siebenthal, 29.
Geology, mining and preparation of barite in Washington Co.: Steel, 1.
Barite deposits: Tarr, 6, 7, 11.
Barite vein cutting granite: Tarr, 29.
Barite industry of Missouri: Weigel, W. M., 1.
Barytes in Missouri: Wittich, 2.
Mineral resources of Washington Co., 1858: Woodford, 2.

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Occurrence of bitumen in Missouri: Broadhead, 68.
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Bituminous sandstone area of southwest Missouri: Hall, C. W., 1.

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Bituminous shales: Broadhead, 75.

BUILDING STONE. Refer to STONE.

CEMENT, PORTLAND.
Geology of Miller Co.: Ball, S. H., 1.
Lime and cement resources: Buehler, 1.
Manufacture of Portland cement: Butler, 1.
Take chert from limestone at Universal Atlas plant: Diener, 1.
Cement materials and industry of the United States: Eckel, 1, 2.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Geology of Jackson Co.: McCourt, 1.
Geology of Pike Co.: Rowley, 24.
Geology of Moniteau Co.: Van Horn, F. B., 1.

CERAMICS. Refer to CLAY.

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Joplin district folio: Smith, W. S. T., 2A.
Technical problems of the tripoli, chat, and ground limestone industries: Reynolds, 1.

CHEMICAL RESOURCES.
Chemical and mineral resources of the St. Louis industrial district: Cuno, 1.

CLAY.
Bleaching.
Geology and bleaching clay of southwest Missouri: Farrar, 2.

Diaspore.
Mineral composition and origin: Allen, V. T., 5.
Winning of Missouri clays: Forbes, 1, 2.

Mining diaspore and flint clays: McQueen, 1.
Geologic relations of diaspore and flint clays: McQueen, 4.
The diaspore clays of Missouri: Swartzlow, 2.
Diasporite in Missouri, 1917: Wherry, 1.
Diaspore clay of Missouri: Wysor, 1.

Fire.

Cheltenham clay: Allen, V. T., 7, 10.
Pit of Green Fire Brick Co.: Bradley, R. S., 1.
Prospecting and developing semi-plastic fire clays: Bradley, R. S., 2.
Fire clays of Phelps Co.: Cronk, 1.
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Yearbook of manufacture in St. Louis: Howe, 1.
Fire clay of east central Missouri: McQueen, 16.
Refractory clays of Missouri: Moore, G. E., 1.
Tests on Missouri fire clays: Taylor, H. W., 1.
Fire clays of Missouri: Wheeler, 10.

Flint.

Mineral composition and orgin of flint clay: Allen, V. T., 5.
Winning of Missouri clays: Forbes, 1.
Sandstone covered flint clay: Keller, 5.
Mining diaspore and flint clays: McQueen, 1.
Geologic relations of diaspore and flint clays: McQueen, 4.

General.

Geology of Miller Co.: Ball, S. H., 1.
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Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Further investigations of southeastern Missouri clays: Davis, W. E., 1.
Geology of Stoddard Co.: Farrar, W., 3.
Clay resources of St. Louis district: Fenneman, 1.
Ceramic engineering: Freeman, 1.
Technical problems in ceramics: Greaves-Walker, 1.
Popular review of ceramic history: Haberman, 1.
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Geological occurrence of clays: Keyes, 19.
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Geology of the Rolla Quadrangle: Lee, W., 2.
Geology of Jackson Co.: McCourt, 1.
Clay resources of Perry area: McQueen, 3.
Fire clay districts in east central Missouri: McQueen, 16.
Geology of the Calhoun Sheet: Marbut, 4.
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Geology of the Richmond area: Marbut, 8.
Geology of Morgan Co.: Marbut, 15.
Kaolin deposits of Bollinger Co.: Orton, 1.
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Geology of Pike Co.: Rowley, 24.
Zinciferous clays of southwest Missouri: Seamon, 1.
Clays of Missouri: Shepard, E. M., 1.
Geology of Greene Co.: Shepard, E. M., 2.
Occurrence of bauxitic clay in Stoddard Co.: Stewart, D. R., 1.
Treatise on Missouri clays: Thornberry, 1.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Clays and shales: Wheeler, 3.
Clay deposits and resources: Wheeler, 7, 8.
Clays of Washington Co.: Woolford, 1.
Clay and minerals of Missouri: Woolford, 2.

Tallow.

Geology of the Granby area: Buckley, 11.
Miscellaneous analyses, tallow clays: Clark, F. W., 1.
Tallow clays of southwestern Missouri: Seamon, 2.

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Analyses and Tests.

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CYRENE DOLOMITE.
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DAWSON COAL HORIZON.
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Stratigraphy of the Decorah formation: Kay, G. M., 1.
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DELTHYRIS SHALY LIMESTONE. Now called BAILEY.
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DENNIS LIMESTONE.
Stratigraphy and paleontology of upper Carboniferous rocks of Kansas: Adams, G. I., 1A.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
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Geology of northwestern Missouri: McQueen, 12.
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Geology of Johnson and Miami Cos., Kansas: Newell, 1.

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Geology of Missouri: Branson, 52.
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Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
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DOUGLAS FORMATION.
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Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
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Stratigraphy and paleontology of the Carboniferous system of the Kansas section: Adams, G. I., 1A.
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Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

DRY SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

DU BOIS LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
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Pennsylvanian system in Nebraska: Condra, 1.
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Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

EMPORIA LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.

ENCRINITAL LIMESTONE. Now called BURLINGTON-KEOKUK.
Geology of Lincoln Co.: Potter, W. B., 1.
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ERVINE CREEK LIMESTONE.
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Correlation of members of Shawnee group in southeastern Nebraska and adjacent areas of Iowa, Missouri and Kansas: Condra, 4.
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ESSEX LIMESTONE.
Alexandrian series in Illinois and Missouri: Savage, T. E., 4.

EUDORA SHALE.
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EUREKA COAL HORIZON.
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Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
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FERN GLEN FORMATION.
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Geology of Ste. Genevieve Co.: Weller, S., 27.

FERRUGINOUS SANDSTONE. Now called AUX VASES.
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Geology of Lincoln Co.: Potter, W. B., 1.
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FIRST MAGNESIAN LIMESTONE. Now called JOACHIM.
General geology of Missouri: Broadhead, 35.
Geology of Lincoln Co.: Potter, W. B., 1.
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FIRST SANDSTONE. Now called St. PETER.
General geology of Missouri: Broadhead, 35.

FONTANA SHALE.
Geology of Missouri: Branson, 52.
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Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

FORT SCOTT LIMESTONE. Refer also to OSWEGO.
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Geology of Jackson Co.: McCourt, 1.
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FORTUNE FORMATION.
Geology of Missouri: Branson, 52.
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FOURTH MAGNESIAN LIMESTONE. Includes everything from top of BONNETERRE to top of EMINENCE.
General geology of Missouri: Broadhead, 35.
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Geology of northwestern Missouri: McQueen, 12.
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Geology of Jackson Co.: McCourt, 1.
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Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

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Geology of Miller Co.: Ball, S. H., 1.
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Lower Mississippian of Missouri: Branson, 38, 39, 52.
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Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

HARVEYVILLE SHALE.
Geology of northwestern Missouri: McQueen, 12.
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HASKELL LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
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HEEBNER SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
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HENRIETTA FORMATION. Refer also to LEXINGTON GROUP.
Geology of Vernon Co.: Greene, F. C., 3.
Coal deposits of Missouri: Hinds, 4.
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HENRIETTA GROUP.
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HERTHA LIMESTONE.
Upper Carboniferous rocks of the Kansas section: Adams, G. I., 1A.
Geology of the Blue Springs gas field: Bartle, 1.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

HEUMADER SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

HICKORY CREEK SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

HIGGINSVILLE LIMESTONE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.

HINDSVILLE FORMATION.
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Eureka Springs-Harrison Folio: Purdue, 2.

HOLT SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

HONEY CREEK COAL HORIZON.
Geology of the Calhoun Sheet: Marbut, 4.
Geology of the Clinton Sheet: Marbut, 5.

HOUX LIMESTONE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.

HOWARD LIMESTONE.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

HUDSON RIVER SHALE. Now called MAQUOKETA.
Lime and cement resources of Missouri: Buehler, 1.
Iron ores of Missouri: Crane, G. W., 1.
Geology of Lincoln Co.: Potter, W. B., 1.
Trenton limestone and Hudson River shales: Rowley, 6.
Geology of Pike Co.: Rowley, 24.
Second annual report Geological Survey of Missouri: Swallow, 2.
Lead and zinc deposits of Missouri: Winslow, 14.

HUSHPUCKNEY SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

IATAN LIMESTONE.
Geology of Missouri: Branson, 52.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Missouri series of the Carboniferous: Keyes, 44.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

INDIAN CAVE SANDSTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

IOLA LIMESTONE. Refer also to PLATTSBURG GROUP.
Geology of the Blue Springs gas field: Bartle, 1.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

IOWA POINT SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

IRON MOUNTAIN CONGLOMERATE.
Lead and zinc deposits of Missouri: Winslow, 14, 20.

ISLAND CREEK SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

JACKSON PARK SHALE.
Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

JEFFERSON CITY FORMATION. Refer also to SECOND MAGNESIAN.
Geology of Miller Co.: Ball, S. H., 1.
Geology of Missouri: Branson, 52.
Geology of Eminence-Cardareva Quadrangles: Bridge, 6.
Lower Ordovician Stratigraphy of Ozarks: Cullison, 5.
Revision of Jefferson City formation in Rolla Quadrangle: Cullison, 1.
Sandstone members of Jefferson City formation: Grawe, 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of the Rolla Quadrangle: Lee, W., 2.
Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
Geology of Morgan Co.: Marbut, 15.
Revision of the Paleozoic systems: Ulrich, 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Lead and zinc deposits of Missouri: Winslow, 14.

JIM CREEK LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

JOACHIM FORMATION. Refer also to FIRST MAGNESIAN.
Copper deposits of Missouri: Bain, 13.
Geology of Missouri: Branson, 52.
Quarrying industry of Missouri: Buckley, 5.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Structural reconnaissance of Mississippi Valley area: Krey, 1.
Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
Lead and zinc deposits of Missouri: Winslow, 14.

JONES POINT SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

JORDAN COAL HORIZON.
Geology of the Calhoun Sheet: Marbut, 4.
Geology of the Clinton Sheet: Marbut, 5.

KANSAS CITY FORMATION.
Pennsylvanian system in Nebraska: Condra, 1.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Leavenworth-Smithville Folio: Hinds, 6.
Geology of Jackson Co.: McCourt, 1.
Occurrences of oil and gas in Missouri: Wilson, M. E., 2.

KANSAS CITY GROUP.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.
Kansas City group in Taxonomy: Keyes, 121C.
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Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

KANWAKA SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

KEOKUK LIMESTONE. Refer also to ENCRINITAL.
Mississippian of Mississippi Valley: Beachler, 1.
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Remarks upon genus *Archmides* from Carboniferous limestone of Mississippi Valley: Hall, J., 6.
Structural reconnaissance of Mississippi Valley area: Krey, 1.
Early Mississippian formations of Missouri: Moore, R. C., 2.
Carboniferous rocks of Iowa: Owen, D. D., 5.
Keokuk limestone of Pike Co.: Rowley, 5, 24.
Geodes of the Keokuk beds: Van Tuyl, 1.
Geology of Ste. Genevieve Co.: Weller, S., 27.

KEREFORD LIMESTONE
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

KIMMSWICK LIMESTONE. Refer also to RECEPTACULITE, TRENTON and PROSSER.
Stratigraphy of the Kimmswick limestone of Illinois and Missouri: Bradley, J. H., 1.
Geology of Missouri: Branson, 52.
Quarrying industry of Missouri: Buckley, 5.
Lime and cement resources of Missouri: Buehler, 1.
Kimmswick limestone of northeastern Missouri: Foerste, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
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Structural reconnaissance of Mississippi Valley area: Krey, 1.
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Geology of Ste. Genevieve Co.: Weller, S., 27.

KINDERHOOK GROUP.
Stratigraphy and paleontology of the Kinderhook group: Branson, 9, 20, 30, 36, 38, 42.
Stratigraphy and petrology of the Kinderhook near St. Albans: Cozzens, 1.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
Kinderhook stratigraphy: Keyes, 45, 46, 115B; Moore, R. C., 1, 2.
Unconformities of Kinderhook: Keyes, 135.
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Correlation of the Kinderhook formations: Weller, S., 11.
Geology of southern Calhoun Co., Illinois: Weller, S., 15A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

KINGS LIMESTONE. Now called COMPTON.
Geology of Greene Co.: Shepard, E. M., 2.

KINGS BRANCH LIMESTONE.
Key to geologic horizons of Greene Co.: Shepard, E. M., 4A.

KING HILL SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

KNOB NOSTER GROUP. Now called CHEROKEE in part.
Report on iron ores: Broadhead, 24.

KNOBTOWN SANDSTONE.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Oil and gas pools in western Missouri: Greene, F. C., 4.

LABETTE SHALE.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Oil and gas pools of western Missouri: Greene, F. C., 4.
Special report on coal: Haworth, 13A.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LA BIRDIE LIMESTONE.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

LADORE SHALE.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LAFAYETTE GRAVEL.

Geology and bleaching clays of southeastern Missouri: Farrar, 2, 3.
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Eureka Springs-Harrison Folio: Purdue, 2.
Cobble of bauxite in the Lafayette gravel: Robertson, P., 8.
Occurrene of oil and gas in Missouri: Wilson, M. E., 2.

LAGONDA SANDSTONE and SHALE

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Report on the Bevier Sheet: Gordon, 3.
Geology of Vernon Co.: Greene, F. C., 3.
Geology of northwestern Missouri: McQueen, 12.

LAMOTTE SANDSTONE. Refer also to POTSDAM and PRISMATIC.

Geology of Missouri: Branson, 52.
Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
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Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
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Nomenclature of the Cambrian formations of the St. Francois mountains: Keyes, 52.
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LANE SHALE.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LANSING FORMATION. Refer also to PLATTSBURG GROUP.

Pennsylvanian system in Nebraska: Condra, 1.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Leavenworth-Smithville Folio: Hinds, 6.
Geology of Jackson Co.: McCourt, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LANSING GROUP.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

LARSH SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.

LAWRENCE SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

LEAVENWORTH LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

LECOMPTON LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LENAPAH LIMESTONE.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

LESUEUR LIMESTONE. Now called POTOSI in part.
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LEXINGTON COAL HORIZON.
Geology of Missouri: Branson, 52.
Coal deposits of Missouri: Hinds, 4.
Lexington formation in Missouri: Keyes, 98.
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Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Geology of the Lexington Sheet: Marbut, 7.
Geology of the Richmond Quadrangle: Marbut, 8.
Report on the Higginsville Sheet: Winslow, 5.

LEXINGTON GROUP. Now called HENRIETTA.
Geological report on the country adjacent to the Pacific Railroad from Sedalia to Kansas City: Broadhead, 24.

LIBERTY MEMORIAL SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.

LITHOGRAPHIC LIMESTONE. Now called LOUISIANA.
General geology of Missouri: Broadhead, 35.

LITTLE KAW LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

LITTLE SALINE LIMESTONE. Refer also to ORISKANY.
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LOESS. Refer also to SEDIMENTARY ROCKS and to PHYSIOGRAPHY.
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Lime and cement resources of Missouri: Buehler 1.
Loess of North America, 1882: Call, 1.
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Geology of southeastern Missouri: Farrar, 2, 3.
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Geology of Ste. Genevieve Co.: Weller, S., 27.

Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

LOUISIANA LIMESTONE. Refer also to LITHOGRAPHIC.
Geology of Missouri: Branson, 52.
Lime and cement resources of Missouri: Buehler, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
The principal Mississippian section: Keyes, 3.
Kinship remoteness of Chouteau and Louisiana limestones: Keyes, 162.
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Geology of Pike Co.: Rowley, 24.
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LOUTRE FORMATION.
Geology of Missouri: Branson, 52.
Geology of the Fire Clay district of east central Missouri: McQueen, 16.

LOWER HELDERBERG. Now called BAILEY.
General geology of Missouri: Broadhead, 35.

McNAIRY SAND.
Geology and bleaching clays of southeastern Missouri: Farrar, 2.

MACON CITY COAL HORIZON.
Report on the Bevier Sheet: Gordon, 3.

MAQUOKETA SHALE.
Geology of Missouri: Branson, 52.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
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Structural reconnaissance of the Mississippi Valley area: Krey, 1.
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Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

MAPLE HILL LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

MARAIS DES CYGNES COAL SERIES. Now called PLEASANTON in part.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.

MARAIS DES CYGNES SHALES. Now called PLEASANTON.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
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MERAMEC GROUP. Refer also to AUGUSTA.
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Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

MERRIAM LIMESTONE.
Geology of Missouri: Branson, 52.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

MIDDLE CREEK LIMESTONE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

MIDWAY GROUP.
Geology of southeastern Missouri: Farrar, 2, 3.
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MINEOLA LIMESTONE.
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MISSION CREEK SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

MISSISSIPPIAN SYSTEM. Refer also to CARBONIFEROUS and MOUNTAIN.
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Structural reconnaissance of the Mississippi Valley area: Krey, 1.
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Geology of the Rolla Quadrangle: Lee, W., 2.
Early Mississippian formations in Missouri: Moore, R. C., 2.
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MISSOURI GROUP.

Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Occurrence of oil and gas in Missouri: Wilson, 2.

MISSOURI SERIES.

Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
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Pennsylvanian system in Kansas: Moore, R. C., 3A.

MOBERLY SANDSTONE.

Coal deposits of Missouri: Hinds, 4.
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Geology of the Fire Clay districts of east central Missouri: McQueen, 16.
Geology of the Huntsville Quadrangle: Marbut, 6.
Geology of the Lexington Sheet: Marbut, 7.

MONTSERRAT COAL HORIZON.

Coal deposits of Missouri: Hinds, 4.

MOREAU SANDSTONE. Now called ROUBIDOUX.

Lead and zinc deposits of Missouri: Winslow, 14.

MOUNTAIN LIMESTONE. Now called MISSISSIPPIAN.

Second annual report Geological Survey of Missouri: Swallow, 2.
Remarks upon the discovery of a terrestrial flora in the Mountain limestone of Illinois: Worthen, A. H., 1A.

MULBERRY COAL HORIZON.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of Vernon Co.: Greene, F. C., 3.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.

MULKY COAL HORIZON.

Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of Vernon Co.: Greene, F. C., 3.
Coal deposits of Missouri: Hinds, 4.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Report on the Higginsville Sheet: Winslow, 5.

MUNCIE CREEK SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

NIAGARA LIMESTONE. Now called BAINBRIDGE.
General geology of Missouri: Broadhead, 35.
Geology of Pike Co.: Rowley, 24.
Geology of southern Calhoun Co., Illinois: Weller, S., 15A.

NODAWAY COAL HORIZON.
Coal deposits of Missouri: Hinds, 4.

NOEL SHALE. Refer also to CHATTANOOGA and EUREKA.
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
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NOIX OOLITE.
Geology of Missouri: Branson, 8, 52.
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Early Mississippian formations in Missouri: Moore, R. C., 2.
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NOWATA SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

NYMAN COAL HORIZON.
Coal deposits of Missouri: Hinds, 4.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OLATHE LIMESTONE.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

ONONDAGA LIMESTONE. Now called COOPER.
General geology of Missouri: Broadhead, 35, Branson, 52.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

ORCHARD CREEK SHALE.
Geology of Missouri: Branson, 52.
Ordovician and Silurian formations in Alexander Co., Illinois: Savage, T. E., 1.
Alexandrian rocks of northeastern Illinois and eastern Wisconsin: Savage, T. E., 2A.
Thebes sandstone and Orchard Creek shale and their faunas: Savage, T. E., 7.

ORDOVICIAN SYSTEM.
Middle Ordovician section, east central Missouri: Bridge, 1.
Stratigraphy of some lower Ordovician formations of the Ozark uplift: Cullison, 5.
Ordovician outcrop in Saline Co.: Grohskopf, 4.
Ordovician system of upper Mississippi Valley: Kay, G. M., 3.
Mid-Ordovicic nomenclature: Keyes, 85.
Magnesian series of Ozark uplift, 1893: Nason, 3.
Revision of the Paleozoic system, Ordovician: Ulrich, 26.
Ordovician-Silurian boundary: Ulrich, 28.
Correlation of early Paleozoic: Ulrich, 33, 35.

OREAD LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ORISKANY SANDSTONE. Now called LITTLE SALINE.
General geology of Missouri: Broadhead, 35.

OSAGE GROUP. Refer also to AUGUSTA.
Geology of Missouri: Branson, 52.
Osage formations of southern Ozark region: Cline, 1.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Early Osage formations of eastern Missouri: Gillerman, 2.
Type locality of Osage group: Keyes, 106.
Early Mississippian formations of Missouri: Moore, R. C., 2, 3.
Osage vs. Augusta: Weller, S., 7.
Correlation papers—Devonian and Carboniferous: Williams, H. S., 2.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OSAGE LIMESTONE. Now called GASCONADE.
Lead and zinc deposits of Missouri: Winslow, 14.

OSKALOOSA SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

OSWEGO LIMESTONE. Now called FORT SCOTT.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OVID COAL HORIZON.
Coal deposits of Missouri: Hinds, 4.

OWL CREEK FORMATION.
Geology of Missouri: Branson, 52.
Geology of southeastern Missouri: Farrar, 2, 3,
Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.

OZARKIAN SYSTEM.
Ozarkian epoch: Hershey, 4.
Revision of the Paleozoic systems: Ulrich, 21.
Naylor ledge, a marine limestone of Canadian age filling caverns in upper Ozarkian: Ulrich, 30.
Ozarkian and Canadian section: Ulrich, 31.
Corelating early Paleozoic: Ulrich, 33, 35.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

OZAWKIE LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

PACIFIC SANDSTONE. Now called ST. PETER.
Geology of Miller Co.: Ball, S. H., 1.
Quarrying industry of Missouri: Buckley, 5.

PAINT CREEK FORMATION.
Geology of Perry and Cape Girardeau Cos.: Flint, 3, 4.
Geology of Ste. Genevieve Co.: Weller, S., 27.

PALEOZOIC ERA.
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Stratigraphy of Paleozoic: Broadhead, 119.
Geologic history of Missouri Paleozoic: Broadhead, 122.
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Thickness of Paleozoic in Mississippi Basin: Keyes, 21 .
Paleozoic seas and barriers in eastern North America: Schuchert, 13.
Post Devonian igneous intrusion in southeastern Missouri: Tarr, 34.
Correlation of Paleozoic formations of northern Arkansas: Ulrich, 17.
Revision of Paleozoic systems: Ulrich, 21, 26.
Physical and time relations of lower Paleozoic systems and formations: Ulrich, 33.
Principles for correlation applied to lower Paleozoic: Ulrich, 35.

PAOLA LIMESTONE.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

PAWNEE LIMESTONE.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Geology of Vernon Co.: Greene, F. C., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

PEDEE GROUP.
Geology of Missouri: Branson, 52.
Geology of northwestern Missouri: McQueen, 12.
Kansas Geological Society 6th annual field conference guidebook: Kansas Geological Society, 2.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

PENNSYLVANIAN SYSTEM. Refer also to CARBONIFEROUS and COAL MEASURES.
Pennsylvanian sandstone in Jackson Co., Bartle, 2.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Pennsylvanian system in Nebraska: Condra, 1.
Sand and gravel resources of Missouri: Dake, 8.
Basal Pennsylvanian transgression in the Ozarks: Dake, 18.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Petrology of Pennsylvanian cycles: Frank, A. J., 1.
Insoluble residues of Pennsylvanian limestone of Boone Co.: Glines, 1.
Septaria from Pennsylvanian shales: Grawe, 1.
Geology of Vernon Co.: Greene, 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Stratigraphy of Kansas: Haworth, 17.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Leavenworth-Smithville Folio: Hinds, 6.
Unconformities in the Peensylvanian: Hinds, 7.
Permian-Pennsylvanian section from western Missouri to eastern Kansas: Kellett, 1.
Genetic emendation of Pennsylvanian series: Keyes, 114A.
Pennsylvanian coal measures series: Keyes, 144.
Pennsylvanian outlier at St. Louis: Knight, 3, 13.
Pennsylvanian overlap in United States: Levorsen, 2.
Pyrite concretions in Pennsylvanian shales: Mathias, 1.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian formations near St. Louis: Meleen, 1.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Pennsylvanian rocks of Kansas-Missouri. region: Moore, R. C., 3C.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
Geology of Pike Co.: Rowley, 24.
Correlation of Pennsylvanian strata: Savage, 6.
Pyritization in Pennsyvanian shales: Tarr, 28.
Permo-Carboniferous orogeny: Van der Gracht, 1.
Pennsylvanian cyclothems: Weller, J. M., 3, 5, 6, 12, 13; Wanless, 1.
Pennsylvanian overlap: Weller, J. M., 7.
Occurrence of oil and gas in Missouri: Wilson M. E., 2.

PERMIAN SYSTEM. Refer also to CARBONIFEROUS.
Permian-Pennsylvanian section in western Missouri and eastern Kansas: Kellett, 1.
Guadalupian series: Keyes, 71.
Paleogeography of Permian time. Schuchert, 23.
Permo-Carboniferous orogeny: Van der Gracht, 1, 2.

PERU SAND.
Geology of Missouri: Branson, 52.
Oil and gas pools of western Missouri: Greene, F. C., 4.

PHELPS SANDSTONE. Now called SYLAMORE.
Geology of the Hahatonka district: Scherer, G. H., 1.
Geology of Greene Co.: Shepard, E. M., 2, 4A.
The Pierson Creek mines: Smith, O. M., 1.
Revision of the Paleozoic systems: Ulrich, 21.
Correlation of the Kinderhook formations of southwestern Missouri: Weller, S., 11.

PIKETON GRAVEL.
Evolution of the northern part of the lowlands of southeastern Missouri: Marbut, 10.

PILOT KNOB CONGLOMERATE.
Copper deposits of Missouri: Bain, 13.
Lead and zinc deposits of Missouri: Buckley, 20.
Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.

PILOT KNOB IRON FORMATION.
Iron ores of Missouri: Crane, G. W., 1.

PIERSON LIMESTONE.
Geology of Missouri: Branson, 52.
Early Mississippian formations in Missouri: Moore, R. C., 2.
Geology of Greene Co.: Shepard, E. M,. 2.
Correlation of Kinderhook in southwestern Missouri: Weller, S., 11.

PIERSON POINT SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.

Pennsylvanian system in Kansas: Moore, R. C., 3A.

PLATTIN LIMESTONE.
Geology of Missouri: Branson, 52.
Quarrying industry of Missouri: Buckley, 5.
Stratigraphy and large fossils of Plattin formation in Ste. Genevieve Co.: Fenton, 2.
Plattin limestone of northeastern Missouri: Foerste, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Plattin formation between Herculaneum and St. Albans: Hinchey, 1.
Plattin and Kimmswick in synomy Keyes, 104.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Revision of the Paleozoic systems: Ulrich, 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.

PLATTSBURG GROUP. Now called LANSING and IOLA in part.
Coal measures in Missouri: Broadhead, 5A.

PLATTSBURG LIMESTONE.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

PLATTSMOUTH LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Missourian series of the Carboniferous: Keyes, 44.
Meek's original Plattsmouth terrane: Keyes, 98.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

PLEASANTON FORMATION. Refer also to MARAIS DES CYGNES.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of Vernon Co.: Greene, F. C., 3.
Coal deposits of Missouri: Hinds, 4.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Leavenworth-Smithville Folio: Hinds, 6.
Geology of Jackson Co.: McCourt, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

PLEASANTON GROUP.
Geology of Missouri: Branson, 52.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Traverse of upper Des Moines and lower Missouri series: Cline, 4.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of northwestern Missouri: McQueen, 12.

PLEISTOCENE SERIES. Refer also to QUATERNARY SYSTEM and LOESS; and to GLACIAL FEATURES under PHYSIOGRAPHY.
Extent of glaciation: Antevs, 1.
Geology of Miller Co.: Ball, S. H., 1.
Relation of Pleistocene to pre-Pleistocene formations south of limits of glaciation: Chamberlin, T. C., 1.
Sand and gravel resources of Missouri: Dake, 8.
Geology of southeastern Missouri: Farrar, W., 2, 3.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of Jackson Co.: McCourt, 1.
Pleistocene of northeastern Iowa: McGee, 2.
Geology of Morgan Co.: Marbut, 15.
Middle Mississippi River during Pleistocene: Robertson, P., 4.
Pleistocene terraces of Mississippi River: Robertson, P., 6.
Relationship of Pleistocene to pre-Pleistocene formations of Crowley's Ridge: Salisbury, 1.
Pleistocene of the Missouri Valley: Shimek, 1, 2.
Annual deposit of Missouri River during post-Pliocene: Todd, 1.
Pleistocene problems: Todd, 6.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

PLIOCENE SERIES.
Geology of southeastern Missouri: Farrar, 2, 3.

PORTERS CREEK CLAY.
Geology of southeastern Missouri: Farrar, 2, 3.
Bauxitic clay in Stoddard Co.: Stewart, D. R., 1.

POTOSI DOLOMITE. Refer also to LESUEUR and POTOSI RESIDUARY.
Geology of Missouri: Branson, 52.

Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Geology of the disseminated lead deposits of St. Francois and Washington Cos.: Buckley, 22.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Insoluble residues as a guide in stratigraphic studies: McQueen, 5.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
Lead and zinc deposits of Missouri: Winslow, 14, 20.

POTOSI GROUP. Included everything between top of ELVINS and base of ST. PETER.
Copper deposits of Missouri: Bain, 11, 13.

POTOSI RESIDUARY. Now called POTOSI and EMINENCE in part.
Presence of a limestone conglomerate in lead region of St. Francois Co.: Nason, 5.

POTOSI SLATES AND CONGLOMERATES. Now called ELVINS.
Presence of a limestone conglomerate in lead region of St. Francois Co.: Nason, 5.

POTSDAM SANDSTONE. Now called LAMOTTE.
Potsdam sandstone: Hall, 9.
Fossils from the Potsdam sandstone: Shumard, 7.

POWELL DOLOMITE. Refer also to YELLVILLE.
Geology of Missouri: Branson, 52.
Lower Ordovician stratigraphy: Cullison, 5.
Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
Eureka Springs-Harrison Folio: Purdue, 2.
Geology of Ste. Genevieve Co.: Weller, S., 27.

PRE-CAMBRIAN ERA. Refer also to IGNEOUS ROCKS under PETROLOGY AND PETROGRAPHY.
General geology of Missouri: Broadhead, 35; Branson, 52.
Age of porphyries: Broadhead, 71, 72.
Archean rocks of Missouri: Broadhead, 96.
Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Disseminated lead deposits of Missouri: Buckley, 22.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Igneous rocks at Skrainka, Madison Co.: Denham, 1.
Pre-Cambrian structure in Missouri: Graves, 2.
Crystalline rocks of the plains: Gould, 2.
Age of porphyry hills of southeast Missouri: Harrison, E., 2.
Archean geology of Missouri: Haworth, 4, 5, 6, 7, 10, 13.
Granite rocks of Missouri: Keyes, 16.
Relations of granites and porphyries in eastern part of Ozarks: Keyes, 20.
Report on Mine La Motte Sheet: Keyes, 29.
What shall we do with pre-Cambrian?: Keyes, 100.
Igneous geology of Ste. Genevieve Co.: Kidwell, 1.
Igneous geology of St. Francois Mountains: Koch, H. L., 1.
Geology of Pilot Knob and Iron Mountain: Meyer, 1, 2.
Igneous geology of Ironton and Fredericktown Quadrangles: Robertson, F., 1.
Flow sequence of felsite rocks: Robertson, F., 2.
Second annual report Geological Survey of Missouri: Swallow, 2.
Intrusive relation of granite to rhyolite: Tarr, 32; Tolman, 5.
Geology of the Silver Mine area: Tolman, 3.
Granite pegmatites and veins: Tolman, 6.
Igneous activity in southeastern Missouri: Tolman, 8, 9.
Igneous rocks of St. Francois Mountains: Wing, 1.
Azoic system: Wadsworth, 1.
Geology of northwest quarter of Ironton Quadrangle: Walker, 1.

PRESTON LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Missouri series in southwestern Iowa: Tilton, 2.

PRISMATIC SANDSTONE. Now called LAMOTTE.
Prismatic sandstone from Missouri: Haworth, 9.

PROCTOR DOLOMITE.
Geology of Miller Co.: Ball, S. H., 1.
Copper deposits of Missouri: Bain, 11, 13.
Geology of Missouri: Branson, 8, 52.
Insoluble residues as a guide to stratigraphic studies: McQueen, 5.
Geology of Morgan Co.: Marbut, 15.
Revision of the Paleozoic systems: Ulrich, 21.

Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.
Lead and zinc deposits of Missouri: Winslow, 14.

PROSSER LIMESTONE. Now called KIMMSWICK.
Invalidity of Prosser term in Missouri: Keyes, 108.

QUATERNARY SYSTEM. Refer also to PLEISTOCENE and LOESS; and to GLACIAL FEATURES under PHYSIOGRAPHY.
Quaternary period of Mississippi River Basin: Alden, 1.
Quaternary deposits: Broadhead, 9; Todd, 5, 6, 7; Swallow, 7.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Geology of Jackson Co.: McCourt, 1.
Quaternary deformation in southeastern Missouri: Shaw, 1.
Early Quaternary or late Tertiary folding in Scott Co.: Stewart, D., 2.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

QUEEN HILL SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

QUINDARO SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

QUIVIRA SHALE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J., 3.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.

RAYTOWN LIMESTONE.
Oil and gas resources of Cass and Jackson Cos.: Clair, J. 3.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of Jackson Co.: McCourt, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Geology of Johnson and Miami Cos., Kansas: Newell, 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

READING LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

RECEPTACULITE LIMESTONE. Now called KIMMSWICK.
General geology of Missouri: Broadhead, 35.
Lead and zinc deposits of Missouri: Winslow, 14.

REEDS SPRING LIMESTONE.
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Kansas Geological Society 7th annual field conference guidebook: Kansas Geological Society, 3.
Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
Early Mississippian formations in Missouri: Moore, R. C., 2.

RENAULT FORMATION.
Geology of Missouri: Branson, 52.
Stratigraphy of Chester group in southwestern Illinois: Weller, S., 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.

RHOMBOIDAL LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.

RICH FOUNTAIN FORMATION.
Lower Ordovician stratigraphy: Cullison, 5.

RICH HILL LIMESTONE.
Geology of Vernon Co.: Greene, 3.
Geology of northwestern Missouri: McQueen, 12.

RIPLEY FORMATION.
Geology of Missouri: Branson, 52.
Geology of southeastern Missouri: Farrar, 2, 3.
Bauxitic clay in Stoddard Co.: Stewart, D., 1.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ROCK BLUFF LIMESTONE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

ROCK LAKE SHALE.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

ROUBIDOUX FORMATION. Refer also to BOLIN CREEK, MOREAU, ST. ELIZABETH and SECOND SANDSTONE.
Geology of Missouri: Branson, 52.
Geology of the Eminence-Cardareva Quadrangles: Bridge, 6.
Heavy minerals in the Roubidoux and other sandstones of the Ozark region: Cordry, 1.
Sand and gravel resources of Missouri: Dake, 8.
Geology of the Potosi-Edgehill Quadrangles: Dake, 15.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Geology of the Rolla Quadrangle: Lee, W., 2.
Insoluble residues as a guide in stratgraphic studies: McQueen, 5.
Geology of Morgan Co.: Marbut, 15.
Report on iron ores: Nason, 2.
Roubidoux near Rolla: Schultz, J. E., 1.
Revision of the Paleozoic systems: Ulrich, 21.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

RULO LIMESTONE.
Pennsylvanian system in Nebraska: Condra, 1.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SAC LIMESTONE. Now called COMPTON.
Geology of Greene Co.: Shepard, E. M., 2.

SACCHAROIDAL SANDSTONE. Now called ST. PETER.
The saccharoidal sandstone: Broadhead, 139.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

ST. ELIZABETH FORMATION. Now called ROUBIDOUX.
Geology of Miller Co.: Ball, S. H., 1.
Geology of Moniteau Co.: Van Horn, F. B., 1.

ST. FRANCOIS LIMESTONE. Includes everything from top of LAMOTTE to top of POTOSI.
Lead and zinc deposits of Missouri: Winslow, 14.

STE. GENEVIEVE LIMESTONE.
Geology of Missouri: Branson, 52.
Ste. Genevieve outliers in St. Louis Co.: Gollhofer, 1.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Observations of geology of County of Ste. Genevieve: Shumard, 6.
Geology of Ste. Genevieve Co.: Weller, S., 27.

ST. JOE LIMESTONE.
Geology of Missouri: Branson, 52.
Geology of the Cassville Quadrangle: Clark, E. L., 3A.
Early Mississippian formations in Missouri: Moore, R. C., 2.
Eureka Springs-Harrison Folio: Purdue, 2.

ST. JOSEPH LIMESTONE. Now called ELVINS and BONNETERRE.
Geological relations and age of the St. Joseph: Nason, 6.
Lead and zinc deposits of Missouri: Winslow, 14, 20.

ST. LAURENT FORMATION. Refer also to ST. LORENZ.
Geology of Missouri: Branson, 52.
Devonian of southeastern Missouri: Croneis, 4.
Synonymy of St. Laurents limestone of Missouri: Keyes, 148.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ST. LORENZ FORMATION. Now called ST. LAURENT.
Sand and gravel resources of Missouri: Dake, 8.

ST. LOUIS LIMESTONE.
General geology of Missouri: Broadhead, 35; Branson, 52.
St. Louis formation in southwestern Missouri: Clark, E. L., 2.
Carboniferous rocks of St. Louis and vicinity: Englemann, 1.
Geology of the St. Louis Quadrangle: Fenneman, 4.
Brecciated character of St. Louis limestone: Gordon, 1; Grawe, 2.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Fauna and stratigraphy of St. Louis formation: Hinchey, 2.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

ST. PETER SANDSTONE. Refer also to CAP AU GRES, CRYSTAL CITY, FIRST SANDSTONE, PACIFIC and SACCHAROIDAL.
Paleogeography of St. Peter sandstone: Berkey, 1.
Geology of Missouri: Branson, 52.
Sand and gravel resources of Missouri: Dake, 8.
Derivation of St. Peter sandstone: Dake, 9, 10.
Taxanomic significance of St. Peter sandstone: Dake, 11.
Resume of St. Peter stratigraphy: Edson, 1.
St. Peter sandstone in southeastern Missouri: McQueen, 10.
Structural reconnaissance of the Mississippi Valley area: Krey, 1.
Geology of Morgan Co.: Marbut, 15.
Eureka Springs-Harrison Folio: Purdue, 2.
Peter sandstone and its buttes: Sardeson, 1.
Geology of Moniteau Co.: Van Horn, F. B., 1.
Geology of Ste. Genevieve Co.: Weller, S., 27.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

SALEM LIMESTONE. See also SPERGEN.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

SALINE CREEK CAVE CONGLOMERATE.
Geology of Miller Co.: Ball, S. H., 1.
Geology of Moniteau Co.: Van Horn, F. B., 1.

SAVERTON SHALE.
Geology of Missouri: Branson, 52.
Kansas Geological Society 9th annual field conference guidebook: Kansas Geological Society, 3A.
Early Mississippian formations in Missouri: Moore, R. C., 2.
Northward extension of Saverton shale into Iowa: Keyes, 136.

SCRANTON SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Pennsylvanian system in Kansas: Moore, R. C., 3A.

SECOND MAGNESIAN LIMESTONE. Includes everything from top of ROUBIDOUX to top of EVERTON.
General geology of Missouri: Broadhead, 35.
Geology of Lincoln Co.: Potter, W. B., 1.
Second annual report Geological Survey of Missouri: Swallow, 2.

SECOND SANDSTONE. Now called ROUBIDOUX.
General geology of Missouri: Broadhead, 35.
Second annual report Geological Survey of Missouri: Swallow, 2.

SEDALIA LIMESTONE.
Geology of Missouri: Branson, 52.
Rock wool resources of Central Missouri: McQueen, 11.
Subsurface geology of northeastern Missouri: Grohskopf, 3.
Redundancy of Sedalia limestone title in Missouri: Keyes, 114D.
Early Mississippian formations in Missouri: Moore, R. C., 2.

SEVERY SHALE.
Pennsylvanian system in Nebraska: Condra, 1.
Pennsylvanian stratigraphy of Missouri: Hinds, 5.
Geology of northwestern Missouri: McQueen, 12.
Pennsylvanian system in Kansas: Moore, R. C., 3A.
Occurrence of oil and gas in Missouri: Wilson, M. E., 2.

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THIRD SANDSTONE. Now called GUNTER.
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