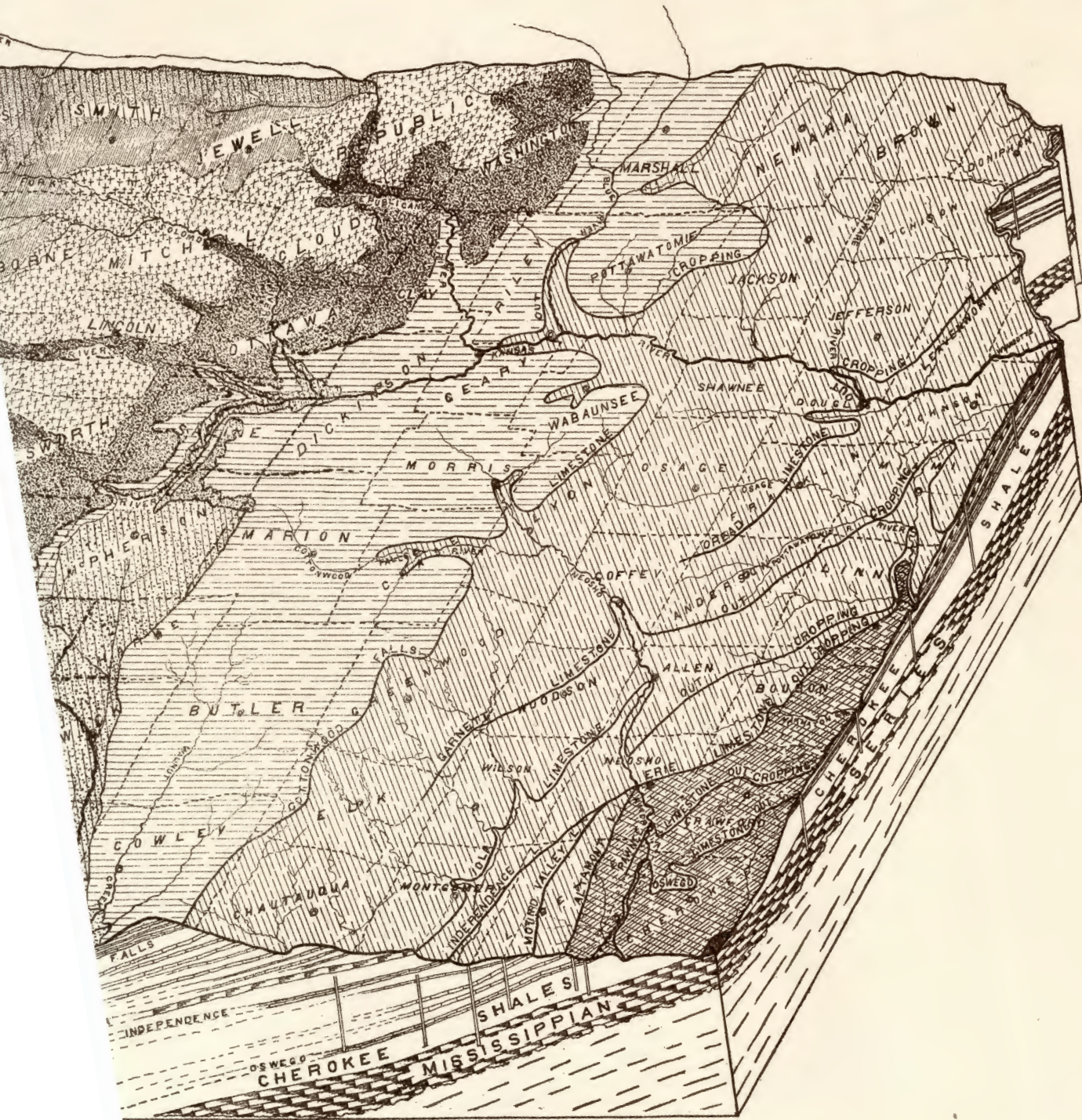


BIBLIOGRAPHY OF KANSAS GEOLOGY 1823—1984

FLORIDA GEOLOGICAL SURVEY
601 W. TENNESSEE STREET
TALLAHASSEE, FLORIDA 32304



About the cover

A Reconnaissance Geologic Map of Kansas, first printed in *The University Geological Survey of Kansas, Volume 2*, by Erasmus Haworth and assistants, 1897, is the result of numerous field investigations in the state conducted by Erasmus Haworth and early members of the University Geological Survey of Kansas. They were assisted by other interested geologists, who volunteered their services and were compensated only for their expenses. Advanced university students also conducted field work for college credit. This map is in general agreement with present knowledge of the state's geologic framework. However, many years of study and new methods of investigation have resulted in numerous revisions.

The petroleum industry was in its infancy when this map was compiled. Countless oil and gas exploration holes and the valuable geologic information that they provide were still in the future. This paucity of subsurface data meant that the discovery of the Nemaha uplift was still a few decades away. This prominent granite ridge is a salient feature of the subsurface of eastern Kansas, extending from Nemaha County south across the state to Sumner County, and would disrupt the westward dip of the strata in the cross section along the south edge of the map if its presence were known.

In southeastern Kansas, the outcrop patterns of several prominent limestones are shown. Some of these names are unfamiliar to today's geologists and are actually aliases of formations that have been renamed or subdivided following subsequent stratigraphic studies. These studies continue today and additional name changes may occur in the future. The theory of cyclothems or cyclical sedimentation was developed later to explain the repetition of nearly identical rock sequences in the Pennsylvanian of eastern Kansas. These look-alike rocks proved confusing to early geologists when travel was difficult and well logs were few and far between. Thus, some of these outcrop patterns shown on the map actually follow different limestones from place to place. This problem plagues today's geologists as well. The Oswego Limestone is known today as the Fort Scott Limestone. The Pawnee and Altamont limestones are two units that are still recognized as such today. The Mound Valley Limestone is a term that was discarded in 1936. However, recent stratigraphic

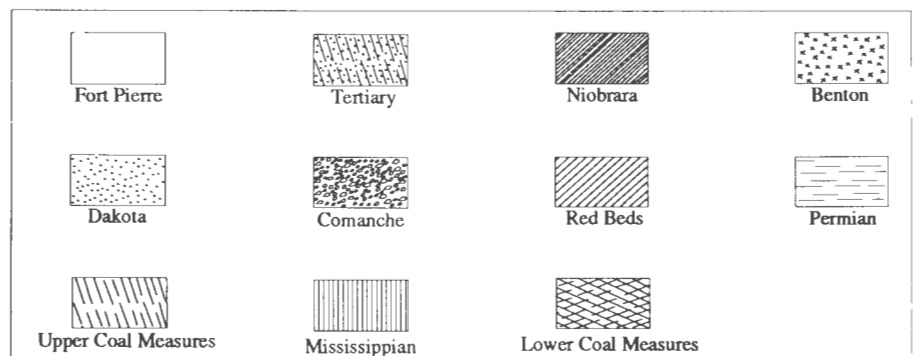
studies favor its reinstatement as a stratigraphic unit between the Ladore and Galesburg shales. The Independence Limestone follows the outcrop pattern of what is today call the Drum Limestone. The Iola Limestone is a unit that is still recognized today; however, from northeastern Allen County on to the northeast, the Iola appears to be miscorrelated with the Dennis Limestone. The Garnett Limestone is known today as the Plattsburg and Stanton limestones. However, in Miami County, the Garnett Limestone mistakenly follows the outcrop of the Wyandotte Limestone. The Oread Limestone is still recognized as such today and the University of Kansas and the Kansas Geological Survey are located on the edge of its escarpment in Lawrence.

The Permian–Pennsylvanian boundary on Haworth's map is placed at the top of the Cottonwood Falls Limestone which is known today as the Cottonwood Limestone. This boundary is currently placed lower in the section at the base of the Towle shale. The thick Permian salt beds recognized in the subsurface of Haworth's map were discovered by drilling, because they do not crop out at the surface.

Above the Permian is a thick sequence of red beds that crop out in south-central Kansas in the Red Hills. These beds are not assigned an age on Haworth's map. At the time of publication, their age was the subject of continuing debate. From 1878 to 1896 these red, nonfossiliferous shales, silts, and sandstones were assigned by various early geologists to the Carboniferous, Cretaceous, Triassic, Jurassic, Jura–Triassic, and finally the Permian in agreement with today's age assignment. Above the red beds are rocks of Cretaceous age called Comanche. These rocks are today known as the Cheyenne Sandstone and Kiowa Formation. Above that are beds of the Dakota, Benton (today divided into the Graneros Shale, Greenhorn Limestone, and Carlile Shale), Niobrara, and Fort Pierre (Pierre)—all of Cretaceous age and whose outcrop patterns agree closely with those of today's maps. Haworth's Tertiary is still recognized in western Kansas as the Ogallala Formation; however, in the Equus Beds region of central Kansas, the adjacent Great Bend of the Arkansas, and in parts of southwestern Kansas, these deposits are now considered Quaternary in age.

—James R. McCauley
Kansas Geological Survey

A RECONNAISSANCE
GEOLOGIC
MAP
OF
KANSAS
Compiled, Principally from Original Surveys
BY
ERASMUS HAWORTH
And Assistants



Kansas Geological Survey

Bulletin 221

Florida Geological Survey,
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903 West Tennessee Street
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Bibliography of Kansas geology, 1823–1984

by

Janice H. Sorensen, Scott J. Johnsgard, and Christopher Wozencraft

Lawrence, Kansas

1989

Introduction

The Kansas Geological Survey has long recognized the importance of collecting bibliographic information on geologic research conducted in Kansas. In 1977, with Bulletin 213, the Survey published its first comprehensive bibliography on Kansas geology. In the twelve years since that volume appeared, the need for an update has become apparent, and a decision was made to create a computer-based product. In 1986, the Survey's library staff undertook initial steps to develop an in-house data base capable of storing and retrieving bibliographic data on geologic studies of Kansas. This data base has been designed to serve two primary functions: production of published bibliographies and indexes, and custom on-line literature searches. At present, nearly 10,000 references from all areas of the geological sciences have been collected, including references on water and mineral resources, geochemistry, soil science, and environmental geology. In addition to references appearing in published sources, the titles of many unpublished manuscripts, such as open-file reports, theses, and dissertations, have been included in the data base.

Among the earliest scientific exploration of Kansas, and subsequent recording of data, was Major Stephen H. Long's expedition in 1819 and 1820. Although earlier expeditions to the unexplored West by Captains Meriwether Lewis and William Clark (1804–06), and Lieutenant Zebulon Pike (1806–07), included visiting parts of present-day Kansas, Long's investigation and reports of the "Great Desert" were more comprehensive. Major Long's findings and those of his companions, Thomas Say, an entomologist, and Edwin James, a biologist, were published in 1823, in two volumes entitled, *Account of an Expedition from Pittsburgh to the Rocky Mountains*. That reference marks the earliest entry in this bibliography.

Since that time, scientists have studied and recorded data pertaining to the geologic history of Kansas. The following bibliography represents an impressive 160 years of research conducted in Kansas. It has been produced by consulting published bibliographies in addition to diligent efforts by the compilers to find new sources of data. Although titled a bibliography of Kansas geology, published information on related research has been included as well. Water, soil, petroleum engineering, and geophysical studies have long proved useful to geologists and have been included for that reason.

Organization and use

This bibliography is arranged in the following fashion. An index to source-abbreviations is included at the front. County outline and simplified geologic maps appear on the opposite page. The bibliography proper follows and is arranged alphabetically by the author's last name and initials, and then chronologically by publication year. The bibliogra-

phy is followed by three indexes: subject, county, and rock-unit. The *subject* index is based on a broad-to-narrow search logic modeled after and modified from the GeoRef system of the American Geological Institute. Synonymous terms as well as many second- and third-level terms have been cross referenced to direct users to the appropriate index entry. Most users with interest in a particular geographic area or stratigraphic interval should start their search with the county or rock-unit indexes. In an effort to aid users, references listed under a given entry in these indexes have been further categorized by primary subject content as well. The rock-unit index contains rock-stratigraphic geologic names as they have been used in references. Therefore, formal and informal terms, provincial names, and outdated terms have been listed as they appear in references. Whenever possible, informal terms and outdated terms have been cross referenced to probable formal equivalents.

On-line bibliographic data base

The Survey's bibliographic data base is maintained and updated in-house, allowing for published bibliographies and the eventual capability to produce custom on-line literature searches. Plans for developing software in-house for search functions are being explored. For more information on the progress of on-line capabilities, contact the Survey's library.

Availability

Most published references listed are available from libraries or the publishers. However, the Survey's on-line bibliographic data base does include location sources for most articles and reports. In the event a report or article is difficult to locate, contact the Survey's library for assistance. Reports published by the federal government are often available for purchase from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. When available, NTIS report numbers have been included with the bibliographic citation. Some reports published by the U.S. Geological Survey are only available from Books & Open-file Services, P.O. Box 25425, Federal Center, Denver, CO 80225. When known, this information has been included with references to U.S. Geological Survey reports and maps. Theses and dissertations are available for inspection at the institution granting the degree or through the interlibrary-loan services of participating libraries. A few older reports are only available in a published form, and these have been noted as such. In addition, the Survey's library maintains a set of about 100 theses and dissertations as part of the Survey's open-file collection. Unbound photocopies of such reports may be purchased from the Library, Kansas

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- Kans. Geol. Soc. and Am. Assoc. Petrol. Geol.**
Kansas Geological Society and American Association of Petroleum Geologists
- Kans. Geol. Survey, Ann. Rept.; Basic Data Ser., Ground-water Rel.; Bull.; Chem. Qual. Ser.; Cir.; Comp. Contr. Ser.; Contr. Paleo. Kans.; Educ. Ser.; Energy Resour. Ser.; Environ. Geol. Ser.; Field-trip Guidebook Natl. Sci. Foun. Class, Kans. St. Coll. Pittsburg; Geol. Ser.; Geophys. Ser.; Ground-water Ser.; Guidebook Ser.; Irr. Ser.; Jour.; Kans. Oil Expl. Proj.; Lawrence; Map Ser.; Miner. Resour. Cir.; Miner. Resour. Ser.; Misc. Rept.; Oil Gas Invest.; Open-**

- Rept.; Nineteenth Bienn. Rept.; Ninth Bienn. Rept.; Quar. Rept.; Rept.; Seventh Bienn. Rept.; Sixth Bienn. Rept.; Sixtieth Rept.; Sixty-fifth Rept.; Sixty-first Rept.; Sixty-fourth Rept.; Sixty-seventh Rept.; Sixty-sixth Rept.; Third Ann. Rept.; Third Bienn. Rept.; Thirty-eighth Bienn. Rept.; Thirty-fifth Bienn. Rept.; Thirty-first Bienn. Rept.; Thirty-fourth Bienn. Rept.; Thirty-ninth Rept.; Thirty-second Bienn. Rept.; Thirty-seventh Bienn. Rept.; Thirty-third Bienn. Rept.; Trans. 1872 [First Ann. Rept.]; Twentieth Bienn. Rept.; Twenty-eighth Bienn. Rept.; Twenty-first Bienn. Rept.; Twenty-fourth Bienn. Rept.; Twenty-ninth Bienn. Rept.; Twenty-second Bienn. Rept.; Twenty-seventh Bienn. Rept.
- Kansas State Board of Agriculture; Eighteenth Biennial Report; Eighth Biennial Report; Eleventh Biennial Report; Fifth Biennial Report; Fiftieth Report; Fifty-ninth Report; Fifty-sixth Report; First Biennial Report; Forty-fifth Report; Forty-first Report; Forty-second Report; Forty-seventh Report; Forty-sixth Report; Forty-third Report; Fourth Annual Report; Fourth Biennial Report; Nineteenth Biennial Report; Ninth Biennial Report; Quarterly Report ending March 31; Report; Seventh Biennial Report; Sixth Biennial Report; Sixtieth Report; Sixty-fifth Report; Sixty-first Report; Sixty-fourth Report; Sixty-seventh Report; Sixty-sixth Report; Third Annual Report; Third Biennial Report; Thirty-eighth Biennial Report; Thirty-fifth Biennial Report; Thirty-first Biennial Report; Thirty-fourth Biennial Report; Thirty-ninth Report; Thirty-second Biennial Report; Thirty-seventh Biennial Report; Thirty-third Biennial Report; Transactions of 1872 [First Annual Report]; Twentieth Biennial Report; Twenty-eighth Biennial Report; Twenty-first Biennial Report; Twenty-fourth Biennial Report; Twenty-ninth Biennial Report; Twenty-second Biennial Report; Twenty-seventh Biennial Report
- Kans. St. Board Health, Div. San.**
Kansas State Board of Health, Division of Sanitation
- Kans. St. Board Health, Kans. Water Resour. Board, and Kans. Geol. Survey**
Kansas State Board of Health, Kansas Water Resources Board, and Kansas Geological Survey
- Kans. St. Board Health, Topeka**
Kansas State Board of Health, Topeka, KS
- Kans. St. Coll., Bull.**
Kansas State College, Bulletin
- Kans. St. Corp. Comm., Topeka**
Kansas State Corporation Commission, Topeka, KS
- Kans. St. Dept. Health, Bull.; Topeka; [unpubl. rept.]**
Kansas State Department of Health, Bulletin; Topeka, KS; [unpublished report]
- Kans. St. Highway Comm., Mat. Inven. Rept.; Topeka**
Kansas State Highway Commission, Materials Inventory Report; Topeka, KS
- Kans. St. Hist. Soc., Trans.**
Kansas State Historical Society, Transactions
- Kans. St. Plan. Board, Topeka; Wichita**
Kansas State Planning Board, Topeka, KS; Wichita, KS
- Kans. St. Teach. Coll., Emporia**
Kansas State Teachers College, Emporia, KS
- Kans. St. Univ., Agri. Exper. Sta., Bull.; Contr.**
Kansas State University, Agricultural Experiment Station, Bulletin; Contribution
- Kans. St. Univ., Coop. Ext. Serv., Cir.; Kans. Farm Bus. Info.; Leaf.; (for) Ozarks Reg. Comm.**
Kansas State University, Cooperative Extension Service.
Circular: Kansas Farm Business Information; Leaflet; (for) The Ozarks Regional Commission
- Kans. St. Univ., Dept. Geol., Manhattan; [guidebook for] Geol. Soc. Am., South-Central Sec., Sixth Ann. Meet.**
Kansas State University, Department of Geology, Manhattan, KS; [guidebook for] The Geological Society of America, South-Central Section, Sixth Annual Meeting
- Kans. St. Univ., Dept. Indus. Eng., Manhattan**
Kansas State University, Department of Industrial Engineering, Manhattan, KS
- Kans. St. Univ., Manhattan**
Kansas State University, Manhattan, KS
- Kans. St. Univ., Univ. Man**
Kansas State University, University for Man
- Kans. St. Univ., Manhattan, (for) Kans. Dept. Health Environ.**
Kansas State University, Manhattan, KS (for) Kansas Department of Health and Environment
- Kans. Univ., 1984 Joint Meet. Assoc. Am. Geogr. West Lakes/Great Plains-Rocky Mount. Div.**
Kansas University, 1984 Joint Meeting of the Association of American Geographers West Lakes/Great Plains-Rocky Mountain Divisions
- Kans. Univ., Alumni Mag.; Bull. Eng. Archi.**
Kansas University, Alumni Magazine; Bulletin of Engineering and Architecture
- Kans. Univ., Bur. Bus. Res., Lawrence**
Kansas University, Bureau of Business Research, Lawrence, KS
- Kans. Univ., Bur. Gov. Res., Citizen's Pamph.**
Kansas University, Bureau of Government Research, Citizen's Pamphlet
- Kans. Univ., Cen. Publ. Aff. (for) Kans. St. Water Coun., Basic Data Comm.**
Kansas University, Center for Public Affairs (for) Kansas State Water Council, Basic Data Committee
- Kans. Univ., Cen. Res. Bus.**
Kansas University, Center for Research in Business
- Kans. Univ., Cen. Res. Eng.**
Kansas University, Center for Research and Engineering
- Kans. Univ., Cen. Res. Inc., Eng. Sci. Div., Lawrence; Rem. Sens. Lab., ERTS Detailed Image Interp. Rept.; Rem. Sens. Lab., Tech. Rept.; Rept.; Tech. Memo.; (for) Kans. Dept. Trans.; (for) Kans. Indep. Oil Gas Assoc.; (for) U.S. Army, Corps Eng.; (for) U.S. Atomic Energy Comm. and Union Carbide Corp.**
Kansas University, Center for Research, Inc., Engineering Science Division, Lawrence, KS; Remote Sensing Laboratory. ERTS Detailed Image Interpretation Report; Remote Sensing Laboratory, Technical Report; Report; Technical Memorandum; (for) Kansas Department of Transportation; (for) Kansas Independent Oil and Gas Association; (for) U.S. Army, Corps of Engineers; (for) U.S. Atomic Energy Commission and Union Carbide Corp.
- Kans. Univ., Dept. Geol., Spec. Pub. (for) U.S. Army, Corps Eng., Kans. City Dis.**
Kansas University, Department of Geology; Special Publication; (for) U.S. Army, Corps of Engineers
- Kans. Univ., Dept. Geol., and Kans. Geol. Survey (for) Kans. Univ., Ext. Div.**

- M.A. thesis, Columbia Univ., New York**
Unpubl. M.A. thesis, Columbia University, New York, NY
- M.A. thesis, Dept. Anthro., Univ. Kans., Lawrence**
Unpubl. M.A. thesis, Department of Anthropology, University of Kansas, Lawrence, KS
- M.A. thesis, Dept. Bot., Univ. Kans., Lawrence**
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- M.B.A. thesis, Dept. Econ., Univ. Kans., Lawrence**
Unpubl. M.B.A. thesis, Department of Economics, University of Kansas, Lawrence, KS
- McCord & McCord, Emporia, KS**
McCord & McCord, Emporia, KS
- McCrone Res. Inst., Chicago, IL**
McCrone Research Institute, Chicago, IL
- McGill Univ., Mus. Pub.**
McGill University, Museum Publication
- McGraw-Hill, Co., New York**
McGraw-Hill, Company, New York, NY
- Meteorit. Soc., Contr.**
Meteoritical Society, Contributions
- Meteoritics**
Meteoritics
- M.E. thesis, Dept. Elec. Eng., Univ. Kans., Lawrence**
Unpubl. M.E. thesis, Department of Electrical Engineering, University of Kansas, Lawrence, KS
- M.G.E. thesis, Dept. Geol., Univ. Okla., Norman**
Unpubl. M.G.E. thesis, Department of Geology, University of Oklahoma, Norman, OK
- Mich. Acad.**
Michigan Academician
- Mich. Acad. Sci., Arts, Let., Geol. Miner. Sec., Prog. Abs. 1971**
Michigan Academy of Science, Arts, and Letters, Geology and Mineralogy Section, Program with Abstracts for 1971
- Mich. Acad. Sci., Arts, Let., Papers**
Michigan Academy of Science, Arts, and Letters, Papers
- Mich. Univ., Mus. Paleo., Contr.; Papers Paleo.**
Michigan University, Museum of Paleontology, Contributions; Papers on Paleontology
- Mich. Univ., Mus. Zool., Occas. Papers**
Michigan University, Museum of Zoology, Occasional Papers
- Micropaleo.**
Micropaleontology
- Micropaleo. Bull.**
Micropaleontology Bulletin

- University, Manhattan, KS
M.S. thesis, Dept. Geogr., Univ. Kans., Lawrence
 Unpubl. M.S. thesis, Department of Geography, University of Kansas, Lawrence, KS
- M.S. thesis, Dept. Geol., Colo. School Mines, Golden**
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- M.S. thesis, Dept. Geol., Stanford Univ., Stanford, CA**
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- M.S. thesis, Dept. Geol., Univ. Ill., Urbana**
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- M.S. thesis, Dept. Geosci., Univ. Missouri, Kansas City**
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- M.S. thesis, Dept. Geosci., Univ. Tulsa, Tulsa, OK**
 Unpubl. M.S. thesis, Department of Geosciences, University of Tulsa, Tulsa, OK
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- M.S. thesis, Dept. Min. Geol., Univ. Kans., Lawrence**
 Unpubl. M.S. thesis, Department of Mining and Geology, University of Kansas, Lawrence, KS
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- M.S. thesis, Dept. Petrol. Eng., Univ. Kans., Lawrence**
 Unpubl. M.S. thesis, Department of Petroleum Engineering, University of Kansas, Lawrence, KS
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 Unpubl. M.S. thesis, Department of Physics, Fort Hays State College, Hays, KS
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- M.S. thesis, Dept. Phys. Astron., Univ. Kans., Lawrence**
 Unpubl. M.S. thesis, Department of Physics and Astronomy, University of Kansas, Lawrence, KS
- M.S. thesis, Dept. Rad. Biophys., Univ. Kans., Lawrence**
 Unpubl. M.S. thesis, Department of Radiation Biophysics, University of Kansas, Lawrence, KS
- M.S. thesis, Dept. Zool., Ft. Hays St. Univ., Hays, KS**
 Unpubl. M.S. thesis, Department of Zoology, Fort Hays State University, Hays, KS
- M.S. thesis, Dept. Zool., Univ. Kans., Lawrence**
 Unpubl. M.S. thesis, Department of Zoology, University of Kansas, Lawrence, KS
- M.S. thesis, Div. Phys. Sci., Emporia St. Univ., Emporia, KS**
 Unpubl. M.S. thesis, Division of Physical Science, Emporia State University, Emporia, KS
- M.S. thesis, Flor. St. Univ., Tallahassee**
 Unpubl. M.S. thesis, Florida State University, Tallahassee, FL
- M.S. thesis, Ft. Hays St. Coll., Hays, KS**
 Unpubl. M.S. thesis, Fort Hays State College, Hays, KS

- New York Acad. Sci., Annals; Trans.**
New York Academy of Sciences, Annals; Transactions
- New York Bot. Garden, Jour.**
New York Botanical Garden, Journal
- New York St. Mus., Bull.**
New York State Museum, Bulletin
- North Am. Benthol. Soc., Bull.**
North American Benthological Society, Bulletin
- North Am. Paleo. Conv., Proc.**
North American Paleontological Convention, Proceedings
- North. Ill. Univ. Press, De Kalb**
Northern Illinois University Press, De Kalb, IL
- North. Ohio Geol. Soc., Inc., Cleveland**
Northern Ohio Geological Society, Inc., Cleveland, OH
- North Texas Geol. Soc. and W. Texas Geol. Soc.**
North Texas Geological Society, Wichita Falls, TX, and West Texas Geological Society, Midland, TX
- Ohio Jour. Sci.**
Ohio Journal of Science
- Oil Gas Comp. Bull.**
Oil and Gas Compact Bulletin
- Oil Gas Jour.**
Oil and Gas Journal
- Oil Trade**
Oil Trade
- Oil Weekly**
Oil Weekly
- Okla. Acad. Sci., Proc.**
Oklahoma Academy of Science, Proceedings
- Okla. Agri. Exper. Sta., Prof. Paper; Res. Rept.**
Oklahoma Agricultural Experiment Station, Professional Paper; Research Report
- Okla. City Geol. Soc., Oklahoma City; Thirty-fifth Ann. Field Conf., Guidebook**
Oklahoma City Geological Society, Oklahoma City, OK; Thirty-fifth Anniversary Field Conference, Guidebook
- Okla. Current Farm Econ.**
Oklahoma Current Farm Economics
- Okla. Geol. Notes**
Oklahoma Geology Notes
- Okla. Geol. Survey, Bull.; Cir.; Guidebook; Norman; (for) U.S. Dept. Energy, NURE Prog.; Spec. Pub.**
Oklahoma Geological Survey, Bulletin; Circular; Guidebook; Norman, OK; (for) U.S. Department of Energy, National Uranium Resource Evaluation Program; Special Publication
- Okla. His. Soc., Oklahoma City**
Oklahoma Historical Society, Oklahoma City, OK
- Okla. St. Univ., Agri. Exper. Sta., Res. Rept.**
Oklahoma State University, Agricultural Experiment Station, Research Report
- Okla. Univ., Bull.**
Oklahoma University, Bulletin
- Okla. Water Resour. Res. Inst., Stillwater; Tech. Compl. Rept.**
Oklahoma Water Resources Research Institute, Stillwater, OK; Technical Completion Report
- Ottawa Natur.**
Ottawa Naturalist
- Oxford Univ. Press, Oxford, England**
Oxford University Press, Oxford, England
- Pacific Geol.**
Pacific Geology
- Palaeo.**
Palaeontology
- Palaeobot.**
Palaeobotanist
- Palaeogeogr., Palaeoclimat., Palaeoecol.**
Palaeogeography, Palaeoclimatology, Palaeoecology
- Palaeontograph., Abt. B (Palaeophyto.)**
Palaeontographica, Abt. B (Palaeophytologie)
- Palaeontolog. Abhand., Abt. B (Palaeobot.)**
Palaeontologische Abhandlungen, Abt. B (Palaeobotanik)
- Palaeontograph. Am.**
Palaeontographica Americana
- Paleobio. (Paleo. Soc.)**
Paleobiology (Paleontological Society)
- Paleo. Bull.**
Paleontological Bulletins
- Palino., Num. extra. 1 (First Internat. Paly. Conf.)**
Palinologia, Numero extraordinario 1 (First International Palynological Conference)
- Palynology**
Palynology
- Pan-Am. Geologist**
Pan-American Geologist
- Peach Enter., Warren, MS**
Peach Enterprises, Warren, MS
- Peak Dist. Mines Hist. Soc., Bull.**
Peak District Mines Historical Society, Bulletin
- Pearce-Sellards Ser.**
Pearce-Sellards Series
- Pergamon Press, Oxford, England; Comp. & Geol.**
Pergamon Press, Oxford, England; Computers & Geology
- Pesticides Mon. Jour.**
Pesticides Monitoring Journal
- Petrol. Eng.**
Petroleum Engineer
- Petrol. Info. Corp., Denver, CO; Spec. Pub.**
Petroleum Information Corporation, Denver, CO; Special Publication
- Petrol. Royal.**
Petroleum Royalties
- Petromotion, Denver, CO**
Petromotion, Denver, CO
- Ph.D. dissert., Ariz. St. Univ., Tempe**
Unpubl. Ph.D. dissertation, Arizona State University, Tempe, AZ
- Ph.D. dissert., Brown Univ., Providence, RI**
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- Ph.D. dissert., Univ. Mich., Ann Arbor**
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- Ph.D. dissert., Univ. Missouri, Columbia**
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- Equus beds: Sophocleous, M.A., 1982
- Finney County: Hathaway, L.R., 1977a; Stramel, G.J., 1958
- Ford County: Chaudhuri, Sambudhas, 1983; Waite, H.A., 1942
- Geary County: Latta, B.F., 1949
general: Albert, C.D., 1978, 1979; Bailey, E.H.S., 1903; Farley, Stephen, 1984; Kansas State Board of Health, 1945, 1950, 1956; Leonard, R.B., 1976a; Olson, G.W., 1974; Whittemore, D.O., 1984e
- Gove County: Krieger, R.A., 1957
- Gray County: Hathaway, L.R., 1977a; Stramel, G.J., 1958
- Greeley County: Krieger, R.A., 1957
- Greenwood County: Bushong, F.W., 1901
- Hamilton County: Hathaway, L.R., 1977a
- Harvey County: Leonard, R.B., 1976; Williams, C.C., 1949
- Hodgeman County: Avis, L.E., 1973; Broedel, V.J., 1982, 1984; Chaudhuri, Sambudhas, 1983
- iodine: Brubaker, H.W., 1930; Kindig, B.A., 1932; Pollock, L.[M.J.], 1982
- Jefferson County: Winslow, J.D., 1972
- Jewell County: Failyer, G.H., 1887, 1889
- Johnson County: O'Connor, H.G., 1971
Kansas: Arendt, J.W., 1975, 1976, 1976a; Bailey, E.H.S., 1885, 1890, 1899a, 1902; Davies, H.E., 1898; Gottlieb, Selma, 1928; O'Connor, H.G., 1978
- Kearny County: Hathaway, L.R., 1977a
- Labette County: Abernathy, G.E., [n.d.], 1941a; Williams, C.C., 1944
- Lane County: Dulas, R.L., 1978; Krieger, R.A., 1957
- Lincoln County: Angino, E.E., 1972a; Durum, W.H., 1952
- Logan County: Johnson, C.R., 1958; Krieger, R.A., 1957
- Lyon County: Failyer, G.H., 1887; O'Connor, H.G., 1953a
- Marion County: Williams, C.C., 1949
- Marshall County: Walters, K.L., 1954
- McPherson County: Leonard, R.B., 1976; Williams, C.C., 1949
- Meade County: Berendsen, Pieter, 1981; Frye, J.C., 1941d, 1941e
methods: Morgan, C.O., 1966; Whittemore, D.O., 1984e
- Miami County: Miller, D.E., 1966a
- mineral waters: Knerr, E.B., 1898
- mine waters: Playton, S.J., 1977, 1978, 1978a, 1978b, 1980
- Mitchell County: Durum, W.H., 1952a
- Montgomery County: Bailey, E.H.S., 1887
- Morton County: Morgan, T.L., 1980
- Nemaha County: Ward, J.R., 1974
- Neosho County: Jungmann, W.L., 1966
- Ness County: Avis, L.E., 1973; Chaudhuri, Sambudhas, 1983; Leonard, R.B., 1975; Nicastro, L.J., 1982, 1983
- nitrates: Bailey, E.H.S., 1899; Kansas Department of Health and Environment, 1981a; Meloan, C.E., 1974; Murphy, L.S., 1970
- nitrogen: Spruill, T.B., 1982, 1983
- north-central: Texas Instruments, Inc., 1982d; Union Carbide Corporation, 1979b, 1980a, 1981c
- northeast: Denne, J.E., 1983a, 1984
- northwest: Hardy, L.C., 1981; Hathaway, L.R., 1979a; Leonard, R.B., 1969d; Union Carbide Corporation, 1981b
- Osage County: O'Connor, H.G., 1955a
- Osborne County: Durum, W.H., 1952a
- Ottawa County: Mack, L.E., 1962
- Pawnee County: Avis, L.E., 1973; McLaughlin, T.G., 1949
- Phillips County: Durum, W.H., 1952a; Fritz, T.R., 1980
- Pottawatomie County: Bailey, E.H.S., 1897
- Rawlins County: Walters, K.L., 1956
recharge effects: Dingman, R.J., 1969
regional: Angino, E.E., 1969a; Case, L.C., 1934; Dingman, R.J., 1969a; Dott, R.H., 1930
- Reno County: Leonard, R.B., 1976; Williams, C.C., 1946, 1949
research programs: Arendt, J.W., 1977
- Rice County: Crum, L.A., 1935; Leonard, R.B., 1976
- Riley County: Failyer, G.H., 1885
- Rooks County: Johnston, M.W., 1951; Schmidt, Gene W., 1961
- Rush County: Avis, L.E., 1973; Leonard, R.B., 1975
- Russell County: Latta, B.F., 1948a; Runyon, H.E., 1936, 1937, 1940; Swineford, Ada, 1945c
- Saline County: Gillespie, J.B., 1981; Latta, B.F., 1949
- saline sources: Bryson, W.R., 1970; Keene, K.M., 1974; Krothe, N.C., 1982a; Leonard, R.B., 1969d, 1974; U.S. Geological Survey, 1983a; Whittemore, D.O., 1979a, 1980b, 1981a; Wilk, Zbigniew, 1960
sampling programs: Culbertson, D.M., 1963; Diaz, A.M., 1962; Spruill, T.B., 1981, 1984b
- Scott County: Dulas, R.L., 1978; Krieger, R.A., 1957; Waite, H.A., 1947
- Sedgwick County: Lane, C.W., 1965a; Leonard, R.B., 1976; Williams, C.C., 1949
- Shawnee County: Hodison, S.T., 1975
- Smith County: Durum, W.H., 1952a
- sodium: Krothe, N.C., 1982c
- south-central: Hathaway, L.R., 1980b; Leonard, R.B., 1972; Severini, A.F., 1981; Texas Instruments, Inc., 1982e, 1982f, 1982g; Union Carbide Corporation, 1979, 1979c, 1979e
- southeast: Macfarlane, P.A., 1980, 1980a, 1981; Texas Instruments, Inc., 1982a; Union Carbide Corporation, 1979d, 1982c, 1982d
- southwest: Gutentag, E.D., 1975, 1981; Hathaway, L.R., 1978, 1978b, 1978c; Krothe, N.C., 1982a, 1982b; Purson, J.D., 1979; Texas Instruments, Inc., 1982b; Union Carbide Corporation, 1980
- springs: Whittemore, D.O., 1978b
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- statistics: Spruill, T.B., 1983a
- structural relations: Martin, R.B., 1968
- sulfur: Krothe, N.C., 1982
- sulfur isotopes: Krothe, N.C., 1980, 1980a
- Sumner County: Failyer, G.H., 1889; Walters, K.L., 1961
- Trego County: Durum, W.H., 1951; Leonard, R.B., 1969, 1969a, 1970, 1971, 1975; Runyon, H.E., 1936, 1937, 1940
- uranium: Landis, E.R., 1957, 1960
- uranium isotopes: Cowart, J.B., 1980, 1981
- Wallace County: Krieger, R.A., 1957
- water/rock interaction: Bryson, W.R., 1964
- west: Hart, Philip, 1977; Krothe, N.C., 1983; Kume, Jack, 1984; Naddih, B.I., 1960; Oliver, Joseph W., 1981
- west-central: Bryson, W.R., 1972, 1972a; Hathaway, L.R., 1975, 1977; Shannon, S.S., Jr., 1979; Texas Instruments, Inc., 1982c
- Wichita County: Angino, E.E., 1972a; Krieger, R.A., 1957
- ground water—levels**
- abandoned mines: Playton, S.J., 1978
- Arkansas River valley: Lohman, S.W., 1974
- Clay County: Walters, K.L., 1956b
- Cloud County: Fader, S.W., 1968; Walters, K.L., 1956b
- data collections: Geiger, C.O., 1983, 1984; U.S. Geological Survey, 1979, 1979a, 1980g, 1980h, 1981; Winslow, J.D., 1964, 1964a, 1968
- drought response: O'Connor, H.G., 1975a, 1979a, 1980
- east: Cook, W.A., 1914; Gogel, A.J., 1979a, 1980
- Ellis County: Leonard, R.B., 1975
- estimation: Baker, C.H., Jr., 1979, 1979a, 1983; Kansas Fish and Game Commission, 1981
- Equus beds: Kansas Water Resources Board, 1962h
- Ford County: Lobmeyer, D.H., 1974a
- gaging programs: Livingston, R.K., 1983
- Graham County: Spinazola, J.M., 1981
- Grant County: Fader, S.W., 1962, 1963a, 1964; Nuzman, C.E., 1965a; Winslow, J.D., 1964, 1964a, 1968
- Hamilton County: Dunlap, L.E., 1984
- Harvey County: Stramel, G.J., 1954; Williams, C.C., 1947
- Hodgeman County: Lobmeyer, D.H., 1974a
- irrigation: Pabst, M.E., 1975
- Jewell County: Fader, S.W., 1968
- Kansas: Bayne, C.K., 1967d; Buchanan, R.C., 1984; Fishel, V.C., 1957, 1958, 1959, 1960; LaMoreaux, P.E., 1959; McGuinness, C.L., 1963; O'Connor, H.G., 1982, 1982a; U.S. Geological Survey, 1974b
- Kearny County: Dunlap, L.E., 1984
- Little Arkansas River basin: Steps, W.E., 1973
- Missouri River basin: La Rocque, G.A., Jr., 1966
- Ness County: Leonard, R.B., 1975
- north: Berry, D.W., 1948, 1951
- north-central: Dunlap, L.E., 1982
- northeast: Schoewe, W.H., 1935
- northwest: Chang, Li-Huei, 1984; Dunlap, L.E., 1982; Kansas Fish and Game Commission, 1981; Pabst, M.E., 1971, 1973, 1976a
- observation programs: McElwee, C.D., 1979; O'Connor, H.G., 1975a; Pabst, M.E., 1983; Sophocleous, M.A., 1983a
- public perception: Kromm, D.E., 1981, 1982, 1983, 1984
- regional: Fishel, V.C., 1956; Hackett, O.M., 1964
- Republic County: Fader, S.W., 1968
- Rush County: Leonard, R.B., 1975
- Scott County: Johnson, C.R., 1954; Waite, H.A., 1941
- Sedgwick County: Lane, C.W., 1965; Stramel, G.J., 1954; Williams, C.C., 1947
- Solomon River Valley: Reed, T.B., 1981
- south-central: Cobb, P.M., 1983a; Pabst, M.E., 1979, 1980, 1981, 1982, 1983a, 1984
- southwest: Gutentag, E.D., 1974a, 1976b, 1978, 1981a; Kansas Water Resources Board, 1958c; Pabst, M.E., 1976, 1978b, 1979b; Sophocleous, M.A., 1981
- Stanton County: Fader, S.W., 1962, 1963a, 1964; Nuzman, C.E., 1965a; Winslow, J.D., 1964, 1964a, 1968
- statistics: Broeker, M.E., 1961, 1962, 1963, 1964, 1965, 1966, 1973, 1977; Keene, K.M., 1969, 1971; LaMoreaux, P.E., 1959; McGuinness, C.L., 1963; U.S. Geological Survey, 1974b
- stream-aquifer interaction: Fader, S.W., 1975c; Fishel, V.C., 1952a; Gelhar, L.W., 1974; Gregory, J.L., 1967, 1968; McNellis, J.M., 1979

- Edwards County: McLaughlin, T.G., 1949
 Elk County: Bayne, C.K., 1958
 Ellis County: Frye, J.C., 1943; Latta, B.F., 1948a; Leonard, A.R., 1961
 Ellsworth County: Bayne, C.K., 1971b
 Finney County: Darton, N.H., 1920; Dunlap, L.E., 1983, 1983a; Gutentag, E.D., 1972; Latta, B.F., 1944; Meyer, W.R., 1965, 1969, 1970; Moss, R.G., 1933; Waite, H.A., 1940a
 Ford County: Lobmeyer, D.H., 1978, 1979; Spinazola, J.M., 1983; Waite, H.A., 1939, 1940, 1942
 Geary County: Latta, B.F., 1949; Moulthrop, J.S., 1963
 general: Nixon, E.K., 1951a
 geophysical methods: Merriam, D.F., 1954; Steeples, D.W., 1971, 1979a; Winslow, J.D., 1967
 Gove County: Hodson, W.G., 1960
 Graham County: Prescott, G.C., Jr., 1955
 Grant County: Darton, N.H., 1920; Fader, S.W., 1963, 1964; Latta, B.F., 1942a; McLaughlin, T.G., 1946
 Gray County: Barrett, J.M., 1961; Gutentag, E.D., 1971a; Latta, B.F., 1944; McGovern, H.E., 1972, 1974
 Greeley County: Prescott, G.C., Jr., 1954; Slagle, S.E., 1973, 1975, 1976; Stullken, L.E., 1974
 Greenwood County: McLaughlin, T.G., 1940
 Hamilton County: Darton, N.H., 1920; Dunlap, L.E., 1983; Lobmeyer, D.H., 1971; McLaughlin, T.G., 1943
 Harper County: Bayne, C.K., 1960
 Harvey County: Bagheri, Saeed, 1980; Beck, H.V., 1955a; Lohman, S.W., 1939a, 1940, 1940c; McElwee, C.D., 1979; Stramel, G.J., 1956, 1967
 Haskell County: Darton, N.H., 1920; Gutentag, E.D., 1971, 1971a, 1974; McLaughlin, T.G., 1946
 High Plains aquifer: Lohman, S.W., 1953
 Hodgeman County: Fishel, V.C., 1952; Lobmeyer, D.F., 1978, 1979
 Jackson County: Beck, H.V., 1955, 1959; Walters, K.L., 1953
 Jefferson County: Carlson, W.A., 1952; Davis, S.N., 1952; Gogel, A.J., 1969; Stone, W.A., 1965; Winslow, J.D., 1972
 Jewell County: Fader, S.W., 1968; Fishel, V.C., 1955
 Johnson County: Fishel, V.C., 1956a; Jewett, J.M., 1935b; O'Connor, H.G., 1971
 Kansas: Bayne, C.K., 1967c, 1967d; Fent, O.S., 1949; Fishel, V.C., 1947, 1963; Foley, F.C., 1955; Frye, J.C., 1942a, 1951a, 1951b; Governor's Task Force on Water Resources, 1977, 1978; Haskins, C.A., 1915; Haworth, Erasmus, 1913; Jones, O.S., 1936, 1948; Kansas State Planning Board, 1937; Kansas Water Resources Board, 1967a; Kenny, J.F., 1983; Landes, K.K., 1934; Lohman, S.W., 1939, 1940a; Moore, R.C., 1940a; Parker, H.N., 1911; Smrha, R.V., 1964
 Kansas River basin: Kansas Water Resources Board, 1959a
 Kansas River valley: Davis, S.N., 1951a; Dufford, A.E., 1953, 1958; Fader, S.W., 1974; Merriam, D.F., 1954
 Kearny County: Darton, N.H., 1920; Dunlap, L.E., 1983, 1983a; Gutentag, E.D., 1972a; McLaughlin, T.G., 1943
 Kiowa County: Latta, B.F., 1948
 Labette County: Abernathy, G.E., 1941; Jungmann, W.L., 1965, 1968; Prescott, G.C., Jr., 1948; Williams, C.C., 1944
 Lane County: Gutentag, E.D., 1976c; Prescott, G.C., Jr., 1950, 1951; Stullken, L.E., 1974
 Leavenworth County: Lohman, S.W., 1940d; Ward, J.R., 1973a
 Lincoln County: Bayne, C.K., 1972d; Berry, D.W., 1952
 Linn County: Seevers, W.J., 1969
 Little Arkansas valley: Anonymous, 1974a
 Logan County: Johnson, C.R., 1956, 1956a
 Lower Arkansas River basin: Kansas Water Resources Board, 1960
 Lyon County: O'Connor, H.G., 1953a
 maps: Kansas Geological Survey, 1975; Lobmeyer, D.H., 1974
 Marais des Cygnes River basin: Kansas Water Resources Board, 1958
 Marion County: Leonard, R.B., 1972; Shea, E.F., 1922
 Marshall County: Walters, K.L., 1954
 McPherson County: Beck, H.V., 1955a; Lohman, S.W., 1939a, 1940, 1940c; McElwee, C.D., 1979
 Meade County: Frye, J.C., 1940, 1940a, 1942b; Macfarlane, P.A., 1982
 methods: Leonard, R.B., 1970b
 Miami County: Miller, D.E., 1966a
 Missouri River basin: Kansas Water Resources Board, 1962; LaRocque, G.A., Jr., 1966; Mason, Betty J., 1952, 1954, 1955
 Missouri River valley: Emmett, L.F., 1969, 1970
 Mitchell County: Hodson, W.G., 1956, 1959
 Montgomery County: O'Connor, H.G., 1970, 1974
 Morton County: Latta, B.F., 1942a; McLaughlin, T.G., 1942
 Nemaha County: Ward, J.R., 1974
 Neosho River basin: Kansas Water Resources Board, 1961
 Neosho River valley: Williams, C.C., 1944
 Ness County: Fishel, V.C., 1952; Jenkins, E.D., 1975a, 1976, 1977, 1977a
 north: Berry, D.W., 1948, 1951
 north-central: Dunlap, L.E., 1982; Edmund, R.W., 1968; Jorgensen, D.G., 1981a; Kansas Water Resources Board, 1961a, 1961b; Phillips, M.A., 1982; Stullken, L.E., 1980
 northeast: Beck, H.V., 1981; Emmett, L.F., 1969, 1970; Kansas Water Resources Board, 1959a, 1962; Severini, A.F., 1981
 northwest: Dunlap, L.E., 1982; Hay, Robert, 1895; Hodson, W.G., 1964; Kansas Water Resources Board, 1960b, 1961a; Pabst, M.E., 1973, 1976a; Pearl, R.H., 1972; Phillips, M.A., 1980
 Norton County: Frye, J.C., 1949c; Johnson, C.R., 1956b
 Osage County: O'Connor, H.G., 1955a
 Osborne County: Dingman, R.J., 1969
 Ottawa County: Mack, L.E., 1959, 1962
 Pawnee County: Cobb, P.M., 1979; Fishel, V.C., 1952; McLaughlin, T.G., 1949
 Phillips County: Frye, J.C., 1949c; Johnson, C.R., 1956b
 Pottawatomie County: Beck, H.V., 1955, 1959; Gilliland, W.J., 1973; Smith, James T., 1959
 Prairie Dog valley: Johnson, C.R., 1956b
 Pratt County: Layton, D.W., 1973
 Rawlins County: Elias, M.K., 1937d; Walters, K.L., 1956
 regional: Bird, J.A., 1942; Case, L.C., 1934; Darton, N.H., 1905a, 1906; Gregory, J.W., 1890, 1892; Gutentag, E.D., 1984, 1984a; Harris, J.B., 1980; Hay, Robert, 1890a; Heiss, H.W., 1978; Helgesen, J.O., 1982; Meinzer, O.E., 1923; Rogers, G.S., 1919; Theis, C.V., 1935; Thomas, H.E., 1952, 1978
 remote sensing methods: McClain, T.J., 1982a
 Reno County: Bayne, C.K., 1956a; Lohman, S.W., 1940, 1940c; Williams, C.C., 1946
 Republican River basin: Kansas Water Resources Board, 1960b, 1961b
 Republic County: Fader, S.W., 1968; Fishel, V.C., 1948a
 Rice County: Bayne, C.K., 1970a, 1971c, 1974a; Fent, O.S., 1950a
 Riley County: Moulthrop, J.S., 1963; Smith, James T., 1959; Steeples, D.W., 1970, 1971
 Rush County: Leonard, A.R., 1961; McNellis, J.M., 1973
 Russell County: Frye, J.C., 1943; Latta, B.F., 1948a
 Saline County: Dunlap, L.E., 1977, 1978; Latta, B.F., 1949; McElwee, C.D., 1981b
 Saline River basin: Kansas Water Resources Board, 1961a
 Scott County: Gutentag, E.D., 1976c; Johnson, C.R., 1954; Moss, R.G., 1933; Stullken, L.E., 1974; Waite, H.A., 1940a, 1947
 Sedgwick County: Bagheri, Saeed, 1980; Beck, H.V., 1955a; Lane, C.W., 1965a; Leonard, R.B., 1972; Lohman, S.W., 1940, 1940b, 1940c; McElwee, C.D., 1979; Meinzer, O.E., 1914; Stramel, G.J., 1956, 1967
 Seward County: Byrne, F.E., 1948c; Macfarlane, P.A., 1982
 Shawnee County: Beck, H.V., 1955, 1959; Davis, S.N., 1952; Gilliland, W.J., 1973
 Sheridan County: Bayne, C.K., 1956
 Sherman County: Prescott, G.C., Jr., 1953a
 Smoky Hill River basin: Kansas Water Resources Board, 1962b
 Solomon River basin: Kansas Water Resources Board, 1961a
 south: Fader, S.W., 1971, 1972, 1975a
 south-central: Fader, S.W., 1976, 1977, 1978; Kansas Water Resources Board, 1960; Lane, C.W., 1962; Lawrence, R.E., 1963; Lohman, S.W., 1942; Pabst, M.E., 1979, 1980, 1981, 1982, 1983a, 1984; Stullken, L.E., 1976; Williams, C.C., 1949
 southeast: Abernathy, G.E., 1948; Fader, S.W., 1975b; Hornbaker, A.L., 1959; Kansas Water Resources Board, 1960a, 1961; Macfarlane, P.A., 1980a, 1981
 South Fork Solomon River basin: Weston, L.K., 1980
 southwest: Dealy, M.T., 1984; Fishel, V.C., 1949; Foley, F.C., 1958; Frye, J.C., 1949a; Gutentag, E.D., 1968, 1976a, 1978, 1981a; Haworth, Erasmus, 1897; Kansas Water Resources Board, 1958a, 1962a; Keene, K.M., 1972; Pabst, M.E., 1976, 1979b; Palacios, Nicolas, 1981; Prill, R.C., 1966a; Slichter, C.S., 1906; Sophocleous, M.A., 1981; U.S. Geological Survey, 1966; Ward, P.E., 1963
 Stafford County: Cobb, P.M., 1979; Latta, B.F., 1950
 Stanton County: Darton, N.H., 1920; Fader, S.W., 1963, 1964; Latta, B.F., 1941, 1942a; McLaughlin, T.D., 1940
 Stevens County: Latta, B.F., 1942a; McLaughlin, T.G., 1946
 Sumner County: Leonard, R.B., 1972; Walters, K.L., 1961
 Thomas County: Frye, J.C., 1945c
 Trego County: Hodson, W.G., 1965; Leonard, A.R., 1961
 Verdigris River basin: Kansas Water Resources Board, 1960a
 Verdigris River valley: Fader, S.W., 1975b
 Wabaunsee County: Beck, H.V., 1955, 1959; Gilliland, W.J., 1973; Smith, James T., 1959
 Wallace County: Hodson, W.G., 1963
 Walnut River basin: Kansas Water Resources Board, 1960a
 west: Darton, N.H., 1905; Follett, W.W., 1892; Haworth, Erasmus, 1897e; Hunt, J.A., 1978; Jorgensen, D.G., 1981; Kume, Jack, 1984; McGovern, H.E., 1984; Olea, R.A., 1982; Pabst, M.E., 1977a, 1978, 1979, 1980, 1981, 1982, 1983a, 1984; Wagner, John P., 1980; Watts, K.R., 1981; Weeks, J.B., 1978, 1981
 west-central: Bayne, C.K., 1972a; Bradley, Edward, 1957; Dunlap, L.E., 1979, 1980a, 1981a; Kansas Water Resources Board, 1962b; Pabst, M.E., 1974, 1977b, 1978c; Spinazola, J.M., 1982, 1982a
 Wichita County: Bayne, C.K., 1972d; Dunlap, L.E., 1980; Johnson, M.S., 1978; Prescott, G.C., Jr., 1954; Slagle, S.E., 1973, 1975, 1976; Stullken, L.E., 1974

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 Kansas: Moore, R.C., 1965b
 Kansas River valley: Kansas Geological Society, 1949a; Moore, R.C., 1965a
 Kiowa County: Latta, B.F., 1955a
 Leavenworth County: Jewett, J.M., 1951a
 Lincoln County: Hattin, D.E., 1978
 Linn County: Heckel, P.H., 1978
 Logan County: Hattin, D.E., 1965d, 1977b, 1978
 Lyon County: Jewett, J.M., 1951c
 Meade County: Bayne, C.K., 1976; Latta, B.F., 1955a; Paul, R.W., 1967
 Montgomery County: Harbaugh, J.W., 1965; Heckel, P.H., 1978; Moore, R.C., 1937d
 northeast: Frye, J.C., 1951e; Moore, R.C., 1932a, 1936b, 1959b; Parizek, E.J., 1965, 1965b
 Pottawatomie County: Byrne, F.E., [n.d.]
 Reno County: Kansas Geological Society, 1938
 Rice County: Kansas Geological Society, 1938
 Rooks County: Kansas Geological Society, 1938a
 Russell County: Hattin, D.E., 1965d, 1977b, 1978; Kansas Geological Society, 1938a
 Shawnee County: Kansas Geological Society, 1949b
 south-central: Kansas Geological Society, 1959a
 southeast: Beck, H.V., 1949a; Elias, M.K., 1936a; Harbaugh, J.W., 1962; Heckel, P.H., 1975b; Wray, J.L., 1975
 southwest: Kansas Geological Society, 1934, 1955; Ver Wiebe, W.A., 1934
 Trego County: Hattin, D.E., 1965d, 1977b, 1978; Kansas Geological Society, 1938a
 Wabaunsee County: Byrne, F.E., [n.d.]; Kansas Geological Society, 1949b
 west: Frye, J.C., 1951f; Kellett, Betty, 1932
 Wilson County: Harbaugh, J.W., 1965; Heckel, P.H., 1978; Kansas Geological Society, 1939a
 Woodson County: Kansas Geological Society, 1939a
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see also biostratigraphy; paleobotany; Plantae—floral studies
- gymnosperms—Coniferales**
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 Quaternary: McGregor, R.L., 1968
- gymnosperms—Cordaitales**
 morphology: Harms, V.L., 1959, 1961
 Pennsylvanian: Baxendale, R.W., 1977, 1978; Baxter, R.W., 1954a, 1959, 1964; Delevoryas, Theodore, 1953; Lanning, F.C., 1972; Leisman, G.A., 1961, 1971; Millay, M.A., 1971; Rothwell, G.W., 1977, 1982; Steidmann, W.E., 1934; Whiteside, K.L., 1971
 Permian: Lanning, F.C., 1972
- gymnosperms—Cycadales**
 Cretaceous: Wieland, G.R., 1942
 Permian: Mamay, S.H., 1968, 1969, 1973
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 Carboniferous: Kozur, Heinz, 1978
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 Paleozoic: Penhallow, D.P., 1897; Taylor, T.N., 1982
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 Permian: Baxter, R.W., 1978
- gypsum**
see under mineral resources—production; minerals—sulfates; sedimentary rocks—chemically precipitated rocks, geochemistry, petrography, petrology
- Gypsum Creek**
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- gypsum deposits**
see also mineral resources; nonmetal deposits
- gypsum deposits—economics**
 Kansas: Klotz, R.O., [n.d.]
 regional factors: Berberick, James, [n.d.]
- gypsum deposits—genesis**
 Kansas: Grimsley, G.P., 1896, 1897
 marine origin: Fairchild, P.W., 1949; Sherwin, R.S., 1903
- gypsum deposits—geochemistry**
 general: Bailey, E.H.S., 1897a
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 Marshall County: Pflug, H.D., 1963
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Donald field: Elster, Toby, 1965
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Countryman field: Bass, N.W., 1951
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Elk City field: Boughton, C.W., 1920
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Engel field: Brooks, Lee, 1957; Care, J.L., 1959
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Bloomer field: Walters, R.F., 1945, 1946a
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Stoltenberg field: Anonymous, 1940d; Walters, R.F., 1945, 1946a
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Damme field: Osborn, J.B., 1962; Schmidlapp, R.L., 1959
Finnup East field: Osborn, J.B., 1962
Finnup field: Schmidlapp, R.L., 1959
general: Norton, G.H., 1938
Nunn field: Aukerman, R.A., 1959; Merriam, D.F., 1955b; Osborn, J.B., 1962
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Sequoyah field: Tucker, V.M., 1959
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- oil and gas fields—Ford County**
Wilroads field: Osborn, J.B., 1962
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Ge–See field: Hilpman, P.L., 1960b
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distribution: Kopper, R.W., 1982
Gove field: Bear, M.F., 1959
Lundgren field: Marion, R.C., 1959
Lundgren South field: Marion, R.C., 1959
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general: Sandlin, G.S., 1957
Law field: Merriam, D.F., 1955b
Law Southeast field: Winchell, R.L., 1959
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- Wisby North field: Donnelly, E.B., 1965
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 Imbt, W.C., 1941; Paddleford, J.T., 1941
- oil and gas fields—Rice County**
 Bornholdt field: Anonymous, 1940b
 Bull Creek field: Wright, B.J., 1965
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 Geneseo—Edwards field: Clark, S.K., 1947, 1948
 Heinz field: Walters, R.F., 1950, 1953
 Lyons field: Goebel, E.D., 1971b; Page, J.H., 1940
 Lyons West field: Ehm, A.E., 1965, 1965a;
 Goebel, E.D., 1971b; Wright, B.J., 1965a
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 Ringwald field: Walters, R.F., 1950, 1953
 Rino field: Richardson, J.M., 1965
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 1964
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 M.W., 1959
 Wherry field: Anonymous, 1942b; McNeil, H.E.,
 1941
 Windom field: Smith, M.W., 1959
 Wisby North field: Donnelly, E.B., 1965
- oil and gas fields—Riley County**
 Yaege field: Goebel, E.D., 1960; Miller, Robert E.,
 1963
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 Hayden field: Merriam, D.F., 1955b
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 Otis—Albert field: Miller, R.R., 1968
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 Shiley North field: James, Alfred, III, 1965
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 Trapp field: Amstutz, P.T., Jr., 1943, 1944
 Wilson Creek field: Hopkins, R.T., 1977
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 Smolan field: Talbott, W.C., 1954
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 Shallow Water field: Aukerman, R.A., 1959a
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 1965
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 W.A., 1946
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 1960
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 1965a
 Valley Center field: Wright, B.J., 1960
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- oil and gas fields—Seward County**
 Hawks field: Strohmeyer, R.C., 1959
 Holt field: Jacques, A.N., 1959
 Kismet field: Osborn, J.B., 1962
 Liberal—Light field: Strohmeyer, R.C., 1959a
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 Massoni field: Osborn, J.B., 1962
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 Adell field: Brown, H.A., 1983, 1984; Lane, P.J.,
 1959; Merriam, D.F., 1955b
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 1959d
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Peabody field
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Permian
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see under algae—floral studies, stromatolites; Amphibia—Labyrinthodonta, Lepospondyli, morphology; Arthropoda—Branchiopoda, Chelicerata, Cirripedia, Crustacea, faunal studies, Merostomata; bacteria—Miscellaneous; biostratigraphy—Foraminifera, algae, Arthropoda, Bryozoa, Coelenterata, Conodonta, Echinodermata, Foraminifera, Insecta, Invertebrata, Mollusca, palynomorphs, pteridophytes, Vertebrata, worms; Brachiopoda—Articulata, faunal studies, Inarticulata, Spiriferida, Strophomenida; Bryozoa—Cheilostomata, Cryptostomata, Ctenostomata, Cyclostomata, faunal studies, morphology, Trepostomata; catalogs—invertebrate paleontology; Coelenterata—Anthozoa, Rugosa; Conodonta—faunal studies, morphology; Echinodermata—Crinoidea, Echinoidea, Holothuroidea, Ophiuroidea, Stellerioidea; Foraminifera—faunal studies, Fusulinina, Miliolina, Textulariina; Fusulinina; gymnosperms—Cordaitales, Cycadales, Pteridospermae; Insecta—Blattaria, Coleoptera, Embiaria, faunal studies, Hymenoptera, Hemipteroidea, Hymenopteroidea, Mecoptera, Mecopteroidea, Megasecoptera, Neuroptera, Odonata, Odonatopteroidea, Orthopteroidea, Oryctoblattinidae, Paleodictyoptera, Paleodictyopteroidea, Plectoptera, Plectoptera, Protelytroptera, Protodonata, Protohymenoptera, Protoperlaria, Protorthoptera, Psocoptera, Psocopteroidea, Thysanoptera; Invertebrata—faunal studies, microfossils; invertebrate paleontology—Arthropoda, Brachiopoda, Bryozoa, Coelenterata, Conodonta, Echinodermata, faunal studies, Foraminifera, Gastropoda, ichnofossils, Insecta, Invertebrata, microfossils, Mollusca, Ostracoda, palynomorphs, Trilobita, worms; Mollusca—Ammonoidea, Bivalvia, Cephalopoda, faunal studies, Gastropoda; Ostracoda—faunal studies, Paleocopida, Podocopida; paleobotany—algae, bacteria, floral studies, gymnosperms, palynomorphs, Plantae, pteridophytes; paleoecology—algae, Arthropoda, biofacies analysis, Brachiopoda, Bryozoa, Conodonta, faunal studies, Foraminifera, ichnofossils, Invertebrata, Mollusca, Ostracoda, shallow marine, worms; palynomorphs—Acritarchs, bisaccate pollen, Chitinozoa, Dinoflagellata, floral studies, megaspores, miospores; Pisces—Chondrichthyes, faunal studies, Ichthyodectes; Plantae—floral studies; pteridophytes—Filicopsida, floral studies; Reptilia—faunal studies, morphology, Synapsida; Trilobita—Ptychopariida; Vertebrata—faunal studies, morphology; vertebrate paleontology—Amphibia, coprolites, faunal studies, Pisces, Reptilia, Vertebrata; worms—Annelida, scolecodonts

Permian-Cretaceous
see under stratigraphy—stratigraphic gaps

- regional: Greene, F.C., 1923; James, G.W., [n.d.]
source beds: Bennison, A.P., 1984, 1984a;
Buzalini, A.D., 1984; Ece, O.I., 1984
source rocks: Cardwell, A.L., 1977; Gautier, D.L.,
1984; Neumann, L.M., 1941, 1946
southeast: Bass, N.W., 1940; Gould, G.F., 1975
southwest: Swanson, D.C., 1967, 1967a, 1967b,
1968, 1968a, 1968b
structural controls: Anonymous, 1942b; Jewett,
J.M., 1958; Kirk, C.T., 1927, 1927a; Monnett,
V.E., 1922; Moore, R.C., 1920; Moss, R.G.,
1934; Mueller, G.N., 1967, 1967a; Powers,
Sidney, 1922; Rich, J.L., 1933a, 1938a, 1938b;
Thatcher, R.J., 1961; Ver Wiebe, W.A., 1929
structural relations: Tomlinson, C.W., 1934
symposia: Bennison, A.P., 1984, 1984a
theories of origin: Haworth, Erasmus, 1908c;
Larson, T.G., 1971; Levorsen, A.I., 1934;
McCoy, A.W., 1934a; Weirich, T.E., 1952,
1953, 1953a, 1955, 1968; Weirick, Gene, 1932
vertical movement: Abernathy, G.E., [n.d.], 1941a
- petroleum—geochemistry**
carbon isotopes: Baker, D.R., 1965, 1969
east: Lane, E.C., 1943
Kansas: Bushong, F.W., 1908; Whitaker, W.A.,
1917
regional: James, G.W., [n.d.]
southeast: Baker, D.R., 1960, 1962, 1963; Hatch,
J.R., 1984
- petroleum—inventory**
northwest: Parkhurst, R.W., 1959, 1959a, 1962
regional: Thrasher, J.R., 1977
- petroleum—possibilities**
Anadarko basin: Wheeler, R.R., 1947, 1947a, 1948
Anderson County: Charles, H.H., 1927, 1927a
asphalt production: DeWoody, O.A., 1940
Barton County: Riggs, C.H., 1960
central: Halepaska, J.C., 1972a; Koester, E.A.,
1938, 1940; Lee, Wallace, 1939; Woodruff,
E.G., 1935
Cheyenne County: Merriam, D.F., 1959b
Cowley County: Kaiser, C.P., 1944; Smith, E.W.,
1955
east: Lee, Wallace, 1939; Morgan, F.W., 1957
Finney County: Twenhofel, W.H., 1925c
Ford County: Twenhofel, W.H., 1925c
Forest City basin: Tulsa Geological Society, 1941
Geary County: Hilpman, P.L., 1960c
Gove County: Irwin, J.S., 1922; Lupton, C.T.,
1922a; Twenhofel, W.H., 1925c
Graham County: Davis, J.C., 1976
Harvey County: Dalrymple, Dal., 1936; McClellan,
H.W., 1932
Haskell County: Bennett, F.O., 1960a
Hodgeman County: Twenhofel, W.H., 1925c
Kansas: Bignell, L.G.E., 1937; Drew, L.J., 1972;
Ebanks, W.J., Jr., 1974; Goebel, E.D., 1969;
Keroher, R.P., 1948; Landes, K.K., 1937a; Lee,
Wallace, 1940b; Merriam, D.F., 1959e, 1962d
Lane County: Lupton, C.T., 1922a
Leavenworth County: Jameson, E., 1889
Lincoln County: Twenhofel, W.H., 1925c
Logan County: Irwin, J.S., 1922; Lupton, C.T.,
1922a
Ness County: Lupton, C.T., 1922a
north-central: Barwick, J.S., 1928; Brown, D.M.,
1967, 1967a; Carlson, M.P., 1971; Shenkel,
C.W., Jr., 1957, 1959
northeast: Dalrymple, Dal., 1937b
northwest: Clair, J.R., 1968; Davis, J.C., 1977
oil shale: Berendsen, Pieter, 1978; Hardy, R.G.,
1977, 1977c
oil show detection: Drees, L.S., 1951
Osage County: Hilpman, P.L., 1961
Pottawatomie County: Beede, J.W., 1920
regional: Adler, F.J., 1971; Bartram, J.G., 1950;
Chenoweth, P.A., 1967; Rascoe, Bailey, Jr.,
1979
Reno County: Dalrymple, Dal., 1936; McClellan,
H.W., 1932
Rice County: Gould, J.G., 1952; McClellan, H.W.,
1932
- Riley County: Hilpman, P.L., 1959
Rush County: Twenhofel, W.H., 1925c
Russell County: Koester, E.A., 1929; Riggs, C.H.,
1960
Salina basin: Tulsa Geological Society, 1941
Scott County: Lupton, C.T., 1922a
Smith County: Landes, K.K., 1939a
source rocks: Trask, P.D., 1937, 1942
south-central: Adkison, W.L., 1972
southeast: Angino, E.E., 1981; Goebel, E.D.,
1971a; Harrison, W.E., 1979
southwest: Ebanks, W.J., Jr., 1977; McCaslin, J.C.,
1960
Trego County: Lupton, C.T., 1922a; Twenhofel,
W.H., 1925c
underground storage: Jewett, J.M., 1954b
west: Bass, N.W., 1926; Bennett, F.O., 1960b;
Crough, M.C., III, 1976; Goebel, E.D., 1957a,
1960c; Putman, B.M., 1960; Rascoe, Bailey, Jr.,
1971
west-central: Halepaska, J.C., 1972a
- petroleum—production**
Allen County: Emery, L.W., 1962; McQuillan,
M.W., 1968
Anderson County: Charles, H.H., 1941;
McQuillan, M.W., 1968
Barber County: Anderson, T.E., 1949; Brewer,
J.E., 1955, 1956; Clark, W.R., 1956; Elster,
Toby, 1965; Euwer, R.M., 1965, 1968; Jacques,
A.N., 1956; Knight, G.L., 1929; Lenderman,
S.E., 1956; Spaulding, W.S., 1955, 1956;
Strong, R.M., 1960; Tucker, V.M., 1956; Ver
Wiebe, W.A., 1948; Wible, E.E., 1956
Barton County: Amstutz, P.T., Jr., 1943, 1944;
Anonymous, 1940a, 1940d; Latta, B.F., 1950;
Nixon, E.K., 1950a; Stephenson, E.A., 1941;
Walters, R.F., 1947a, 1948; Ward, D.C., 1961
basement rocks: Landes, K.K., 1939, 1960, 1977;
P'an Chung-Hsiang, 1982; Walters, R.F., 1950,
1952, 1953
Bourbon County: McQuillan, M.W., 1968
Brown County: Rascoe, Bailey, Jr., 1960
Butler County: Berger, W.R., 1921; Berry, G.F.,
Jr., 1948; Coffman, C.L., 1975, 1975a; Collins,
J.W., 1981; Garlough, J.L., 1938; Merriam,
D.F., 1964b; Oros, M.O., 1972b; Reeves, J.R.,
1929; Uhrlaub, Rudolph, 1921
carbonate reservoirs: Lockridge, J.P., 1978;
Scholle, P.A., 1978; Watney, W.L., 1984a
central: Irion, R.L., 1963; Kornfeld, J.A., 1939,
1941, 1941a; Oros, M.O., 1972
Chase County: Ley, H.A., 1926b; Merriam, D.F.,
1960c
Chautauqua County: Schrader, F.C., 1905
Clark County: Jamieson, J.J., 1959; Waite, George,
1955, 1956
Clay County: Guy, W.J., 1960, 1960a, 1960b
Comanche County: Capps, W.M., 1965; Daniels,
J.I., 1956; Euwer, R.M., 1965, 1968
Cowley County: Booth, A.L., 1962; Moore, R.C.,
1925a; Snow, D.R., 1925, 1929; Wagner, K.L.,
1984
Decatur County: Anderson-Prichard Oil Company,
Geological Department, 1959; Brown, H.A.,
1983, 1984; Curtis, G.R., 1959; Lane, P.J.,
1959a, 1959b, 1959c, 1959e
Dickinson County: Koester, E.A., 1952; Steder,
R.M., 1960, 1960a, 1960b
east: Dalrymple, Dal., 1937; Jewett, J.M., 1951,
1959a; Lane, E.C., 1943; Whitaker, W.A., 1918
Edwards County: McCaleb, G.A., 1965; Sheats,
Claud, Jr., 1956, 1956a; Stevens, H.W., 1960
Elk County: Schrader, F.C., 1905
Ellis County: Allan, T.H., 1929; Harding, J.E.,
1961
Ellsworth County: Anonymous, 1940d; Ley, H.A.,
1926b, 1926c; Walters, R.F., 1947a, 1948
enhanced recovery: Ebanks, W.J., Jr., 1975, 1975a;
Kornfeld, J.A., 1938; Sweeney, A.E., 1948;
Tillman, R.W., 1981
evaporative losses: Higgins, J.H., 1922
- Finney County: Aukerman, R.A., 1959; Norton,
G.H., 1938; Roby, R.E., 1959, 1961;
Schmidlapp, R.L., 1959; Tucker, V.M., 1959
Forest City basin: McClellan, H.W., 1940a
gas storage: Biegler, N.W., 1972
Geary County: Merriam, D.F., 1960c; Sternin, J.E.,
1961
Gove County: Bear, M.F., 1959; Marion, R.C.,
1959
Graham County: Robinson, J.E., 1978; Sandlin,
G.S., 1957
Greenwood County: Brekly, A.L., 1929; Berger,
W.R., 1921; Cadman, W.K., 1927; Cheyney,
A.E., 1929; Garlough, J.L., 1938; Loomis,
Harve, 1923
Harper County: Devlin, J.B., 1965; Frensley, R.W.,
1965, 1968; James, Alfred, III, 1965a; Richter,
J.B., 1955, 1956
Harvey County: Bunte, A.S., 1941; Hall, R.H.,
1930; Johnson, K.W., 1960; Ley, H.A., 1926b;
Tucker, N.A., 1956; Ver Wiebe, W.A., 1946
Haskell County: Aufmuth, R.E., 1966; Brown,
H.A., 1962, 1984a; Fugitt, L.B., 1959; Roby,
R.E., 1959, 1961; Watson, C.E., 1959
heavy oil: Arnold, M.D., 1974; Ebanks, W.J., Jr.,
1974a, 1974b, 1977c, 1978, 1978a, 1978b;
Enright, R.J., 1964; French, M.S., 1977; Miller,
J.S., 1972
Hodgeman County: Beene, D.L., 1965; Ebanks,
W.J., Jr., 1976, 1977b; Ingold, B.L., 1965;
Linehan, R.M., 1965; Stewart, G.F., 1965;
Stinson, B.R., 1965; Zorger, G.W., 1965
in situ combustion: Hardy, R.G., 1977c
Jefferson County: Lee, Wallace, 1941, 1944
Jewell County: Ansari, N.W., 1965
Kansas: Abernathy, G.E., 1945, 1946a; Benson,
D.L., 1923; Chism, Jim, 1982; Dott, R.H., 1935,
1935a; Ebanks, W.J., Jr., 1977a; Goebel, E.D.,
1953, 1958; Haworth, Erasmus, 1917; Hilpman,
P.L., 1958; Jewett, J.M., 1947a, 1948, 1949c,
1952; Kansas Geological Society, 1965a;
Kansas Geological Survey, 1959a; Kansas Sec-
ondary Recovery and Pressure Maintenance
Committee, 1964, 1965; Keroher, R.P., 1942;
Kesler, L.W., 1928; Koester, E.A., 1934; Lee,
Marvin, 1935; Merriam, D.F., 1959d; Moore,
R.C., 1920c; Nixon, E.K., 1948; Oros, M.O.,
1963, 1968, 1974, 1975a; Powell, J.P., 1953,
1956, 1957, 1958, 1958a, 1959; Spitz, O.T.,
1970; Ver Wiebe, W.A., 1938; Willhite, G.P.,
1977
Kearny County: Davis, R.M., 1959; Hubley, M.D.,
1942; Roby, R.E., 1959, 1961
Kingman County: Cruce, J.D., 1956; Frensley,
R.W., 1965, 1968; King, C.R., 1965, 1965a;
Richardson, J.M., 1956a; Skelly Oil Company,
Geological Department, 1956a
Kiowa County: Curtis, G.R., 1968; Euwer, R.M.,
1965, 1968; James, Alfred, III, 1956;
Lenderman, S.E., 1956a; Zajic, W.E., 1956
Labette County: Carroll, H.H., 1981; Foster, W.H.,
1929; Schrader, F.C., 1905
Lane County: McCoy, J.R., 1965
Leavenworth County: Lee, Wallace, 1941, 1944
Lincoln County: Harding, J.E., 1961
Linn County: Jewett, J.M., 1940a
maps: Beene, D.L., 1967; Kansas Blue Print
Company, 1961; McClellan, H.W., 1940; Paul,
S.E., 1983a; Petromotion, 1971, 1973, 1973a,
1974; Stevens, Curtis, 1968
Marion County: Brown, Alton R., 1959, 1960;
Koester, E.A., 1952; Smith, M.W., 1960;
Stubbs, P.J., 1960
McPherson County: Anonymous, 1940b; Bunte,
A.S., 1941; Hiestand, T.C., 1933; Hylton, G.K.,
1960; Olson, D.R., 1956; Smith, M.W., 1959;
Swindell, Floyd, 1931
Meade County: Baab, Patricia, 1981; Fennell,
W.R., 1959; Jamieson, J.J., 1959; Renfro,
C.A., 1953, 1959; Wilkinson, R.D., 1959
Mitchell County: Ansari, N.W., 1965

- petroleum—trapping controls**
 block faulting: Gagliardo, D., 1983, 1984;
 Gustavson, J.B., 1983
 combination traps: Ebanks, W.J., Jr., 1976, 1977b;
 Knight, W.V., 1976
 general: Haworth, Erasmus, 1908b
 lithofacies: Ball, S.M., 1966; Brewer, J.E., 1965a;
 Gatewood, L.E., 1978, 1978a
 paleokarst: Anonymous, 1940c
 paleotopographic: Mannhard, G.W., 1974; Walters,
 R.F., 1945, 1945a, 1946, 1946a, 1947
 stratigraphic controls: Hilpman, P.L., 1958
 stratigraphic traps: Anonymous, 1941b; Kornfeld,
 J.A., 1941, 1941a, 1943; Marden, D.W., 1967,
 1967a; Smith, R.K., 1951; Watney, W.L., 1984a
 structural geology: Merriam, D.F., 1955
- petroleum engineering**
see engineering geology
see under data processing—engineering geology
- petroleum exploration**
see data processing: mathematical geology;
 statistical analysis
see under data processing—economic geology,
 pattern analysis, programs; geophysical
 methods—applications, radioactivity methods,
 seismic methods; geophysical surveys—applica-
 tions; multisource methods; remote sensing—
 applications; structural geology—lineaments;
 well logging—applications, radioactivity
- petroleum facilities**
see maps
- petroleum sources**
see under structural analysis—folds
- petrology**
see igneous petrology; metamorphic petrology;
 sedimentary petrology; igneous rocks;
 metamorphic rocks; meteorites; sedimentary
 rocks; sediments
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 features—Bala kimberlite, Leonardville
 kimberlite, Rose dome, Silver City dome,
 Stockdale kimberlite; stratigraphy—
 Pennsylvanian
- petrophysics**
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- Peyton Creek**
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- Pfaff crater**
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- Phanerozoic**
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see under Aves—, Invertebrata—, Pisces—faunal
 studies; invertebrate paleontology—
 Invertebrata; Reptilia—Chelonia, faunal studies,
 morphology; Vertebrata—evolution, faunal
 studies; vertebrate paleontology—Aves, Pisces,
 Reptilia, Vertebrata
- phase equilibria**
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 sulfides
- phenocryst**
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- Phillips County meteorite**
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- phlogopite**
see under absolute age—K/Ar dates; minerals—
 sheet silicates
- phosphate**
see under geochemistry—black shale
- phosphate deposits**
see also nonmetal deposits
- phosphate deposits—possibilities**
 southeast: Berendsen, Pieter, 1978
- phosphate deposits—properties**
 fertilizing: Rose, K.E., 1967
 fertilizing value: Randle, R.F., 1949
 shale: Runnels, R.T., 1949
- phosphate deposits—resources**
 east: Runnels, R.T., 1949
 Kansas: Ryan, J.P., 1956
 south: Rose, K.E., 1967
- phosphate rocks**
see under sedimentary rocks—environmental
 analysis
- phosphates**
see minerals
see under environmental geology—pollution;
 geochemistry—shale; mineral resources—
 geochemistry
- phosphatic nodules**
see under sedimentary structures—secondary
 structures
- phosphorite**
see under diagenesis—materials; sedimentary
 rocks—petrology
- phosphorus**
see elements; geochemistry
see under geochemistry—soils; hydrology—
 hydrologic cycles; soils—geochemistry
- photogeology**
see remote sensing
see under structural geology—methods
- photogrammetry**
see under engineering geology—methods
- photolineaments**
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- phyloid algae**
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- physical geography**
see geomorphology
- physical properties**
see under engineering geology—materials; ceramic
 materials—, clay deposits—, coal deposits—,
 construction materials—, gypsum deposits—,
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 leum—, salt deposits—, soils—, volcanic ash
 deposits—properties
- physiography**
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- phytoliths**
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- pillar deformation**
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- pipeline maps**
see maps—petroleum facilities
- pipelines**
see under coal deposits—production
- pipes**
see intrusions
- pipestone argillite**
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- Piqua field**
see under oil and gas fields—Allen County
- Pisces**
see also biostratigraphy; paleoecology; vertebrate
 paleontology; Vertebrata—faunal studies
- Pisces—Actinistia**
 Pennsylvanian: Hibbard, C.W., 1933
- Pisces—Chondrichthyes**
 Cretaceous: Stewart, J.D., 1978b; Williston, S.W.,
 1900
 morphology: Williams, M.E., 1972, 1972a
 Pennsylvanian: Chorn, J.D., 1978a, 1978b; Crum,
 E.R., 1917; Hansen, M.C., 1968, 1980; Miller,
 H.W., Jr., 1957; Mudge, B.F., 1873, 1874a;
 Orvig, Tor, 1967; Poplin, C.M., 1974, 1982;
 Zangerl, Rainer, 1973
 Permian: Hansen, M.C., 1968; Martin, H.T., 1913;
 Miller, H.W., Jr., 1958d; Williams, M.E., 1972,
 1972a
- Pisces—Dipnoi**
 Cretaceous: Chorn, J.D., 1976; Schultze, H.-P.,
 1981
 Paleozoic: Chorn, J.D., 1976
 Pennsylvanian: Williston, S.W., 1899a
- Pisces—Elasmobranchii**
 evolution: Hay, O.P., 1901
- Pisces—faunal studies**
 Carboniferous: Eastman, C.R., 1903
 Cretaceous: Cockerell, T.D.A., 1919; Cope, E.D.,
 1871e, 1872f, 1877b, 1878; Hay, O.P., 1904;
 Jordan, D.S., 1924; Loomis, F.B., 1900;
 McClung, C.E., 1908; Sternberg, C.H., 1905,
 1907, 1907b; Stewart, Alban, 1898, 1898a,
 1898b, 1898c, 1899a, 1899d; Williston, S.W.,
 1900b
 general: Mudge, B.F., 1875b
 Pennsylvanian: Chorn, J.D., 1978; Dunkle, D.H.,
 1962; Gunnell, F.H., 1933; Leidy, Joseph, 1859;
 Twenhofel, W.H., 1914
 Permian: Dunkle, D.H., 1962
 Phanerozoic: Chorn, J.D., 1978c
 Pleistocene: Smith, C.L., 1958, 1962, 1963
- Pisces—Holocephali**
 Cretaceous: Hibbard, C.W., 1942c
- Pisces—Holostei**
 Cretaceous: Stewart, J.D., 1979b
- Pisces—Ichthyodectes**
 Pennsylvanian: Martin, L.D., 1972
 Permian: Martin, L.D., 1972
- Pisces—ichthyoliths**
 Pennsylvanian: Tway, L.E., 1977, 1979, 1982,
 1982a
- Pisces—morphology**
 Cretaceous: Brown, R.W., 1950; Moodie, R.L.,
 1926; Schaeffer, Bobb, 1954
 Mesozoic: Lane, H.H., 1945a
 Paleozoic: Lane, H.H., 1945a
- Pisces—Osteichthyes**
 Cretaceous: Anonymous, 1947; Cope, E.D., 1873,
 1873b, 1877a, 1892; Cragin, F.W., 1901;
 Crook, A.R., 1892; Dunkle, D.H., 1946, 1969;
 Goody, P.C., 1970; Gregory, J.T., 1950; Hay,
 O.P., 1898a, 1899, 1899a; Hibbard, C.W.,
 1939d, 1941e, 1945a; Martin, H.T., 1920;
 McClung, C.E., 1926; Miller, H.W., Jr., 1958,
 1958a; Osborn, H.F., 1904a; Stewart, Alban,
 1899, 1899b, 1899c; Stewart, J.D., 1982, 1984;
 Wiley, E.O., 1977, 1981; Williston, S.W., 1899,
 1900a; Woodward, A.S., 1913
 morphology: Hay, O.P., 1902a, 1902b
 Pennsylvanian: Echols, Joan, 1963; Poplin, C.M.,
 1984; Rayner, D.H., 1952; Zidek, Jiri, 1975,
 1976, 1976a
 Pleistocene: Neff, N.A., 1975; Stewart, J.D., 1979a
 Pliocene: Hibbard, C.W., 1936, 1942d; Robertson,
 G.M., 1943
 taxonomy: Hay, O.P., 1898b
- Pisces—Teleostei**
 Cretaceous: Bardack, David, 1965a, 1976; Green,
 W.R., 1913; Hussakof, Louis, 1929; Stewart,
 Alban, 1900; Thorpe, M.R., 1934
 evolution: Bardack, David, 1965a
 morphology: Bardack, David, 1965a
 Pliocene: Hubbs, C.L., 1951
- pisoliths**
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 environmental analysis; sedimentary struc-
 tures—secondary structures
- place names**
see under environmental geology—land use
- placers**
see under sediments—composition
- plains border**
see under geomorphology—landform description
- planar-bedding structures**
see sedimentary structures—planar-bedding
 structures
- planning**
see water resources
see under engineering geology—construction,
 underground installations; environmental
 geology—land use; hydrology—lakes and
 reservoirs; water resources—development
- Plantae**
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 Plantae; bryophytes; gymnosperms;
 paleobotany—Plantae; paleoecology—Plantae;
 palynomorphs; pteridophytes
- Plantae—floral studies**
 Carboniferous: Crevecoeur, F.F., 1903
 Cretaceous: Baxter, R.W., 1954; Berry, E.W.,
 1920, 1922; Gress, E.M., 1922; Hollick, C.A.,

- population growth**
see under statistical analysis—pattern analysis
- Porifera**
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- Porifera—Calcispongia**
 Pennsylvanian: Mathewson, J.E., 1978
- Porifera—Demospongia**
 Pennsylvanian: Berendsen, Pieter, 1978a
- Porifera—faunal studies**
 Pennsylvanian: Nodine-Zeller, D.E., 1978
- Porifera—taxonomy**
 Carboniferous: De Laubenfels, M.W., 1947
- porosity**
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- porosity effects**
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- portland cement**
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- potash deposits**
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- potash deposits—resources**
 regional: Phalen, W.C., 1913
- potassium**
see elements; isotopes
see under geochemistry—shale, soils; soils—geochemistry
- power spectra**
see under cartography—contour maps; data processing—cartography
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- Coffey County: Swanson, D.W., 1982
- Cowley County: Horsch, M.L., 1980
- Crawford County: Rott, D.E., 1973; Welch, J.E., 1982b
- Dickinson County: Jantz, D.R., 1980
- Doniphan County: Sallee, K.H., 1980
- Douglas County: Dickey, H.P., 1977
- east: Haworth, Erasmus, 1896g
- Edwards County: Roth, W.E., 1973
- Ellis County: Glover, R.K., 1975; Zavesky, L.D., 1967
- Finney County: Gwin, R.E., 1963; Harmer, R.F., 1965
- Ford County: Dodge, D.A., 1965
- Franklin County: Dickey, H.P., 1981
- Geary County: Dunmire, R.G., 1960; Jantz, D.R., 1975
- general: Throckmorton, R.I., 1933
- Gove County: Angell, R.C., 1978
- Grant County: Hamilton, V.L., 1969
- Gray County: Tomasu, B.I., 1968
- Greeley County: McBee, C.W., 1961a
- Greenwood County: Fortner, J.R., 1982
- Hamilton County: McBee, C.W., 1961
- Harper County: Ratcliff, I.W., Jr., 1971
- Harvey County: Hoffman, B.R., 1974
- Haskell County: Hamilton, V.L., 1968
- Hodgeman County: Haberman, R.L., 1973
- Jackson County: Campbell, H.V., 1979
- Jefferson County: Dickey, H.P., 1977a; Woodring, S.M., 1973
- Jewell County: Hamilton, V.L., 1984
- Johnson County: Plinsky, R.O., 1979
- Kansas: Bidwell, O.W., 1973; Moore, R.C., 1931a; U.S. Department of Agriculture, 1981f
- Kearny County: Sallee, K.H., 1963
- Kingman County: Hoffman, B.R., 1979
- Lane County: Sallee, K.H., 1972
- Leavenworth County: Zavesky, L.D., 1977
- Linn County: Penner, H.L., 1981
- Logan County: Bell, E.L., 1964
- Lyon County: Neill, J.T., 1981
- maps: Fenwick, R.W., 1979
- Marion County: Horsch, M.L., 1983
- Marshall County: Kutnink, P.R., 1980
- McPherson County: Rott, D.E., 1983
- Meade County: Tomasu, B.I., 1977
- Miami County: Penner, H.L., 1981
- Mitchell County: Hamilton, V.L., 1980
- Montgomery County: Fleming, E.L., 1981
- Morris County: Barker, W.L., 1974; Macfarlane, P.A., 1979
- Morton County: Dickey, H.P., 1963
- Nemaha County: Kutnink, P.R., 1982
- Neosho County: Fleming, E.L., 1982
- Ness County: Rott, D.E., 1977
- northwest: Hathaway, L.R., 1980
- Norton County: Palmer, C.D., 1977
- Osborne County: Fleming, E.L., 1977
- Ottawa County: Atkinson, C.H., 1980
- Pawnee County: Dodge, D.A., 1978a
- Pratt County: Horsch, M.L., 1968
- Rawlins County: Angell, R.C., 1981
- regional: Warren, John, 1982
- Reno County: Rockers, J.J., 1966
- Republic County: Atkinson, C.H., 1967
- Rice County: Horsch, M.L., 1974
- Riley County: Jantz, D.R., 1975
- Rooks County: Palmer, C.D., 1982
- Rush County: Dodge, D.A., 1980
- Russell County: Jantz, D.R., 1982
- Saline County: Cline, A.J., 1959
- Scott County: Gwin, R.E., 1963; Sallee, K.H., 1965
- Sedgwick County: Penner, H.L., 1979
- Seward County: Dickey, H.P., 1965
- Shawnee County: Abmeyer, Walter, 1970
- Sheridan County: Angell, R.C., 1984
- Sherman County: Angell, R.C., 1973; Johnson, R.A., 1980
- Smith County: Hamilton, V.L., 1978
- south-central: Hathaway, L.R., 1982
- southwest: Hathaway, L.R., 1978a
- Stafford County: Dodge, D.A., 1978
- Stanton County: Fleming, E.L., 1961
- Stevens County: Dickey, H.P., 1961
- Thomas County: Barker, W.L., 1980
- Wallace County: Patrick, G.E., 1875a, 1906a
- Wichita County: Hamilton, V.L., 1965
- Woodson County: Swanson, D.W., 1977
- Wyandotte County: Patrick, G.E., 1875a, 1906a; Zavesky, L.D., 1977
- soils—water regimes**
- controlling factors: Modha, V.V., 1964; Morin, R.E., 1961; Van Orman, C.R., 1956
- movement: Dabiri, H.E., 1969a, 1970; Green, D.W., 1968a, 1972; Khare, J.D., 1971
- remote sensing: Jacobberger, P.A., 1982, 1983
- Soldier Creek**
- see under* hydrologic features—rivers and streams
- Solomon River**
- see under* hydrologic features—rivers and streams
- Solomon River basin**
- see under* ground water—surveys; water resources—management, supplies, water quality
- Solomon River valley**
- see under* ground water—levels
- solubility**
- see under* geochemistry—coal, fly ash
- solution features**
- see* geomorphology
- solution mining**
- see under* mining geology—environmental aspects, practice; salt deposits—production
- sonic methods**
- see* well logging
- source beds**
- see under* petroleum—genesis and migration
- source rocks**
- see under* petroleum—genesis and migration, possibilities, production; sediments—genesis; symposia—petroleum
- South Fork Cottonwood River**
- see under* hydrologic features—rivers and streams
- South Fork Ninescaw River**
- see under* hydrologic features—rivers and streams
- South Fork Ninescaw River basin**
- see under* hydrology—surveys
- South Fork Solomon River**
- see under* hydrologic features—rivers and streams
- South Fork Solomon River basin**
- see under* ground water—surveys
- spacing**
- see under* structural analysis—fractures
- spatial filtering**
- see under* cartography—structure maps; data processing—structural geology
- spatial filters**
- see under* data processing—remote sensing; geophysical methods—magnetic methods
- spatial frequency**
- see under* structural analysis—folds
- spatial variations**
- see under* soils—composition, geochemistry, patterns; statistical analysis—soils
- spectral analysis**
- see under* geophysical methods—magnetic methods, radioactivity methods; mathematical geology—stratigraphy
- spectrographic analysis**
- see under* geochemistry—clays
- spectroscopic methods**
- see under* geochemistry—, structural analysis—methods
- Spermatophyta**
- see* angiosperms; gymnosperms; Plantae—floral studies
- sphalerite**
- see under* fluid inclusions—geochemistry, geologic thermometry; geochemistry—coal; minerals sulfides

stratigraphy—Cretaceous

Barber County: Bullard, F.M., 1928; Vaughan, T.W., 1897

central: Bergman, D.W., 1950; Cragin, F.W., 1895, 1895a; Hattin, D.E., 1975; O'Connor, H.G., 1968a; Plummer, N.V., 1947; Retallack, G.J., 1980; Schoewe, W.H., 1952; Todd, J.E., 1911a; Twenhofel, W.H., 1918

Clark County: Bullard, F.M., 1928; Cooper, W.W., 1967; Scott, R.W., 1970a; Vaughan, T.W., 1897

Comanche County: Bullard, F.M., 1928; Vaughan, T.W., 1897

Ellis County: Bass, N.W., 1926; Drees, R.H., 1974; Frey, R.W., 1972; Hattin, D.E., 1965c, 1965d, 1977b, 1978; Kansas Geological Society, 1938a; Stearns, R.A., 1976

Ellsworth County: Happ, S.C., 1947; Hattin, D.E., 1965c, 1965d; Langeheim, R.L., Jr., 1965; Siemers, C.T., 1971a, 1971b; Snyder, D.L., 1963; Twenhofel, W.H., 1926a

Ford County: Bottjer, D.J., 1978; Flueckinger, L.A., 1972a; Tetrick, M.J., 1979

Geary County: Hay, Robert, 1896c

general: Trimble, D.E., 1980

Gove County: Frey, R.W., 1972; Martin, L.G., 1984; Russell, W.L., 1929a; Yamamoto, S., 1978, 1979

Graham County: Kansas Geological Society, 1938a

Hamilton County: Bass, N.W., 1926; King, N.R., 1972, 1973; Quinn, A.W., 1927

history of research: Merriam, D.F., 1958

Hodgeman County: Bottjer, D.J., 1978; Flueckinger, L.A., 1972a; Tetrick, M.J., 1979

Kansas: Adams, G.I., 1898; Cragin, F.W., 1890, 1890a, 1891, 1891b, 1896c; Fischer, A.G., 1983; Franks, P.C., 1975; Gould, C.N., 1900, 1901a; Hattin, D.E., 1971a; Haworth, Erasmus, 1897b; Logan, W.N., 1897a; Morrow, A.L., 1941, 1967; Mudge, B.F., 1876, 1877b; Plummer, N.V., 1942e; Scott, R.W., 1977; Twenhofel, W.H., 1920; Ward, J.V., 1982, 1983, 1983a

Kiowa County: Bullard, F.M., 1928; Cooper, W.W., 1967; Latta, B.F., 1946; Scott, R.W., 1970a

Lincoln County: Hattin, D.E., 1969a, 1978; Siemers, C.T., 1971a, 1971b

Logan County: Bergstresser, T.J., 1981, 1982; Hattin, D.E., 1965c, 1965d, 1977b, 1978; Martin, L.G., 1984; Russell, W.L., 1929a; Yamamoto, S., 1978, 1979

marker beds: Hattin, D.E., 1969, 1975, 1979, 1982

McPherson County: Twenhofel, W.H., 1926a

Meade County: Bullard, F.M., 1928

Mitchell County: Bottjer, D.J., 1978

nomenclature: Hattin, D.E., 1968, 1969a; Keyes, C.R., 1941c, 1941k, 1941o, 1941p, 1942d; O'Connor, H.G., 1968a

north: Greene, F.C., 1910

north-central: Franks, P.C., 1967, 1967a, 1979, 1980; Hatfield, C.B., 1961; Hattin, D.E., 1962, 1965b, 1982; Hay, Robert, 1889; Miller, H.W., Jr., 1958c; Plummer, N.V., 1947; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952; Twenhofel, W.H., 1924; Wallace, K.C., 1979

northwest: Hostetler, J.M., 1967, 1968; McKellar, T.R., 1962; Miller, H.W., Jr., 1958c; Stewart, J.D., 1984

regional: Cobban, W.A., 1949, 1952; Crook, M.C., 1975; Elder, W.P., 1984; Gill, J.R., 1961, 1972; Hill, R.T., 1895; Pratt, L.M., 1984; Reeside, J.B., Jr., 1944; Retallack, G.J., 1981a; Tester, A.C., 1930, 1930a, 1931

regional correlation: Meek, F.B., 1859a; White, C.A., 1891

Republic County: Bottjer, D.J., 1978

Rice County: Hay, Robert, 1896c; Twenhofel, W.H., 1926a

Riley County: Mudge, M.R., 1949

Rooks County: Kansas Geological Society, 1938a

Russell County: Bottjer, D.J., 1978; Hattin, D.E.,

1965c, 1965d, 1977b, 1978; Kansas Geological Society, 1938a; Siemers, C.T., 1971, 1971a, 1971b; Snyder, D.L., 1963; Tetrick, M.J., 1978, 1979

Sherman County: Russell, W.L., 1929a; Woods, R.S., 1978a

south: Twenhofel, W.H., 1924

south-central: Prosser, C.S., 1897

southwest: Bergman, D.W., 1950; Gould, C.N., 1898; Hay, Robert, 1890; Latta, B.F., 1955; Plummer, N.V., 1947; Prosser, C.S., 1899

stratigraphic gaps: Laferriere, A.P., 1983; Russell, J.L., 1970

subsurface structure: Merriam, D.F., 1957a

Trego County: Broadhead, G.C., 1882a; Frey, R.W., 1969, 1969a, 1972; Hattin, D.E., 1965c, 1965d, 1977b, 1978; Kansas Geological Society, 1938a; King, N.R., 1972, 1973; Martin, L.G., 1984; Russell, W.L., 1929a

Wallace County: Elias, M.K., 1931; Russell, W.L., 1929a

Washington County: Charles, H.W., 1901; Tetrick, M.J., 1979

west: Bass, N.W., 1925, 1926; Manes, M.L., 1973; O'Connor, H.G., 1968a; Stoner, O.E., 1934; Williston, S.W., 1893, 1897

west-central: Archer, A.W., 1980, 1983; Cobban, W.A., 1965; Hattin, D.E., 1962, 1962a, 1964, 1975, 1975b, 1982

stratigraphy—Devonian

central: Johnston, L.A., 1934; Taylor, M.H., [Jr.], 1946, 1947, 1947b

Harvey County: Hall, R.H., 1934

Kansas: Goebel, E.D., 1968d; Hilpman, P.L., 1967, 1969a, 1969b, 1970; Merriam, D.F., 1960e

McPherson County: Hall, R.H., 1934

nomenclature: Williams, H.S., 1891

regional: Goebel, E.D., 1967e

stratigraphy—general

Kansas: Keyes, C.R., 1915a

nomenclature: Keyes, C.R., 1915, 1937a, 1941h, 1941i, 1941n, 1942, 1942a, 1942b; Moore, R.C., 1948

stratigraphy—Holocene

Hamilton County: Mettler, D.E., 1956

Jackson County: Dort, Wakefield, Jr., 1974

methods: Dort, Wakefield, Jr., 1973

regional: Madole, R.F., 1981

stratigraphy—Jurassic

nomenclature: O'Connor, H.G., 1968

northwest: Merriam, D.F., 1955a; O'Connor, H.G., 1968

stratigraphy—Mesozoic

Kansas: Merriam, D.F., 1957; Moore, R.C., 1944a

regional: Dott, R.H., 1941; Ver Wiebe, W.A., 1933a, 1933b

stratigraphy—methods

correlation: Canard, C.R., 1966; Ho, Tong-Yun, 1964, 1966; Smith, C.C., 1975, 1975a

geochronology: Boelstorff, J.D., 1972, 1973, 1973a, 1973b, 1974, 1974a, 1976

heavy minerals: Edson, F.C., 1930

lithostratigraphy: Haworth, Erasmus, 1894c

marker beds: Hostetler, J.M., 1967, 1968; Swineford, Ada, 1963

paleosols: Frye, J.C., 1948a, 1949

seismic stratigraphy: Kucinskas, D.P., 1975

thermoluminescence: Bergstrom, R.E., 1953; McNellis, J.M., 1963

well-logging methods: Gordon, A.D., 1979

stratigraphy—Mississippian

Barber County: Thomas, M.A., 1982

central: Irion, R.L., 1963; Lee, Wallace, 1940c

Chautauqua County: Leatherock, Constance, 1936

Cherokee County: Brichta, L.C., 1951; Brockie, D.C., 1968; Hagni, R.D., 1965, 1966; Haworth, Erasmus, 1883c; Moore, R.C., 1939c; Nodine-Zeller, D.E., 1977; Sigma Gamma Epsilon, Alpha Nu Chapter, 1966, 1969

Clark County: Funk, T.J., 1982

Cowley County: Kaiser, C.P., 1944; Leatherock, Constance, 1936; Wagner, K.L., 1984

east: Goebel, E.D., 1959b; Lee, Wallace, 1940c

east-central: Willoughby, K.L., 1978

Elk County: Oliver, L.G., 1975

Ford County: Funk, T.J., 1982

Hugoton embayment: Maher, J.C., 1948

Kansas: Ebanks, W.J., Jr., 1979d; Goebel, E.D., 1968d, 1968e, 1973, 1979; Haworth, Erasmus, 1882, 1908g; Lee, Wallace, 1940b; Merriam, D.F., 1960

Kiowa County: Clark, S.B., 1974, 1977

Linn County: Lee, Wallace, 1940

Montgomery County: Leatherock, Constance, 1936; Lee, Wallace, 1940a

Ness County: Nodine-Zeller, D.E., 1980

north-central: Euwer, R.M., 1963

regional: Brant, R.A., 1934; Giles, A.W., 1935; Goebel, E.D., 1967e; Greene, F.C., 1923a; Rich, J.L., 1933a

Seward County: Swanson, D.C., 1968d, 1968e

south: Thompson, T.L., 1968

south-central: Goebel, E.D., 1967d; Hiestand, T.C., 1938, 1938a

southwest: Cole, V.B., 1975; Gill, H.W., Jr., 1961; Marden, D.W., 1967, 1967a; Renfro, C.A., 1948; Severy, C.L., 1975; Shenkel, C.W., Jr., 1955a

subsurface structure: McDuffie, R.H., 1959

Sumner County: McNeeley, J.B., 1973

west: Clair, J.R., 1948, 1949; Goebel, E.D., 1966, 1967, 1967b, 1967c, 1968; Thompson, T.L., 1963, 1963a, 1963b

Wilson County: Stryker, W.L., 1925

Woodson County: Sigma Gamma Epsilon, Alpha Nu Chapter, 1966, 1969

stratigraphy—Neocene

Kansas: Cragin, F.W., 1896a

regional: Dall, W.H., 1892

stratigraphy—Neogene

Clark County: Frye, J.C., 1941b

Ellis County: Thomasson, J.R., 1979a

Ford County: Frye, J.C., 1941b

Meade County: Frye, J.C., 1941b

Norton County: Bennett, D.K., 1984

Phillips County: Bennett, D.K., 1984

Seward County: Frye, J.C., 1941b

southwest: Hibbard, C.W., 1958

Wallace County: Bennett, D.K., 1978

stratigraphy—nomenclature

general: Moore, R.C., 1952

history: Moore, R.C., 1936a

stratigraphy—Ordovician

bibliography: Cramer, H.R., 1965

Butler County: Kidd, R.L., 1930

central: Edson, F.C., 1929; Taylor, M.H., [Jr.], 1947a

east: Merriam, D.F., 1956b

Edwards County: Ver Wiebe, W.A., 1947

Ellis County: Siler, J.C., 1958

Graham County: Ver Wiebe, W.A., 1947

Harper County: Bradley, W.C., 1961

Kansas: Cole, V.B., 1975a; Goebel, E.D., 1968b, 1968c; Keroher, R.P., 1948; Merriam, D.F., 1961b

Kearny County: Ver Wiebe, W.A., 1947

Montgomery County: Keroher, R.P., 1940b

Morris County: Anonymous, 1982

Nemaha County: Anonymous, 1982

Ness County: Ver Wiebe, W.A., 1947

north-central: Leatherock, Constance, 1945

northeast: Carlson, M.P., 1983

Osborne County: Ver Wiebe, W.A., 1947

Ottawa County: Ver Wiebe, W.A., 1947

Pawnee County: Ver Wiebe, W.A., 1947

regional: Bartram, J.G., 1950; Chenoweth, P.A., 1968; Dapples, E.C., 1955; Edson, F.C., 1935; Kistler, J.O., 1952; Larson, T.G., 1971; White, Luther H., 1929

regional correlation: Ireland, H.A., 1944, 1965, 1966a; Kay, G.M., 1929

Russell County: Twenhofel, W.H., 1927

south: Ireland, H.A., 1946



- Leavenworth County: Bennett, John, 1896a; Lins, T.W., 1950; Mathews, W.L., 1978; McLaren, D.B., 1958; Moore, R.C., 1936b; Patterson, Joseph M., 1933; Sigma Gamma Epsilon, Alpha Nu Chapter, 1951; Wilson, James A., 1959
- Linn County: El-Zouki, A.Y., 1971; Hatcher, D.A., 1961; Heckel, P.H., 1978; Keroher, R.P., 1940; Machovec, M.A., 1963; Mossler, J.H., 1973; Padgham, J.B., 1957; Price, R.C., 1981, 1982, 1984; Ravn, R.L., 1981, 1982; Schoewe, W.H., 1955; Underwood, M.R., 1984, 1984a
- Lyon County: Dorsey, M.T., 1978; Gilmore, John B., 1972; Mendoza, H.A., 1959; Moore, R.C., 1936b; Mudge, M.R., 1956, 1962; Ross, D.A., 1960; SeEVERS, W.J., 1960; Smith, A.J., 1905; Underwood, J.O., 1964; Wood, R.L., 1959
- Meade County: Baab, Patricia, 1981
- Miami County: El-Zouki, A.Y., 1971; Hatcher, D.A., 1961; Miller, D.E., 1963; Mossler, J.H., 1973
- Montgomery County: Abernathy, G.E., 1940; Davis, J.C., 1959; Davis, J.R., 1939; Emery, P.A., 1962; Haggiagi, M.A., 1970; Harbaugh, J.W., 1965; Heckel, P.H., 1975, 1978; Malinky, J.M., 1980; Moore, R.C., 1937, 1937a, 1937d; O'Connor, H.G., 1962; Oakes, M.C., 1942, 1943; Schoewe, W.H., 1955; Stobbe, W.J., 1971
- Nemaha County: Mudge, M.R., 1956, 1962
- Neosho County: Emery, P.A., 1962; Haggiagi, M.A., 1970; Mossler, J.H., 1973; Ravn, R.L., 1981, 1982; Stobbe, W.J., 1971
- Ness County: Nodine-Zeller, D.E., 1981; Walters, R.F., 1979a, 1979b
- nomenclature: Haworth, Erasmus, 1908h; Howe, W.B., 1951; Keyes, C.R., 1937, 1937b, 1937c, 1937d, 1937e, 1939, 1940, 1941b, 1941d, 1941f, 1941g, 1941i, 1941r, 1942c; Levorsen, A.I., 1937; Moore, R.C., 1932c, 1933a, 1936a, 1937c, 1949b, 1956; Searight, W.V., 1953; Williams, H.S., 1891
- North America: Moore, R.C., 1936
- northeast: Ball, S.M., 1959; Bartle, G.G., 1938; Beede, J.W., 1898d; Burchett, R.R., 1959; Cambridge, T.R., 1959; Conley, C.D., 1979; Dixon, V.R., 1960; Holl, F.G., 1932; Kansas Geological Society, 1936; Keroher, R.P., 1940a; Maderak, M.L., 1960; Mann, C.J., 1957; Merriam, D.F., 1956e, 1959a; Moore, R.C., 1934b; Parizek, E.J., 1965, 1965b; Sanders, D.T., 1957, 1959; Schoewe, W.H., 1938e; Stephenson, L.G., 1958; Wallace, M.H., 1941
- northwest: Hockens, S.N., 1959; McMurray, K.S., 1962; Parkhurst, R.W., 1959, 1959a, 1962; Walton, R.G., 1960; Watney, W.L., 1980b
- Osage County: Becker, Karl, 1940; Dorsey, M.T., 1978; Gilmore, John B., 1972; Mathews, W.L., 1978; Mendoza, H.A., 1959; Mudge, M.R., 1956; Ross, D.A., 1960; SeEVERS, W.J., 1960; Smith, A.J., 1905; Wood, R.L., 1959; Zandell, C.H., 1963
- petrology: McMillan, N.J., 1956
- Pottawatomie County: Hamed, C.H., 1945; Mudge, M.R., 1956, 1962; Renfro, A.R., 1963; Twiss, P.C., 1955; Voss, J.D., 1969, 1972
- Rawlins County: Harbaugh, J.W., 1964d
- regional: Beede, J.W., 1909; Branson, C.C., 1960, 1962, 1968; Condra, G.E., 1927, 1937, 1949; Edson, F.C., 1934; Greene, F.C., 1923a; Heckel, P.H., 1984, 1984a; Keyes, C.R., 1895; Larson, T.G., 1971; Moore, R.C., 1931b, 1932, 1949, 1957, 1959, 1959a, 1962a, 1965; Rich, J.L., 1933a; Roth, R.L., 1930; Singler, C.R., 1965; Wanless, H.R., 1932, 1957; Weller, J.M., 1958
- regional correlation: Keyes, C.R., 1900, 1937; Moore, R.C., 1929a, 1935, 1948a; Pfefferkorn, H.W., 1981; Prosser, C.S., 1897b, 1899a, 1910; Wagner, H.C., 1964
- Riley County: Mudge, M.R., 1949; Renfro, A.R., 1963; Twiss, P.C., 1955
- Sedgwick County: Griffith, G.L., 1981
- Seward County: Swanson, D.C., 1968d, 1968e
- Shawnee County: Becker, Karl, 1940; Beede, J.W., 1898; Bennett, John, 1896a; Gilmore, John B., 1972; Lumb, W.E., 1933; Mendoza, H.A., 1959, 1959a; Moore, R.C., 1936b; Mudge, M.R., 1956, 1962; Ronca, L.B., 1959; Ross, D.A., 1960; SeEVERS, W.J., 1960; Sigma Gamma Epsilon, Alpha Chapter, 1958; Sigma Gamma Epsilon, Alpha Nu Chapter, 1951; Wood, R.L., 1959; Zandell, C.H., 1963
- south: Branson, C.C., 1957
- south-central: Adams, G.I., 1902a, 1903, 1903a; Brown, S.S.L., 1966, 1967; Butler, J.B., 1960; Priest, Tim, 1982; Schulte, G.S., 1958, 1959; Winchell, R.L., 1957, 1957a
- southeast: Bartram, J.G., 1941; Berendsen, Pieter, 1978; Berger, W.R., 1918; Brondos, M.D., 1983, 1983a; Buczynski, Chris, 1982; Buzzalini, A.D., 1984; Cooper, Ç.L., 1927; Crane, W.R., 1898; Denesen, S.L., 1984; Ebanks, W.J., Jr., 1974a, 1974b, 1977c, 1978b, 1979, 1979a, 1979c; Ece, O.I., 1984; Harbaugh, J.W., 1962; Haworth, Erasmus, 1894g, 1896a; Howe, W.B., 1951; Hudson, A.S., 1969, 1970; Jewett, J.M., 1937, 1943, 1945; Johansson, F.C., Jr., 1959; Kansas Geological Society, 1937, 1949; Landes, K.K., 1937c; Lemmons, J.E., 1946; McManus, D.A., 1956; Merriam, D.F., 1962; Mossler, J.H., 1970, 1970a; Moussavi-Harami, Reza, 1980, 1980a, 1980b, 1984; Myers, D.E., 1968a; Pierce, W.G., 1935b; Schlinsog, D.G., 1982, 1983; Singler, C.R., 1965a; von Bitter, P.H., 1983; West, E.P., 1885, 1885a; White, S.M., 1960; Wolf, G.V., 1984a; Woody, M.D., 1983, 1983a; Wright, C.R., 1975
- southwest: Gill, H.W., Jr., 1961; Parkinson, R.W., 1982, 1982a; Rascoe, Bailey, Jr., 1962, 1978; Scale, J.D., 1980
- Stafford County: Harbaugh, J.W., 1964d
- stratigraphic gaps: Ball, S.M., 1959; Dalton, J.A., 1958; Rich, J.L., 1932, 1932a
- subsurface structure: Merriam, D.F., 1959
- Sumner County: Andersen, R.E., 1982; Buchanan, G.S., 1925; Trotter, S.F., 1981
- symposia: Bennisson, A.P., 1984, 1984a
- Wabaunsee County: Bennett, John, 1896a; Moore, R.C., 1936b; Mudge, M.R., 1956, 1962; Renfro, A.R., 1963; SeEVERS, W.J., 1960; Twiss, P.C., 1955
- west: Abels, T.A., 1958, 1959; Maher, J.C., 1952; McManus, D.A., 1959, 1960; Miller, W.F., 1955; Watney, W.L., 1981a, 1981b
- west-central: Merriam, D.F., 1955, 1955b
- Wilson County: Chelkowsky, J.R., 1947; Davis, J.C., 1959; Edson, M.W., 1984; Haggiagi, M.A., 1970; Harbaugh, J.W., 1965; Hay, Robert, 1887b; Heckel, P.H., 1978, 1978b; Stryker, W.L., 1925; Wagner, H.C., 1953, 1964
- Woodson County: Bennett, John, 1896; Haggiagi, M.A., 1970
- Wyandotte County: Culbertson, A.E., 1915; Heckel, P.H., 1978; Lins, T.W., 1950; Machovec, M.A., 1963; Wilson, James A., 1959
- stratigraphy—Permian**
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- geochemistry: Chaudhuri, Sambudhas, 1982, 1983
- geomorphology: Frye, J.C., 1950
- ground water: Cobb, P.M., 1983a; Dealy, M.T., 1984
- invertebrate paleontology: Franzen, D.S., 1946a; Scott, R.W., 1967, 1968
- magnesium ores: Frye, J.C., 1942c
- meteorites: Nininger, H.H., 1928b
- paleobotany: Bint, A.N., 1983; Segal, R.H., 1965; Shumard, C.B., 1974
- petroleum: Jamieson, J.J., 1959; Waite, George, 1955, 1956
- sedimentary rocks: King, G.E., 1972; Latta, B.F., 1942; Robinson, R.J., 1983; Scott, R.W., 1970a; Swineford, Ada, 1955a; Welsh, J.P., 1966
- seismology: Wilson, F.W., 1973
- soils: Jaafar, M.N., 1978; Tomasu, B.I., 1982
- stratigraphy: Bullard, F.M., 1928; Clifton, R.L., 1925, 1926, 1930, 1930a; Courtier, W.H., 1934; Frye, J.C., 1941b, 1951f; Malone, D.J., 1962; Mannhard, G.W., 1972, 1974; Neustadt, Walter, Jr., 1941; Renfroe, C.A., 1948; Severy, C.L., 1975; Swineford, Ada, 1954; Vaughan, T.W., 1897
- structural analysis: Funk, T.J., 1982; Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983g, 1983h, 1983i; Berendsen, Pieter, 1977, 1981; Fair, C.L., 1982c; Geodata International, Inc., 1980, 1980a; Texas Instruments, Inc., 1978d, 1978e, 1982e
- vertebrate paleontology: Hibbard, C.W., 1942a; Schultze, H.-P., 1981
- Clay County**
- areal geology: Beshears, G.T., 1958; Walters, K.L., 1956b, 1959
- clay deposits: Plummer, N.V., 1947
- clay mineralogy: Bryson, W.R., 1959
- elements: Runnels, R.T., 1951a
- engineering geology: U.S. Department of Agriculture, 1979b
- environmental geology: U.S. Department of Agriculture, 1979c, 1979d; U.S. Geological Survey, 1976h, 1979o
- geochemical surveys: Union Carbide Corporation, 1979b
- geomorphology: Mandel, R.D., 1984a
- ground water: Keene, K.M., 1975, 1976, 1977
- gypsum deposits: Grimsley, G.P., 1897a, 1899a
- hydrology: Knapp, H.V., 1984; Yu, Yun-Sheng, 1980
- invertebrate paleontology: Jones, A.W., 1898, 1899, 1903, 1905
- limestone deposits: Runnels, R.T., 1951
- paleobotany: Sternberg, C.H., 1884; Towner, H.C., 1877
- petroleum: Guy, W.J., 1960, 1960a, 1960b
- sedimentary rocks: Swineford, Ada, 1947; Wilbur, R.O., 1956
- sedimentary structures: Mizula, J.W., 1960
- sediments: Crumpton, C.F., 1951
- soils: Wehmueller, W.A., 1984
- stratigraphy: Elias, M.K., 1934c; Franks, P.C., 1967, 1967a, 1979; Greene, F.C., 1910; Taylor, M.H., [Jr.], 1946, 1947b
- structural analysis: Lorenzen, D.J., 1973; Shenkel, C.W., Jr., 1959
- uranium ores: Fair, C.L., 1982; Geometrics, Inc., 1977, 1977b; Texas Instruments, Inc., 1982d; Union Carbide Corporation, 1982e
- vertebrate paleontology: Schaffner, D.C., 1938
- water resources: Koelliker, J.K., 1984
- Cloud County**
- areal geology: Bayne, C.K., 1959; Buck, L.P., 1951; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952; Walters, K.L., 1956b; Wing, M.E., 1930
- ceramic materials: Bauleke, M.P., 1968; Hladik, W.B., 1969; Plummer, N.V., 1959
- clay deposits: Belchic, George, 1915; Bowdish, F.W., 1953; Hill, W.E., Jr., 1963a; McMillan, W.D., 1948; Plummer, N.V., 1947, 1963
- coal deposits: Bailey, E.H.S., 1889a; Blake, L.I., 1889
- construction materials: Myers, L.D., 1978
- engineering geology: Anonymous, 1972a; U.S. Department of Agriculture, 1979b
- environmental geology: Hulen, P.L., 1976, 1979; U.S. Department of Agriculture, 1979c, 1979d; U.S. Geological Survey, 1976h, 1979o
- geochemical surveys: Union Carbide Corporation, 1979b
- ground water: Berry, D.W., 1948, 1951; Fader, S.W., 1968; Fishel, V.C., 1948a; Keene, K.M., 1975, 1976, 1977; Reed, T.B., 1981
- hydrology: Alexander, J.P., 1978
- invertebrate paleontology: Hattin, D.E., 1969b
- paleobotany: Baxter, R.W., 1954; Farley, M.B., 1982; Sternberg, C.H., 1884
- popular geology: Hockett, K., 1979
- sand and gravel deposits: Bowdish, F.W., 1952
- sedimentary structures: Mizula, J.W., 1960
- soils: Atkinson, C.H., 1976
- stratigraphy: Bergman, D.W., 1950; Cobban, W.A., 1949; Franks, P.C., 1967, 1967a; Hattin, D.E., 1965b, 1975; Lohman, S.W., 1948, 1948a
- uranium ores: Fair, C.L., 1982; Geometrics, Inc., 1977, 1977b; Texas Instruments, Inc., 1982d; Union Carbide Corporation, 1982c

- limestone deposits: Runnels, R.T., 1951
 mineral resources: Adams, G.I., 1904a; Clark, J.G., 1970; Hartley, D.D., 1963; Hayes, W.C., 1959; Heidenreich, W.L., [n.d.]
 minerals: Tien, Pei-Lin, 1968a
 mining geology: Kinney, E.D., 1940a; Powell, W.E., 1974
 paleobotany: Baxter, R.W., 1962a; Bond, T.A., 1963; Habib, Daniel, 1960; Leisman, G.A., 1961, 1962b, 1964, 1964a; Urban, J.B., 1962, 1962a, 1970; Van Landingham, S.L., 1961
 paleoecology: Boardman, D.R., II, 1984a; Rosowitz, D.W., 1982, 1982a
 petroleum: Angino, E.E., 1981; Ebanks, W.J., Jr., 1974a, 1974b, 1977c, 1978b; Gould, G.F., 1975; Ockerman, J.W., 1932; Pate, C.L., 1947; Schlinsog, D.G., 1982, 1983; Wells, J.S., 1977, 1982
 phosphate deposits: Runnels, R.T., 1949
 sedimentary rocks: Adams, D.J., 1959; Aden, L.J., 1982, 1982a; Brenner, R.L., 1981; Cook, A.C., 1977; Hambleton, W.W., 1951, 1953; Hatch, J.R., 1984; Inden, R.F., 1968; McCracken, Earl, 1953, 1955; McHargue, T.R., 1982; Odell, W.W., 1942; Schenk, P.E., 1963, 1963a; Schroeder, R.J., 1967, 1968; Woody, M.D., 1984; Worthington, R.E., 1982, 1982a
 sedimentary structures: Perkins, T.W., 1974, 1976; Pierce, W.G., 1935c
 soils: Rott, D.E., 1973; Tan, K.H., 1981; Voth, R.D., 1973; Welch, J.E., 1982b
 stratigraphy: Abernathy, G.E., 1936, 1937; Berger, W.R., 1918; Brady, L.L., 1982; Branson, C.C., 1968; Harris, J.W., 1984; Heckel, P.H., 1979a; Howard, L.W., 1959, 1965; Howe, W.B., 1954, 1956; Ireland, H.A., 1955; Jewett, J.M., 1943, 1945, 1965b; Lemmons, J.E., 1946; Price, R.C., 1981, 1982, 1984
 structural analysis: Abernathy, G.E., 1925; Pierce, W.G., 1935a
 uranium ores: Bendix Field Engineering Corporation, 1981; Derby, J.R., 1982; Texas Instruments, Inc., 1978i, 1982a
 water resources: Crawford, R.E., 1973; Hombaker, A.L., 1959
- Decatur County**
 areal geology: Byrne, F.E., 1950; Elias, M.K., 1937d; Hodson, W.G., 1969
 engineering geology: U.S. Bureau of Reclamation, 1974a
 environmental geology: U.S. Army, Corps of Engineers, 1973b; U.S. Geological Survey, 1976b, 1979e, 1979j
 geophysical surveys: Merriam, D.F., 1955f
 ground water: Hathaway, L.R., 1979a; Jenkins, E.D., 1975; Keene, K.M., 1969; Leonard, R.B., 1969d; McClain, T.J., 1983; Pabst, M.E., 1971, 1973, 1976a; Sophocleous, M.A., 1981a, 1982c
 invertebrate paleontology: Leonard, A.B., 1943
 isotopes: Watney, W.L., 1979
 meteorites: Nininger, H.H., 1937, 1971d
 paleoecology: Lammons, J.M., 1969, 1970
 petroleum: Anderson-Prichard Oil Company, Geological Department, 1959; Brown, H.A., 1983, 1984; Curtis, G.R., 1959; Goebel, E.D., 1960c; Lane, P.J., 1959a, 1959b, 1959c, 1959e
 sedimentation: Watney, W.L., 1980b
 sediments: Metz, H.L., 1954; Swineford, Ada, 1945, 1955d, 1975a
 soils: Badgley, W.A., 1957
 stratigraphy: Frye, J.C., 1951f, 1956; Hibbard, C.W., 1944c; Hockens, S.N., 1959; McElroy, M.N., 1965, 1965a; McMurray, K.S., 1962; Merriam, D.F., 1955b; Miesner, J.F., 1967, 1968; Moore, R.C., 1950; Walton, R.G., 1960
 structural analysis: Mehl, R.L., 1959; Parkhurst, R.W., 1959; Rohrbough, C.A., 1956
 uranium ores: Bendix Field Engineering Corporation, 1983b, 1983f; Geodata International, Inc., 1981, 1981b
 vertebrate paleontology: Feduccia, J.A., 1980
- Dickinson County**
 areal geology: Moore, R.C., 1959b, 1959c; Ver Wiebe, W.A., 1941a
 biostratigraphy: Sohn, I.G., 1975
 clay mineralogy: Bryson, W.R., 1959; Watkins, K.N., 1957
 construction materials: Special Aggregates Committee, 1958
 engineering geology: Fent, O.S., [n.d.]; U.S. Army, Corps of Engineers, 1963
 environmental geology: U.S. Geological Survey, 1976d, 1976h, 1979k, 1979o
 geochemical surveys: Union Carbide Corporation, 1979a, 1979b
 geomorphology: Sloanaker, C.J., 1950
 ground water: Bell, T.C., 1974; Gillespie, J.B., 1981; Latta, B.F., 1949; Whittemore, D.O., 1975, 1981
 gypsum deposits: Crane, W.R., 1901a; Grimsley, G.P., 1897a, 1899a
 hydrology: Dunlap, L.E., 1977, 1978; Furness, L.W., 1967d; Hargadine, G.D., 1978, 1979a; Knapp, H.V., 1984; Nighswonger, J.J., 1970; Yu, Yun-Sheng, 1980
 invertebrate paleontology: Benson, R.H., 1967; Dunbar, C.O., 1923, 1924; Durden, C.J., 1978; Gutentag, E.D., 1969; Jones, A.W., 1898, 1899, 1903, 1905; Sellards, E.H., 1903; Tasch, Paul, 1961a, 1961e; Thomas, C.R., 1927a
 mineral resources: Heidenreich, W.L., [n.d.]
 minerals: Haworth, Erasmus, 1885
 mining geology: Kline, H.D., 1962
 paleobotany: Baxter, R.W., 1978; Mamay, S.H., 1973
 paleoecology: Ho, Tong-Yun, 1964, 1966
 petroleum: Koester, E.A., 1952; Shenkel, C.W., Jr., 1955; Steder, R.M., 1960, 1960a, 1960b; Williams, D.W., 1921a
 sedimentary rocks: Cubitt, J.M., 1975, 1979; Swineford, Ada, 1947
 sedimentation: Tasch, Paul, 1964b
 soils: Jantz, D.R., 1980; McCauley, J.R., 1984
 stratigraphy: Adams, G.I., 1896a; Elias, M.K., 1934c; Franks, P.C., 1967, 1967a, 1979; Greene, F.C., 1910; Tasch, Paul, 1963; Taylor, M.H., [Jr.], 1946, 1947, 1947a, 1947b
 structural analysis: Lorenzen, D.J., 1973; Rich, J.L., 1930; Shenkel, C.W., Jr., 1957, 1959
 uranium ores: Fair, C.L., 1982, 1982a; Geometrics, Inc., 1977, 1977a, 1977b; Texas Instruments, Inc., 1982, 1982d; Union Carbide Corporation, 1981a, 1982e
 water resources: Koelliker, J.K., 1984
- Doniphan County**
 areal geology: Burchett, R.R., 1972; Dort, Wakefield, Jr., 1965a, 1969; Hawn, Frederick, 1866; Hay, Robert, 1896b; Kansas Geological Society, 1936; Lemmons, J.E., 1940; Marshall, E.E., 1940; Moore, R.C., 1936b; Ockerman, J.W., 1935; Schoewe, W.H., 1932; Sigma Gamma Epsilon, Alpha Chapter, 1965; Wallace, M.H., 1941
 clay mineralogy: Tien, Pei-Lin, 1968
 construction materials: Petersen, G.E., 1974
 environmental geology: U.S. Geological Survey, 1976f, 1978j, 1979m, 1984
 geochemistry: Denne, J.E., 1984
 geomorphology: Aber, J.S., 1977; Denne, J.E., 1979; Dort, Wakefield, Jr., 1970; Knerr, E.B., 1893; Schoewe, W.H., 1931, 1933, 1941
 ground water: Bayne, C.K., 1970, 1973; Denne, J.E., 1980; Emmett, L.F., 1969
 hydrology: Bevans, H.E., 1982
 invertebrate paleontology: Brainard, R.H., 1978; Cocke, J.M., 1969; Koepnick, R.B., 1971, 1974; Maerz, R.H., Jr., 1976; Squires, J.M., 1952
 meteorites: Henderson, E.P., 1949
 mineral resources: Heidenreich, W.L., [n.d.]
 paleoecology: Baird, G.C., 1971; Griesemer, A.D., 1970, 1971; Rowell, B.F., 1970, 1972, 1973
 sedimentary rocks: Galle, O.K., 1966, 1966a, 1967;
- Hill, W.E., Jr., 1964; Lane, D.W., 1958; McMillan, N.J., 1955, 1956; Rutan, Debra, 1980
 sedimentary structures: Swineford, Ada, 1958
 sediments: Aber, J.S., 1982b; Conrad, O.G., 1963, 1964; Metz, H.L., 1954; Swineford, Ada, 1955c, 1975
 soils: Badgley, W.A., 1957; Hanna, R.M., 1954, 1955; Mason, R.M., 1971; Sallee, K.H., 1980
 stratigraphy: Ball, S.M., 1964; Baptist, O.C., 1941; Bayne, C.K., 1965b, 1965c, 1971a; Becker, Karl, 1940; Bramlette, W.A., 1940; Brown, W.G., 1958; Cambridge, T.R., 1959; Caspell, F.C., 1970, 1971; Clark, J.E., 1940; Dort, Wakefield, Jr., 1970a; Einsohn, S.D., 1971; Frye, J.C., 1949b, 1950a, 1951e, 1954b; Jeffords, R.M., 1940; Monger, J.W.H., 1961
 surficial deposits: Dort, Wakefield, Jr., 1963
 uranium ores: Bendix Field Engineering Corporation, 1982, 1982b; EG&G Geometrics, 1980, 1980a
 vertebrate paleontology: Einsohn, S.D., 1971a
- Douglas County**
 absolute age: Steeples, D.W., 1981c
 areal geology: Adams, L.W., 1961; Anonymous, 1975b; Carlson, W.A., 1952; Davis, S.N., 1951a, 1952; Dufford, A.E., 1953, 1958; Gerhard, R.G., 1961; Hirsch, J.W., 1966; Jewett, J.M., 1951a, 1961a; Kansas Geological Society, 1932, 1936, 1949a; McClain, T.J., 1979; Moore, R.C., 1936b, 1959b, 1959c, 1965a; Muilenburg, G.E., 1957, 1958a, 1959, 1960a; O'Connor, H.G., 1959, 1960; Ockerman, J.W., 1935; Sigma Gamma Epsilon, Alpha Chapter, 1951; Wallace, M.H., 1941; Ward, J.R., 1983; Wing, M.E., [n.d.], 1921
 biostratigraphy: Perkins, R.D., 1962
 clay mineralogy: Jamkhindikar, S.M., 1969, 1970; Watkins, K.N., 1957
 coal deposits: Bowsher, A.L., 1943
 construction materials: Jimenez, J., 1972; Special Aggregates Committee, 1958
 data processing: Esler, J.E., 1967
 elements: Runnels, R.T., 1951a
 engineering geology: Brown, S.M., Jr., 1971, 1971a; Burgat, V.A., 1970; Huang, T., 1978; Irza, T.J., 1969; Lentell, T.L., 1977, 1977a; O'Brien, W.J., 1972a; Smith, J.L., 1977; U.S. Army, Corps of Engineers, 1971c, 1972h; U.S. Department of Agriculture, 1983b; Wagner, T.W., 1972; Yukler, M.A., 1974
 environmental geology: Bishop, C.S., 1977; Davis, M.J., 1979; Dunmire, R.G., 1940; Elliott, R.G., 1973; Hilpman, P.L., 1968c; Hwang, C.L., 1974; Merchant, J.W., Jr., 1975; Sorenson, C.J., 1984; Tudor Engineering Company, 1982; U.S. Army, Corps of Engineers, 1965c, 1969a, 1972, 1973d, 1974g; U.S. Geological Survey, 1976f, 1976g, 1978j, 1979m, 1979n
 geochemistry: Denne, J.E., 1984; Galle, O.K., 1964; Kopsick, D.A., 1980; Murphy, M.E., 1972; Runnels, R.T., 1953; Young, C.C., 1913
 geomorphology: Aber, J.S., 1977, 1978, 1981; Denne, J.E., 1979; Dort, Wakefield, Jr., 1980; Elks, J.E., 1979; Hoover, W.F., 1932, 1936; Ratzlaff, J.R., 1978; Schoewe, W.H., 1924, 1928, 1928a, 1931; Todd, J.E., 1911
 geophysical anomalies: Kodama, K.P., 1982
 geophysical surveys: Crow, B.B., 1960; Merriam, D.F., 1954; Wainwright, K.E., 1960
 ground water: Angino, E.E., 1981a; Brothers, R.C., 1976; Denne, J.E., 1980; Fader, S.W., 1974; Gogel, A.J., 1981; Lohman, S.W., 1941; Vis, B.J., 1981
 guidebooks: Jewett, J.M., 1967a
 hydrology: Alexander, J.P., 1978; Bailey, E.H.S., 1884; Bartow, Edward, 1902; Bushong, F.W., 1909; Henry, J.A., 1981; McCrae, R.O., 1953, 1954; Murphy, E.C., 1895; Snow, F.H., 1895; U.S. Army, Corps of Engineers, 1971j; Wyman, S.M., 1972; Yukler, M.A., 1974a

- sediments: Caprez, L.P., 1974
- soils: Glover, R.K., 1975; Ibrahim, I.K., 1981, 1981a; Jaafar, M.N., 1978; Smith, R.M., 1965; Tye, R.V., 1946; Zavesky, L.D., 1967
- stratigraphy: Bergman, D.W., 1950; Cobban, W.A., 1949; Drees, R.H., 1974; Frye, J.C., 1956; Hattin, D.E., 1962, 1965b, 1965c, 1965d, 1975, 1977b, 1978; Hostetler, J.M., 1967, 1968; Irion, R.L., 1963; McElroy, M.N., 1965, 1965a; McKellar, T.R., 1962; Miller, H.W., Jr., 1958c; Moore, R.C., 1950; Siler, J.C., 1958; Stratton, J.L., 1942
- structural analysis: Carr, D.D., 1958; Neuhauser, K.R., 1983
- uranium ores: Texas Instruments, Inc., 1978b, 1978c; Union Carbide Corporation, 1982, 1982b
- vertebrate paleontology: Bardack, David, 1965a, 1976; Latas, P.J., 1978; Martin, L.D., 1977a; McMullen, T.L., 1974, 1975; Stewart, J.D., 1978a; Tallan, M.E., 1978; Zehr, D.D., 1974
- Ellsworth County**
- areal geology: Bayne, C.K., 1971b, 1972a; Bramlette, M.N., 1925; Sigma Gamma Epsilon, Alpha Nu Chapter, [n.d.], 1952; Ver Wiebe, W.A., 1941a; Waterman, W.D., [n.d.]
- biostratigraphy: Eicher, D.L., 1965; Hattin, D.E., 1968a
- ceramic materials: Bauleke, M.P., 1968
- clay deposits: Belchic, George, 1915; Hill, W.E., Jr., 1963a; Huh, J.M., 1968; McMillan, W.D., 1948; Plummer, N.V., 1947, 1963
- construction materials: Bauleke, M.P., 1962
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Brady, L.L., 1973; Halepaska, J.C., 1972b, 1972c; Happ, S.C., 1947; Taylor, W.K., 1964; Walters, R.F., 1976a, 1978
- environmental geology: Biegler, N.W., 1964; Knutson, Herbert, 1971; U.S. Army, Corps of Engineers, 1977c; U.S. Geological Survey, 1976c, 1976d, 1979i, 1979k
- geochemical surveys: Union Carbide Corporation, 1979a
- geomorphology: Frye, J.C., 1945d
- ground water: Bailey, E.H.S., 1887a; Berry, D.W., 1948, 1951; Crum, L.A., 1935; Keene, K.M., 1975, 1976, 1977; Martin, R.B., 1968
- hydrology: Castro, Joffre, 1984; Hill, A.L., 1955; Livingston, N.D., 1981; U.S. Army, Corps of Engineers, 1961
- invertebrate paleontology: Feldmann, R.M., 1977, 1978, 1978a; Jones, A.W., 1898, 1899, 1903, 1905; Kay, W.T., 1977; Miller, B.B., 1981; Miller, H.W., Jr., 1962; Moore, R.C., 1925; Scott, R.W., 1967, 1968
- mineral resources: Hardy, R.G., 1964
- minerals: Buddhue, J.D., 1938, 1938a; Langeheim, R.L., Jr., 1965; Rogers, A.F., 1910; Tien, Pei-Lin, 1969a, 1969b
- paleobotany: Baxter, R.W., 1954; Sternberg, C.H., 1884; Tilden, J.E., 1930
- paleoecology: Hatfield, C.B., 1961; Miller, B.B., 1978a, 1978b; Siemers, C.T., 1971a, 1971b
- petroleum: Anonymous, 1940d; Halepaska, J.C., 1972a; Landes, K.K., 1960; Ley, H.A., 1926b, 1926c; Oros, M.O., 1972; Walters, R.F., 1945, 1946a, 1947a, 1948
- popular geology: Nickel, Gerhard, Jr., 1972
- salt deposits: Bailey, E.H.S., 1889; Bowdish, F.W., 1951; Goebel, E.D., 1972b; Runnels, R.T., 1952a
- sedimentary rocks: Behairy, Abdel-Kader A., 1972; Berg, J.A., 1981; Calder, J.A., 1971; Hopkins, R.T., 1977; Snyder, D.L., 1963; Swineford, Ada, 1947; Wu, Dah Cheng, 1972
- sedimentary structures: Franks, P.C., 1969, 1969a; Harnly, H.J., 1898; McLane, Michael, 1978; Mizula, J.W., 1960
- sediments: Swineford, Ada, 1946a
- soils: Bhango, M.S., 1956; Jaafar, M.N., 1978; Naddih, B.I., 1960
- stratigraphy: Adkison, W.L., 1972; Bergman, D.W., 1950; Franks, P.C., 1967, 1967a, 1979; Frye, J.C., 1943a, 1951f; Hattin, D.E., 1965b, 1965c, 1965d, 1975; Hay, Robert, 1889; McElroy, M.N., 1965, 1965a; Moore, R.C., 1950; Scott, R.W., 1966; Taylor, M.H., [Jr.], 1946, 1947, 1947b; Twenhofel, W.H., 1926a
- structural analysis: Clark, S.K., 1947, 1948; Howard, J.R., 1958; Ver Wiebe, W.A., 1937; Walters, R.F., 1953
- uranium ores: Fair, C.L., 1982a; Geometrics, Inc., 1977, 1977a; Texas Instruments, Inc., 1978c, 1982; Union Carbide Corporation, 1981a, 1982b
- vertebrate paleontology: Brown, R.W., 1950; Hibbard, C.W., 1978; Holman, J.A., 1972a; Neff, N.A., 1975; Snow, F.H., 1887; Williston, S.W., 1893c; Zakrzewski, R.J., 1976
- Finney County**
- areal geology: Darton, N.H., 1920; Edson, F.C., 1945; Latta, B.F., 1944; Liberal Geological Society, [n.d.], 1960; Stramel, G.J., 1958; Twenhofel, W.H., 1925c
- biostratigraphy: Manes, M.L., 1973
- cartography: Williams, T.H.L., 1981
- data processing: Poracsky, Joseph, 1982
- engineering geology: Hejl, H.R., 1973
- environmental geology: Kansas University, Center for Research, Inc., 1973; U.S. Army, Corps of Engineers, 1974c; U.S. Geological Survey, 1976a, 1976j, 1979h, 1979q
- geochemical surveys: Union Carbide Corporation, 1980
- geophysical methods: Gaither, V.U., 1956
- geophysical surveys: Haralick, R.M., 1975
- ground water: Baker, C.H., Jr., 1983; Dabiri, H.E., 1970, 1970a; Dealy, M.T., 1984; Dunlap, L.E., 1983, 1983a; Frye, J.C., 1949a; Gillespie, J.B., 1969; Gutentag, E.D., 1966, 1972, 1981a; Hathaway, L.R., 1977a; Keene, K.M., 1975, 1976, 1977; Kume, Jack, 1982, 1984; Lindgren, R.J., 1982a; Meyer, W.R., 1963, 1965, 1966, 1969, 1970; Moss, R.G., 1933; Pabst, M.E., 1976, 1979b; Power, J.A., Jr., 1971; Prill, R.C., 1968a, 1968b, 1976, 1977; Sophocleous, M.A., 1981; Waite, H.A., 1940a
- hydrology: Collins, D.N., 1959; Sophocleous, M.A., 1980; Wright, A.E., 1905
- meteorites: Nininger, H.H., 1953, 1971k
- natural gas: Bartle, G.G., 1939, 1940, 1940a, 1940b, 1940c
- petroleum: Aukerman, R.A., 1959; Bennett, F.O., 1960; Norton, G.H., 1938; Roby, R.E., 1959, 1961; Schmidlapp, R.L., 1959; Tucker, V.M., 1959
- remote sensing: Jacobberger, P.A., 1981
- sedimentary rocks: Ball, S.M., 1966; Dubins, I.M., 1947; McCracken, Earl, 1953, 1955; Runnels, R.T., 1949a; White, L.M., 1981
- soils: Cipra, J.E., 1970; Dixon, R.M., 1960; Gwin, R.E., 1963; Harner, R.F., 1965; Ibrahim, I.K., 1981, 1981a; Jaafar, M.N., 1978; Prill, R.C., 1967
- stratigraphy: Frye, J.C., 1951f; Gill, H.W., Jr., 1961; Graffham, A.A., 1945; Hattin, D.E., 1962; Malone, D.J., 1962; McKellar, T.R., 1962; Merriam, D.F., 1955b; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983i; Geodata International, Inc., 1981c; Texas Instruments, Inc., 1978e
- vertebrate paleontology: Hibbard, C.W., 1938
- water resources: Chaffee, P.K., 1983; Coburn, F.D., 1913; Diesem, I.L., 1913; Hay, Robert, 1891a; Heidari, Manoutchehr, 1981; Knapp, G.S., 1950
- zinc ores: Evans, David Le Count, 1962
- Ford County**
- areal geology: Bayne, C.K., 1972a; Edson, F.C., 1945, 1947; Latta, B.F., 1955a; Lee, Wallace, 1953; Plummer, N.V., 1955; Twenhofel, W.H., 1925c; Waite, H.A., 1942
- biostratigraphy: Eicher, D.L., 1965; Thompson, T.L., 1968
- clay deposits: Plummer, N.V., 1947
- coal deposits: Flueckinger, L.A., 1972a
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: Hulen, P.L., 1976, 1979; Kansas University, Center for Research, Inc., 1973; U.S. Army, Corps of Engineers, 1969, 1970b, 1974c; U.S. Geological Survey, 1976a, 1976i, 1979h, 1979p
- geochemical surveys: Union Carbide Corporation, 1979c, 1980
- geochemistry: Chaudhuri, Sambudhas, 1983
- ground water: Baker, C.H., Jr., 1983; Cobb, P.M., 1983a; Dealy, M.T., 1984; Hathaway, L.R., 1978b; Keene, K.M., 1975, 1976, 1977; Kume, Jack, 1984; Lohmeyer, D.H., 1974a, 1978, 1979; Lohman, S.W., 1938; Sophocleous, M.A., 1981; Spinazola, J.M., 1983; Waite, H.A., 1939, 1940; Weakly, E.C., 1975
- hydrology: Collins, D.N., 1959; Snow, F.H., 1895; Sophocleous, M.A., 1980
- invertebrate paleontology: Thompson, T.L., 1965, 1965a
- metal ores: Stroud, R.B., 1970
- paleobotany: Tetric, M.J., 1979
- paleoecology: Bottjer, D.J., 1978; Hatfield, C.B., 1961
- petroleum: Halepaska, J.C., 1972a; Oros, M.O., 1972
- salt deposits: Goebel, E.D., 1972b
- soils: Dodge, D.A., 1965; Jaafar, M.N., 1978; Naddih, B.I., 1960
- stratigraphy: Bergman, D.W., 1950; Courtier, W.H., 1934; Frye, J.C., 1941b, 1951f; Hattin, D.E., 1965b, 1975; Malone, D.J., 1962; Renfro, C.A., 1948; Severy, C.M., 1975
- structural analysis: Funk, T.J., 1982; Hays, J.K., 1961; Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983h; Fair, C.L., 1982c; Texas Instruments, Inc., 1978d, 1978e, 1982e
- water resources: Hay, Robert, 1891a
- zinc ores: Evans, David Le Count, 1962
- Franklin County**
- areal geology: Ball, M.M., 1957; Ball, S.M., 1958a, 1963; Carpenter, A.C., 1958; Laughlin, D.J., 1957; Wallace, M.H., 1941
- clay deposits: Hill, W.E., Jr., 1963a
- clay mineralogy: Jamkhindikar, S.M., 1969, 1970; Watkins, K.N., 1957
- coal deposits: Bailey, E.H.S., 1889a; Blake, L.L., 1889; Bowsher, A.L., 1943; Rich, J.L., 1933
- construction materials: Crosier, C.M., 1968; Special Aggregates Committee, 1958; Stallard, A.H., 1969
- elements: Runnels, R.T., 1951a
- engineering geology: Mackie, Andrew, 1980; Stallard, A.H., 1970
- enhanced recovery: Powell, J.P., 1953
- environmental geology: Hulen, P.L., 1976, 1979; U.S. Army, Corps of Engineers, 1973c; U.S. Geological Survey, 1976g, 1979n
- geochemistry: Murphy, M.E., 1972
- geophysical methods: Crumpton, C.F., 1959
- ground water: Vis, B.J., 1981
- hydrology: Kansas Water Office, 1983c; Nighswonger, J.J., 1970
- invertebrate paleontology: Bandel, Klaus, 1967a; Burke, J.J., 1974; Cocke, J.M., 1970, 1970a, 1970b; Grinnell, R.S., Jr., 1958; Jewett, J.M., 1929; Richards, H.G., 1955; Roy, M.B., 1966; Squires, J.M., 1952; Strimple, H.L., 1971; Toomey, D.F., 1972, 1974; Weller, J.M., 1935; Zinser, R.W., 1950
- limestone deposits: Runnels, R.T., 1951

- Engineers, 1974e: U.S. Geological Survey, 1976a, 1979h
- geochemical surveys: Union Carbide Corporation, 1980
- ground water: Dealy, M.T., 1984; Frye, J.C., 1949a; Gutentag, E.D., 1981a; Hathaway, L.R., 1977a, 1978; Kume, Jack, 1982, 1984; McGovern, H.E., 1972, 1974; Pabst, M.E., 1976, 1979b; Prill, R.C., 1968a, 1976, 1977; Sophocleous, M.A., 1981
- hydrology: Collins, D.N., 1959; Sophocleous, M.A., 1980
- petroleum: Watney, W.L., 1983b
- sedimentary rocks: McCracken, Earl, 1953, 1955
- soils: Morin, R.E., 1961; Naddih, B.I., 1960; Prill, R.C., 1967; Tomasu, B.I., 1968
- stratigraphy: Cole, V.B., 1975; Frye, J.C., 1951f; Gill, H.W., Jr., 1961; Malone, D.J., 1962; Renfro, C.A., 1948; Severy, C.L., 1975; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a; Texas Instruments, Inc., 1978e
- water resources: Barrett, J.M., 1961; Gutentag, E.D., 1971a; Hay, Robert, 1891a
- zinc ores: Evans, David Le Count, 1962
- Greeley County**
- areal geology: Bayne, C.K., 1972a; Edson, F.C., 1945; McManus, D.A., 1959a; Prescott, G.C., Jr., 1954; Sharps, J.A., 1976
- data processing: Yukler, M.A., 1979
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: Allen, E.G., 1977; Gosch, J.W., 1970; Gwin, R.E., Jr., 1974; Stone, L.R., 1982; U.S. Geological Survey, 1976j, 1979c, 1979q, 1980a
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- meteorites: Mason, Brian, 1969
- petroleum: Halepaska, J.C., 1972a; Oros, M.O., 1972; Putman, B.M., 1960
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Abels, T.A., 1958, 1959; White, L.M., 1981
- soils: Cipra, J.E., 1970; Kaufman, Abraham, 1950; McBee, C.W., 1961a; Smith, R.M., 1965
- uranium ores: Bendix Field Engineering Corporation, 1983d, 1983i; Geodata International, Inc., 1981c; Maarouf, A.M., 1982; Shannon, S.S., Jr., 1979; Texas Instruments, Inc., 1978g, 1982c
- vertebrate paleontology: Hibbard, C.W., 1951b
- Greenwood County**
- absolute age: Kigoshi, Kunihiko, 1967
- areal geology: Hawn, Frederick, 1866; Jewett, J.M., 1960b; Kansas Geological Society, 1932, 1937a, 1939a, 1959a; Lemmons, J.E., 1940; Marshall, E.E., 1940; Mudge, M.R., 1962; Muilenburg, G.E., 1960b; Prosser, C.S., 1904; Smith, A.J., 1905; Wallace, M.H., 1941
- biostratigraphy: Thompson, T.L., 1968
- construction materials: Myers, L.D., 1982
- data processing: Harbaugh, J.W., 1964a
- engineering geology: Jordan, D.W., 1981; U.S. Department of Agriculture, 1981a, 1983
- enhanced recovery: Johnston, K.H., 1960; Powell, J.P., 1956
- environmental geology: U.S. Army, Corps of Engineers, 1969c, 1975b; U.S. Department of Agriculture, 1984; U.S. Geological Survey, 1976d, 1976e, 1976g, 1976k, 1979k, 1979l, 1979n, 1979r
- geochemical surveys: Union Carbide Corporation, 1979a, 1979d, 1979e, 1982d
- geochemistry: Myers, J.E., 1970
- geomorphology: Ham, W.E., 1939, 1943; Wooster, L.C., 1890
- ground water: Bushong, F.W., 1901; Fader, S.W., 1975b; Leonard, R.B., 1972
- hydrology: Livingston, N.D., 1981; Marcher, M.V., 1984; McCauley, J.R., 1974; Nighswonger, J.J., 1970; Snow, F.H., 1895
- igneous rocks: Adams, J.W., 1959
- invertebrate paleontology: Andersen, R.E., 1974, 1976; Brainard, R.H., 1978, 1978b; Conkin, B.M., 1954; Cuffey, R.J., 1966, 1967, 1967a; Delo, D.M., 1928; Douglass, R.C., 1962; Edmiston, E.F., 1932; Elias, M.K., 1938b; Hanson, Johna, 1973, 1976; Harrington, H.J., 1955; Lalicker, C.G., 1932; Maerz, R.H., Jr., 1976; Miller, H.W., Jr., 1958b, 1963; Newton, G.B., 1970, 1971, 1971a; Pabian, R.K., 1974; Richards, H.G., 1955; Sawyer, J.F., 1954; Simonsen, A.H., 1977, 1977a; Spencer, R.S., 1968, 1970; Squires, J.M., 1952; Tasch, Paul, 1953; Tharalson, D.B., 1984; Thompson, T.L., 1965, 1965a; Toomey, D.F., 1972, 1974; Williams, C.C., 1941; Williams, H.S., 1881
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- sedimentary structures: Mudge, M.R., 1956; Rich, J.L., 1938a
- sedimentation: Bass, N.W., 1933, 1934, 1935, 1936, 1937, 1937a; Lucke, J.B., 1938; Read, W.F., 1939; Rich, J.L., 1938; Tarr, R.S., 1934
- seismology: Steeples, D.W., 1977a
- soils: Fortner, J.R., 1982
- statistical analysis: Toomey, D.F., 1966
- stratigraphy: Ashlock, Rex, 1978; Avers, D.D., 1968; Baptist, O.C., 1941; Becker, Karl, 1940; Berger, W.R., 1918; Bernasek, R.A., 1967; Bramlette, W.A., 1940; Brown, S.S.L., 1966, 1967; Bushong, F.W., 1899; Clark, J.E., 1940; Condra, G.E., 1933; Dorsey, M.T., 1978; Hattin, D.E., 1954, 1957; Haworth, Erasmus, 1894; Jeffords, R.M., 1940; Lamoreaux, S.B., 1983, 1984, 1984a; McCrone, A.W., 1960, 1963; Merriam, D.F., 1982a; Monger, J.W.H., 1961; Prosser, C.S., 1897a; Scafe, Don, 1963; Snyder, B.L., 1968; Troell, A.R., Jr., 1965, 1965a, 1966, 1969; Underwood, J.O., 1964; Winchell, R.L., 1957, 1957a; Zandell, C.H., 1963
- structural analysis: Rich, J.L., 1935; Ward, J.R., 1964, 1968
- uranium ores: Bendix Field Engineering Corporation, 1981, 1982a, 1983k; Derby, J.R., 1982; EG&G Geometrics, 1980b; Fair, C.L., 1982a, 1982b; Geometrics, Inc., 1977, 1977a; Texas Instruments, Inc., 1978h, 1978i, 1982, 1982a, 1982f; Union Carbide Corporation, 1981a
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- water resources: U.S. Army, Corps of Engineers, 1970c
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- areal geology: Bass, N.W., 1926; Darton, N.H., 1920; Liberal Geological Society, 1960; Maher, J.C., 1947; McLaughlin, T.G., 1943; McManus, D.A., 1959a; Plummer, N.V., 1955; Scott, G.R., 1968; Sharps, J.A., 1976
- biostratigraphy: Hattin, D.E., 1971
- engineering geology: Colton, R.B., 1975; Landes, K.K., 1931b
- environmental geology: Allen, E.G., 1977, 1980; Gwin, R.E., Jr., 1974; U.S. Army, Corps of Engineers, 1974e; U.S. Geological Survey, 1976a, 1976j, 1979c, 1979d, 1979h, 1979q, 1980a
- geochemical surveys: Union Carbide Corporation, 1980
- geomorphology: Bass, N.W., 1931; Frye, J.C., 1950; Mettler, D.E., 1956; Smith, H.T.U., 1940b
- ground water: Barker, R.A., 1979a, 1981, 1983; Dealy, M.T., 1984; Dunlap, L.E., 1983, 1984; Frye, J.C., 1949a; Gutentag, E.D., 1981a; Hathaway, L.R., 1977a; Keene, K.M., 1975, 1976, 1977; Kume, Jack, 1982, 1984; Lobmeyer, D.H., 1971, 1974; Pabst, M.E., 1976, 1979b; Prill, R.C., 1966a, 1968a, 1976, 1977
- hydrology: Collins, D.N., 1959
- invertebrate paleontology: Delo, D.M., 1931; Eicher, D.L., 1970; Morrow, A.L., 1931; Worstell, P.J., 1966
- meteorites: Nininger, H.H., 1938, 1971f
- natural gas: Bartle, G.G., 1939, 1940, 1940a, 1940b, 1940c
- petroleum: Bloesch, Edward, 1937; Brown, H.A., 1963; Putman, B.M., 1960
- sedimentary rocks: Abels, T.A., 1958, 1959; Dubins, I.M., 1947; Runnels, R.T., 1949a; White, L.M., 1981
- sedimentary structures: Swineford, Ada, 1958
- soils: Cipra, J.E., 1970; Dixon, R.M., 1960; Kaufman, Abraham, 1950; McBee, C.W., 1961; Morin, R.E., 1961; Prill, R.C., 1967
- stratigraphy: Bergman, D.W., 1950; Cobban, W.A., 1949; Gill, H.W., Jr., 1961; Hattin, D.E., 1962, 1975; Hostetler, J.M., 1967, 1968; King, N.R., 1972, 1973; Malone, D.J., 1962; Quinn, A.W., 1927; Rascoe, Bailey, Jr., 1962; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983c, 1983d, 1983i; Geodata International, Inc., 1981c; Maarouf, A.M., 1982; McCarn, D.W., 1982; Purson, J.D., 1979; Shannon, S.S., Jr., 1979; Texas Instruments, Inc., 1978e, 1978f, 1978g, 1982b, 1982c
- water resources: Coburn, F.D., 1913; Hay, Robert, 1891a; Knapp, G.S., 1950
- Harper County**
- absolute age: Miller, B.B., 1975
- areal geology: Bayne, C.K., 1960, 1972a; Ver Wiebe, W.A., 1934a
- biostratigraphy: Thompson, T.L., 1968
- copper ores: Berendsen, Pieter, 1981a; Hill, W.E., Jr., 1967; Lambert, M.W., 1979, 1981; Ripley, E.M., 1980a; Waugh, T.C., 1974, 1976
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: U.S. Geological Survey, 1976i, 1976k, 1979p, 1979r, 1982, 1983
- geochemical surveys: Union Carbide Corporation, 1979, 1979c, 1979e, 1982c
- geophysical methods: Gaither, V.U., 1956

- construction materials: Stallard, A.H., 1971
 engineering geology: Lentell, T.L., 1977, 1977a;
 Stallard, A.H., 1970, 1972; U.S. Department of
 Agriculture, 1979a
 environmental geology: U.S. Army, Corps of
 Engineers, 1965c, 1975; U.S. Department of
 Agriculture, 1977, 1978, 1978a; U.S.
 Geological Survey, 1976f, 1978j, 1979m
 geochemistry: Denne, J.E., 1984
 geomorphology: Denne, J.E., 1979, 1982a, 1984a;
 Dort, Wakefield, Jr., 1980; Elks, J.E., 1979;
 Hoover, W.F., 1932, 1936; Ratzlaff, J.R., 1978;
 Schoewe, W.H., 1938d
 geophysical surveys: Heider, Franz, 1982;
 Merriam, D.F., 1954; Severini, A.F., 1981;
 Stelljes, V.D., 1964; Wainwright, K.E., 1960
 ground water: Denne, J.E., 1980; Fader, S.W.,
 1974; Gogel, A.J., 1969; Stone, W.A., 1965;
 Winslow, J.D., 1972
 hydrology: Bevans, H.E., 1982; Furness, L.W.,
 1965a; Livingston, N.D., 1981; McCauley, J.R.,
 1973, 1975a, 1977; McCrae, R.O., 1953, 1954;
 Wyman, S.M., 1972
 invertebrate paleontology: Conkin, B.M., 1954;
 Farmer, J.D., 1971, 1971a, 1973; Grinnell, R.S.,
 Jr., 1958; Koepnick, R.B., 1971, 1974; Maerz,
 R.H., Jr., 1976; Richards, H.G., 1955; Spencer,
 R.S., 1968, 1970; Squires, J.M., 1952;
 Williams, C.C., 1941
 mineral resources: Heidenreich, W.L., [n.d.]
 paleoecology: Carlton, D.R., 1975; Hakes, W.G.,
 1976, 1976b; von Bitter, P.H., 1972
 petroleum: Lee, Wallace, 1941, 1942, 1944
 sedimentary rocks: Galle, O.K., 1966a, 1967;
 Keroher, G.C., 1939; McMillan, N.J., 1955,
 1956
 sediments: Carlson, W.A., 1952a; Davis, S.N.,
 1951; Schneider, H.I., 1976
 soils: Dickey, H.P., 1977a; Woodring, S.M., 1973
 stratigraphy: Becker, Karl, 1940; Bramlette, W.A.,
 1940; Brown, W.G., 1958; Burchett, R.R.,
 1959; Cambridge, T.R., 1959; Frye, J.C., 1950a;
 Jeffords, R.M., 1940; Lamoreaux, S.B., 1983;
 Monger, J.W.H., 1961
 structural analysis: Callen, J.M., 1983; Stewart,
 G.F., 1967
 uranium ores: Bendix Field Engineering
 Corporation, 1982; EG&G Geometrics, 1980
 vertebrate paleontology: Tway, L.E., 1977, 1979
- Jewell County**
 areal geology: Burchett, R.R., 1972; Byrne, F.E.,
 1950b; Dreeszen, V.H., 1973; Fishel, V.C.,
 1955
 construction materials: Anonymous, 1970a;
 Bauleke, M.P., 1962
 environmental geology: U.S. Geological Survey,
 1976, 1976h, 1978l, 1979f, 1979g, 1979o,
 1982a
 geochemical surveys: Union Carbide Corporation,
 1979b, 1980a, 1981c
 geophysical methods: Crumpton, C.F., 1959
 ground water: Berry, D.W., 1948, 1951; Fader,
 S.W., 1968; Failyer, G.H., 1887, 1889
 invertebrate paleontology: Griffith, J.H., 1947;
 Hattin, D.E., 1952, 1969b; Miller, B.B., 1980;
 Morrow, A.L., 1931
 paleoecology: Ho, Tong-Yun, 1964, 1966
 popular geology: Hockett, K., 1979
 remote sensing: Lidster, W.A., 1975
 sedimentary rocks: Dubins, I.M., 1947; Runnels,
 R.T., 1949a
 sediments: Bauleke, M.P., 1969a; Metz, H.L.,
 1954; Swineford, Ada, 1946a
 soils: Badgley, W.A., 1957; Hamilton, V.L., 1984
 stratigraphy: Bergman, D.W., 1950; Frye, J.C.,
 1951e; Hattin, D.E., 1962, 1975; Hibbard,
 C.W., 1944c; Hostetler, J.M., 1967, 1968;
 McKellar, T.R., 1962
 structural analysis: Ansari, N.W., 1965
 uranium ores: Fair, C.L., 1982; Geometrics, Inc.,
 1977, 1977b, 1977c; Texas Instruments, Inc.,
 1978a, 1978b, 1982d; Union Carbide
 Corporation, 1981, 1981d, 1982, 1982c
 vertebrate paleontology: Hibbard, C.W., 1942
 volcanic ash deposits: Landes, K.K., 1938
- Johnson County**
 areal geology: Dufford, A.E., 1953, 1958; Gentile,
 R.J., 1984; Gerhard, R.G., 1961; Hilmes, G.E.,
 1970; Jewett, J.M., 1951a, 1956b, 1967;
 Johnsgard, S.K., 1984; Kansas Geological
 Society, 1949a; Muilenburg, G.E., 1957, 1958a,
 1959, 1960a; Newell, N.D., 1935a; O'Connor,
 H.G., 1971, 1973; Ockerman, J.W., 1935;
 Parizek, E.J., 1975; Ward, J.R., 1983; Wing,
 M.E., [n.d.]
 construction materials: Plummer, N.V., 1948a
 engineering geology: Burgat, V.A., 1970; Furness,
 L.W., 1967a; Gentile, R.J., 1975a; Irza, T.J.,
 1968; Larimore, R.E., 1978; Press, J.E., 1967;
 Stallard, A.H., 1970
 enhanced recovery: Kharrat, Riyaz, 1984
 environmental geology: Black and Veatch
 Engineers, 1972a; Calabrese, P.A., 1977; Hulen,
 P.L., 1976, 1979; Sorenson, C.J., 1984; U.S.
 Army, Corps of Engineers, 1965c, 1970a, 1972,
 1973d, 1974, 1974a, 1974d, 1980, 1980a; U.S.
 Environmental Protection Agency, 1979a; U.S.
 Geological Survey, 1976f, 1976g, 1978j,
 1979m, 1979n
 geochemistry: Denne, J.E., 1984
 geomorphology: Denne, J.E., 1979; Dort,
 Wakefield, Jr., 1980; Elks, J.E., 1979; Hoover,
 W.F., 1932, 1936; Merriam, D.F., 1956b;
 O'Connor, H.G., 1963a; Ratzlaff, J.R., 1978;
 Schoewe, W.H., 1928a, 1941; Simms, J.J., 1975
 ground water: Denne, J.E., 1980; Fader, S.W.,
 1974; Fishel, V.C., 1956a; Jewett, J.M., 1935b
 guidebooks: Jewett, J.M., 1967a
 hydrology: Hazel, R.H., 1979; U.S. Army, Corps
 of Engineers, 1971j
 igneous rocks: Adams, J.W., 1959
 invertebrate paleontology: Baesemann, J.F., 1971,
 1972, 1973; Cocke, J.M., 1969, 1970, 1970a,
 1970b; Gentile, R.J., 1974; Grinnell, R.S., Jr.,
 1958; Harrington, H.J., 1955; Jewett, J.M.,
 1929; Roy, M.B., 1966; Sayre, A.N., 1930;
 Squires, J.M., 1952; Thompson, M.L., 1957;
 Welch, R.G., 1964; Zinser, R.W., 1950
 mineral resources: Heidenreich, W.L., [n.d.];
 McDougal, R.B., 1970; Schoewe, W.H., 1956c
 minerals: Tien, Pei-Lin, 1971
 mining geology: Hombaker, A.L., 1967
 natural gas: Moore, R.C., 1934c
 paleobotany: Clendening, J.A., 1968, 1977;
 Minoura, N., 1979
 paleoecology: Boardman, D.R., II, 1984a
 petroleum: Schlinsog, D.G., 1983
 sedimentary rocks: Cook, A.C., 1977; Crowley,
 D.J., 1966, 1967, 1969; Cubitt, J.M., 1975,
 1979; El-Zouki, A.Y., 1971; Gentile, R.J.,
 1969; Ives, William, Jr., 1960; Kahle, C.F.,
 1962; Keroher, G.C., 1939; Kidder, D.L., 1982;
 Prochnow, Suzanne, 1982; Schroeder, R.J.,
 1967, 1968; Schutter, S.R., 1983; Verhulst,
 A.T., 1970; Whitcomb, C.W., 1965
 sedimentary structures: Hall, B.P., 1961; Hamblin,
 W.K., 1969
 sediments: Davis, S.N., 1951; Holien, C.W., 1982
 soils: Kirkland, J.T., 1981; Plinsky, R.O., 1979
 stratigraphy: Ball, S.M., 1959, 1964; Brown, W.G.,
 1958; Burchett, R.R., 1959; Eastwood, W.P.,
 1958; Haworth, Erasmus, 1894; Lamerson,
 P.R., 1956; Newell, N.D., 1931; Wilson, James
 A., 1959
 uranium ores: Bendix Field Engineering
 Corporation, 1982, 1982a; EG&G Geometrics,
 1980, 1980b
 vertebrate paleontology: Lillegraven, J.A., 1966
 water resources: Fishel, V.C., 1953; Landes, K.K.,
 [n.d.]
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 areal geology: Darton, N.H., 1920; Liberal
 Geological Society, 1960; Maher, J.C., 1946,
 1947; McLaughlin, T.G., 1943; Plummer, N.V.,
 1955
 environmental geology: Gwin, R.E., Jr., 1974; U.S.
 Army, Corps of Engineers, 1974e; U.S.
 Geological Survey, 1976a, 1976j, 1979h, 1979q
 geochemical surveys: Union Carbide Corporation,
 1980
 ground water: Baker, C.H., Jr., 1983; Barker, R.A.,
 1979a, 1981, 1983; Dealy, M.T., 1984; Dunlap,
 L.E., 1983, 1983a, 1984; Frye, J.C., 1949a;
 Gillespie, J.B., 1977; Gutentag, E.D., 1968,
 1972a, 1981a; Hathaway, L.R., 1977a; Kume,
 Jack, 1982, 1984; Lindgren, R.J., 1982, 1982a;
 Pabst, M.E., 1976, 1979b; Prill, R.C., 1966a,
 1968a, 1976, 1977
 hydrology: Collins, D.N., 1959
 invertebrate paleontology: Morrow, A.L., 1931
 natural gas: Bartle, G.G., 1939, 1940, 1940a,
 1940b, 1940c
 petroleum: Bennett, F.O., 1960; Davis, R.M., 1959;
 Hubley, M.D., 1942; Roby, R.E., 1959, 1961
 sedimentary rocks: Abels, T.A., 1958, 1959;
 Swineford, Ada, 1947; White, L.M., 1981
 soils: Cipra, J.E., 1970; Dixon, R.M., 1960; Prill,
 R.C., 1967; Sallee, K.H., 1963
 stratigraphy: Bergman, D.W., 1950; Cole, V.B.,
 1975; Gill, H.W., Jr., 1961; Hattin, D.E., 1975;
 Malone, D.J., 1962; Rascoe, Bailey, Jr., 1962;
 Thompson, M.L., 1944; Ver Wiebe, W.A.,
 1947; Worden, J.A., 1959, 1960
 structural analysis: Osborn, J.B., 1962
 uranium ores: Bendix Field Engineering
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 International, Inc., 1981c; Texas Instruments,
 Inc., 1978e
 water resources: Coburn, F.D., 1913; Knapp, G.S.,
 1950
- Kingman County**
 areal geology: Kansas Geological Society, 1959a;
 Lane, C.W., 1960; Lee, Wallace, 1949; Sigma
 Gamma Epsilon, Alpha Nu Chapter, [n.d.]; Ver
 Wiebe, W.A., 1934a, 1941a
 construction materials: Hargadine, G.D., 1966b
 copper ores: Hill, W.E., Jr., 1967; Lambert, M.W.,
 1981; Waugh, T.C., 1974, 1976
 data processing: Merriam, D.F., 1963b
 engineering geology: Jewett, J.M., 1954b, 1955,
 1956a; Walters, R.F., 1976a, 1978; Wilhelm,
 C.J., 1936
 environmental geology: U.S. Geological Survey,
 1976i, 1976k, 1979p, 1979r
 geochemical surveys: Union Carbide Corporation,
 1979c, 1979e
 geophysical methods: Gaither, V.U., 1956
 ground water: Cobb, P.M., 1983a; Fader, S.W.,
 1976, 1977, 1978; Hathaway, L.R., 1978b;
 Kansas Geological Survey, 1942; Martin, R.B.,
 1968; Stullken, L.E., 1976; Whittemore, D.O.,
 1982a
 hydrology: Hargadine, G.D., 1978, 1979a; Ward,
 J.C., 1970, 1971
 metal ores: Stroud, R.B., 1970
 mineral resources: Jewett, J.M., 1946
 natural gas: Kornfeld, J.A., 1973; Page, J.H., 1940
 petroleum: Cruce, J.D., 1956; Frenshley, R.W.,
 1965, 1968; Goebel, E.D., 1959; King, C.R.,
 1965, 1965a; Richardson, J.M., 1956a;
 Rutledge, R.B., 1936, 1937, 1937a; Skelly Oil
 Company, Geological Department, 1956a
 sedimentary rocks: Graff, H.J., 1970; Swineford,
 Ada, 1955a
 soils: Hoffman, B.R., 1979; Thorp, F.C., 1954
 stratigraphy: Adkinson, W.L., 1972; Courtier, W.H.,
 1934; Gould, C.N., 1901b; McElroy, M.N.,
 1965, 1965a; Schulte, G.S., 1959; Swineford,
 Ada, 1954; Winchell, R.L., 1957, 1957a
 structural analysis: Dwivedi, R.L., 1983; Kelly,
 T.E., 1961; Lippert, R.H., 1964; Steele, A.D.,
 1982; Williams, C.D., 1968; Wynn, L.L., 1959
 structural features: Kelly, T.E., 1964

- statistical analysis: Toomey, D.F., 1966
- stratigraphy: Ball, S.M., 1959, 1964; Baptist, O.C., 1941; Burchett, R.R., 1959; Dixon, V.R., 1960; Eastwood, W.P., 1958; Monger, J.W.H., 1961; Patterson, Joseph M., 1933; Rogers, R.A., 1982; Sanders, D.T., 1957, 1959; Troell, A.R., Jr., 1965, 1965a, 1966, 1969; Wilson, James A., 1959
- structural analysis: Callen, J.M., 1983
- uranium ores: Bendix Field Engineering Corporation, 1982, 1982a; EG&G Geometrics, 1980, 1980b
- vertebrate paleontology: Crum, E.R., 1917; Tway, L.E., 1982, 1982a
- Lincoln County**
- areal geology: Bayne, C.K., 1972a, 1972d; Berry, D.W., 1952; Bramlette, M.N., 1925; Twenhofel, W.H., 1925c; Ver Wiebe, W.A., 1941a
- biostratigraphy: Eicher, D.L., 1965; Hattin, D.E., 1967
- clay deposits: Plummer, N.V., 1947
- clay mineralogy: Wu, Dah Cheng, 1971
- construction materials: Bauleke, M.P., 1962; Crosier, C.M., 1968
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972, 1972b, 1972c; Halepaska, J.C., 1972b, 1972c; Taylor, W.K., 1964; Walters, R.F., 1976a, 1978
- environmental geology: U.S. Geological Survey, 1976, 1976c, 1976d, 1976h, 1979g, 1979i, 1979k, 1979o
- geochemical surveys: Union Carbide Corporation, 1979a, 1979b
- geomorphology: Cline, R.L., 1974; Frye, J.C., 1945d, 1947b
- ground water: Angino, E.E., 1972a; Berry, D.W., 1948, 1951; Durum, W.H., 1952; Martin, R.B., 1968
- invertebrate paleontology: Benson, R.H., 1967; Jones, A.W., 1898, 1899, 1903, 1905; Moore, R.C., 1925
- paleoecology: Hatfield, C.B., 1961; Siemers, C.T., 1971a, 1971b
- petroleum: Halepaska, J.C., 1972a; Harding, J.E., 1961; Oros, M.O., 1972
- popular geology: Nickel, Gerhard, Jr., 1972
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Al-Arabi, N.A., 1971; Dellwig, L.F., 1972; Swineford, Ada, 1947
- sedimentary structures: McLane, Michael, 1978
- sediments: Swineford, Ada, 1946a
- stratigraphy: Bergman, D.W., 1950; Cobban, W.A., 1949; Franks, P.C., 1967, 1967a; Frye, J.C., 1943a; Goebel, E.D., 1972; Hattin, D.E., 1965b, 1969a, 1975, 1978; Hay, Robert, 1889; Taylor, M.H., [Jr.], 1947
- structural analysis: Landes, K.K., 1931c, 1931d, 1933c
- uranium ores: Fair, C.L., 1982, 1982a; Geometrics, Inc., 1977, 1977a, 1977b; Texas Instruments, Inc., 1978b, 1978c, 1982, 1982d; Union Carbide Corporation, 1981a, 1982, 1982b, 1982c
- vertebrate paleontology: Hibbard, C.W., 1943a; Zakrzewski, R.J., 1982
- Linn County**
- areal geology: Hawn, Frederick, 1866; Seevers, W.J., 1969
- coal deposits: Abernathy, G.E., 1946; Bailey, E.H.S., 1889a; Blake, L.L., 1889; Brady, L.L., 1976; Cobb, J.C., 1981, 1981a; Schoewe, W.H., 1955; U.S. Bureau of Mines, 1929
- construction materials: Hargadine, G.D., 1966
- diagenesis: Nollsch, D.A., 1983
- elements: Runnels, R.T., 1951a
- engineering geology: U.S. Department of Agriculture, 1977b
- enhanced recovery: Powell, J.P., 1953, 1958, 1959
- environmental geology: U.S. Department of Agriculture, 1978b; U.S. Geological Survey, 1976g, 1979n; Wagner, Jan, 1976; Willhite, G.P., 1979, 1979a
- geochemistry: Runnels, R.T., 1953
- geomorphology: Merriam, D.F., 1956b
- geophysical surveys: Yarger, H.L., 1972a
- hydrology: Alexander, J.P., 1978; Bevans, H.E., 1984; Kansas Water Office, 1983c; Kenny, J.F., 1982
- invertebrate paleontology: Baesemann, J.F., 1971, 1972, 1973; Cocks, J.M., 1970, 1970a, 1970b; Grinnell, R.S., Jr., 1958; Laukel, Q.C., 1956; Qandil, Yacoub, 1961; Squires, J.M., 1952; Strimple, H.L., 1978
- lead deposits: Schoewe, W.H., 1959b
- limestone deposits: Runnels, R.T., 1951
- meteorites: Nininger, H.H., 1937, 1971d
- mineral resources: Heidenreich, W.L., [n.d.]
- natural gas: Charles, H.H., 1929
- paleobotany: Minoura, N., 1979
- paleoecology: Boardman, D.R., II, 1984a; Frost, J.G., 1968, 1968a
- petroleum: Anonymous, 1964; Jewett, J.M., 1940a; Ockerman, J.W., 1932; Schlingog, D.G., 1983
- remote sensing: Pincomb, Arthur, 1971
- sedimentary rocks: Dalton, J.A., 1958; El-Zouki, A.Y., 1971; Keroher, G.C., 1939; Kidder, D.L., 1982; Lawson, R.W., 1953; Mossler, J.H., 1971; Muhs, D.R., 1979; Railsback, L.B., 1983; Schenk, P.E., 1963, 1963a; Schroeder, R.J., 1967, 1968; Underwood, M.R., 1984, 1984a; Woody, M.D., 1984
- sedimentary structures: Hall, B.P., 1961; Hamblin, W.K., 1969
- sedimentation: Rich, J.L., 1926b, 1926c, 1938
- soils: Mulhern, D.W., 1983; Penner, H.L., 1981
- stratigraphy: Hatcher, D.A., 1961; Heckel, P.H., 1978, 1979a; Jewett, J.M., 1943, 1945, 1965b; Keroher, R.P., 1940; Lamerson, P.R., 1956; Lee, Wallace, 1940; Lemmons, J.E., 1946; Machovec, M.A., 1963; Mossler, J.H., 1970, 1970a, 1973; Price, R.C., 1981, 1982, 1984; Ravn, R.L., 1981, 1982; Singler, C.R., 1965a
- structural analysis: Padgham, J.B., 1957
- uranium ores: Bendix Field Engineering Corporation, 1982a; EG&G Geometrics, 1980b
- well logging: Doveton, J.H., 1980
- Logan County**
- areal geology: Adams, G.I., 1898a; Bayne, C.K., 1972a; Cohen, Stephen, 1960; Collins, J.B., 1947; Johnson, C.R., 1956, 1956a, 1958; Landes, K.K., 1939b; Liberal Geological Society, [n.d.]; Lupton, C.T., 1922a; Russell, W.L., 1929a
- biostratigraphy: Martin, L.G., 1984; Thompson, T.L., 1963b, 1968
- construction materials: Frye, J.C., 1946d
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: Gwin, R.E., Jr., 1974; Knutson, Herbert, 1971; U.S. Geological Survey, 1976b, 1976j, 1979j, 1979q
- geochemistry: Yamamoto, S., 1978, 1979
- ground water: Bradley, Edward, 1957; Dunlap, L.E., 1981b, 1984a; Hathaway, L.R., 1979a; Jenkins, E.D., 1975; Keene, K.M., 1971; Krieger, R.A., 1957; Kume, Jack, 1982, 1984; McClain, T.J., 1983; Pabst, M.E., 1971, 1973, 1974, 1976a, 1977b, 1982a; Sophocleous, M.A., 1981a, 1982c
- hydrology: Alexander, J.P., 1978; McClain, T.J., 1975a
- invertebrate paleontology: Beecher, C.E., 1900; Bergstresser, T.J., 1983; Frerichs, W.E., 1981; Green, R.G., 1974; Jeletzky, J.A., 1961; Klapper, Gilbert, 1971; Leonard, A.B., 1943; Loetterle, G.J., 1937, 1937a; Miller, H.W., Jr., 1957a, 1957b, 1957c, 1968a; Schuchert, Charles, 1904; Thompson, T.L., 1962, 1965, 1965a
- limestone deposits: Kansas Geological Survey, 1931
- meteorites: Preston, H.L., 1900
- nickel ores: Dewey, F.P., 1889; Snow, F.H., 1889a
- paleobotany: Bergstresser, T.J., 1983a; Segal, R.H., 1965; Selva, S.B., 1981
- paleoecology: Archer, A.W., 1980, 1983; Lammons, J.M., 1969, 1970; Stewart, J.D., 1984
- petroleum: Halepaska, J.C., 1972a; Irwin, J.S., 1922; McCaslin, J.C., 1981b; Oros, M.O., 1972
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Abels, T.A., 1958, 1959; Caldwell, C.D., 1983; Hattin, D.E., 1975a, 1981a; Yamamoto, S., 1977
- sediments: Pinkley, G.F., 1928
- soils: Bell, E.L., 1964, 1969; Davis, R.D., 1962; Naddih, B.I., 1960; Paliwal, K.V., 1964
- stratigraphy: Bergstresser, T.J., 1981, 1982; Frye, J.C., 1956; Gill, J.R., 1972; Hattin, D.E., 1965c, 1965d, 1977b, 1978, 1982; Miller, H.W., Jr., 1958c; Rascoe, Bailey, Jr., 1968
- structural analysis: Rohrbough, C.A., 1956
- uranium ores: Bendix Field Engineering Corporation, 1983b, 1983c; Geodata International, Inc., 1981, 1981c
- vertebrate paleontology: Bardack, David, 1965a; Hibbard, C.W., 1936, 1942c, 1942d; Martin, L.D., 1977; McClung, C.E., 1908a; Osborn, H.F., 1904a; Robertson, G.M., 1943; Sternberg, C.H., 1922a; Taylor, E.H., 1938; Williston, S.W., 1898b, 1902g; Wiman, Carl, 1920
- Lyon County**
- areal geology: Elias, M.K., 1936a; Hawn, Frederick, 1866; Jewett, J.M., 1951c, 1958a, 1960b, 1961b, 1962; Kansas Geological Society, 1936, 1959a; Moore, R.C., 1936b; Mudge, M.R., 1962; Mulenburg, G.E., 1957a, 1958, 1960b, 1961b, 1962a; O'Connor, H.G., 1953; Smith, A.J., 1902, 1903, 1905, 1906; Wooster, L.C., 1888a
- coal deposits: Kelly, D.S., 1887
- engineering geology: Jordan, D.W., 1981; Moore, J.I., [n.d.]
- environmental geology: Bond, S.V., 1980; True, M.L.K., 1969; U.S. Geological Survey, 1976d, 1976g, 1979k, 1979n
- geochemical surveys: Union Carbide Corporation, 1979a
- ground water: Fader, S.W., 1975b; Failyer, G.H., 1887; O'Connor, H.G., 1953a
- hydrology: Kansas Water Office, 1983c; Nighswonger, J.J., 1970; Scobee, E.R., 1967
- invertebrate paleontology: Cuffey, R.J., 1966, 1967, 1967a; Douglass, R.C., 1962; Edmiston, E.F., 1932; Elias, M.K., 1950; Fry, H.C., Jr., 1975, 1975a, 1976; Ireland, H.A., 1956; Jeffords, R.M., 1948b; Matthews, J.L., 1959; Newton, G.B., 1970, 1971, 1971a; Perlmutter, Barry, 1971, 1971a, 1975, 1975a; Richards, H.G., 1959; Schoewe, W.H., 1933a; Simonsen, A.H., 1977, 1977a; Spencer, R.S., 1968, 1970; Tasch, Paul, 1953
- meteorites: Buddhue, J.D., 1940, 1940a; Farquhar, O.C., 1957a; Howard, K.S., 1907; Merrill, G.P., 1902, 1902a; Stockwell, H.O., 1953
- mineral resources: Heidenreich, W.L., [n.d.]; Hornbaker, A.L., 1960; O'Connor, H.G., 1953b
- paleobotany: Minoura, N., 1979
- paleoecology: Tasch, Paul, 1952, 1953a
- paleogeography: Wells, J.D., 1950
- sedimentary rocks: Cubitt, J.M., 1975, 1979; Harbaugh, J.W., 1964c; Keroher, G.C., 1939; Lardner, J.E., 1984; McMillan, N.J., 1955, 1956; Owen, D.E., 1959; Ross, D.A., 1960; Wahrhaftig, Leon, 1952; Wilbur, R.O., 1956; Wooster, L.C., 1934
- sedimentary structures: Mudge, M.R., 1956
- sediments: Schneider, H.I., 1976
- soils: McCauley, J.R., 1984; Neill, J.T., 1981
- stratigraphy: Avers, D.D., 1968; Bernasek, R.A., 1967; Condra, G.E., 1933; Dishman, B.D., 1969; Dorsey, M.T., 1978; Elias, M.K., 1934c; Empie, J.S., 1961; Garber, M.S., 1962; Gilmore,

- paleomagnetism: Izett, G.A., 1977
- petroleum: Fennell, W.R., 1959; Jamieson, J.J., 1959; Renfroe, C.A., 1953, 1959; Wilkinson, R.D., 1959
- sedimentary rocks: Baab, Patricia, 1981; Franz, R.H., 1984; Swineford, Ada, 1955a
- sediments: Bauleke, M.P., 1969a; Rebertus, D.G., 1972, 1973; Swineford, Ada, 1946a
- soils: Naddih, B.I., 1960; Tomasu, B.I., 1977
- stratigraphy: Bullard, F.M., 1928; Cole, V.B., 1975; Davis, L.C., 1975, 1976; Frye, J.C., [n.d.], 1941b, 1951f; Gill, H.W., Jr., 1961; Kovach, J.T., 1979, 1980; Malone, D.J., 1962; McManus, D.A., 1959, 1960; Paul, R.W., 1967; Renfroe, C.A., 1948; Severy, C.L., 1975; Spicer, S.R., 1975; Swineford, Ada, 1954; Worden, J.A., 1959, 1960
- structural analysis: Haworth, Erasmus, 1896; Izett, G.A., 1980; Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983g; Berendsen, Pieter, 1977, 1981; Geodata International, Inc., 1980; Texas Instruments, Inc., 1978e
- vertebrate paleontology: Bjork, P.R., 1973; Breyer, J., 1976; Carleton, M.D., 1979; Dalquest, W.W., 1971, 1980; Etheridge, Richard, 1958, 1960, 1961; Feduccia, J.A., 1975; Franzen, D.S., 1947a; Getz, L.L., 1960; Hibbard, C.W., 1938, 1938a, 1939b, 1939c, 1940a, 1941a, 1941b, 1941c, 1941d, 1942, 1943, 1949, 1949b, 1950, 1951, 1951a, 1952, 1953a, 1954, 1955, 1956, 1960, 1963, 1970, 1972; Holman, J.A., 1963, 1979; Jammot, Dominique, 1972; Klingener, David, 1963; Miller, W.E., 1982; Moseley, Carolyn, 1975; Oelrich, T.M., 1957; Paulson, G.R., 1960, 1961; Peters, J.A., 1953; Rickart, E.A., 1976; Rinker, G.C., 1949; Schultz, G.E., 1965; Smith, C.L., 1958; Smith, G.R., 1963; Stevens, M.S., 1965; Taylor, E.H., 1941, 1942; Tihen, J.A., 1955; Tordoff, H.B., 1951; Zakrzewski, R.J., 1981, 1982
- volcanic ash deposits: Landes, K.K., 1938
- water resources: Coburn, F.D., 1913; Hay, Robert, 1891a
- Miami County**
- absolute age: Steeples, D.W., 1981c
- areal geology: Jewett, J.M., 1940; Miller, D.E., 1966, 1966a; Newell, N.D., 1935a; Swallow, G.C., 1865
- construction materials: Petersen, G.E., 1975a
- diagenesis: Nollsch, D.A., 1983
- elements: Rannels, R.T., 1951a
- engineering geology: U.S. Army, Corps of Engineers, 1971b, 1971d; U.S. Department of Agriculture, 1977b
- enhanced recovery: Powell, J.P., 1953
- environmental geology: U.S. Army, Corps of Engineers, 1968b; U.S. Department of Agriculture, 1978b; U.S. Geological Survey, 1976g, 1979n; Wagner, Jan, 1976
- geomorphology: Merriam, D.F., 1956b
- geophysical anomalies: Kodama, K.P., 1982
- geophysical surveys: Vargas, J.F., 1984
- ground water: Bailey, E.H.S., 1887a; Gogel, A.J., 1981
- hydrology: Alexander, J.P., 1978; Bevans, H.E., 1984; Kansas Water Office, 1983c; Kenny, J.F., 1982; Nighswonger, J.J., 1970
- igneous rocks: Adams, J.W., 1959; Hay, Robert, 1893e
- invertebrate paleontology: Cocke, J.M., 1970, 1970a, 1970b; Grinnell, R.S., Jr., 1958; Merchant, F.E., 1939; Newell, N.D., 1937b; Thompson, M.L., 1957; Welch, R.G., 1964; Zinser, R.W., 1950
- limestone deposits: Rannels, R.T., 1951
- mineral resources: Heidenreich, W.L., [n.d.]
- paleoecology: Frost, J.G., 1968, 1968a; Spencer, R.S., 1978
- petroleum: Anonymous, 1964; Moore, R.C., 1917; Ockerman, J.W., 1932; Pate, C.L., 1947; Schlinsog, D.G., 1983; Whitaker, W.A., 1918
- sedimentary rocks: Crowley, D.J., 1966, 1967, 1969; El-Zouki, A.Y., 1971; Ives, William, Jr., 1960; Keroher, G.C., 1939; Lawson, R.W., 1953; Mitchell, J.C., 1981, 1981a; Mossler, J.H., 1971; Muhs, D.R., 1979; Railsback, L.B., 1983; Schroeder, R.J., 1967, 1968; Schutter, S.R., 1983
- sedimentary structures: Hall, B.P., 1961; Hamblin, W.K., 1969
- seismology: Steeples, D.W., 1977a
- soils: Penner, H.L., 1981
- stratigraphy: Ball, S.M., 1959; Burchett, R.R., 1959; Hatcher, D.A., 1961; Heckel, P.H., 1979a; Jewett, J.M., 1965b; Lamerson, P.R., 1956; Miller, D.E., 1963; Mossler, J.H., 1970, 1970a, 1973; Singler, C.R., 1965a
- uranium ores: Bendix Field Engineering Corporation, 1982a; EG&G Geometrics, 1980b
- water resources: Flynn, C.B., 1980
- Mitchell County**
- areal geology: Bayne, C.K., 1972a; Byrne, F.E., 1951a; Hodson, W.G., 1956, 1959; Landes, K.K., 1930a; Leonard, A.R., 1952; Ockerman, J.W., 1930, 1930a; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952
- biostratigraphy: Hattin, D.E., 1967, 1968a, 1971
- construction materials: Hargadine, G.D., 1965a
- engineering geology: Angino, E.E., 1972, 1972b; Anonymous, 1972a; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: U.S. Geological Survey, 1976, 1976h, 1979g, 1979o
- geochemical surveys: Union Carbide Corporation, 1979b
- geomorphology: Bailey, E.H.S., 1892; Hoppie, J.R., 1980; Landes, K.K., 1932, 1933; Swineford, Ada, 1955b
- ground water: Berry, D.W., 1948, 1951; Durum, W.H., 1952a; Martin, R.B., 1968; Reed, T.B., 1981
- hydrology: Bailey, E.H.S., 1896; Patrick, G.E., 1881
- invertebrate paleontology: Crick, R.E., 1976, 1978, 1979; Hattin, D.E., 1952; Worstell, P.J., 1966
- meteorites: Patrick, G.E., 1877; Shepard, C.U., Sr., 1876; Smith, John Lawrence, 1877
- paleoecology: Botjter, D.J., 1978; Hatfield, C.B., 1961
- petroleum: Halepaska, J.C., 1972a; Oros, M.O., 1972
- popular geology: Hockett, K., 1979; Kennedy, Marie, 1948
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Hattin, D.E., 1971b, 1975a
- sedimentary structures: Mizula, J.W., 1960
- soils: Dixon, R.M., 1960; Hamilton, V.L., 1980
- stratigraphy: Bergman, D.W., 1950; Cobban, W.A., 1949; Franks, P.C., 1967, 1967a; Hattin, D.E., 1962, 1965b, 1975; Hay, Robert, 1889; Hostetler, J.M., 1967, 1968; McElroy, M.N., 1965, 1965a; McKellar, T.R., 1962; Taylor, M.H., [Jr.], 1946, 1947, 1947b
- structural analysis: Ansari, N.W., 1965; Landes, K.K., 1931c, 1931d, 1933c
- uranium ores: Fair, C.L., 1982; Geometrics, Inc., 1977, 1977b; Texas Instruments, Inc., 1978b, 1982d; Union Carbide Corporation, 1982, 1982e
- Montgomery County**
- areal geology: Gerhard, R.G., 1960; Kansas Geological Society, 1947, 1962; Moore, R.C., 1937, 1937a; O'Connor, H.G., 1962, 1974; Reed, R.D., 1922; Schrader, F.C., 1908
- biostratigraphy: Malinky, J.M., 1983a
- clay mineralogy: Kinell, C.B., III, 1964
- coal deposits: Schoewe, W.H., 1955
- construction materials: Dilley, C.A., 1931; Haworth, Erasmus, 1905a
- diagenesis: Stone, W.P., Jr., 1980, 1984
- engineering geology: Esmail-Beik, Siavash, 1979; Miller, J.S., 1972
- environmental geology: See-Kan RC&D Project, Inc., 1972; U.S. Army, Corps of Engineers, 1969c, 1973e, 1974b, 1974i, 1975b, 1983; U.S. Department of Agriculture, 1962, 1962b; U.S. Geological Survey, 1976e, 1979i, 1983
- geochemical surveys: Union Carbide Corporation, 1979d, 1982c, 1982d
- geomorphology: Davis, J.C., 1955, 1957; Ham, W.E., 1939, 1943
- ground water: Bailey, E.H.S., 1887; Fader, S.W., 1975b; O'Connor, H.G., 1970
- hydrology: Chang, H.H., 1981; Field, C.T., 1980; Knapp, H.V., 1980; Marcher, M.V., 1984; McCauley, J.R., 1974; Nighswonger, J.J., 1970; Yu, Yun-Sheng, 1980
- igneous rocks: Adams, J.W., 1959
- invertebrate paleontology: Cocke, J.M., 1968, 1970, 1970a, 1970b; Jacques, T.E., 1964; Jewett, J.M., 1929; Laukel, Q.C., 1956; Pabian, R.K., 1979b; Sayre, A.N., 1930; Squires, J.M., 1952; Strimple, H.L., 1950
- mineral resources: Clark, J.G., 1970; Hartley, D.D., 1963; Schraaer, F.C., 1906
- natural gas: Boughton, C.W., 1920; Ley, H.A., 1935
- nonmetal deposits: Schrader, F.C., 1905a
- paleobotany: Heckel, P.H., 1975a
- paleoecology: Boardman, D.R., II, 1984a; Brondos, M.D., 1983, 1983a; Frost, J.G., 1968, 1968a, 1969; Spencer, R.S., 1978; Wood, R.H., II, 1977
- petroleum: Abernathy, G.E., 1940, 1947; Angino, E.E., 1981; Bartow, Edward, 1905a; Benson, D.L., 1923; Calvin, D.G., 1963, 1965; Ebanks, W.J., Jr., 1974a, 1974b; Foster, W.H., 1929; Goebel, E.D., 1962; Gould, G.F., 1975; Moore, R.C., 1917, 1921b; Pate, C.L., 1947; Schlinsog, D.G., 1982; Schrader, F.C., 1905; Whitaker, W.A., 1918; Williams, D.W., 1921
- sedimentary rocks: Davis, J.C., 1959; Harbaugh, J.W., 1959, 1960, 1960a, 1962, 1965; Hayes, J.B., 1967; Keroher, G.C., 1939; Kidder, D.L., 1982; Leatherock, Constance, 1936; Malinky, J.M., 1980; Mitchell, J.C., 1981, 1981a; Moussavi-Harami, Reza, 1980, 1980a, 1984; Muhs, D.R., 1979; Parkinson, R.W., 1982; Railsback, L.B., 1983; Schroeder, R.J., 1967, 1968; Schutter, S.R., 1983; Stone, W.P., Jr., 1979; White, S.M., 1960; Wilson, F.W., 1957, 1957a; Woody, M.D., 1984
- sedimentary structures: Hall, B.P., 1961; Hamblin, W.K., 1969; Ravn, R.L., 1978
- sedimentation: Ball, S.M., 1971; Heckel, P.H., 1975
- soils: Fleming, E.L., 1981
- stratigraphy: Ball, S.M., 1964; Berger, W.R., 1918; Brown, W.G., 1958; Davis, J.R., 1939; Eastwood, W.P., 1958; Emery, P.A., 1962; Haggiagi, M.A., 1970; Haworth, Erasmus, 1894e, 1894g, 1896a; Heckel, P.H., 1978; Ireland, H.A., 1955; Jewett, J.M., 1943, 1965b; Keroher, R.P., 1940b; Lee, Wallace, 1940a; Moore, R.C., 1937d; Oakes, M.C., 1942, 1943; Schulte, G.S., 1958, 1959; Stobbe, W.J., 1971; Winchell, R.L., 1957, 1957a
- uranium ores: Bendix Field Engineering Corporation, 1981, 1982c; Derby, J.R., 1982; Texas Instruments, Inc., 1978i, 1978j, 1978k, 1982a; Union Carbide Corporation, 1982a
- vertebrate paleontology: Chom, J.D., 1978a
- water resources: Steichen, J.M., 1984; U.S. Army, Corps of Engineers, 1970c
- zinc ores: Goebel, E.D., 1981
- Morris County**
- areal geology: Hawn, Frederick, 1866; Jewett, J.M., 1958a, 1961b, 1962; Kansas Geological Society, 1959a; Mudge, M.R., 1958; Muilenburg, G.E., 1957a, 1958, 1961b, 1962a
- clay deposits: Saunders, W.H., 1875, 1896
- clay mineralogy: Bryson, W.R., 1959
- engineering geology: U.S. Army, Corps of

- Stoneburner, R.K., 1982; Walters, R.F., 1979a, 1979b
- sedimentary structures: Swineford, Ada, 1958
- sediments: Swineford, Ada, 1946a
- soils: Rott, D.E., 1977
- stratigraphy: Bergman, D.W., 1950; Frye, J.C., 1956; Hattin, D.E., 1962, 1975; Hostetler, J.M., 1967, 1968; Irion, R.L., 1963; McKellar, T.R., 1962; Stratton, J.L., 1942; Ver Wiebe, W.A., 1947
- structural analysis: Hays, J.K., 1961
- uranium ores: Bendix Field Engineering Corporation, 1983i; Geodata International, Inc., 1981c; Texas Instruments, Inc., 1978c; Union Carbide Corporation, 1982b
- water resources: Heidari, Manoutchehr, 1981, 1982a
- well logging: Welch, R.G., 1963
- Norton County**
- areal geology: Byrne, F.E., 1949; Dreeszen, V.H., 1973; Frye, J.C., 1949c; Hay, Robert, 1885a; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952
- ceramic materials: Knight, G.L., 1931
- construction materials: Bauleke, M.P., 1962; Crosier, C.M., 1968; Frye, J.C., 1946d; Grisafe, D.A., 1978
- engineering geology: Irza, T.J., 1968a
- environmental geology: U.S. Geological Survey, 1976, 1976b, 1978i, 1979e, 1979f, 1979g, 1979j
- geochemical surveys: Union Carbide Corporation, 1980a
- geomorphology: Hoppie, J.R., 1980
- geophysical surveys: Merriam, D.F., 1955f
- ground water: Berry, D.W., 1948, 1951; Johnson, C.R., 1956b; Leonard, R.B., 1969d; Stullken, L.E., 1980
- hydrology: Gardner, W.I., 1968, 1969; Stullken, L.E., 1984
- igneous rocks: Harrower, K.L., 1976; Scott, R.W., 1964
- meteorites: Beck, C.W., 1949, 1951; Bogard, D.D., 1967; Eugster, O., 1970; Iijima, Sumio, 1973; Masuda, Akimasa, 1968; Matsuda, Hideki, 1968; Miller, H.W., Jr., 1969a; Munk, M.N., 1968; Nininger, H.H., 1937, 1949a, 1971d, 1971j; Okada, Akihiko, 1980, 1981, 1982; Pollack, S.S., 1964; Smyth, J.R., 1973, 1974
- paleoecology: Lammons, J.M., 1969, 1970
- petroleum: Merriam, D.F., 1954b
- sediments: Bauleke, M.P., 1969a, 1970; Metz, H.L., 1954; Swineford, Ada, 1946a, 1955d
- soils: Badgley, W.A., 1957; Palmer, C.D., 1977
- stratigraphy: Bennett, D.K., 1984; Frye, J.C., 1951f, 1956; Hibbard, C.W., 1944c; McElroy, M.N., 1965, 1965a
- structural analysis: Parkhurst, R.W., 1959; Tibbetts, B.L., 1958
- uranium ores: Bendix Field Engineering Corporation, 1983b, 1983f; Geodata International, Inc., 1981, 1981b; Texas Instruments, Inc., 1978a, 1978b; Union Carbide Corporation, 1981, 1982
- vertebrate paleontology: Hay, Robert, 1885
- volcanic ash deposits: Landes, K.K., 1938
- water resources: Hay, Robert, 1891a
- Osage County**
- areal geology: Hawn, Frederick, 1866; Hirsch, J.W., 1966; O'Connor, H.G., 1955; Smith, A.J., 1905; Wallace, M.H., 1941
- clay deposits: Saunders, W.H., 1875, 1896
- clay mineralogy: Watkins, K.N., 1957
- coal deposits: Bailey, E.H.S., 1889a; Blake, L.L., 1889; Brady, L.L., 1976; Hartsock, D.L., 1970
- construction materials: Special Aggregates Committee, 1958; Stallard, A.H., 1966a
- data processing: Miller, F.E., 1969
- elements: Runnels, R.T., 1951a
- engineering geology: Fagerburg, T.L., 1977; Jewett, J.M., 1948a; U.S. Department of Agriculture, 1983b
- environmental geology: U.S. Army, Corps of Engineers, 1973c, 1974i, 1976d, 1982; U.S. Geological Survey, 1976g, 1979n
- geochemistry: Galle, O.K., 1964; Schroeder, D.C., 1982
- geomorphology: Mandel, R.D., 1984a
- ground water: O'Connor, H.G., 1955a, 1972a
- hydrology: Alexander, J.P., 1978; Kansas Water Office, 1983c; Livingston, N.D., 1981; Nighswonger, J.J., 1970
- igneous rocks: Adams, J.W., 1959
- invertebrate paleontology: Andersen, R.E., 1974, 1976; Conkin, B.M., 1954; Elias, M.K., 1950; Grinnell, R.S., Jr., 1958; Ireland, H.A., 1956; Koepnick, R.B., 1971, 1974; Maerz, R.H., Jr., 1976; Perlmutter, Barry, 1971, 1971a, 1975, 1975a; Richards, H.G., 1955, 1959; Strimple, H.L., 1950; Williams, C.C., 1941
- limestone deposits: Runnels, R.T., 1951
- mineral resources: Heidenreich, W.L., [n.d.]; O'Connor, H.G., 1955b
- paleobotany: Lokke, D.H., 1966
- paleoecology: Carlton, D.R., 1975; Hakes, W.G., 1972
- petroleum: Hilpman, P.L., 1961
- sedimentary rocks: Cubino, E.E., 1959; Crouch, M.L., 1971; Cubitt, J.M., 1975, 1979; Evans, J.K., 1967; Galle, O.K., 1966a, 1967; Hill, W.E., Jr., 1964; Keroher, G.C., 1939; Mathews, W.L., 1978; McMillan, N.J., 1955, 1956; Owen, D.E., 1959; Perkins, H.C., 1952; Ross, D.A., 1960; Schroeder, R.J., 1967, 1968; Wahrhaftig, Leon, 1952
- sedimentary structures: Mudge, M.R., 1956
- sediments: Schneider, H.I., 1976
- stratigraphy: Baptist, O.C., 1941; Becker, Karl, 1940; Cambridge, T.R., 1959; Dixon, V.R., 1960; Dorsey, M.T., 1978; Gilmore, John B., 1972; Girardot, S.L., 1962; Jeffords, R.M., 1940; Lamoreaux, S.B., 1983; Mendoza, H.A., 1959; Monger, J.W.H., 1961; Scafe, Don, 1963; Seevers, W.J., 1960; Stephenson, L.G., 1958; Wood, R.L., 1959; Zandell, C.H., 1963
- structural analysis: Stewart, G.F., 1967
- uranium ores: Bendix Field Engineering Corporation, 1982a; EG&G Geometrics, 1980b
- vertebrate paleontology: Mudge, B.F., 1873, 1874a, 1875b; Schoewe, W.H., 1956; Tway, L.E., 1982, 1982a; Wooster, L.C., 1935
- Osborne County**
- areal geology: Bayne, C.K., 1972a; Bramlette, M.N., 1925; Landes, K.K., 1930a; Lee, Wallace, 1953; Leonard, A.R., 1952; Ockerman, J.W., 1930, 1930a; Walters, C.P., 1952
- biostratigraphy: Manes, M.L., 1973
- clay deposits: Hill, W.E., Jr., 1963a; Huh, J.M., 1968
- engineering geology: Angino, E.E., 1972, 1972b; Anonymous, 1972a; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: U.S. Geological Survey, 1976, 1979g
- geochemistry: Search, Herman, 1939
- geomorphology: Hoppie, J.R., 1980
- ground water: Berry, D.W., 1948, 1951; Dingman, R.J., 1969; Durum, W.H., 1952a; Jorgensen, D.G., 1981a; Leonard, R.B., 1969d; Martin, R.B., 1968; Stullken, L.E., 1980
- hydrology: Alexander, J.P., 1978
- igneous rocks: Harrower, K.L., 1976
- invertebrate paleontology: Benson, R.H., 1967; Crick, R.E., 1976, 1978; Hattin, D.E., 1952, 1977; Worstell, P.J., 1966
- meteorites: Nininger, H.H., 1931, 1971m
- petroleum: Halepaska, J.C., 1972a; Harding, J.E., 1961; McCaslin, J.C., 1981c; Oros, M.O., 1972
- popular geology: Hockett, K., 1979
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Dubins, I.M., 1947; Runnels, R.T., 1949a
- soils: Dixon, R.M., 1960; Fleming, E.L., 1977; Travis, D.O., 1965, 1965a
- stratigraphy: Bayne, C.K., 1965; Bergman, D.W., 1950; Cobban, W.A., 1949; Frye, J.C., 1951e; Hattin, D.E., 1962, 1982; Hostetler, J.M., 1967, 1968; McElroy, M.N., 1965, 1965a; McKellar, T.R., 1962; Merriam, D.F., 1955b; Ver Wiebe, W.A., 1947
- structural analysis: Ansari, N.W., 1965
- uranium ores: Texas Instruments, Inc., 1978b; Union Carbide Corporation, 1982
- water resources: Burnett, R.D., 1984
- Ottawa County**
- areal geology: Mack, L.E., 1959, 1962; Schoewe, W.H., 1938b; Ver Wiebe, W.A., 1941a
- ceramic materials: Bauleke, M.P., 1968
- clay deposits: Belchic, George, 1915; Hill, W.E., Jr., 1963a; McMillan, W.D., 1948; Plummer, N.V., 1947
- construction materials: Petersen, G.E., 1977
- engineering geology: Anonymous, 1972a; Huang, T., 1978
- environmental geology: U.S. Geological Survey, 1976d, 1976h, 1979k, 1979o
- geochemical surveys: Union Carbide Corporation, 1979a, 1979b
- geomorphology: Hoppie, J.R., 1980; Landes, K.K., 1945
- ground water: Reed, T.B., 1981
- hydrology: Lindskov, K.L., 1969a
- invertebrate paleontology: Jones, A.W., 1898, 1899, 1903, 1905; Scott, R.W., 1967, 1968
- paleobotany: Baxter, R.W., 1954; Schoewe, W.H., 1945; Sternberg, C.H., 1884
- petroleum: Ebanks, W.J., Jr., 1978b
- sedimentary rocks: Swineford, Ada, 1947
- sedimentary structures: Bell, W.T., 1901; Franks, P.C., 1959b, 1969; Mizula, J.W., 1960; Shaffer, H.L., 1937; Ward, H.K., 1938
- soils: Atkinson, C.H., 1980; McCauley, J.R., 1984
- stratigraphy: Bergman, D.W., 1950; Franks, P.C., 1967, 1967a, 1979; Greene, F.C., 1910; Hattin, D.E., 1975; Seiler, C.D., 1951; Taylor, M.H., [Jr.], 1946, 1947, 1947b; Ver Wiebe, W.A., 1947
- structural analysis: Folger, Anthony, 1948
- uranium ores: Fair, C.L., 1982, 1982a; Geometrics, Inc., 1977, 1977a, 1977b; Texas Instruments, Inc., 1982, 1982d; Union Carbide Corporation, 1981a, 1982e
- vertebrate paleontology: Eaton, T.H., Jr., 1960; Parmenter, C.S., 1899; Washburn, J., 1978
- Pawnee County**
- areal geology: Bayne, C.K., 1972a; McLaughlin, T.G., 1949; Mohr, C.L., 1939, 1939a; Plummer, N.V., 1955
- clay deposits: Plummer, N.V., 1947
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: Kansas University, Center for Research, Inc., 1973; U.S. Army, Corps of Engineers, 1974e, 1977a; U.S. Department of Agriculture, 1976c, 1977c; U.S. Geological Survey, 1976c, 1979i
- geochemistry: Hart, Philip, 1977
- geophysical methods: Macfarlane, P.A., 1983
- geophysical surveys: Rupnik, J.J., 1959
- ground water: Avis, L.E., 1973; Cobb, P.M., 1979, 1983a; Fader, S.W., 1976, 1977, 1978; Fishel, V.C., 1952; Hathaway, L.R., 1978b, 1978c; Martin, R.B., 1968; Sophocleous, M.A., 1981; Stullken, L.E., 1976
- hydrology: Sophocleous, M.A., 1980
- meteorites: Fodor, R.V., 1969
- natural gas: Kornfeld, J.A., 1973
- petroleum: Costa, D.J., 1965; Halepaska, J.C., 1972a; Oros, M.O., 1972; Redman, K.G., 1947
- salt deposits: Goebel, E.D., 1972b; Kulstad, R.O., [n.d.]
- sedimentary rocks: Chaudhuri, Sambudhas, 1976

- environmental geology: Biegler, N.W., 1964; Burrton Task Force, 1984; Gogel, A.J., 1979, 1981a; Gosch, J.W., 1970; U.S. Geological Survey, 1976c, 1976d, 1976i, 1976k, 1979i, 1979k, 1979p, 1979r
- geochemical surveys: Union Carbide Corporation, 1979a, 1979c, 1979e
- geochemistry: Holser, W.T., 1963
- geomorphology: Ham, W.E., 1939, 1943
- geophysical surveys: Miller, R.D., 1984a
- ground water: Beede, J.W., 1898a; Cobb, P.M., 1983a; Fader, S.W., 1976, 1977, 1978; Halepaska, J.C., 1972d; Hathaway, L.R., 1978b, 1978c, 1980b; Kansas Geological Survey, 1942; Leonard, R.B., 1976, 1976a; Lohman, S.W., 1940; Martin, R.B., 1968; Olea, R.A., 1984, 1984a; Sophocleous, M.A., 1982b, 1983, 1984; Steps, W.E., 1973; Stulken, L.E., 1976; Whittemore, D.O., 1982b, 1983c, 1983d; Williams, C.C., 1946
- hydrology: Albert, C.D., 1964; Cobb, P.M., 1983; Green, D.W., 1973; Hargadine, G.D., 1978, 1979a; Hatfield, C.R., 1975; Kansas State Board of Health, 1954; Kansas Water Office, 1983d; Ward, J.C., 1970, 1971
- invertebrate paleontology: Benson, R.H., 1967; Gutentag, E.D., 1962; Stauffer, C.R., 1932; Tasch, Paul, 1959
- mineral resources: Hardy, R.G., 1964
- minerals: Swineford, Ada, 1953a
- mining geology: Snyder, J.D., 1961
- natural gas: Kornfeld, J.A., 1973; Moore, R.C., 1934c; Page, J.H., 1940
- paleobotany: Reiser, Ralph, 1960; Shaffer, B.L., 1964
- paleoecology: Ho, Tong-Yun, 1964, 1966; Tasch, Paul, 1960
- petroleum: Anonymous, 1942b; Crow, R.D., 1963; Dalrymple, Dal, 1936; Donnelly, E.B., 1965; Halepaska, J.C., 1972a; Imb, W.C., 1941, 1942a; Kornfeld, J.A., 1943; Ley, H.A., 1926b; Oros, M.O., 1965, 1972; Paddleford, J.T., 1941; Richardson, J.M., 1956, 1965; Skelly Oil Company, Geological Department, 1956; Steincamp, H.L., 1965
- popular geology: Hantla, J.P., Sr., 1972
- salt deposits: Bradshaw, R.L., 1969a; Brookins, D.G., 1970i; Cowan, D.W., 1940; Goebel, E.D., 1972b, 1972c; Hardy, R.G., 1967; Nixon, E.K., 1951b; Runnels, R.T., 1952a; Young, C.M., 1927
- sedimentary rocks: Dellwig, L.F., 1963, 1963a, 1968; Graff, H.J., 1970; Holser, W.T., 1963a, 1968; Jones, C.L., 1965; Swineford, Ada, 1955a
- sediments: Haworth, Erasmus, 1897f; Mutch, T.A., 1966
- soils: Rockers, J.J., 1966
- stratigraphy: Adkison, W.L., 1972; Courtier, W.H., 1934; Frye, J.C., 1941c; Gould, C.N., 1901b; Hiestand, T.C., 1938; McClellan, H.W., 1932; McElroy, M.N., 1965, 1965a; Swineford, Ada, 1954; Taylor, M.H., [Jr.], 1946, 1947, 1947a, 1947b
- structural analysis: Berendsen, Pieter, 1979; Dwivedi, R.L., 1983; Kelly, T.E., 1961; Lippert, R.H., 1964; Ricci, A.T., 1955; Williams, C.D., 1968
- structural features: Kelly, T.E., 1964
- uranium ores: Bendix Field Engineering Corporation, 1983h, 1983k; Fair, C.L., 1982a, 1982b, 1982c; Geometrics, Inc., 1977, 1977a; Texas Instruments, Inc., 1978c, 1978d, 1978h, 1982, 1982e, 1982f; Union Carbide Corporation, 1981a, 1982b
- water resources: Black, R.D., 1984; Selin, R.P., 1961; Stramel, G.J., 1967a
- zinc ores: Seward, P.A., 1982
- Republic County**
- areal geology: Burchett, R.R., 1972; Byrne, F.E., 1950a; Wing, M.E., 1930
- clay deposits: Plummer, N.V., 1947
- construction materials: Petersen, G.E., 1976
- engineering geology: U.S. Department of Agriculture, 1979b
- environmental geology: U.S. Department of Agriculture, 1979c, 1979d; U.S. Geological Survey, 1976h, 1979o, 1982a
- geochemical surveys: Union Carbide Corporation, 1979b, 1981c
- ground water: Berry, D.W., 1948, 1951; Fader, S.W., 1968; Fishel, V.C., 1948a
- invertebrate paleontology: Griffith, J.H., 1947; Hattin, D.E., 1977; Morrow, A.L., 1931
- paleoecology: Bottjer, D.J., 1978
- popular geology: Hockett, K., 1979
- remote sensing: Lidster, W.A., 1975
- sedimentary structures: Mizula, J.W., 1960
- sediments: Metz, H.L., 1954
- soils: Atkinson, C.H., 1967; Badgley, W.A., 1957 stratigraphy: Bayne, C.K., 1965a; Bergman, D.W., 1950; Cobban, W.A., 1949; Eshelman, R.E., 1974, 1974a; Franks, P.C., 1967, 1967a, 1979; Frye, J.C., 1951e; Hattin, D.E., 1962, 1965b, 1975; Hay, Robert, 1889; Lohman, S.W., 1948, 1948a
- uranium ores: Fair, C.L., 1982; Geometrics, Inc., 1977, 1977b, 1977c; Texas Instruments, Inc., 1982d; Union Carbide Corporation, 1981d, 1982e
- vertebrate paleontology: Eshelman, R.E., 1972, 1975
- water resources: Steichen, J.M., 1984
- Rice County**
- areal geology: Bayne, C.K., 1970a, 1971c, 1972a, 1974a; Fent, O.S., 1950a; Goebel, E.D., 1971b; Kansas Geological Society, 1938, 1959a; Lee, Wallace, [n.d.], 1949; Ver Wiebe, W.A., 1941a
- clay deposits: Plummer, N.V., 1947
- clay mineralogy: Twell, C.F., 1964
- elements: Twenhofel, W.H., 1917c
- engineering geology: Angino, E.E., 1971, 1971a, 1971b, 1971d, 1972, 1972b; Anonymous, 1972b, 1975a; Bayne, C.K., 1972; Belter, W.G., 1971; Boegly, W.J., Jr., 1965; Bradshaw, R.L., 1964, 1969, 1970; Dellwig, L.F., 1958, 1959, 1960; Empton, F.M., 1966, 1970; Fader, S.W., 1975; Fredericksen, W.F., 1972; Goebel, E.D., 1971, 1972a; Halepaska, J.C., 1971, 1971a, 1972, 1972b, 1972c; Holden, Constance, 1971, 1972; Jenks, G.H., 1979; Kopp, O.C., 1973; Lomenick, T.F., 1972; McClain, W.C., 1967, 1967a, 1967b, 1970; Moore, J.L., 1942; National Research Council, Committee on Radioactive Waste Management, 1970; Snyder, J.D., 1960; U.S. Army, Corps of Engineers, 1961a; U.S. Bureau of Reclamation, 1976, 1976a; Walters, R.F., 1976a, 1978; Wilhelm, C.J., 1936
- environmental geology: Biegler, N.W., 1964; Boch, A.L., 1972; Dahman, R.C., 1973; Lear, John, 1972; U.S. Atomic Energy Commission, 1971; U.S. Geological Survey, 1976d, 1979k
- geochemical surveys: Union Carbide Corporation, 1979a
- geochemistry: Kleihege, B.W., 1948
- geomorphology: Avanesians, R.C., 1972; Stewart, G.F., 1973, 1973a
- geophysical surveys: O'Connor, R.E., 1959; Pakiser, L.C., 1954, 1954a, 1956
- ground water: Cobb, P.M., 1983a; Crum, L.A., 1935; Hathaway, L.R., 1978b, 1978c; Keene, K.M., 1975, 1976, 1977; Knapp, R.M., 1975; Leonard, R.B., 1976, 1976a; Martin, R.B., 1968; Stulken, L.E., 1976; Turner, J.H., 1978
- hydrology: Albert, C.D., 1964; Cobb, P.M., 1983; Green, D.W., 1973; Hargadine, G.D., 1978, 1979a; Hatfield, C.R., 1975; Kansas State Board of Health, 1954; Kansas Water Office, 1983d; Zeller, E.J., 1971
- invertebrate paleontology: Scott, R.W., 1967, 1968
- magnesium ores: Frye, J.C., 1942c
- mineral resources: Hardy, R.G., 1964
- minerals: Kopp, O.C., 1974; Rogers, A.F., 1910
- mining geology: Bradshaw, R.L., 1970b; Snyder, J.D., 1961
- natural gas: Kornfeld, J.A., 1973; Page, J.H., 1940
- paleobotany: Shaffer, B.L., 1964
- paleoecology: Tasch, Paul, 1976
- petroleum: Amstutz, P.T., Jr., 1943, 1944; Anonymous, 1940b, 1942b; Brewer, J.E., 1965; Donnelly, E.B., 1965; Ehm, A.E., 1965a; Halepaska, J.C., 1972a; Landes, K.K., 1960; Ley, H.A., 1926b; McNeil, H.E., 1941; Oros, M.O., 1972; Richardson, J.M., 1965; Smith, M.W., 1959; Waller, R.K., 1964; Wright, B.J., 1965, 1965a
- salt deposits: Goebel, E.D., 1972b, 1972c; Holdaway, K.A., 1972; Homer, R.M., 1914; Lomenick, T.F., 1968; Nixon, E.K., 1951b
- sedimentary rocks: Dellwig, L.F., 1971; Dreschhoff, G.A.M., 1971; Glossa, J.M., 1982; Latta, B.F., 1942; McCracken, Earl, 1953, 1955; Swineford, Ada, 1947, 1955a
- sedimentary structures: Swineford, Ada, 1958
- sediments: Mutch, T.A., 1966
- soils: Hawando, Tamiric, 1978, 1979, 1983; Horsch, M.L., 1974
- stratigraphy: Courtier, W.H., 1934; Franks, P.C., 1967, 1967a, 1979; Hay, Robert, 1896c; McClellan, H.W., 1932; McElroy, M.N., 1965, 1965a; Moore, R.C., 1950; Scott, R.W., 1966; Swineford, Ada, 1954; Taylor, M.H., [Jr.], 1946, 1947, 1947a, 1947b; Twenhofel, W.H., 1926a
- structural analysis: Clark, S.K., 1947, 1948; Ehm, A.E., 1965; Gould, J.G., 1952; Hylton, G.K., 1960; Nicholas, R.H., 1954; Steele, A.D., 1982; Walters, R.F., 1950
- structural geology: Peterson, Rex M., 1979
- uranium ores: Fair, C.L., 1982a; Geometrics, Inc., 1977, 1977a; Texas Instruments, Inc., 1978c, 1982; Union Carbide Corporation, 1981a, 1982b
- vertebrate paleontology: McMullen, T.L., 1975
- well logging: Doveton, J.H., 1979, 1980; Myers, J.E., 1972, 1972a
- zinc ores: Seward, P.A., 1982
- Riley County**
- areal geology: Barrett, W.J., 1958; Byrne, F.E., 1949e; Hay, Robert, 1896; Hirsch, J.W., 1966; Jewett, J.M., 1941a; Kansas Geological Society, 1932; Mendenhall, R.A., 1958; Moore, R.C., 1918, 1959b, 1959c; Ragle, R.C., 1937; Schmits, L.J., 1981
- biostratigraphy: Miller, H.W., Jr., 1956; Wind, F.H., 1973
- ceramic materials: Siemens, M.A., 1982
- clay mineralogy: Asmussen, L.E., 1958; Brookins, D.G., 1972a; Bryson, W.R., 1959; Dulekoz, Erhan, 1969; Hargadine, G.D., 1959; McPherron, D.S., 1956; Russell, J.L., 1968; Stindl, Heribert, 1966
- construction materials: Clark, P.C., 1978; Dawley, E.R., 1940; Mudge, M.R., 1949a
- engineering geology: Brookins, D.G., 1972; Happ, S.C., 1961; Kansas Academy of Science, Geology Section, 1953; Lane, K.S., 1960, 1962; Strain, R.E., 1977; Yarger, H.L., 1973c
- environmental geology: Bond, S.V., 1980; Gosch, J.W., 1970; Hall, R.A., 1979; Knight, C.W., 1971; Shanklin, G.P., 1980; U.S. Army, Corps of Engineers, 1965c, 1971i, 1972g, 1976c; U.S. Geological Survey, 1976h, 1979e; Webb, R.M., 1962, 1963; Weinzierl, E.J., 1968, 1969
- geochemical surveys: Union Carbide Corporation, 1979b
- geochemistry: Denne, J.E., 1984; Murphy, M.E., 1972; Reitz, B., 1980; Yarger, H.L., 1973d
- geochronology: Naeser, C.W., 1971; Zartman, R.E., 1977
- geomorphology: Baehr, W.M., 1954; Beck, H.V., 1961, 1961a; Brookins, D.G., 1969a; Bussing, C.E., 1984; Chelikowsky, J.R., 1974, 1976; Denne, J.E., 1979; Fish, M.C., 1953, 1953a; Hoover, W.F., 1932, 1936; Mudge, M.R., 1955; Ratzlaff, J.R., 1978; Schoewe, W.H., 1939
- geophysical methods: Steeples, D.W., 1976a

- 1949; Franks, P.C., 1967, 1967a; Frye, J.C., 1943a, 1951f; Hattin, D.E., 1962, 1965b, 1965c, 1965d, 1975, 1977b, 1978; Hay, Robert, 1889; Hostettler, J.M., 1967, 1968; Koester, E.A., 1929; McElroy, M.N., 1965, 1965a; Moore, R.C., 1950; Stratton, J.L., 1942
- structural analysis: Walters, R.F., 1950, 1953
- uranium ores: Texas Instruments, Inc., 1978b, 1978c; Union Carbide Corporation, 1982, 1982b
- vertebrate paleontology: Hibbard, C.W., 1939d; Stewart, J.D., 1978a; Zakrzewski, R.J., 1982
- Saline County**
- absolute age: Steeples, D.W., 1981c
- areal geology: Bramlette, M.N., 1925; Lee, Wallace, 1949; Merriam, D.F., 1967b; Moore, R.C., 1959b, 1959c; Sigma Gamma Epsilon, Alpha Nu Chapter, [n.d.]; Ver Wiebe, W.A., 1941a; Waterman, W.D., [n.d.]
- clay deposits: Plummer, N.V., 1947
- data processing: Davis, J.C., 1967
- engineering geology: Anonymous, 1972a; Irza, T.J., 1967; U.S. Bureau of Reclamation, 1976, 1976a
- environmental geology: Bucher and Willis, Consulting Engineers, 1973; Gogel, A.J., 1979, 1981a; Knutson, Herbert, 1971; U.S. Army, Corps of Engineers, 1972e, 1972f, 1973, 1975c; U.S. Geological Survey, 1976d, 1979k
- geochemical surveys: Union Carbide Corporation, 1979a
- geomorphology: Cline, R.L., 1974; Hoppie, J.R., 1980
- ground water: Beede, J.W., 1898a; Berry, D.W., 1948, 1951; Gillespie, J.B., 1980, 1981; Gogel, A.J., 1981; Latta, B.F., 1949; McElwee, C.D., 1981, 1981a, 1981b; Reed, T.B., 1981; Whittemore, D.O., 1981, 1981a, 1983b
- gypsum deposits: Grimsley, G.P., 1899a
- hydrology: Dunlap, L.E., 1977, 1978; Hargadine, G.D., 1978, 1979a; Lindskov, K.L., 1969
- invertebrate paleontology: Feldmann, R.M., 1978, 1978a; Jones, A.W., 1898, 1899, 1903, 1905; Scott, R.W., 1978
- mineral resources: Bauleke, M.P., 1967
- minerals: Rogers, A.F., 1901
- paleobotany: Sternberg, C.H., 1884
- petroleum: Steder, R.M., 1960; Talbott, W.C., 1954
- sand and gravel deposits: Bowdish, F.W., 1952
- sedimentary rocks: Swineford, Ada, 1947
- sedimentary structures: Franks, P.C., 1969; Mizula, J.W., 1960
- seismology: Steeples, D.W., 1977a
- soils: Cline, A.J., 1959; Matthews, C.W., 1949
- stratigraphy: Franks, P.C., 1967, 1967a, 1979; Hiestand, T.C., 1938; Taylor, M.H., [Jr.], 1946, 1947, 1947a, 1947b
- structural analysis: Pan, Chih-Wei, 1959; Thatcher, R.J., 1961
- uranium ores: Fair, C.L., 1982a; Geometrics, Inc., 1977, 1977a; Texas Instruments, Inc., 1982; Union Carbide Corporation, 1981a
- Scott County**
- areal geology: Bayne, C.K., 1972a; Edson, F.C., 1945; Liberal Geological Society, [n.d.], 1960; Lupton, C.T., 1922a; Maher, J.C., 1946, 1947; Waite, H.A., 1947
- biostratigraphy: Thompson, T.L., 1963b, 1968
- data processing: Yukler, M.A., 1979
- engineering geology: Angino, E.E., 1972, 1972b; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c
- environmental geology: U.S. Department of Agriculture, 1976e, 1977c; U.S. Geological Survey, 1976j, 1979q
- geomorphology: Frye, J.C., 1941a
- ground water: Baker, C.H., Jr., 1983; Bradley, Edward, 1957; Dulas, R.L., 1978; Dunlap, L.E., 1981a, 1981b, 1984a; Frye, J.C., 1949a; Gillespie, J.B., 1973, 1976; Gutentag, E.D., 1976c; Hargadine, G.D., 1974; Hathaway, L.R., 1975; Johnson, C.R., 1954; Krieger, R.A., 1957; Kume, Jack, 1982, 1984; McCall, K.D., 1944; Moss, R.G., 1933; Pabst, M.E., 1974, 1977b, 1982a; Sophocleous, M.A., 1981; Spinazola, J.M., 1982; Stullken, L.E., 1974; Waite, H.A., 1940a, 1941; Yukler, M.A., 1976, 1977
- hydrology: Sophocleous, M.A., 1980
- invertebrate paleontology: Nodine-Zeller, D.E., 1972; Thompson, T.L., 1962, 1965, 1965a
- meteorite localities: Farrington, O.C., 1906
- meteorites: Kunz, G.F., 1906, 1907; Mason, Brian, 1970; Merrill, G.P., 1906, 1906a, 1912
- minerals: Franks, P.C., 1959c
- paleobotany: Segal, R.H., 1965
- petroleum: Aukserman, R.A., 1959a; DeWoody, O.A., 1940; Halepaska, J.C., 1972a; Norton, G.H., 1938; Oros, M.O., 1972
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Abels, T.A., 1958, 1959
- soils: Cipra, J.E., 1970; Gwin, R.E., 1963; Sallee, K.H., 1965
- stratigraphy: Frye, J.C., 1956; Miller, H.W., Jr., 1958c
- uranium ores: Bendix Field Engineering Corporation, 1983i; Geodata International, Inc., 1981c
- vertebrate paleontology: Sternberg, C.H., 1907a
- water resources: Coburn, F.D., 1913; Epperson, E.H., 1913; Gutentag, E.D., 1972b
- well logging: Canard, C.R., 1966
- zinc ores: Evans, David Le Count, 1962
- Sedgwick County**
- areal geology: Adkison, W.L., 1963; Kansas Geological Society, 1932, 1959a; Ley, H.A., 1926; Lohman, S.W., 1940c; Lukert, L.H., 1949; Mead, J.R., 1898; Philbrick, E.P., 1932; Ver Wiebe, W.A., 1934a, 1941a; Williams, C.C., 1949
- copper ores: Berendsen, Pieter, 1981a; Hill, W.E., Jr., 1967; Lambert, M.W., 1979, 1981; Ripley, E.M., 1980a; Waugh, T.C., 1974, 1976
- engineering geology: Berg, J.R., 1982; Darrow, D.D., 1974; U.S. Bureau of Reclamation, 1977; Walters, R.F., 1976a, 1978
- enhanced recovery: Heithecker, R.E., 1939, 1939a
- environmental geology: Biegler, N.W., 1964; Gogel, A.J., 1979, 1981a; James, I.C., II, 1968; O'Connor, R.E., 1984; U.S. Army, Corps of Engineers, 1974c, 1975d, 1976a, 1982b; U.S. Department of Agriculture, 1976a; U.S. Environmental Protection Agency, 1979; U.S. Geological Survey, 1976k, 1979r; Wiseman, R.F., 1977
- geochemical surveys: Union Carbide Corporation, 1979e
- geochemistry: Jones, O.S., 1938a
- geomorphology: Ham, W.E., 1939, 1943; Michaelson, Louis, 1938
- geophysical surveys: Noah, C.G., 1956
- ground water: Bagheri, Saeed, 1980; Beck, H.V., 1955a; Dabiri, H.E., 1969; Halepaska, J.C., 1972d; Hathaway, L.R., 1980b; Kansas Geological Survey, 1942; Kansas Water Resources Board, 1962h; Knapp, R.M., 1975; Lane, C.W., 1962, 1965, 1965a; Lawrence, R.E., 1963; Leonard, R.B., 1972, 1976, 1976a; Lohman, S.W., 1940, 1940b, 1942; McElwee, C.D., 1979; Meinzer, O.E., 1914; Olea, R.A., 1984, 1984a; Sophocleous, M.A., 1982b, 1983, 1984; Stramel, G.J., 1954, 1956, 1967; Turner, J.H., 1978; Whittemore, D.O., 1982; Williams, C.C., 1947; Wilson, F.W., 1982a
- gypsum deposits: Crane, W.R., 1901a
- hydrology: Albert, C.D., 1964; Alexander, J.P., 1978; Ellis, D.W., 1963; Green, D.W., 1973; Hargadine, G.D., 1978, 1979a; Hatfield, C.R., 1975; Kansas State Board of Health, 1954; Kansas Water Office, 1983d; Latta, B.F., 1940; Peck, C.O., 1978; Perry, C.A., 1984b
- invertebrate paleontology: Tasch, Paul, 1958a, 1961a, 1961e, 1962a
- limestone deposits: Brady, L.L., 1972
- metal ores: Long, D.T., 1976
- petroleum: Bunte, A.S., 1939; Cole, V.B., 1960; Goebel, E.D., 1959; Howell, Orvie, 1965; Kirk, M.S., Jr., 1960; Morgan, F.W., 1964; Scott, R.L., 1960; Shawver, D.D., 1965, 1965a; Ver Wiebe, W.A., 1946; Wright, B.J., 1960
- salt deposits: Nixon, E.K., 1951b; Tien, Pei-Lin, 1965
- sand and gravel deposits: Bowdish, F.W., 1952
- sedimentary rocks: Dellwig, L.F., 1971; Graff, H.J., 1970; Griffith, G.L., 1981; Swineford, Ada, 1955a
- sedimentation: Tasch, Paul, 1964b
- soils: Penner, H.L., 1979
- stratigraphy: Adkison, W.L., 1972; Brown, S.S.L., 1966, 1967; Carmody, R.A., 1947; Courtier, W.H., 1934; Frye, J.C., 1941c; Gould, C.N., 1901b; Hiestand, T.C., 1938; McElroy, M.N., 1965, 1965a; Swineford, Ada, 1954; Tasch, Paul, 1961c, 1963; Taylor, M.H., [Jr.], 1946, 1947, 1947a, 1947b; Winchell, R.L., 1957, 1957a
- structural analysis: Butler, J.B., 1960; Dwivedi, R.L., 1983; Kelly, T.E., 1961; Lippert, R.H., 1964; Vickery, W.R., 1932; Wynn, L.L., 1959
- structural features: Kelly, T.E., 1964
- uranium ores: Bendix Field Engineering Corporation, 1983k; Berg, J.R., 1979; Fair, C.L., 1982b; Texas Instruments, Inc., 1978h, 1982f
- water resources: Black and Veatch Engineers, 1952; Black, R.D., 1984; Crawford, R.E., 1973; Hess, R.H., 1952; House, A.E., 1955; Keplinger and Wanemacher Engineers, 1954; Lawrence, R.E., 1940, 1940a; Petri, L.R., 1964; U.S. Bureau of Reclamation, 1980, 1981; Wichita Mayor's Advisory Committee, 1956; Wichita [City of], 1940
- zinc ores: Seward, P.A., 1982
- Seward County**
- areal geology: Barnes, V.E., 1970; Byrne, F.E., 1948c; King, W.R., Jr., [n.d.], 1956a; Liberal Geological Society, [n.d.]
- cartography: Williams, T.H.L., 1981
- construction materials: Hargadine, G.D., 1970a
- environmental geology: U.S. Geological Survey, 1976a, 1979h, 1981a
- geochemical surveys: Union Carbide Corporation, 1980
- geophysical surveys: Macfarlane, P.A., 1982
- ground water: Dealy, M.T., 1984; Frye, J.C., 1949a; Gutentag, E.D., 1981a; Hathaway, L.R., 1978; Kume, Jack, 1982; Pabst, M.E., 1976, 1979b; Prill, R.C., 1976, 1977; U.S. Geological Survey, 1966; Whittemore, D.O., 1984a, 1984d
- hydrology: Cobb, P.M., 1983; McLaughlin, T.G., 1947; Schumm, S.A., 1963
- invertebrate paleontology: Tasch, Paul, 1961
- natural gas: Bartle, G.G., 1939, 1940, 1940a, 1940b, 1940c; Garlough, J.L., 1941; Jemison, R.M., Jr., 1978
- paleoecology: Ho, Tong-Yun, 1964, 1966; Swanson, D.C., 1968d, 1968e
- petroleum: Jacques, A.N., 1959; Strohmeier, R.C., 1959, 1959a, 1959b
- remote sensing: Jacobberger, P.A., 1981
- salt deposits: Kulstad, R.O., [n.d.]
- sand and gravel deposits: Hardy, R.G., 1968
- sedimentary rocks: Abels, T.A., 1958, 1959; Franz, R.H., 1984
- sediments: Swineford, Ada, 1946a
- soils: Dickey, H.P., 1965; Dixon, R.M., 1960; Prill, R.C., 1967
- stratigraphy: Adams, G.I., 1902; Cole, V.B., 1975; Frye, J.C., [n.d.], 1941b; Gill, H.W., Jr., 1961; Malone, D.J., 1962; Renfroe, C.A., 1948; Severy, C.L., 1975; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983g; Geodata International, Inc., 1980; Texas Instruments, Inc., 1978e

- uranium ores: Bendix Field Engineering Corporation, 1983b; Fair, C.L., 1982c; Texas Instruments, Inc., 1978c, 1978d, 1982c; Union Carbide Corporation, 1982b
- water resources: Stramel, G.J., 1967a
- well logging: Doveton, J.H., 1984
- Stanton County**
- areal geology: Darton, N.H., 1920; Gutentag, E.D., 1963; Latta, B.F., 1941; Liberal Geological Society, 1960; McManus, D.A., 1959a; Scott, G.R., 1968
- cartography: Williams, T.H.L., 1981
- engineering geology: Colton, R.B., 1975
- environmental geology: Allen, E.G., 1980; U.S. Geological Survey, 1976a, 1979d, 1979h
- geochemical surveys: Union Carbide Corporation, 1980
- geomorphology: Frye, J.C., 1941a
- ground water: Dealy, M.T., 1984; Fader, S.W., 1962, 1963, 1963a, 1964; Frye, J.C., 1949a; Gutentag, E.D., 1981a; Hathaway, L.R., 1978; Kume, Jack, 1982, 1984; Latta, B.F., 1942a; McLaughlin, T.G., 1940; Nuzman, C.E., 1965a; Pabst, M.E., 1976, 1979b; Prill, R.C., 1966a, 1976, 1977; Winslow, J.D., 1964, 1964a, 1968
- hydrology: Schumm, S.A., 1963; Winslow, J.D., 1966
- natural gas: Bartle, G.G., 1939, 1940, 1940a, 1940b, 1940c
- petroleum: Rupp, G.E., 1959
- sedimentary rocks: Abdullah, T.Y., 1983; White, L.M., 1981
- soils: Cipra, J.E., 1970; Fleming, E.L., 1961
- stratigraphy: Cole, V.B., 1975; Gill, H.W., Jr., 1961; Gutentag, E.D., 1963a; Malone, D.J., 1962; McManus, D.A., 1959, 1960; Renfroe, C.A., 1948; Severy, C.L., 1975; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983c; McCam, D.W., 1982; Purson, J.D., 1979; Texas Instruments, Inc., 1978e, 1978f, 1982b
- vertebrate paleontology: O'Brien, P.J., 1978
- Stevens County**
- areal geology: Barnes, V.E., 1970; King, W.R., Jr., [n.d.]; McLaughlin, T.G., 1946
- biostratigraphy: Goebel, E.D., 1969a, 1979a; Thompson, T.L., 1968
- construction materials: Hargadine, G.D., 1970b
- environmental geology: U.S. Geological Survey, 1976a, 1979h, 1981a
- geochemical surveys: Union Carbide Corporation, 1980
- geophysical surveys: Karcher, J.C., 1935
- ground water: Dealy, M.T., 1984; Frye, J.C., 1949a; Gutentag, E.D., 1981a; Hathaway, L.R., 1978; Kume, Jack, 1982; Latta, B.F., 1942a; Pabst, M.E., 1976, 1979b; Prill, R.C., 1966a, 1976, 1977; U.S. Geological Survey, 1966
- hydrology: McLaughlin, T.G., 1947; Schumm, S.A., 1963
- invertebrate paleontology: Thompson, T.L., 1965, 1965a
- meteorites: Nininger, H.H., 1937, 1971d
- natural gas: Bartle, G.G., 1939, 1940, 1940a, 1940b, 1940c; Garlough, J.L., 1941; Taylor, G.L., 1934
- salt deposits: Latta, B.F., 1942b
- sedimentary rocks: Abdullah, T.Y., 1983; Abels, T.A., 1958, 1959; Franz, R.H., 1984; White, L.M., 1981
- soils: Dickey, H.P., 1961; Dixon, R.M., 1960
- stratigraphy: Cole, V.B., 1975; Gill, H.W., Jr., 1961; Malone, D.J., 1962; McManus, D.A., 1959, 1960; Renfroe, C.A., 1948; Severy, C.L., 1975; Taylor, G.L., 1931; Worden, J.A., 1959, 1960
- structural analysis: Osborn, J.B., 1962
- uranium ores: Bendix Field Engineering Corporation, 1983a, 1983g; Geodata International, Inc., 1980; Texas Instruments, Inc., 1978e
- Sumner County**
- areal geology: Ley, H.A., 1926; Lukert, L.H., 1949; Millison, C.D., 1927; Walters, K.L., 1961
- biostratigraphy: Tasch, Paul, 1962e
- construction materials: Hargadine, G.D., 1964
- copper ores: Berendsen, Pieter, 1981a; Hill, W.E., Jr., 1967; Lambert, M.W., 1979, 1981; Ripley, E.M., 1980a; Waugh, T.C., 1974, 1976
- engineering geology: U.S. Bureau of Reclamation, 1977
- environmental geology: Gogel, A.J., 1979, 1981a; U.S. Army, Corps of Engineers, 1975d; U.S. Department of Agriculture, 1968, 1976a; U.S. Geological Survey, 1976k, 1979r, 1983
- geochemical surveys: Union Carbide Corporation, 1979, 1979e, 1982c
- geomorphology: Ham, W.E., 1939, 1943
- ground water: Failyer, G.H., 1889; Kansas Geological Survey, 1942; Knapp, R.M., 1975; Leonard, R.B., 1972
- hydrology: Green, D.W., 1973; Hargadine, G.D., 1978, 1979a; Kansas Water Office, 1983d
- invertebrate paleontology: Lalicker, C.G., 1932; Maxey, J.R., 1932; Tasch, Paul, 1961e
- metal ores: Long, D.T., 1976
- meteorites: Gillerman, Elliot, 1967
- mineral resources: Hardy, R.G., 1964
- natural gas: Gutru, R.J., 1965
- petroleum: Bass, B.L., 1959; Calvin, D.G., 1963, 1965; Goebel, E.D., 1959; Knight, W.V., 1976; Snow, D.R., 1925
- sedimentary rocks: Graff, H.J., 1970; Swineford, Ada, 1955a; Trotter, S.F., 1982; White, S.M., 1960
- sedimentation: Tasch, Paul, 1964b
- soils: Fenwick, R.W., 1979
- stratigraphy: Adams, G.I., 1896; Adkison, W.L., 1972; Andersen, R.E., 1982; Brown, S.S.L., 1966, 1967; Buchanan, G.S., 1925; Courtier, W.H., 1934; Gould, C.N., 1901b; McNeeley, J.B., 1973; Schulte, G.S., 1959; Swineford, Ada, 1954; Trotter, S.F., 1981; Ver Wiebe, W.A., 1937b; Winchell, R.L., 1957, 1957a
- structural analysis: Butler, J.B., 1960; Dwivedi, R.L., 1983; Kelly, T.E., 1961; Soucek, C.H., 1959; Wynn, L.L., 1959
- structural features: Kelly, T.E., 1964
- uranium ores: Bendix Field Engineering Corporation, 1983k; Eutsler, R.L., 1982; Fair, C.L., 1982b; Texas Instruments, Inc., 1978h, 1978j, 1982f, 1982g; Union Carbide Corporation, 1982a
- water resources: U.S. Bureau of Reclamation, 1980, 1981, 1981a
- Thomas County**
- areal geology: Frye, J.C., 1945c; Liberal Geological Society, [n.d.]
- environmental geology: Gosch, J.W., 1970; U.S. Geological Survey, 1976b, 1979j
- geomorphology: Frye, J.C., 1950; Hoppie, J.R., 1980
- ground water: Hathaway, L.R., 1979a; Jenkins, E.D., 1975; Keene, K.M., 1969; Leonard, R.B., 1969d; McClain, T.J., 1983; Pabst, M.E., 1971, 1973, 1976a; Sophocleous, M.A., 1981a, 1982c
- hydrology: Steichen, J.M., 1982
- invertebrate paleontology: Leonard, A.B., 1943
- isotopes: Watney, W.L., 1979
- paleoecology: Lammons, J.M., 1969, 1970
- petroleum: Goebel, E.D., 1960c
- sediments: Swineford, Ada, 1945, 1975a
- soils: Barker, W.L., 1980; Bradley, G.A., 1981; Jaafar, M.N., 1978; Naddih, B.I., 1960
- stratigraphy: Hockens, S.N., 1959; McMurray, K.S., 1962; Walton, R.G., 1960
- structural analysis: Mehl, R.L., 1959; Rohrbough, C.A., 1956
- uranium ores: Bendix Field Engineering Corporation, 1983b; Geodata International, Inc., 1981
- well logging: Canard, C.R., 1966
- Trego County**
- areal geology: Bayne, C.K., 1972a; Byrne, F.E., 1947; Collins, J.B., 1947; Hodson, W.G., 1965; Kansas Geological Society, 1938a; Landes, K.K., 1939b; Leonard, A.R., 1961; Liberal Geological Society, 1960; Lupton, C.T., 1922a; Russell, W.L., 1929a; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952; Twenhofel, W.H., 1925c; Weskamp, D.P., 1961
- biostratigraphy: Kolb, K.K., 1975; Martin, L.G., 1984
- construction materials: Frye, J.C., 1946d
- engineering geology: Angin, E.E., 1972, 1972i; Bayne, C.K., 1972; Halepaska, J.C., 1972b, 1972c; U.S. Bureau of Reclamation, 1964, 1971a, 1972, 1974
- environmental geology: Knutson, Herbert, 1971; U.S. Geological Survey, 1976, 1976b, 1976c, 1976j, 1979g, 1979i, 1979j, 1979q
- geophysical methods: Gauthier, V.U., 1956
- geophysical surveys: Koester, E.A., 1959
- ground water: Berry, D.W., 1948, 1951; Durum, W.H., 1951; Leonard, R.B., 1969, 1969a, 1970, 1971, 1975; Runyon, H.E., 1936, 1937, 1940; Stullken, L.E., 1980
- hydrology: Leonard, R.B., 1972a; Ratzlaff, J.R., 1982; Yu, Yun-Sheng, 1984
- invertebrate paleontology: Deiss, A.P., 1978; Frerichs, W.E., 1981; Frey, R.W., 1971; Loetterle, G.J., 1937, 1937a; Matsumoto, Tatsuro, 1958
- meteorites: Miller, H.W., Jr., 1969a
- minerals: Swineford, Ada, 1954a
- paleoecology: Archer, A.W., 1980, 1983; Frey, R.W., 1969, 1969a, 1969b, 1970, 1972; Stewart, J.D., 1984
- paleomagnetism: Shive, P.N., 1974
- petroleum: Ash, R.G., 1965; Davis, J.C., 1977; Halepaska, J.C., 1972a; Oros, M.O., 1972; Roberts, A.A., 1984
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Dubins, I.M., 1947; Hattin, D.E., 1981a; Rannels, R.T., 1949a; Stoneburner, R.K., 1982
- soils: Glover, R.K., 1968
- stratigraphy: Broadhead, G.C., 1882a; Frye, J.C., 1956; Hattin, D.E., 1962, 1965c, 1965d, 1977b, 1978, 1982; Hibbard, C.W., 1944c; Irion, R.L., 1963; King, N.R., 1972, 1973; McElroy, M.N., 1965, 1965a; McKellar, T.R., 1962; Merriam, D.F., 1955b; Miller, H.W., Jr., 1958c; Stratton, J.L., 1942; Ver Wiebe, W.A., 1947
- structural analysis: Hays, J.K., 1961
- uranium ores: Bendix Field Engineering Corporation, 1983b, 1983i; Geodata International, Inc., 1981, 1981c; Texas Instruments, Inc., 1978b, 1978c; Union Carbide Corporation, 1982, 1982b
- vertebrate paleontology: Bardack, David, 1965a, 1976; Brodkorb, Pierce, 1962; Dunkle, D.H., 1946; Hibbard, C.W., 1945b, 1971a; Holman, J.A., 1971a, 1972, 1975, 1981; Miller, H.W., Jr., 1958a; Williston, S.W., 1901a; Wilson, R.L., 1968, 1968a, 1968b; Zakrzewski, R.J., 1982
- Wabaunsee County**
- areal geology: Beck, H.V., 1955, 1959; Bennett, John, 1896a; Byrne, F.E., [n.d.]; Hirsch, J.W., 1966; Jewett, J.M., 1958a, 1961b, 1962; Johnson, William D., Jr., 1967a; Kansas Geological Society, 1932, 1936, 1949b, 1959a; Moore, R.C., 1936b, 1959b, 1959c; Mudge, M.R., 1959, 1962; Mulenburg, G.E., 1957a, 1958, 1961b, 1962a; Ockerman, J.W., 1935; Sigma Gamma Epsilon, Alpha Chapter, 1951; Smith, R.K., 1951
- biostratigraphy: Miller, H.W., Jr., 1956; Wind, F.H., 1973
- clay mineralogy: Asmussen, L.E., 1958
- construction materials: Mudge, M.R., 1950
- data processing: Demirmen, Ferruh, 1972

- 1969c, 1975b; U.S. Geological Survey, 1976e, 1979f
- geochemical surveys: Union Carbide Corporation, 1979d, 1982d
- geochemistry: Runnels, R.T., 1953
- geochronology: Pearn, W.C., 1959
- geomorphology: Davis, J.C., 1955, 1957; Ham, W.E., 1939, 1943
- geophysical surveys: Hambleton, W.W., 1955; Jarjur, S.Z., 1973
- ground water: Fader, S.W., 1975b
- hydrology: Marcher, M.V., 1984; Nighswonger, J.J., 1970
- igneous rocks: Adams, J.W., 1959; O'Connor, H.G., 1968b; Weidman, Samuel, 1933
- invertebrate paleontology: Cocke, J.M., 1968, 1970, 1970a, 1970b; Jacques, T.E., 1964; Jewett, J.M., 1929; Pabian, R.K., 1974c, 1979b; Robinson, S.W., 1981; Squires, J.M., 1952
- metamorphic rocks: Twenhofel, W.H., 1917, 1917a
- mineral resources: Clark, J.G., 1970; Hartley, D.D., 1963; Hornbaker, A.L., 1960; Schrader, F.C., 1906
- minerals: Tien, Pei-Lin, 1969a, 1969b
- natural gas: Charles, H.H., 1929
- nonmetal deposits: Schrader, F.C., 1905a
- paleobotany: Heckel, P.H., 1975a
- paleoecology: Boardman, D.R., II, 1984a; Brondos, M.D., 1983, 1983a; Frost, J.G., 1968, 1968a; Miller, B.B., 1978; Senich, M.A., 1975; Spencer, R.S., 1978; Wood, R.H., II, 1977; Wray, J.L., 1964
- petroleum: Bartow, Edward, 1905a; Benson, D.L., 1923; Calvin, D.G., 1963, 1965; Dains, F.B., 1896; Foster, W.H., 1929; Goebel, E.D., 1962; Mahony, B.J., 1964; Moore, R.C., 1917, 1921b; Schlinsog, D.G., 1982; Schrader, F.C., 1905; Whitaker, W.A., 1918
- sedimentary rocks: Adams, D.J., 1959; Conley, C.D., 1974, 1977; Davis, J.C., 1959; Dawson, W.C., 1984; Edson, M.W., 1984; Galle, O.K., 1966a, 1967; Harbaugh, J.W., 1959, 1960, 1960a, 1962, 1965; Hayes, J.B., 1967; Kettenbrink, E.C., 1971; Kidder, D.L., 1982; Minor, J.A., 1969; Mitchell, J.C., 1981, 1981a; Moussavi-Harami, Reza, 1980, 1980a, 1984; Nelson, D.L., 1978; Rutan, Debra, 1980; Schroeder, R.J., 1967, 1968; Schutter, S.R., 1983; Woody, M.D., 1984
- sedimentary structures: Bower, R.R., 1961; Hall, B.P., 1961; Hamblin, W.K., 1969; Manger, W.L., 1970
- sedimentation: Ball, S.M., 1971; Wagner, H.C., 1964
- stratigraphy: Ball, S.M., 1964; Berger, W.R., 1918; Brown, W.G., 1958; Eastwood, W.P., 1958; Haggiagi, M.A., 1970; Haworth, Erasmus, 1894g; Hay, Robert, 1887b; Heckel, P.H., 1978, 1978b, 1979a; Ireland, H.A., 1955; Schulte, G.S., 1958, 1959; Wagner, H.C., 1953; Winchell, R.L., 1957, 1957a
- structural analysis: Chelikowsky, J.R., 1947; Wagner, H.C., 1961
- uranium ores: Bendix Field Engineering Corporation, 1981; Derby, J.R., 1982; Texas Instruments, Inc., 1978i, 1982a
- water resources: U.S. Army, Corps of Engineers, 1970c
- Woodson County**
- areal geology: Bennett, John, 1896; Jewett, J.M., 1960b; Kansas Geological Society, 1932, 1939a; Muilenburg, G.E., 1960b; Sigma Gamma Epsilon, Alpha Nu Chapter, 1966, 1969; Wagner, H.C., 1954, 1961a; Wallace, M.H., 1941; Yates, J.A., 1909
- biostratigraphy: Thompson, T.L., 1968
- clay mineralogy: Jamkhindikar, S.M., 1969, 1970
- coal deposits: Bowsher, A.L., 1943
- enhanced recovery: Powell, J.P., 1958, 1959
- environmental geology: Gosch, J.W., 1970; See-Kan RC&D Project, Inc., 1972; U.S. Geological Survey, 1976e, 1976g, 1979f, 1979n
- geochemical surveys: Union Carbide Corporation, 1979d, 1982d
- geochronology: Pearn, W.C., 1959
- geomorphology: Ham, W.E., 1939, 1943; Merriam, D.F., 1956b; Twenhofel, W.H., 1917b, 1919
- geophysical surveys: Hambleton, W.W., 1955; Hartenberger, R.A., 1959; Jarjur, S.Z., 1973
- ground water: Fader, S.W., 1975b
- hydrology: Livingston, N.D., 1981; Marcher, M.V., 1984; McCauley, J.R., 1974
- igneous rocks: Adams, J.W., 1959; Bickford, M.E., 1969, 1971, 1971a; Cullers, R.L., 1982a; Franks, P.C., 1965, 1966, 1971; Hay, Robert, 1883; O'Connor, H.G., 1968b; Tolman, Carl, 1939; Twenhofel, W.H., 1925, 1925a, 1926; Weidman, Samuel, 1933; Wheeler, H.E., 1966
- intrusions: Knight, G.L., 1932
- intrusive features: Sleeman, L.H., Jr., 1959
- invertebrate paleontology: Cocke, J.M., 1970, 1970a, 1970b; Merchant, F.E., 1939; Thompson, M.L., 1957; Thompson, T.L., 1965, 1965a; Toomey, D.F., 1972, 1974
- lead ores: Bastin, E.S., 1939a
- metamorphic rocks: Berg, J.R., 1980; Twenhofel, W.H., 1917, 1917a, 1921, 1928
- mica deposits: Franks, P.C., 1959
- mineral deposits: Mudge, B.F., 1881a; Schaffner, D.C., 1939a
- mineral resources: Clark, J.G., 1970; Hartley, D.D., 1963; Hornbaker, A.L., 1960
- minerals: Franks, P.C., 1959a; Smith, M.P., 1984
- paleobotany: Carter, J.F., 1960; Hay, Robert, 1887d; Hutter, T.J., 1976; Toomey, D.F., 1969a
- paleoecology: Brondos, M.D., 1983, 1983a; Frost, J.G., 1968, 1968a; Hakes, W.G., 1972; Wood, R.H., II, 1977
- petroleum: Calvin, D.G., 1963, 1965; Ebanks, W.J., Jr., 1974a, 1974b; Gould, G.F., 1975; Mahony, B.J., 1964; Moore, D.W., 1925; Moore, R.C., 1917
- sedimentary rocks: Adams, D.J., 1959; Crouch, M.L., 1971; Galle, O.K., 1966a, 1967; Goebel, E.D., 1969b, 1969c; Lane, D.W., 1958; Lardner, J.E., 1984; Moussavi-Harami, Reza, 1980, 1980a, 1984; Rutan, Debra, 1980; Schroeder, R.J., 1967, 1968; Toomey, D.F., 1964, 1964a, 1969; Woody, M.D., 1984
- sedimentary structures: Bower, R.R., 1961
- sedimentation: Ball, S.M., 1971
- seismology: Steeples, D.W., 1977a
- soils: Hadimani, A.S., 1967; Jackson, M.L., 1974; Sridhar, K., 1974; Swanson, D.W., 1977
- statistical analysis: Toomey, D.F., 1966
- stratigraphy: Ball, S.M., 1964; Baptist, O.C., 1941; Berger, W.R., 1918; Brown, W.G., 1958; Eastwood, W.P., 1958; Haggiagi, M.A., 1970; Monger, J.W.H., 1961; Troell, A.R., Jr., 1965, 1965a, 1966, 1969; Winchell, R.L., 1957
- uranium ores: Bendix Field Engineering Corporation, 1981, 1982a; Derby, J.R., 1982; EG&G Geometrics, 1980b; Texas Instruments, Inc., 1978i, 1982a
- water resources: U.S. Army, Corps of Engineers, 1970d
- Wyandotte County**
- areal geology: Dufford, A.E., 1953, 1958; Gerhard, R.G., 1961; Hay, Robert, 1896b; Jewett, J.M., 1935a, 1956b, 1961a; Kansas Geological Society, 1932, 1949a; Moore, R.C., 1965a; Muilenburg, G.E., 1956b, 1957, 1958a, 1959, 1960a; Oeckerman, J.W., 1935; Parizek, E.J., 1975; Sigma Gamma Epsilon, Alpha Chapter, 1951; Ward, J.R., 1983; Wing, M.E., [n.d.]
- clay mineralogy: Watkins, K.N., 1957
- coal deposits: Thorne, Joshua, 1878, 1879
- construction materials: Kulstad, R.O., 1957; Special Aggregates Committee, 1958
- diagenesis: Nollsch, D.A., 1983
- elements: Runnels, R.T., 1951a
- engineering geology: Burgat, V.A., 1970; Dedman, E.V., 1972; Fredericksen, W.F., 1967, 1972c; Furness, L.W., 1967a; Gentile, R.J., 1975a; Howard, Needles, Tammen, and Bergendoff, Consulting Engineers, 1967; Roth, J.C., 1980, 1980a; Stallard, A.H., 1970; Stauffer, T.P., Sr., 1972, 1972a, 1973, 1973a, 1975; Walters, R.L., 1984; Whitfield, J.W., 1970, 1978; Willis, S.K., 1978
- environmental geology: Black and Veatch Engineers, 1972a; Calabrese, P.A., 1977; Hauth, L.D., 1978, 1981; Parizek, E.J., 1978; Sorenson, C.J., 1984; Tudor Engineering Company, 1982; U.S. Army, Corps of Engineers, 1965c, 1969d, 1972, 1972j, 1973d, 1974d; U.S. Department of Agriculture, 1967; U.S. Environmental Protection Agency, 1973; U.S. Geological Survey, 1976f, 1978j, 1979m
- geochemistry: Denne, J.E., 1984; Runnels, R.T., 1953
- geochronology: McNellis, J.M., 1963
- geomorphology: Denne, J.E., 1979; Dort, Wakefield, Jr., 1980; Elks, J.E., 1979; Hoover, W.F., 1932, 1936; O'Connor, H.G., 1963a; Ratzlaff, J.R., 1978; Schoewe, W.H., 1931; Simms, J.J., 1975; Walters, K.L., 1956a
- geophysical surveys: Happ, S.C., 1946
- ground water: Denne, J.E., 1980; Emmett, L.F., 1969, 1970; Fader, S.W., 1974; Fishel, V.C., 1948, 1956a; Ward, J.R., 1973a
- guidebooks: Jewett, J.M., 1967a; Kansas Geological Survey, 1956
- hydrology: Eustace, B.E., 1982; U.S. Army, Corps of Engineers, 1971j
- invertebrate paleontology: Baesemann, J.F., 1971, 1972, 1973; Cocke, J.M., 1969, 1970, 1970a, 1970b; Grinnell, R.S., Jr., 1958; Jewett, J.M., 1929; Merchant, F.E., 1939; Roy, M.B., 1966; Sayre, A.N., 1930; Squires, J.M., 1952; Strimple, H.L., 1971a; Tasch, Paul, 1978; Thompson, M.L., 1957; Zinsler, R.W., 1950
- limestone deposits: Fredericksen, W.F., 1972b, 1972d; Runnels, R.T., 1951
- mineral resources: Heidenreich, W.L., [n.d.]; Newell, N.D., 1931a; Schoewe, W.H., 1956c
- natural gas: Case, T.S., 1877
- paleobotany: Minoura, N., 1979
- paleoecology: Boardman, D.R., II, 1984a; Hakes, W.G., 1976, 1976b; Merrill, G.K., 1978
- phosphate deposits: Randle, R.F., 1949; Runnels, R.T., 1949
- sand and gravel deposits: Bowdish, F.W., 1952
- sedimentary rocks: Boerngen, J.G., 1975; Connor, J.J., 1980; Coveney, R.M., Jr., 1977; Crowley, D.J., 1966, 1967, 1969; Cubitt, J.M., 1975, 1979; Ives, William, Jr., 1960; Kahle, C.F., 1962; Keroher, G.C., 1939; Kidder, D.L., 1982; Lins, T.W., 1950, 1950a; Minor, J.A., 1969; Mitchell, J.C., 1981, 1981a; Railsback, L.B., 1983; Rogers, A.F., 1925, 1925a; Schutter, S.R., 1983; Wainner, K.F., 1939, 1939a; Whitcomb, C.W., 1965
- sedimentary structures: Hall, B.P., 1961; Hamblin, W.K., 1969
- sediments: Holien, C.W., 1982
- soils: Patrick, G.E., 1875a, 1906a; Zavesky, L.D., 1977
- stratigraphy: Ball, S.M., 1959, 1964; Burchett, R.R., 1959; Culbertson, A.E., 1915; Eastwood, W.P., 1958; Heckel, P.H., 1978, 1979a; Lamer-son, P.R., 1956; Machovec, M.A., 1963; Wilson, James A., 1959
- uranium ores: Bendix Field Engineering Corporation, 1982; EG&G Geometrics, 1980
- vertebrate paleontology: Kost, Ed, 1984; Lillegraven, J.A., 1966; Nelson, M.E., 1980
- water resources: Fishel, V.C., 1953; White, E.A., 1909

- stratigraphy: Paul, R.W., 1967
vertebrate paleontology: Getz, L.L., 1960
- Auburn Shale**
areal geology: Campbell, J.B., Jr., 1979
paleobotany: Jizba, K.M.M., 1962; Schaeffer, K.M.M., 1960
stratigraphy: Girardot, S.L., 1962; Heckel, P.H., 1979a
- Avoca Limestone Member**
sedimentary rocks: Bergstrom, R.E., 1953
- "B" sandstone**
petroleum: Panhandle Eastern Pipe Line Company, Geology Department, 1959
see also Morrowan Series
- "B" zone**
petroleum: Brown, H.A., 1963, 1984a
- Bachelor Creek Limestone Member**
stratigraphy: Mendoza, H.A., 1959; Merriam, D.F., 1982a
see also Howard Limestone
- Bader Limestone**
environmental geology: Hall, R.A., 1979
invertebrate paleontology: Ehret, A.L., Jr., 1961
paleoecology: Dietsch, H.A., 1956; Lane, N.G., 1964
sedimentary rocks: Dowling, P.L., Jr., 1967
stratigraphy: Dishman, B.D., 1969
- Ballard Formation**
areal geology: Stevens, J.B., 1963
biostratigraphy: Bayne, C.K., 1976a
invertebrate paleontology: Gutentag, E.D., 1958, 1962; Miller, B.B., 1960, 1961, 1963, 1964a
stratigraphy: Kovach, J.T., 1979, 1980; Spicer, S.R., 1975
vertebrate paleontology: Hibbard, C.W., 1972; Zakrzewski, R.J., 1967, 1975
- Bandera Quarry Sandstone Member**
stratigraphy: Jewett, J.M., 1943
- Bandera Shale**
areal geology: Jewett, J.M., 1940
coal deposits: Abernathy, G.E., 1946; Schoewe, W.H., 1955
guidebooks: Murray, F.N., 1976
invertebrate paleontology: Laukel, Q.C., 1956
paleoecology: Gamble, J.C., 1967
stratigraphy: Jewett, J.M., 1943, 1945
see also Mulberry coal bed
- Barberian series**
stratigraphy: Keyes, C.R., 1940
see also Cheyenne Sandstone, Kiowa Shale
- Barneston Limestone**
biostratigraphy: Wind, F.H., 1973
environmental geology: Hall, R.A., 1979
limestone deposits: Runnels, R.T., 1951
paleoecology: Griffin, J.R., Jr., 1974; Kues, B.S., 1975, 1975a
sedimentation: Jewett, J.M., 1933a
stratigraphy: Carl, M.F., 1980; Dishman, B.D., 1969; Smit, D.E., 1978
structural analysis: Hays, J.K., 1961; Lippert, R.H., 1964; Mehl, R.L., 1959
structural features: Kelly, T.E., 1964
- Bartlesville sandstone**
areal geology: Smith, E.W., 1955
data processing: Harbaugh, J.W., 1964a
engineering geology: Jordan, D.W., 1981; Martin, W.L., 1975; Miller, J.S., 1972
enhanced recovery: Carroll, H.H., 1981; Hardy, W.C., 1975
geochemistry: Jeffords, R.M., 1948; McClure, J.W., Jr., 1973
guidebooks: Murray, F.N., 1976
natural gas: Boughton, C.W., 1920
petroleum: Bass, N.W., 1935a, 1936a, 1940; Cadman, W.K., 1927; Cheyney, A.E., 1929; Emery, L.W., 1962; Garlough, J.L., 1938; Jewett, J.M., 1940a; Joers, J.C., 1950, 1950a, 1950b, 1950c; Mahony, B.J., 1964; Tarr, R.S., 1925; Tulsa Geological Society, Research Committee, 1946, 1947; Weirich, T.E., 1953a, 1968
sedimentary rocks: Hudson, A.S., 1969; Hulse, W.J., 1978, 1979, 1979a; Leatherock, Constance, 1935, 1937, 1937a
sedimentary structures: Rich, J.L., 1938a
sedimentation: Bass, N.W., 1933, 1934, 1935, 1936, 1937, 1937a; Tarr, R.S., 1934
stratigraphy: Buchanan, G.S., 1925
well logging: Doveton, J.H., 1980; Kranz, D.S., 1982
see also Bluejacket Sandstone Member
- "basal sandstone"**
petroleum: Ver Wiebe, W.A., 1946
structural features: Koester, E.A., 1935, 1935a
- Beattie Limestone**
areal geology: Mudge, M.R., 1962
clay mineralogy: Dulekoz, Erhan, 1969; Stindl, Heribert, 1966
environmental geology: Hall, R.A., 1979
ground water: Whittemore, D.O., 1978b
invertebrate paleontology: Ehret, A.L., Jr., 1961
paleoecology: Elias, M.K., 1962, 1964; Lane, N.G., 1964
sedimentary rocks: Imbrie, John, 1959, 1960, 1964; Laporte, L.F., 1964; Pecchioni, L.L., 1981
stratigraphy: Snyder, B.L., 1968
- Beil Limestone Member**
biostratigraphy: Perkins, R.D., 1962
geochemistry: Galle, O.K., 1964
invertebrate paleontology: Brondos, M.D., 1974; Farmer, J.D., 1971, 1971a, 1973; Grinnell, R.S., Jr., 1958; Koepnick, R.B., 1969, 1971, 1974; Maerz, R.H., Jr., 1976, 1977, 1978; Rowell, A.J., 1979; Spencer, R.S., 1968, 1970
paleoecology: Baird, G.C., 1971; Haack, R.C., 1978, 1980
sedimentary rocks: Bergstrom, R.E., 1953; Ronca, L.B., 1959
stratigraphy: Brown, W.G., 1958
- Belleville Formation**
stratigraphy: Bayne, C.K., 1965a; Eshelman, R.E., 1974, 1974a; Frye, J.C., 1945a
vertebrate paleontology: Carleton, M.D., 1979; Eshelman, R.E., 1972, 1975
see also Dakota Sandstone, Greenleaf sandstone, Kiowa Shale, Spring Creek clay
- Belvidere shell beds**
sedimentary rocks: Ross, Scott, 1976
stratigraphy: Cragin, F.W., 1895; Vaughan, T.W., 1897
see also Kiowa Shale
- Benedict bed**
paleoecology: Brondos, M.D., 1983, 1983a
- Bennett Shale Member**
clay mineralogy: Asmussen, L.E., 1958
invertebrate paleontology: Byrne, F.E., 1942; Grinnell, R.S., Jr., 1958; Little, J.M., 1965; Sloan, K.W., 1963
sedimentary rocks: Wilbur, R.O., 1956
stratigraphy: McCrone, A.W., 1960, 1963; O'Connor, H.G., 1952
vertebrate paleontology: Dunkle, D.H., 1962
- Benton formation**
areal geology: Stoner, O.E., 1934
invertebrate paleontology: Jeletzky, J.A., 1961
see also Colorado Group
- Benton group**
biostratigraphy: Johnson, J.H., 1930
vertebrate paleontology: Harksen, J.C., 1963
see also Colorado Group
- bentonite marker beds**
clay mineralogy: Wu, Dah Cheng, 1971
- Benton sand**
vertebrate paleontology: Cragin, F.W., 1888
see also Colorado Group
- Benton shale**
invertebrate paleontology: Logan, W.N., 1898
popular geology: Brown, G., 1981
structural analysis: Thomas, C.R., 1925
vertebrate paleontology: Williston, S.W., 1894e
see also Colorado Group
- Bern Limestone**
areal geology: Campbell, J.B., Jr., 1979
paleoecology: Conley, C.D., 1979
sedimentary rocks: Owen, D.E., 1959; Ross, D.A., 1960
stratigraphy: Girardot, S.L., 1962; Myers, D.E., 1968a
vertebrate paleontology: Chorn, J.D., 1978, 1984
- Bethany Falls Limestone Member**
clay mineralogy: Watkins, K.N., 1957
construction materials: Plummer, N.V., 1948a; Special Aggregates Committee, 1958
diagenesis: Nollsch, D.A., 1983, 1983a
engineering geology: Gentile, R.J., 1975a; Whitfield, J.W., 1970, 1978; Willis, S.K., 1978
invertebrate paleontology: Newell, N.D., 1937b
limestone deposits: Fredericksen, W.F., 1972b
sedimentary rocks: Lawson, R.W., 1953; Scott, G.L., 1970
sedimentary structures: Hamblin, W.K., 1969
stratigraphy: Keyes, C.R., 1937c, 1937d, 1942e; Mossler, J.H., 1973; Payton, C.E., 1965
see also Mound Valley limestone
- Bethany limestone**
stratigraphy: Keyes, C.R., 1939
see also Bronson subgroup
- Bevier coal bed**
coal deposits: Clarke, J.P., 1953; Davis, J.D., 1944
paleobotany: Baxter, R.W., 1965a; Davis, Bill, 1962; Habib, Daniel, 1960; Jones, K.D., 1968; Leisman, G.A., 1961, 1961a, 1962, 1962b, 1970; Otto, D.A., 1967, 1968; Schabillion, J.T., 1967, 1969, 1969a, 1970; Van Landingham, S.L., 1961
paleogeography: Wright, C.R., 1965
sedimentary rocks: Hambleton, W.W., 1951, 1951a, 1951b, 1953; Hatch, J.R., 1984; Odell, W.W., 1942
sedimentary structures: Perkins, T.W., 1974
see also Cabaniss Formation
- Bevier formation**
sedimentation: Wright, C.R., 1975
see also Cabaniss Formation
- Big Basin Formation**
areal geology: Norton, G.H., 1939
environmental geology: Smith, B.J. (Stout), 1976
ground water: Kume, Jack, 1982
stratigraphy: Clifton, R.L., 1930, 1930a; Hollweg, W.A., 1964; Spicer, S.R., 1975
see also Hackberry shale member, "Taloga" formation
- Big Blue series**
areal geology: Kellett, Betty, 1932, 1951; Moore, R.C., [n.d.]
paleoecology: Elias, M.K., 1962
paleogeography: Elias, M.K., 1937b
sedimentary rocks: Muir, J.L., 1934
stratigraphy: Condra, G.E., 1931; Dott, R.H., 1932; Elias, M.K., 1934a, 1934c; Kraemer, J.L., 1934
structural features: Koester, E.A., 1935, 1935a
see also Chase Group, Council Grove Group, Sumner Group
- Bignell Formation**
soils: Badgley, W.A., 1957
stratigraphy: Bayne, C.K., 1968b, 1971a
see also Bignell loess
- Bignell loess**
ceramic materials: Frye, J.C., 1949d
stratigraphy: Caspall, F.C., 1970, 1971; Frye, J.C., 1951e
see also Bignell Formation
- Bignell silt member**
stratigraphy: Frye, J.C., 1947a
- Big Springs Limestone Member**
geochemistry: Galle, O.K., 1964
invertebrate paleontology: Brainard, R.H., 1978, 1978a; Maerz, R.H., Jr., 1976
sedimentary rocks: Bergstrom, R.E., 1953; Ronca, L.B., 1959
- Blackjack Creek limestone member**
invertebrate paleontology: Laukel, Q.C., 1956

- sedimentary rocks: McKinney, J.S., 1959; Rose, K.E., 1967; Van Dyke, R.J., 1976
- sedimentation: Wright, C.R., 1975
- stratigraphy: Branson, C.C., 1960, 1968; Denesen, S.L., 1984
- structural analysis: Abernathy, G.E., 1925; McQuillan, M.W., 1968
- see also* Bevier coal bed, Bevier formation, Burbank sand, Cabaniss group, Cabaniss sandstone, Croweburg coal bed, Croweburg cyclothem, Croweburg formation, Excello shale member, Fleming coal bed, Fort Scott coal bed, Lagonda formation, "Lagonda interval," Mineral coal bed, Mulky coal bed, Mulky cyclothem, Red Fork sandstone, Robinson Branch coal bed, Senora formation, Skinner sandstone, "squirrel sandstone," Tebo coal bed, Weir-Pittsburg coal bed
- Cabaniss group**
stratigraphy: Howe, W.B., 1954, 1956
see also Cabaniss Formation
- Cabaniss sandstone**
petroleum: Ebanks, W.J., Jr., 1977c
see also Cabaniss Formation
- Calhoun Shale**
areal geology: Campbell, J.B., Jr., 1979; Sigma Gamma Epsilon, Alpha Nu Chapter, 1951
invertebrate paleontology: Andersen, R.E., 1974, 1976; Harrington, H.J., 1955
paleobotany: Remy, W., 1980
stratigraphy: Bayne, C.K., 1965b; Cambridge, T.R., 1959; Lamoreaux, S.B., 1984, 1984a
see also Topeka coal bed, Topeka megacyclothem
- Calvert ash bed**
construction materials: Bauleke, M.P., 1962; Crosier, C.M., 1968; Grisafe, D.A., 1978
sediments: Bauleke, M.P., 1969a, 1970; Swineford, Ada, 1955d
volcanic ash deposits: Carey, J.S., 1952
see also Ash Hollow member
- Caneyville limestone**
sedimentary rocks: Drake, L.Y., 1951; Wahrhaftig, Leon, 1952
sedimentary structures: Mudge, M.R., 1956
- Canville Limestone Member**
paleoecology: Frost, J.G., 1968, 1968a
sedimentary rocks: Railsback, L.B., 1983; Twiss, P.C., 1955
- Captain Creek Limestone Member**
biogeography: Pabian, R.K., 1977a
clay mineralogy: Watkins, K.N., 1957
construction materials: Special Aggregates Committee, 1958
invertebrate paleontology: Pabian, R.K., 1979b; Roy, M.B., 1966
paleoecology: Brondos, M.D., 1983, 1983a
sedimentary rocks: Harbaugh, J.W., 1960; Hopkins, R.T., 1977; Moussavi-Harami, Reza, 1980b; Prochnow, Suzanne, 1982
sedimentary structures: Ravn, R.L., 1978
sedimentation: Heckel, P.H., 1975
stratigraphy: Ball, S.M., 1959; Eastwood, W.P., 1958
structural analysis: Parkhurst, R.W., 1962
- Carlile Formation**
ground water: Fritz, T.R., 1980; Schmidt, Gene W., 1961
invertebrate paleontology: Thorne, Peter, 1984
- Carlile Shale**
areal geology: Lee, Wallace, 1954b; Mack, L.E., 1959; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952
biostratigraphy: Johnson, J.H., 1930; Manes, M.L., 1973; McNeil, D.H., 1979; Smith, C.C., 1975, 1975a
geochemistry: Rarick, Lawrence, 1937; Search, Herman, 1939; Turner, P.P., 1983a
ground water: Kume, Jack, 1982; Latta, B.F., 1948a; Yukler, M.A., 1976, 1977
invertebrate paleontology: Crick, R.E., 1976, 1978; Griffith, J.H., 1947; Hattin, D.E., 1952, 1974, 1977; Morrow, A.L., 1931; Stewart, J.D., 1976; Worstell, P.J., 1966
minerals: Tien, Pei-Lin, 1971
paleobotany: Potter, F.W., 1982; Stearns, R.A., 1976
paleoecology: Archer, A.W., 1980, 1983; Stewart, J.D., 1984
petroleum: Scholle, P.A., 1978; Weimer, R.J., 1983
sedimentary rocks: Fullerton, L.B., 1974; Hattin, D.E., 1975a
stratigraphy: Cobban, W.A., 1949; Hattin, D.E., 1962, 1964, 1965c, 1965d, 1968, 1975b, 1977b, 1978; Hostetler, J.M., 1967, 1968; Laferriere, A.P., 1983
vertebrate paleontology: Hibbard, C.W., 1939d; Martin, L.D., 1977a; Stewart, J.D., 1978a
- Carlton Limestone Member**
invertebrate paleontology: Durden, C.J., 1978
stratigraphy: Ver Wiebe, W.A., 1937b
see also Elmo limestone member
- Cave Creek formation**
stratigraphy: Norton, G.H., 1937
see also Blaine Formation
- Cave limestone**
areal geology: Swallow, G.C., 1867
see also Wyandotte Limestone
- Cedar Bluff coal bed**
sedimentary rocks: Schutter, S.R., 1983
see also Galesburg Shale
- Cedar Bluffs till**
stratigraphy: Bayne, C.K., 1968b, 1971a
see also Kansas till, Sappa Formation
- Cedar Hills Sandstone**
areal geology: Norton, G.H., 1939
ground water: Pollock, L./M.J.J., 1982
sedimentary rocks: Holdaway, K.A., 1975
sedimentation: Holdaway, K.A., 1976, 1977, 1978
stratigraphy: Campbell, C.L., 1963; Norton, G.H., 1937; Swineford, Ada, 1955
- Cement City Limestone Member**
paleoecology: Merrill, G.K., 1978
- "Centerville Lagonda sandstone"**
sedimentary rocks: Reinholtz, P.N., 1982
see also Lagonda Sandstone Member
- "Champion shell bed"**
sedimentary rocks: Ross, Scott, 1976
stratigraphy: Bullard, F.M., 1928
see also Kiowa Formation
- Chanute Shale**
environmental geology: U.S. Army, Corps of Engineers, 1974i
guidebooks: Murray, F.N., 1976
invertebrate paleontology: Baesemann, J.F., 1971, 1972, 1973
paleoecology: Merrill, G.K., 1978
sedimentary rocks: Mitchell, J.C., 1981, 1981a
stratigraphy: Burchett, R.R., 1959; Haggiagi, M.A., 1970; Heckel, P.H., 1979a; Schulte, G.S., 1958
see also "Layton sandstone," Noxie sandstone member, Thayer coal bed, Thayer shale
- Chase formation**
stratigraphic: Prosser, C.S., 1895
- Chase Group**
areal geology: Barrett, W.J., 1958; Beshears, G.T., 1958; Leonard, R.B., 1964a; Mudge, M.R., 1958
biostratigraphy: Carr, T.R., 1979; Wind, F.H., 1973, 1974a
clay mineralogy: Bryson, W.R., 1959
environmental geology: Hall, R.A., 1979
geochemistry: Murphy, M.E., 1972; Rubey, W.W., 1954
ground water: Bell, T.C., 1974; Leonard, R.B., 1972
hydrology: Scobee, E.R., 1967
igneous rocks: Dyer, R.G., 1970
invertebrate paleontology: Clark, W.K., 1950; Davis, M.E., 1951; Johnson, J.H., 1947; Kellett, Betty, 1933, 1934, 1935; Lalicker, C.G., 1932, 1932a; Maxey, J.R., 1932; Wind, F.H., 1974
natural gas: Furbush, M.A., 1959; Garlough, J.L., 1941
paleoecology: Cuffey, R.J., 1980
sedimentary rocks: Cubitt, J.M., 1975, 1979; Johnson, W.B., 1949; Tien, Pei-Lin, 1970a
sedimentation: Keyes, C.R., 1938b
stratigraphy: Branson, C.C., 1960a; Buller, J.V., 1968; Carl, M.F., 1980; Dishman, B.D., 1969; Lutz-Garihan, A.B., 1979; Russell, J.L., 1967; Verville, G.J., 1951; Wilson, L.R., 1980
structural features: Kelly, T.E., 1964
vertebrate paleontology: Miller, H.W., Jr., 1958d
see also Big Blue series, Five-finger carbonate, Marion formation, Marion stage
- Chattanooga Shale**
areal geology: Ley, H.A., 1926; McKnight, E.T., 1970
geophysical surveys: Landis, E.R., 1955a
petroleum: Abernathy, G.E., [n.d.], 1941a; Shenkel, C.W., Jr., 1955; Williams, D.W., 1921a; Wright, B.J., 1965
sedimentary rocks: Blythe, J.G., 1950; Leathercock, Constance, 1936
sedimentation: Rich, J.L., 1931
stratigraphy: Goebel, E.D., 1959b, 1968d; Hilpman, P.L., 1969b, 1970; Johnston, L.A., 1934; Lee, Wallace, 1940, 1940a, 1940b; McClellan, H.W., 1930a; White, Luther H., 1929
structural analysis: Hylton, G.K., 1960; Rich, J.L., 1933a
structural features: Kelly, T.E., 1964
see also "Kinderhook shale," Misener sandstone member, Skelton shale, Sylamore sandstone
- Checkerboard Limestone**
guidebooks: Murray, F.N., 1976
stratigraphy: Davis, J.R., 1939; Emery, P.A., 1962; Hatcher, D.A., 1961; Jewett, J.M., 1965b; Oakes, M.C., 1942, 1943; Ravn, R.L., 1981, 1982
- Chelsea Sandstone Member**
paleobotany: Baxendale, R.W., 1977, 1978
sedimentary rocks: Van Dyke, R.J., 1976, 1976a
- Cherokee Formation**
petroleum: Ebanks, W.J., Jr., 1978b; Wells, J.S., 1977, 1982
- Cherokee Group**
biostratigraphy: Swade, J.W., 1984
clay deposits: Bowdish, F.W., 1953; Hill, W.E., Jr., 1963a
clay mineralogy: Shannon, E.H.M., 1978, 1978a; Tien, Pei-Lin, 1970b, 1973, 1973a
coal deposits: Abernathy, G.E., 1946; Brady, L.L., 1974, 1976, 1976b, 1977, 1978; Flueckinger, L.A., 1973; Livingston, N.D., 1981a; Schoewe, W.H., 1959
engineering geology: Gadge, P.R., 1977
enhanced recovery: Ebanks, W.J., Jr., 1975a
geochemistry: Angino, E.E., 1967; James, G.W., 1972a
geophysical surveys: Vargas, J.F., 1984
ground water: Abernathy, G.E., 1948; Pollock, L./M.J.J., 1982
invertebrate paleontology: Beede, J.W., 1904; Gunnell, F.H., 1933; Miller, A.K., 1934; Newell, N.D., 1937b; Nodine-Zeller, D.E., 1978; Orlandy, Ralph, 1951
mineral resources: Berendsen, Pieter, 1978
paleobotany: Baxendale, R.W., 1977, 1978; Baxter, R.W., 1959, 1962; Eggert, D.A., 1959; Leisman, G.A., 1961b, 1964, 1964a; Mahaffy, J.F., 1975; Mamay, S.H., 1959; Phillips, T.L., 1970; Schlanker, C.M., 1969; Wilson, L.R., 1979
petroleum: Aukerman, R.A., 1959; Baker, D.R., 1960, 1962, 1963; Bass, N.W., 1940; Blanc, R., 1984; Byers, P.C., 1959; Crumpley, B.K., 1953; Ebanks, W.J., Jr., 1974a, 1974b, 1977c, 1978; Fowler, G.M., 1933; Fugitt, L.B., 1959; Galvin, Cyril, 1982; Goebel, E.D., 1957a; Gould, G.F., 1975; Mueller, G.N., 1967, 1967a; Panhandle Eastern Pipe Line Company, Geology Department, 1959a; Tarr, R.S., 1925

- environmental geology: Hall, R.A., 1979; Smith, B.J. (Stout), 1976
- geochemistry: Murphy, M.E., 1972; Switek, John, 1977
- geophysical surveys: Mathias, K.E., 1972
- gypsum deposits: Fairchild, P.W., 1949
- hydrology: Scobee, E.R., 1967; Whittemore, D.O., 1980
- invertebrate paleontology: Clark, W.K., 1950; Davis, M.E., 1951; Duncan, Helen, 1962; Edmiston, E.F., 1932; Ehret, A.L., Jr., 1961; Gordon, Mackenzie, Jr., 1962; Johnson, J.H., 1947; Kellett, Betty, 1933, 1934, 1935; Lalicker, C.G., 1932, 1932a; Little, J.M., 1965; Maxey, J.R., 1932; Perlmutter, Barry, 1971, 1971a, 1975, 1975a; Strimple, H.L., 1962; Voran, R.L., 1977a
- natural gas: Davis, D.V., Jr., 1976
- paleoecology: Lane, N.G., 1964; Peterson, Robert M., 1978, 1979
- sedimentary rocks: Cubitt, J.M., 1975, 1979; Erlenwein, S.D., 1978; Huber, D.D., 1964; Johnson, W.B., 1949; Parish, K.L., 1952; Terwilliger-Robertson, S.J., 1983; White, L.M., 1981
- sedimentation: Moore, R.C., 1964
- stratigraphy: Avers, D.D., 1968, 1968a; Branson, C.C., 1960a; Buller, J.V., 1968; Dishman, B.D., 1969; Fudge, M.R., 1974; Lutz-Garihan, A.B., 1979; McCrone, A.W., 1960, 1963; Merriam, D.F., 1959a; Snyder, B.L., 1968; Verville, G.J., 1951; Wilson, L.R., 1980
- vertebrate paleontology: Miller, H.W., Jr., 1958d *see also* Atchison shale, Big Blue series, Five-finger carbonate, Garrison formation
- Cowley Formation**
- lead ores: Wallace, M.H., 1942
- minerals: Miller, M.H., 1975
- stratigraphy: Goebel, E.D., 1967d, 1968; Lee, Wallace, 1940a, 1940b; Oliver, L.G., 1975
- Cresswell Limestone Member**
- areal geology: Mendenhall, R.A., 1958
- clay mineralogy: Bryson, W.R., 1959; Watkins, K.N., 1957
- construction materials: Special Aggregates Committee, 1958
- limestone deposits: Grisafe, D.A., 1976, 1983
- sedimentary rocks: Aber, S.W., 1982; Haury, C.E., 1984; Wilbur, R.O., 1956
- sedimentation: Jewett, J.M., 1933a *see also* Luta limestone
- Crete Formation**
- stratigraphy: Bayne, C.K., 1968b
- Critzer limestone member**
- paleoecology: Spencer, R.S., 1978
- sedimentary rocks: Underwood, M.R., 1984
- stratigraphy: Ravn, R.L., 1981, 1982 *see also* Hertha Limestone
- Crooked Creek Formation**
- areal geology: Stevens, J.B., 1963
- biostratigraphy: Bayne, C.K., 1976a
- invertebrate paleontology: Gutentag, E.D., 1958, 1962; Miller, B.B., 1960, 1961, 1963, 1964a
- stratigraphy: Kovach, J.T., 1979, 1980; Paul, R.W., 1967
- structural analysis: Izett, G.A., 1980
- vertebrate paleontology: Carleton, M.D., 1979; Getz, L.L., 1960; Hibbard, C.W., 1951, 1954a, 1967, 1972; Holman, J.A., 1979; Zakrzewski, R.J., 1975, 1981 *see also* Borchers ash
- Crouse Limestone**
- environmental geology: Hall, R.A., 1979
- invertebrate paleontology: Voran, R.L., 1977a; West, R.R., 1972e
- paleoecology: West, R.R., 1972a, 1972b, 1972c, 1972d; Yarrow, G.R., 1974
- sedimentary rocks: Chaudhuri, Sambudhas, 1972; Huber, D.D., 1964; Twiss, P.C., 1972; Voran, R.L., 1977; Wilbur, R.O., 1956
- sedimentation: Pearson, D.L., 1972
- stratigraphy: Bigelow, Nelson, Jr., 1954; Dishman, B.D., 1969; West, R.R., 1972, 1983b
- structural analysis: Lorenzen, D.J., 1973
- Croweburg coal bed**
- coal deposits: Cobb, J.C., 1981, 1981a; Hatch, J.R., 1976
- paleogeography: Wright, C.R., 1965
- sedimentary rocks: Hatch, J.R., 1984; McKinney, J.S., 1959 *see also* Cabaniss Formation
- Croweburg cyclothem**
- paleogeography: Wright, C.R., 1965 *see also* Cabaniss Formation
- Croweburg formation**
- sedimentation: Wright, C.R., 1975 *see also* Cabaniss Formation
- Crowe limestone**
- invertebrate paleontology: Ehret, A.L., Jr., 1961
- Cruise sandstone member**
- petroleum: Merriam, D.F., 1959b
- "Curzen" limestone member**
- stratigraphy: Jeffords, R.M., 1940 *see also* Curzon Member
- Curzon Member**
- invertebrate paleontology: Grinnell, R.S., Jr., 1958
- sedimentary rocks: Bergstrom, R.E., 1953; Boemgen, J.G., 1975; Connor, J.J., 1980; Ronca, L.B., 1959 *see also* "Curzen" limestone member
- Custer formation**
- stratigraphy: Roth, R.I., 1932, 1933
- Custerian series**
- stratigraphy: Swineford, Ada, 1954
- Custerian stage**
- areal geology: Norton, G.H., 1939 *see also* "red beds"
- "D" sandstone**
- petroleum: Tainter, P.A., 1983 *see also* Dakota Sandstone
- Dakota Formation**
- areal geology: Bass, N.W., 1926; Bayne, C.K., 1972d, 1974a; Lee, Wallace, 1954b; Mack, L.E., 1959; Plummer, N.V., 1955; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952; Stanton, T.W., 1925; Twenhofel, W.H., 1924
- biostratigraphy: Hattin, D.E., 1967; Stanton, T.W., 1922
- ceramic materials: Bauleke, M.P., 1968; Plummer, N.V., 1954, 1960
- clay deposits: Belchic, George, 1915; Bowdish, F.W., 1953; Huh, J.M., 1968; Plummer, N.V., 1947, 1963; Waugh, W.N., 1964
- coal deposits: Schoewe, W.H., 1952
- data processing: Srivastava, G.S., 1974
- geomorphology: Hoppie, J.R., 1980
- geophysical surveys: Knapp, R.W., 1981; Merriam, D.F., 1955f
- ground water: Angino, E.E., 1972a; Crook, M.C., 1975; Helgesen, J.O., 1982; Jenkins, E.D., 1975; Keene, K.M., 1976, 1977; Kume, Jack, 1982, 1984; Latta, B.F., 1948a; Lobbmeyer, D.H., 1978, 1979; Schmidt, Gene W., 1961; Weakly, E.C., 1975; Wilk, Zbigniew, 1960
- gypsum deposits: Cragin, F.W., 1886
- hydrology: Dunlap, L.E., 1977; Hargadine, G.D., 1978, 1979a
- igneous rocks: Brookins, D.G., 1971a
- invertebrate paleontology: Hattin, D.E., 1965a, 1974; Sternberg, C.H., 1880; White, C.A., 1894
- metal ores: James, G.W., 1978
- mineral exploration: Zeller, E.J., 1976a
- paleobotany: Baxter, R.W., 1954; Beeker, C.D., 1975; Berry, E.W., 1920; Dilcher, D.L., 1975, 1976, 1978, 1978a, 1979; Farley, M.B., 1982, 1983; Gress, E.M., 1922; Hay, Robert, 1885b; Hollick, C.A., 1895, 1903, 1903a; Lesquereux, Leo, 1875, 1892; Retallack, G.J., 1980a, 1981; Sternberg, C.H., 1881a; Twenhofel, W.H., 1920a; Ward, L.F., 1897, 1898
- paleoecology: Retallack, G.J., 1980, 1981a; Siemers, C.T., 1970, 1971, 1971a, 1971b
- petroleum: Merriam, D.F., 1959b; Tainter, P.A., 1983
- sedimentary rocks: McLane, Michael, 1979; Scott, R.W., 1970a; Siemers, C.T., 1972, 1976; Swineford, Ada, 1947
- sedimentary structures: Franks, P.C., 1959b; McLane, Michael, 1978
- sediments: Reimer, L.J., 1975
- soils: Reed, E.C., 1954; Thorp, James, 1949
- stratigraphy: Carl, M.F., 1980; Charles, H.W., 1901; Franks, P.C., 1967, 1967a, 1975; Gould, C.N., 1898, 1901a; Greene, F.C., 1910; Hattin, D.E., 1965c, 1965d, 1978; Hay, Robert, 1889; Latta, B.F., 1946; Merriam, D.F., 1954a, 1957a; Miesse, J.V., 1974; Plummer, N.V., 1942e; Todd, J.E., 1911a; Twenhofel, W.H., 1920
- structural analysis: Bass, N.W., 1925; Merriam, D.F., 1958
- uranium ores: Zeller, E.J., 1976
- vertebrate paleontology: Cope, E.D., 1878d; Eaton, T.H., Jr., 1960; Mehl, M.G., 1934, 1941; Parmenter, C.S., 1899; Schaffner, D.C., 1938
- water resources: Peck, J.C., 1980
- Dakota Group**
- ground water: Lippert, Verne, 1937, 1938
- paleobotany: Sternberg, C.H., 1884
- sedimentary rocks: Larsen, V.E., 1953
- sedimentary structures: Mizula, J.W., 1960
- stratigraphy: Courtier, W.H., 1934
- structural features: Koester, E.A., 1935, 1935a
- vertebrate paleontology: Harksen, J.C., 1963 *see also* Mentor beds
- Dakota Sandstone**
- areal geology: Stoner, O.E., 1934
- coal deposits: Flueckinger, L.A., 1972a
- elements: Twenhofel, W.H., 1917c
- geochemistry: Rarick, Lawrence, 1937
- geomorphology: Beede, J.W., 1898b; Frye, J.C., 1947b
- geophysical methods: Crumpton, C.F., 1959
- ground water: Haworth, Erasmus, 1897e; Kume, Jack, 1983
- mineral resources: Bauleke, M.P., 1967
- paleobotany: Hay, Robert, 1883a; Snow, F.H., 1889
- paleoecology: Archer, A.W., 1980, 1983
- popular geology: Nickel, Gerhard, Jr., 1972
- sedimentary rocks: Kansas University, Center for Research, Inc., 1969; Karl, H.A., 1971, 1976
- sedimentary structures: Bell, W.T., 1901; Harnly, H.J., 1898; Shaffer, H.L., 1937
- stratigraphy: Prosser, C.S., 1897; Tester, A.C., 1930, 1930a, 1931
- structural features: Merriam, D.F., 1958b
- vertebrate paleontology: Brown, R.W., 1950; Snow, F.H., 1887
- water resources: Haworth, Erasmus, 1895 *see also* Belvidere formation, "D" sandstone, "J" sandstone, Omadi sandstone, Rocktown channel sandstone
- David City Formation**
- sediments: Conrad, O.G., 1963, 1964
- stratigraphy: Bayne, C.K., 1965b, 1965c, 1968b; Frye, J.C., 1950a, 1951e
- "Dawson" shale**
- sedimentary rocks: Kidder, D.L., 1982 *see also* Marmaton Group
- Day Creek Dolomite**
- areal geology: Norton, G.H., 1939
- environmental geology: Smith, B.J. (Stout), 1976
- magnesium ores: Frye, J.C., 1942c
- sedimentary rocks: Welsh, J.P., 1966
- stratigraphy: Broin, T.L., 1957, 1958; Clifton, R.L., 1930, 1930a; Hollweg, W.A., 1964; Swineford, Ada, 1955
- Decorah shale**
- invertebrate paleontology: Stauffer, C.R., 1932; Twenhofel, W.H., 1927
- stratigraphy: Kay, G.M., 1929 *see also* Platteville Formation

- 1980b; Kansas Water Resources Board, 1962b; McNellis, J.M., 1979; Olea, R.A., 1984, 1984a; Sophocleous, M.A., 1982a, 1982b, 1983, 1984; Stramel, G.J., 1956, 1967
- sediments: Haworth, Erasmus, 1897f
- stratigraphy: Bayne, C.K., 1968b; Frye, J.C., 1941c, 1943a, 1945a; Semken, H.A., Jr., 1965, 1965a, 1966
- vertebrate paleontology: Cope, E.D., 1889; Deere, E.O., 1908; Harnly, H.J., 1932; Hay, O.P., 1917a
- water resources: Frye, J.C., 1939a; Kansas Water Resources Board, 1960c; Keplinger and Wanemacher Engineers, 1954
- see also* Holdrege Formation, McPherson Formation
- Erie limestone**
- stratigraphy: Haworth, Erasmus, 1895b
- see also* Bronson subgroup
- Ervine Creek Limestone Member**
- paleoecology: Griesemer, A.D., 1970, 1971, 1971a
- sedimentary rocks: Angino, E.E., 1959; Bergstrom, R.E., 1953; Boerngen, J.G., 1975; Connor, J.J., 1980; Ronca, L.B., 1959; Svendsen, A.E., 1961
- stratigraphy: Lamoreaux, S.B., 1984, 1984a
- structural analysis: Stewart, G.F., 1967
- Esch sand**
- natural gas: Bass, N.W., 1951
- Eskridge Shale**
- areal geology: Mudge, M.R., 1962
- clay mineralogy: Asmusen, L.E., 1958; Dulekoz, Erhan, 1969; Hargadine, G.D., 1959
- environmental geology: Hall, R.A., 1979
- invertebrate paleontology: Voran, R.L., 1977a
- paleobotany: Wilson, L.R., 1973
- paleoecology: Lane, N.G., 1964
- paleogeography: Wells, J.D., 1950, 1950a
- sedimentary rocks: Brookins, D.G., 1970g, 1973; Cullers, R.L., 1974, 1975; Irvine, Robert, 1959; Pecchioni, L.L., 1981; Russell, J.L., 1974, 1974a; Waterman, W.D., 1951
- stratigraphy: Snyder, B.L., 1968
- Eudora Shale Member**
- biogeography: Pabian, R.K., 1977a
- biostratigraphy: Malinky, J.M., 1983a
- geochemistry: Amini, M.K., 1981; Murphy, M.E., 1972
- invertebrate paleontology: Malinky, J.M., 1981
- paleoecology: Boardman, D.R., II, 1984a; Brondos, M.D., 1983, 1983a; Spencer, R.S., 1978
- petroleum: Angino, E.E., 1981; Schlinsog, D.G., 1982, 1983
- phosphate deposits: Randle, R.F., 1949
- sedimentary rocks: Coveney, R.M., Jr., 1979, 1979a; Harbaugh, J.W., 1960; Kidder, D.L., 1982; Malinky, J.M., 1980; Moussavi-Harami, Reza, 1980, 1980a, 1980b, 1984; Schutter, S.R., 1983
- sedimentation: Heckel, P.H., 1975; Malinky, J.M., 1982
- stratigraphy: Ball, S.M., 1959
- Excello shale member**
- construction materials: Hardy, R.G., 1977b
- geochemistry: James, G.W., 1972a
- paleoecology: Gamble, J.C., 1967
- petroleum: Angino, E.E., 1981; Hardy, R.G., 1977; Schlinsog, D.G., 1982, 1983
- sedimentary rocks: Hatch, J.R., 1984
- sedimentation: Knight, K.L., 1983
- stratigraphy: Ece, O.I., 1984
- see also* Cabaniss Formation
- Exline shale member**
- paleoecology: Boardman, D.R., II, 1984a
- see also* Pleasanton Formation
- "F" sandstone**
- petroleum: Panhandle Eastern Pipe Line Company, Geology Department, 1959a
- see also* Morrow Series
- Fairport Chalk Member**
- biostratigraphy: Manes, M.L., 1973; McNeil, D.H., 1979
- geochemistry: Search, Herman, 1939
- invertebrate paleontology: Hattin, D.E., 1952, 1969b
- paleoecology: Stewart, J.D., 1984
- petroleum: Scholle, P.A., 1978; Weimer, R.J., 1983
- sedimentary rocks: Hattin, D.E., 1975a; Singh, Gambhir, 1965
- stratigraphy: Hattin, D.E., 1962, 1968
- vertebrate paleontology: Martin, L.D., 1977a; Stewart, J.D., 1978a, 1982
- see also* Fairport chalky shale member
- Fairport chalky shale member**
- invertebrate paleontology: Hattin, D.E., 1977
- see also* Fairport Chalk Member
- Falls City Limestone**
- invertebrate paleontology: Spencer, R.S., 1968, 1970
- paleobotany: Barker, G.W., 1983, 1984
- sedimentary rocks: Drake, L.Y., 1951; Twiss, P.C., 1955
- stratigraphy: Bernasek, R.A., 1967
- Farley Limestone Member**
- geochronology: McNellis, J.M., 1963
- invertebrate paleontology: Gentile, R.J., 1974; Grinnell, R.S., Jr., 1958; Merchant, F.E., 1939
- sedimentary rocks: Crowley, D.J., 1966, 1967, 1969; Galle, O.K., 1960; Ives, William, Jr., 1960
- sedimentary structures: Hamblin, W.K., 1969
- stratigraphy: Wilson, James A., 1959
- Fence-post limestone bed**
- paleobotany: Huh, J.M., 1972
- popular geology: Muilenburg, G.E., 1956, 1975a
- stratigraphy: Hattin, D.E., 1975
- see also* Pfeifer Shale Member
- Fence-post limestone member**
- limestone deposits: Darling, Stephanie, 1983; Grisafe, D.A., 1976, 1983
- popular geology: Muilenburg, G.E., 1976a
- see also* Pfeifer Shale Member
- Fern Glen Limestone**
- lead ores: Ruhl, Otto, 1949a
- paleoecology: Lane, H.R., 1978
- Five-finger carbonate**
- sedimentary rocks: White, L.M., 1981
- see also* Chase Group, Council Grove Group
- Five Point Limestone Member**
- invertebrate paleontology: Douglass, R.C., 1962; Matthews, J.L., 1959
- limestone deposits: Grisafe, D.A., 1976, 1983
- sedimentary rocks: Aber, S.W., 1982; Drake, L.Y., 1951; Twiss, P.C., 1955
- Fleming coal bed**
- coal deposits: Cobb, J.C., 1981, 1981a
- paleobotany: Andrews, H.N., Jr., 1958; Arnold, C.A., 1960; Baxendale, R.W., 1977, 1978; Baxter, R.W., 1951, 1952, 1952a, 1953, 1953a, 1959a, 1960, 1965, 1965a, 1966, 1971, 1971a, 1975; Cridland, A.A., 1958, 1960; Felix, C.J., 1952, 1952a; Frankenberg, J.M., 1969; Harms, V.L., 1959, 1961; Jones, K.D., 1968; Leisman, G.A., 1960, 1961a, 1962a, 1970, 1971a; Roth, Elmer A., 1954, 1955; Schabillon, J.T., 1967, 1969, 1969a, 1970; Schlanker, C.M., 1969; Segal, R.H., 1966; Stewart, W.N., 1952, 1958
- sedimentary structures: Perkins, T.W., 1974
- see also* Cabaniss Formation
- Flint Hills limestone**
- sedimentation: Keyes, C.R., 1938b
- Florena Shale Member**
- areal geology: Yates, J.A., 1911
- biostratigraphy: Haworth, R.H., 1955
- clay mineralogy: McPherson, D.S., 1956
- diagenesis: Imbrie, John, 1956
- geochemistry: Murphy, M.E., 1972
- invertebrate paleontology: Burkett, B.T., 1980a; Byrne, F.E., 1942; Greene, F.C., 1908a; Heaslip, W.G., 1955; Komicker, L.S., 1954, 1954a, 1958; Miller, A.K., 1936; Pabian, R.K., 1981; Reider, F.R., 1952; Sawyer, J.F., 1954; Spencer, R.S., 1968, 1970; Truxell, R.E., 1951; Walker, B.H., 1951, 1955, 1955a; Wells, Dana, 1929
- paleobotany: Jizba, K.M.M., 1962
- paleoecology: Imbrie, John, 1955
- sedimentary rocks: Imbrie, John, [n.d.], 1959a, 1964
- Florence flint**
- invertebrate paleontology: Ryniker, Charles, 1932
- stratigraphy: Jellards, E.H., 1905
- structural analysis: Keynolos, D.H., 1937
- see also* Florence Limestone Member
- Florence Limestone Member**
- engineering geology: Fent, O.S., [n.d.]
- natural gas: Bartle, G.G., 1940, 1940a
- sedimentary rocks: Hartig, R.L., 1954; Haury, C.E., 1984; Markley, L.C., 1953
- stratigraphy: Carl, M.F., 1980; Smit, D.E., 1978
- structural analysis: Kotoyantz, A.A., 1956
- see also* Florence flint
- Flower-pot Shale**
- areal geology: Knight, G.L., 1929; Norton, G.H., 1939
- ground water: Ward, P.E., 1961
- gypsum deposits: McGregor, D.J., 1948
- sedimentary rocks: Holdaway, K.A., 1975
- sedimentation: Holdaway, K.A., 1976, 1977, 1978
- stratigraphy: Campbell, C.L., 1963; Fay, R.O., 1961, 1962, 1964; Norton, G.H., 1937; Smit, D.E., 1978; Swineford, Ada, 1955
- Foraker Limestone**
- areal geology: Mudge, M.R., 1962
- geochemistry: Switek, John, 1977
- ground water: Whittemore, D.O., 1978b
- invertebrate paleontology: Ehret, A.L., Jr., 1961; Kaesler, R.L., 1972; Little, J.M., 1965; Pabian, R.K., 1981; Schmidt, Winfried, 1974
- paleoecology: Lane, N.G., 1964; Peterson, Robert M., 1978, 1979; Roden, M.K., 1975; Yarrow, G.R., 1974
- sedimentary rocks: Haury, C.E., 1984; Twenhofel, W.H., 1919b
- stratigraphy: Avers, D.D., 1968; Bernasek, R.A., 1967; Garber, M.S., 1962; Smit, D.E., 1978
- see also* Elmdale shale
- Forbes limestone**
- stratigraphy: Keyes, C.R., 1941r
- see also* Deer Creek Limestone
- Fort Benton group**
- vertebrate paleontology: Osborn, H.F., 1904b
- Fort Hays Limestone Member**
- areal geology: Stoner, O.E., 1934
- biostratigraphy: Manes, M.L., 1973
- geochemistry: Search, Herman, 1939
- geophysical methods: Crumpton, C.F., 1959
- ground water: Johnson, C.R., 1954
- invertebrate paleontology: Deiss, A.P., 1978
- limestone deposits: Grisafe, D.A., 1976, 1983
- paleoecology: Baldwin, E.A., 1976; Frey, R.W., 1969, 1969a, 1969b, 1970, 1972
- paleomagnetism: Shive, P.N., 1974
- petroleum: Weimer, R.J., 1983
- sand and gravel deposits: Hardy, R.G., 1968
- sedimentary rocks: Arthur, M.A., 1981; Dubins, I.M., 1947; Runnels, R.T., 1949a; Singh, Gambhir, 1965
- sedimentary structures: McMillan, J.M., Jr., 1931
- sediments: Reimer, L.J., 1975
- stratigraphy: Drees, R.H., 1974; King, N.R., 1972, 1973; Laferriere, A.P., 1983; Miller, H.W., Jr., 1958c
- structural analysis: Neuhauser, K.R., 1983
- vertebrate paleontology: Dunkle, D.H., 1946
- Fort Riley Limestone**
- areal geology: Beshears, G.T., 1958
- clay mineralogy: Bryson, W.R., 1959; Watkins, K.N., 1957
- construction materials: Special Aggregates Committee, 1958

- stratigraphy: Condra, G.E., 1933; Lane, N.G., 1954; Snyder, B.L., 1968
- Guadalupian Series**
sedimentary rocks: Swineford, Ada, 1955a
stratigraphy: Rascoe, Bailey, Jr., 1968
- Gunter Sandstone Member**
stratigraphy: Keroher, R.P., 1940b
- Gurley Sandstone Member**
petroleum: Merriam, D.F., 1959b
- "H bed"**
biostratigraphy: Goebel, E.D., 1968f
- "H" zone**
petroleum: Curtis, G.R., 1959
see also Kansas City Group
- Hackberry shale member**
stratigraphy: Clifton, R.L., 1930, 1930a
see also Big Basin Formation
- Hamlin Shale Member**
minerals: Fishburn, M.D., 1962a
paleobotany: Barker, G.W., 1983, 1984
paleoecology: Peterson, Robert M., 1976, 1977, 1978, 1979, 1980
stratigraphy: Fisher, W.L., 1980, 1981
- Hancock sand**
petroleum: Abernathy, G.E., 1947; Williams, D.W., 1921
- Happy Hollow Limestone Member**
sedimentary rocks: Wahrhaftig, Leon, 1952
- Harper Sandstone**
areal geology: Bayne, C.K., 1974a; Norton, G.H., 1939
copper ores: Berendsen, Pieter, 1980a, 1981a
stratigraphy: Campbell, C.L., 1963; Norton, G.H., 1937; Swineford, Ada, 1955
see also Kingman sandstone member
- Harper Siltstone**
sedimentary rocks: Holdoway, K.A., 1975
sedimentation: Holdoway, K.A., 1976, 1977, 1978
stratigraphy: Swineford, Ada, 1955
- Hartford ash**
invertebrate paleontology: Miller, B.B., 1980
- Hartford Limestone Member**
sedimentary rocks: Bergstrom, R.E., 1953; Ronca, L.B., 1959
stratigraphy: Bramlette, W.A., 1940; Lamoreaux, S.B., 1984, 1984a
vertebrate paleontology: Zidek, Jiri, 1975, 1976, 1976a
- Hartland Shale Member**
biostratigraphy: Hattin, D.E., 1971
limestone deposits: Darling, Stephanie, 1983
petroleum: Scholle, P.A., 1978
sedimentary rocks: Hattin, D.E., 1971b
stratigraphy: Hattin, D.E., 1975
- Harveyville Shale Member**
stratigraphy: Gilmore, John B., 1972; Underwood, J.O., 1964
see also Olpe shale
- Haskell Limestone Member**
areal geology: Kansas Geological Society, 1939a
clay mineralogy: Jamkhindikar, S.M., 1969, 1970
geochronology: Pearn, W.C., 1959
petroleum: McCaleb, G.A., 1965
sedimentary rocks: Rutan, Debra, 1980
sedimentary structures: Bridwell, Arthur, 1943; Miller, H.W., Jr., 1957d, 1973
stratigraphy: Ball, S.M., 1964
vertebrate paleontology: Poplin, C.M., 1974, 1984
see also "Brown lime"
- Haskew gypsum member**
stratigraphy: Malone, D.J., 1962
see also Blaine Formation
- Havensville Shale Member**
clay mineralogy: Lee, Moon J., 1972, 1972a, 1976; McPherron, D.S., 1956
invertebrate paleontology: Byrne, F.E., 1942; Spencer, R.S., 1968, 1970
sedimentary rocks: Chaudhuri, Sambudhas, 1972a, 1976; Cullers, R.L., 1974, 1975; Hartig, R.L., 1954
stratigraphy: Hattin, D.E., 1954, 1957
- Hawxby Shale Member**
paleobotany: Barker, G.W., 1983, 1984
- Heebner Shale Member**
absolute age: Morency, Maurice, 1970
areal geology: Wallace, M.H., 1941
geochemistry: Amini, M.K., 1981; Murphy, M.E., 1972
invertebrate paleontology: von Bitter, P.H., 1980
natural gas: Jemison, R.M., Jr., 1978
paleoecology: von Bitter, P.H., 1979, 1979a, 1983
paleogeography: Rascoe, Bailey, Jr., 1978
petroleum: Kopper, R.W., 1982; Linehan, R.M., 1965; Schlinsog, D.G., 1982, 1983; Stewart, G.F., 1965
sedimentary rocks: Calder, J.A., 1971; Coveney, R.M., Jr., 1979a; Crouch, M.L., 1971; Evans, J.K., 1967, 1967a, 1969; Hathaway, L.R., 1972, 1979; Lane, D.W., 1958
sedimentary structures: Merriam, D.F., 1983a
stratigraphy: Baptist, O.C., 1941; Smith, C.C., 1938
structural analysis: Bayne, C.K., 1977; Briggeman, H.W., 1959
structural features: Kelly, T.E., 1964
vertebrate paleontology: Tway, L.E., 1982, 1982a
- Hepler sandstone member**
sedimentary rocks: Dalton, J.A., 1958; White, S.M., 1960
stratigraphy: Hatcher, D.A., 1961; Jewett, J.M., 1965b
see also Pleasanton Group
- Hepler shale**
sedimentary rocks: Dalton, J.A., 1958
- Herington Limestone**
clay mineralogy: Bryson, W.R., 1959
construction materials: Special Aggregates Committee, 1958
natural gas: Bartle, G.G., 1940, 1940a
sedimentary rocks: Wilbur, R.O., 1956
sedimentation: Jewett, J.M., 1933a; Tasch, Paul, 1964b
stratigraphy: Beede, J.W., 1909b; Ver Wiebe, W.A., 1937b; Wilson, L.R., 1980
- Herington Member**
clay mineralogy: Watkins, K.N., 1957
sedimentary rocks: Haury, C.E., 1984
- Hertha Limestone**
biostratigraphy: Boardman, D.R., II, 1984
invertebrate paleontology: Baesemann, J.F., 1971, 1972, 1973; Beede, J.W., 1906; Cocke, J.M., 1970, 1970a, 1970b; Qandil, Yacoub, 1961
limestone deposits: Runnels, R.T., 1951
petroleum: Kaiser, C.P., 1944; Oros, M.O., 1965
sedimentary rocks: Lawson, R.W., 1953; Schroeder, R.J., 1967, 1968
stratigraphy: Keyes, C.R., 1937d; Ravn, R.L., 1981, 1982
see also Critzer limestone member, Mound City shale member, Sniabar limestone member
- Heumader Shale Member**
areal geology: Wallace, M.H., 1941
geochemistry: Amini, M.K., 1981; Murphy, M.E., 1972
sedimentary rocks: Calder, J.A., 1971; Lane, D.W., 1958; Noonan, J.M., 1971
sedimentary structures: Merriam, D.F., 1983a
stratigraphy: Baptist, O.C., 1941
structural analysis: Fenster, D.F., 1984
- Hickory Creek Shale Member**
invertebrate paleontology: Harrington, H.J., 1955; Jacques, T.E., 1964; Pabian, R.K., 1979b
paleoecology: Boardman, D.R., II, 1984a; Spencer, R.S., 1978
sedimentary rocks: Harbaugh, J.W., 1959, 1960
- Higginsville limestone member**
construction materials: Hardy, R.G., 1977b
invertebrate paleontology: Laukel, Q.C., 1956; West, R.R., 1984
stratigraphy: Jewett, J.M., 1943
see also Fort Scott Limestone
- Highland shale**
stratigraphy: Ver Wiebe, W.A., 1937b
- High Plains aquifer**
ground water: Gutentag, E.D., 1980, 1980a, 1981, 1984; Krothe, N.C., 1982a, 1982b, 1982c; Olea, R.A., 1982; Pabst, M.E., 1982a; Stullken, L.E., 1981, 1982; Weeks, J.B., 1978, 1981
see also Ogallala Formation
- Hills Pond peridotite**
igneous rocks: O'Connor, H.G., 1968b
- Holdenville Shale**
invertebrate paleontology: West, R.R., 1964
sedimentary rocks: Dalton, J.A., 1958
stratigraphy: Jewett, J.M., 1943
see also Memorial shale
- Holdrege Formation**
areal geology: Bayne, C.K., 1960; Lane, C.W., 1960
stratigraphy: Bayne, C.K., 1968b
see also "Equus beds"
- Hollenberg limestone member**
clay mineralogy: Bryson, W.R., 1959
sedimentary rocks: Wilbur, R.O., 1956
stratigraphy: Ver Wiebe, W.A., 1937b
- "Hollow dolomite"**
stratigraphy: Johnston, L.A., 1934
- Holmesville Shale Member**
clay mineralogy: Bryson, W.R., 1959
sedimentary rocks: Waterman, W.D., 1951
- Holt Shale Member**
stratigraphy: Bramlette, W.A., 1940; Jeffords, R.M., 1940
- Hooser Shale Member**
clay mineralogy: McPherron, D.S., 1956
- Howard Limestone**
areal geology: Campbell, J.B., Jr., 1979; Schoewe, W.H., 1932
geochemistry: Myers, J.E., 1970
invertebrate paleontology: Richards, H.G., 1959
petroleum: Lane, P.J., 1959e
sedimentary rocks: Fullerton, L.B., 1970; McMillan, N.J., 1955, 1956; O'Connor, H.G., 1958; Pawel, D.T., 1975; Wahrhaftig, Leon, 1952
stratigraphy: Andersen, R.E., 1982; Mendoza, H.A., 1959; Merriam, D.F., 1982a
structural analysis: Reynolds, D.H., 1937
see also Bachelor Creek Limestone Member, Osage City shale
- Howe Limestone Member**
clay mineralogy: Asmussen, L.E., 1958
stratigraphy: McCrone, A.W., 1960, 1963; O'Connor, H.G., 1952
- Hughes Creek Shale Member**
geochemistry: Murphy, M.E., 1972
invertebrate paleontology: Byrne, F.E., 1942; Fisher, W.L., 1971; Kaesler, R.L., 1972, 1972a; Little, J.M., 1965; Matthews, J.L., 1959; Pabian, R.K., 1981; Schmidt, Winfried, 1974
paleobotany: Jizba, K.M.M., 1962
paleoecology: Kaesler, R.L., 1968, 1969; Roden, M.K., 1975; Tarkington, D.K., 1977; West, R.R., 1976; Yarrow, G.R., 1974
sedimentary rocks: Irvine, Robert, 1959
stratigraphy: Garber, M.S., 1962
vertebrate paleontology: Dunkle, D.H., 1962
- Hunton Formation**
geophysical surveys: Baysinger, B.L., 1963
petroleum: Brown, Alton R., 1960
stratigraphy: Carmody, R.A., 1947; Cole, V.B., 1980; Taylor, M.H., [Jr.], 1946, 1947b
structural analysis: Ansari, N.W., 1965; Kotoyantz, A.A., 1956; Sternin, J.E., 1961; Tucker, N.A., 1956
see also Hunton group, Kinderhook dolomite, Younkin formation
- Hunton group**
invertebrate paleontology: Ireland, H.A., 1966, 1967
sedimentary rocks: Borak, B., 1982; Miller, Robert E., 1963

- 1981; Cubitt, J.M., 1975, 1979, 1984; Gentile, R.J., 1969; Harbaugh, J.W., 1964d; Ives, William, Jr., 1955; Keroher, G.C., 1939; Lawson, R.W., 1953; Verhulst, A.T., 1970; Watney, W.L., 1977, 1981, 1983, 1984
- sedimentary structures: Hall, B.P., 1961
- sedimentation: Heckel, P.H., 1979, 1984; Watney, W.L., 1980b, 1983a
- stratigraphy: Aufmuth, R.E., 1966; Burchett, R.R., 1959; Heckel, P.H., 1978; Hockens, S.N., 1959; Jungmann, W.L., 1964; Keyes, C.R., 1939, 1941b, 1941i; Lamerson, P.R., 1956; Machovec, M.A., 1963; Miller, D.E., 1963; Newell, N.D., 1931, 1933; Parizek, E.J., 1965, 1965b; Payton, C.E., 1965; Ravn, R.L., 1981, 1982; Watney, W.L., 1978
- structural analysis: Booth, A.L., 1962; Burchett, R.R., 1983e; Gerhard, R.G., 1965; Herman, C.W., 1957; Parkhurst, R.W., 1959, 1959a, 1962; Sandlin, G.S., 1957; Steeples, D.W., 1982; Strong, R.M., 1960
- see also Bronson formation, Bronson group, Bronson subgroup, "H" zone, Stokes sand
- Kansas City limestone**
stratigraphy: Keyes, C.R., 1937b
- "Kansas City oolite"**
stratigraphy: Keyes, C.R., 1937b
see also Westerville Limestone Member
- Kansas till**
geomorphology: O'Connor, H.G., 1963a
stratigraphy: Bayne, C.K., 1965b; Frye, J.C., 1950a
see also Cedar Bluffs till, Nickerson till
- Kanwaka Shale**
areal geology: McClain, T.J., 1979
data processing: Esler, J.E., 1968
invertebrate paleontology: Furrington, Wealthy, 1948
sedimentary rocks: Schoewe, W.H., 1938e
soils: Savage, M.E.A., 1961
stratigraphy: Braden, W.J., 1958; Brown, S.S.L., 1966, 1967; Schrott, R.O., 1966, 1966a; Smith, C.C., 1938
see also Lecompton megacyclothem, Oread megacyclothem
- Keary Formation**
areal geology: McManus, D.A., 1959a
sedimentary rocks: Abels, T.A., 1958, 1959; Franz, R.H., 1984
stratigraphy: McManus, D.A., 1959, 1960; McMurray, K.S., 1962
- Keokuk Formation**
mineral deposits: Hagni, R.D., 1962a
- Keokuk Limestone**
fluid inclusions: Schmidt, R.A., 1962
geophysical methods: Crumpton, C.F., 1959
ground water: Abernathy, G.E., 1948
lead ores: Fowler, G.M., 1939; Harbaugh, J.W., 1950, 1950a; Moore, R.C., 1939b; Wallace, M.H., 1942
limestone deposits: Runnels, R.T., 1951; Waugh, T.C., 1966
mineral deposits: Hagni, R.D., 1962; Schmidt, R.A., 1959
mineral resources: Kinney, E.D., 1941
petroleum: Euwer, R.M., 1964
sedimentary rocks: Saadallah, A.A., 1964
stratigraphy: Lee, Wallace, 1940, 1940a, 1940b; Moore, R.C., 1939c
structural analysis: Desai, A.A., 1966
zinc ores: Brichta, L.C., 1950; Wei, Chi-Sheng, 1975
- Kereford Limestone Member**
areal geology: Wallace, M.H., 1941
biostratigraphy: Peterson, Robert M., 1976a
sedimentary rocks: Bergstrom, R.E., 1953; Galle, O.K., 1966a, 1967; Ronca, L.B., 1959
sedimentary structures: Merriam, D.F., 1983a
stratigraphy: Baptist, O.C., 1941; Monger, J.W.H., 1961; Smith, C.C., 1938
- "Keyes sand"**
sedimentary rocks: Abels, T.A., 1958, 1959
- Keyes sandstone**
petroleum: Fuqua, H.H., 1959; Panhandle Eastern Pipe Line Company, Geology Department, 1959a; Rupp, G.E., 1959
structural analysis: Strunk, P.M., 1958
see also Morrowan Series
- Kickapoo limestone**
vertebrate paleontology: Twenhofel, W.H., 1914
see alsolatan Limestone Member
- Kiewitz shale**
invertebrate paleontology: Pabian, R.K., 1974c
see also Stoner Limestone Member
- Kimball formation**
minerals: Swineford, Ada, 1959
vertebrate paleontology: Martin, L.D., 1975
see also Ogallala Formation
- Kimball member**
areal geology: Merriam, D.F., 1955c
minerals: Franks, P.C., 1959c
paleobotany: Thomasson, J.R., 1976h
sedimentary structures: Swineford, Ada, 1958
stratigraphy: Bayne, C.K., 1968a; Frye, J.C., 1956
see also "algal limestone," Ogallala Formation
- Kimmswick Limestone**
stratigraphy: Leatherock, Constance, 1945
- Kinderhook dolomite**
petroleum: Ver Wiebe, W.A., 1946
see also Hunton Formation
- Kinderhookian Series**
stratigraphy: Carmody, R.A., 1947; Cole, V.B., 1975
see also Kinderhookian stage
- Kinderhookian stage**
invertebrate paleontology: Klapper, Gilbert, 1971
stratigraphy: Goebel, E.D., 1968e
see also Kinderhookian Series
- "Kinderhook shale"**
areal geology: Schoewe, W.H., 1932
petroleum: Bunte, A.S., 1939; Imbt, W.C., 1942a; Wright, B.J., 1965
sedimentary rocks: Leatherock, Constance, 1936
stratigraphy: Johnston, L.A., 1934; McClellan, H.W., 1930a
structural analysis: Ehm, A.E., 1965; Kotoyantz, A.A., 1956
structural features: Koester, E.A., 1935, 1935a
see also Chattanooga Shale
- King Hill Shale Member**
paleobotany: Lokke, D.H., 1966
- Kingman sandstone member**
areal geology: Norton, G.H., 1939
see also Harper Sandstone
- Kingsdown Formation**
areal geology: Schultz, G.E., 1966, 1967
biostratigraphy: Bayne, C.K., 1976a; Schultz, G.E., 1966a
invertebrate paleontology: Devore, C.H., 1974, 1975; Gutentag, E.D., 1958, 1962; Miller, B.B., 1960, 1961, 1963, 1964a, 1966
paleobotany: Kapp, R.O., 1965, 1970
paleoecology: Hibbard, C.W., 1945
stratigraphy: Paul, R.W., 1967
vertebrate paleontology: Carleton, M.D., 1979; Jammot, Dominique, 1972; Schultz, G.E., 1965; Tihen, J.A., 1954; Zakrzewski, R.J., 1975
- Kingsdown Silt**
invertebrate paleontology: Franzen, D.S., 1946
stratigraphy: Frye, J.C., 1941b, 1945a
- Kinney Limestone Member**
sedimentary rocks: Hartig, R.L., 1954
- Kinnison shale member**
stratigraphy: Howe, W.B., 1951
- Kiowa Formation**
areal geology: Bayne, C.K., 1974a
biogeography: Scott, R.W., 1977
engineering geology: Brady, L.L., 1973
geomorphology: Hoppie, J.R., 1980
ground water: Angino, E.E., 1972a; Crook, M.C., 1975; Keene, K.M., 1976, 1977; Kume, Jack, 1982, 1984
hydrology: Dunlap, L.E., 1977; Hargadine, G.D., 1978, 1979a
- invertebrate paleontology: Feldmann, R.M., 1977, 1978, 1978a; Scott, R.W., 1967, 1968, 1978
metal ores: James, G.W., 1978
paleobotany: Bint, A.N., 1983; Ward, J.V., 1983
paleoecology: Scott, R.W., 1967a, 1970; West, R.R., 1976
popular geology: Nickel, Gerhard, Jr., 1972
sedimentary rocks: Larsen, V.E., 1953; Scott, R.W., 1970a
sedimentary structures: Franks, P.C., 1969, 1969a
stratigraphy: Franks, P.C., 1967, 1967a, 1979; Gould, C.N., 1898; Plummer, N.V., 1942e
vertebrate paleontology: Schultze, H.-P., 1981
see also "Champion shell bed"
- Kiowa Shale**
areal geology: Knight, G.L., 1929; Mack, L.E., 1959; Swineford, Ada, 1945c
biostratigraphy: Cooper, W.W., 1967; Tasch, Paul, 1962d, 1964c
clay deposits: Ives, William, Jr., 1960a
engineering geology: Mackie, Andrew, 1980
geomorphology: Frye, J.C., 1947b
hydrology: Scobee, E.R., 1967
invertebrate paleontology: Loeblich, A.R., Jr., 1950; Marcou, Jules, 1897
mineral resources: Bauleke, M.P., 1967
minerals: Langeheim, R.L., Jr., 1965
paleobotany: Twenhofel, W.H., 1920a; Ward, J.V., 1982
petroleum: Merriam, D.F., 1959b
sedimentary rocks: King, G.E., 1972; Ross, Scott, 1976; Swineford, Ada, 1947
soils: Matthews, C.W., 1949
stratigraphy: Bullard, F.M., 1928; Franks, P.C., 1975; Latta, B.F., 1946; Prosser, C.S., 1897; Twenhofel, W.H., 1918
see also Barberian series, Belvidere formation, Belvidere shell beds
- "Knobtown sandstone"**
stratigraphy: Hatcher, D.A., 1961
see also Tackett formation
- Krebs Formation**
clay mineralogy: Tien, Pei-Lin, 1973, 1973a
coal deposits: Brady, L.L., 1974, 1976, 1977, 1978; Flueckinger, L.A., 1973; Welch, J.E., 1982a
stratigraphy: Brady, L.L., 1982; Branson, C.C., 1960, 1968; Ebanks, W.J., Jr., 1979c; Harris, J.W., 1984
structural analysis: McQuillan, M.W., 1968
see also Columbus coal bed, Columbus cyclothem, Dry Wood coal bed, Riverton coal bed, Rowe coal bed
- Krebs group**
stratigraphy: Howe, W.B., 1954, 1956
- Krider Limestone Member**
clay mineralogy: Bryson, W.R., 1959
natural gas: Bartle, G.G., 1940, 1940a
- Kukle ash**
vertebrate paleontology: Holman, J.A., 1979
- "L bed"**
lead ores: Fowler, G.M., 1939
- Laberdie limestone member**
invertebrate paleontology: Laukel, Q.C., 1956
paleoecology: Gamble, J.C., 1967
stratigraphy: Jewett, J.M., 1943; Price, R.C., 1981, 1982, 1984
see also Pawnee Limestone
- Labette Shale**
areal geology: Jewett, J.M., 1940
guidebooks: Murray, F.N., 1976
invertebrate paleontology: Beede, J.W., 1904; Williams, J.[S.], 1938
paleoecology: Gamble, J.C., 1967
petroleum: Ockerman, J.W., 1932
sedimentary rocks: O'Connor, H.G., 1958
stratigraphy: Jewett, J.M., 1943, 1945; Keyes, C.R., 1937, 1941g; Price, R.C., 1981, 1982, 1984
- Ladore Shale**
invertebrate paleontology: Jaeser nann, J.F., 1971,

- limestone deposits: Darling, Stephanie, 1983
sedimentary rocks: Hattin, D.E., 1971b; Snyder, D.L., 1963
stratigraphy: Hattin, D.E., 1969a, 1975
- Linwood clay**
sediments: Swineford, Ada, 1968
- Linwood shale**
stratigraphy: Keyes, C.R., 1939
- Little Cabin sandstone**
paleobotany: Morgan, J.L., 1955, 1955a
petroleum: Ebanks, W.J., Jr., 1977c
see also Warner Sandstone Member
- Little Osage shale member**
construction materials: Hardy, R.G., 1977b
invertebrate paleontology: Laukel, Q.C., 1956
mineral resources: Berendsen, Pieter, 1978
paleoecology: Boardman, D.R., II, 1984a; Gamble, J.C., 1967
petroleum: Angino, E.E., 1981; Hardy, R.G., 1977, 1977c
sedimentary rocks: Modzeleski, Vincent, 1968
stratigraphy: Jewett, J.M., 1943
uranium ores: Hardy, R.G., 1977a
vertebrate paleontology: Chorn, J.D., 1978b
see also Fort Scott Limestone
- Long Creek Limestone Member**
ground water: Whittemore, D.O., 1978b
sedimentary rocks: Wilbur, R.O., 1956
stratigraphy: Garber, M.S., 1962
- Longford Member**
sedimentary structures: Franks, P.C., 1969
stratigraphy: Franks, P.C., 1979
- Loup Fork beds**
stratigraphy: Bennett, D.K., 1984; Cragin, F.W., 1891a
vertebrate paleontology: Cope, E.D., 1887b, 1890; Cragin, F.W., 1892; Williston, S.W., 1894b
see also Ogallala Formation
- Loup Fork formation**
vertebrate paleontology: Scott, W.B., 1890
see also Ogallala Formation
- Loup Fork group**
invertebrate paleontology: Sternberg, C.H., 1882
vertebrate paleontology: Gilbert, J.Z., 1898; Sternberg, C.H., 1906, 1907a
see also Ogallala Formation
- Loup River beds**
paleobotany: Brooks, B.W., 1928
vertebrate paleontology: Cope, E.D., 1878c
see also Ogallala Formation
- Loveland Loess**
ceramic materials: Frye, J.C., 1949d
sediments: Metz, H.L., 1954
soils: Badgley, W.A., 1957; Hanna, R.M., 1954, 1955; Hawando, Tamir, 1978, 1979, 1983
stratigraphy: Bayne, C.K., 1968b, 1971a; Eshelman, R.E., 1974, 1974a; Frye, J.C., 1951e, 1951f; Miess, J.V., 1974
vertebrate paleontology: Eshelman, R.E., 1975
- Loveland silt member**
stratigraphy: Frye, J.C., 1947a, 1949
- lower Sibley coal bed**
coal deposits: Bowsher, A.L., 1943
see also Tonganoxie Sandstone Member
- lower Williamsburg coal bed**
coal deposits: Bowsher, A.L., 1943
see also Lawrence Formation
- Luta limestone**
stratigraphy: Beede, J.W., 1909b; Boos, M.F., 1929
see also Cresswell Limestone Member
- "M bed"**
biostratigraphy: Goebel, E.D., 1968f
fluid inclusions: Schmidt, R.A., 1962
lead ores: Fowler, G.M., 1939
mineral deposits: Hagni, R.D., 1966; Schmidt, R.A., 1959
sedimentary rocks: Saadallah, A.A., 1964
structural analysis: Desai, A.A., 1966; Toweh, S.H., 1978
- Maple Hill Limestone Member**
sedimentary rocks: Drake, L.Y., 1951; Twiss, P.C., 1955; Wahrhaftig, Leon, 1952
stratigraphy: Wood, R.L., 1959
- Maquoketa dolomite**
petroleum: Imbt, W.C., 1941, 1942a
- Maquoketa Formation**
stratigraphy: Johnston, L.A., 1934; Taylor, M.H., [Jr.], 1947a
- Maquoketa Shale**
paleobotany: Wright, R.P., 1981
paleoecology: Tasch, Paul, 1976
sedimentary rocks: Carlson, M.P., 1983; Ver Wiebe, W.A., 1948
stratigraphy: Carmody, R.A., 1947; Cole, V.B., 1975a, 1980; Goebel, E.D., 1968c; McClellan, H.W., 1930a
structural features: Koester, E.A., 1935, 1935a
see also Engle shale
- Marais des Cygnes series**
areal geology: Swallow, G.C., 1867
- Marion formation**
invertebrate paleontology: Sellards, E.H., 1903
stratigraphy: Gould, C.N., 1901b, 1901c; Prosser, C.S., 1895, 1897, 1905
see also Chase Group, Wellington Formation
- Marion stage**
stratigraphy: Beede, J.W., 1909b
see also Chase Group, Wellington Formation
- Marmaton Group**
areal geology: Jewett, J.M., 1940; Schoewe, W.H., 1932
biostratigraphy: Swade, J.W., 1984
coal deposits: Brady, L.L., 1974, 1976, 1976b; Flueckinger, L.A., 1973; Schoewe, W.H., 1955
enhanced recovery: Ebanks, W.J., Jr., 1975a
invertebrate paleontology: Elias, M.K., 1935; Laukel, Q.C., 1956; Nodine-Zeller, D.E., 1978
lead deposits: Schoewe, W.H., 1959b
mineral resources: Berendsen, Pieter, 1978
petroleum: Aukerman, R.A., 1959, 1959a; Byers, P.C., 1959; Fugitt, L.B., 1959; Lee, Wallace, 1939; McCaslin, J.C., 1981b, 1981c; Ockerman, J.W., 1932; Redman, K.G., 1947; Renfroe, C.A., 1959; Roberts, A.A., 1984; Schmidlapp, R.L., 1959
sedimentary rocks: Baab, Patricia, 1981; Hatch, J.R., 1981, 1982
sedimentary structures: Berendsen, Pieter, 1978a
sedimentation: Heckel, P.H., 1979, 1984; Renfroe, C.A., 1954
stratigraphy: Aufmuth, R.E., 1966; Baker, J.M., 1984; Jewett, J.M., 1941, 1943, 1945; Jungmann, W.L., 1964; Keyes, C.R., 1937, 1941f; Lemmons, J.E., 1946; Maderak, M.L., 1960; McMurray, K.S., 1962; Miesner, J.F., 1968; Priest, Tim, 1982; Roth, R.L., 1930; Searight, W.V., 1953
structural analysis: McQuillan, M.W., 1968; Osborn, J.B., 1962; Steeples, D.W., 1982
vertebrate paleontology: Crum, E.R., 1917
see also "Dawson" shale, Peru limestone
- Marquette member**
stratigraphy: Twenhofel, W.H., 1926a
- Matfield Shale**
biostratigraphy: Wind, F.H., 1973
environmental geology: Hall, R.A., 1979
stratigraphy: Dishman, B.D., 1969
- McLish formation**
well logging: Doveton, J.H., 1984
see also Simpson Group
- "McLouth sand"**
petroleum: Lee, Wallace, 1941
- McPherson Formation**
areal geology: Lohman, S.W., 1939a, 1940c
geochemistry: Rubey, W.W., 1954
ground water: Beede, J.W., 1898a; Lohman, S.W., 1940; Williams, C.C., 1946
invertebrate paleontology: Miller, B.B., 1970
stratigraphy: Frye, J.C., 1941c; Semken, H.A., Jr., 1965, 1965a, 1966
- vertebrate paleontology: Carleton, M.D., 1979; Harnly, H.J., 1932; Hibbard, C.W., 1952a; Holman, J.A., 1963, 1971
see also "Equus beds"
- Meade formation**
biostratigraphy: Bayne, C.K., 1976a
geochemistry: Rubey, W.W., 1954
ground water: Johnson, C.R., 1954
paleoecology: Hibbard, C.W., 1945
stratigraphy: Frye, J.C., 1941b, 1945a, 1950a, 1951f, 1954a; Semken, H.A., Jr., 1965, 1965a, 1966
vertebrate paleontology: Hibbard, C.W., 1956
see also Meade Group
- Meade Group**
ground water: Manges, H.L., 1973
invertebrate paleontology: Franzen, D.S., 1946; Gutentag, E.D., 1958
see also Meade formation
- medial Chase megacyclothem**
stratigraphy: Dishman, B.D., 1969
- Medicine Lodge Gypsum Member**
areal geology: Knight, G.L., 1929
gypsum deposits: Kulstad, R.O., 1955, 1956a; McGregor, D.J., 1948
stratigraphy: Malone, D.J., 1962; Smit, D.E., 1978
- Memorial shale**
stratigraphy: Jewett, J.M., 1945; Oakes, M.C., 1942, 1943
see also Holdenville Shale
- Mentor beds**
invertebrate paleontology: Jones, A.W., 1898, 1899, 1903, 1905
stratigraphy: Cragin, F.W., 1895a; Prosser, C.S., 1897; Twenhofel, W.H., 1918, 1926a
see also Dakota Group
- Meramecian stage**
biostratigraphy: Goebel, E.D., 1967a; Thompson, T.L., 1963b, 1968
invertebrate paleontology: Thompson, T.L., 1962, 1963, 1963a, 1965, 1965a
stratigraphy: Goebel, E.D., 1968e; McNeeley, J.B., 1973
- Merriam Limestone Member**
invertebrate paleontology: Roy, M.B., 1966
sedimentary rocks: Harbaugh, J.W., 1959, 1960
stratigraphy: McManus, D.A., 1956
- Middle Creek limestone member**
diagenesis: Nollisch, D.A., 1983
sedimentary rocks: Lawson, R.W., 1953
stratigraphy: Mossler, J.H., 1973
- Milan dolomite**
copper ores: Hill, W.E., Jr., 1967
metal ores: Long, D.T., 1976
see also Wellington Formation
- Milan limestone member**
areal geology: Norton, G.H., 1939
copper ores: Berendsen, Pieter, 1980a, 1981a
sedimentation: Tasch, Paul, 1964b
see also Wellington Formation
- Mine Creek shale member**
paleoecology: Gamble, J.C., 1967
stratigraphy: Jewett, J.M., 1943; Price, R.C., 1981, 1982, 1984
see also Pawnee Limestone
- Mineral coal bed**
coal deposits: Cobb, J.C., 1981, 1981a; Hatch, J.R., 1976
construction materials: Hardy, R.G., 1977b
environmental geology: Powell, W.E., 1982
paleobotany: Baxendale, R.W., 1977, 1978; Baxter, R.W., 1951, 1965a, 1971, 1971a, 1975; Cridland, A.A., 1958, 1960; Jones, K.D., 1968; Leisman, G.A., 1970, 1971a; Otto, D.A., 1967, 1968; Roth, Elmer A., 1954, 1955; Schabillion, J.T., 1967, 1969, 1969a, 1970; Segal, R.H., 1966; Urban, J.B., 1962, 1962a, 1970
sedimentary rocks: Hambleton, W.W., 1951, 1951a, 1951b, 1953
sedimentary structures: Perkins, T.W., 1974
see also Cabaniss Formation

- Logan, W.N., 1897, 1898; McClung, C.E., 1898; Morrow, A.L., 1931; Springer, Frank, 1899, 1900, 1901; Williston, S.W., 1890a, 1890c; Withers, T.H., 1926
- nonmetal deposits: Kinney, E.D., 1942b
- paleobotany: Dawson, G.M., 1890; Stearns, R.A., 1976
- paleoecology: Archer, A.W., 1980, 1983; Frey, R.W., 1969, 1969a, 1969b, 1970, 1972
- sedimentary rocks: Hattin, D.E., 1975a, 1977a; Patrick, G.E., 1875
- sediments: Pinkley, G.R., 1928; Reimer, L.J., 1975
- stratigraphy: Hattin, D.E., 1965c, 1965d, 1975b, 1978
- vertebrate paleontology: Gregory, J.T., 1950; Hay, O.P., 1898a, 1899, 1899a; Hibbard, C.W., 1941e, 1945a; Martin, H.T., 1920; Mehl, M.G., 1931, 1931a, 1936; Stenberg, C.H., 1905, 1907, 1908, 1909, 1911, 1913; Stenberg, G.F., 1958; Wieland, G.R., 1909a; Williston, S.W., 1890, 1899
- Niobrara Formation**
- areal geology: Stoner, O.E., 1934
- biostratigraphy: Johnson, J.H., 1930; Manes, M.L., 1973; Woods, R.S., 1978a
- clay mineralogy: Pollastro, R.M., 1983
- geochemistry: Rarick, Lawrence, 1937; Rubey, W.W., 1954; Search, Herman, 1939; Yamamoto, S., 1978, 1979
- geomorphology: Russell, W.L., 1929
- ground water: Fritz, T.R., 1980; Hathaway, L.R., 1979a; Johnson, C.R., 1954; Johnson, M.S., 1978; Krieger, R.A., 1957; Latta, B.F., 1948a; Schmidt, Gene W., 1961
- invertebrate paleontology: Deiss, A.P., 1978; Dring, N.B., 1977; Frerichs, W.E., 1981; Green, R.G., 1974; Jeletzky, J.A., 1955, 1961; Loettler, G.J., 1937, 1937a; Miller, H.W., Jr., 1957a, 1957b, 1957c, 1959, 1968, 1968a, 1969; Neugebauer, J., 1978; Stenberg, C.H., 1881; Thorne, Peter, 1984
- natural gas: Brown, C.A., 1982; Lockridge, J.P., 1978, 1983, 1984; Rountree, R.L., 1978; Smagala, T., 1981
- paleobotany: Hart, W.G., 1972; Johnson, J.H., 1948
- paleoecology: Archer, A.W., 1982; Baldwin, E.A., 1976; Stewart, J.D., 1984
- paleomagnetism: Shive, P.N., 1974
- petroleum: Jameson, J.S., 1983; Rice, D.D., 1980, 1981, 1982; Scholle, P.A., 1978; Weimer, R.J., 1983
- sedimentary rocks: Arthur, M.A., 1981; Hattin, D.E., 1981a; Honjo, Susumu, 1970; Yamamoto, S., 1977
- sedimentary structures: Archer, A.W., 1984
- stratigraphy: Cobban, W.A., 1949; Hattin, D.E., 1977b; Laferriere, A.P., 1983; Miller, H.W., Jr., 1958c
- structural analysis: Neuhauser, K.R., 1983
- vertebrate paleontology: Bardack, David, 1965, 1965a, 1976; Cope, E.D., 1873, 1877a; DeLong, R.L., 1970; Dunkle, D.H., 1969; Gingerich, P.D., 1972; Goody, P.C., 1970; Harksen, J.C., 1963, 1966; Hibbard, C.W., 1942c; Holman, J.A., 1981; Hussakof, Louis, 1929; Jordan, D.S., 1924; Marsh, O.C., 1880a, 1880b, 1980; Martin, L.D., 1977, 1984; Mateer, N.J., 1976; Miller, H.W., Jr., 1958a; Stenberg, G.F., 1957; Stewart, J.D., 1978b, 1979b; Walker, M.V., 1967; Wiley, E.O., 1977; Williston, S.W., 1893c, 1913; Wiman, Carl, 1920
- well logging: Fertl, W.H., 1982
- see also* Niobrara shale
- Niobrara shale**
- economic geology: McCaslin, J.C., 1977
- see also* Niobrara Formation
- Nippewalla group**
- areal geology: Norton, G.H., 1939
- salt deposits: Nixon, E.K., 1951b
- sedimentary rocks: Holdaway, K.A., 1975; Swineford, Ada, 1955a
- sedimentation: Holdaway, K.A., 1976, 1977, 1978
- stratigraphy: Campbell, C.L., 1963; Hollweg, W.A., 1964; Schumaker, R.D., 1966; Swineford, Ada, 1954
- see also* Salt Fork group
- Nodaway coal bed**
- coal deposits: Whittle, R.E., 1940
- see also* Aarde Shale Member
- Nodaway underclay**
- sedimentary rocks: McMillan, N.J., 1955, 1956
- see also* Aarde Shale Member
- Nolans Limestone**
- biostratigraphy: Wind, F.H., 1973
- environmental geology: Bryson, W.R., 1966
- ground water: Bell, T.C., 1974
- sedimentary rocks: Glossa, J.M., 1982
- stratigraphy: Carl, M.F., 1980; Russell, J.L., 1967; Wilson, L.R., 1980
- see also* Enterprise shale
- Norfleet limestone member**
- sedimentary rocks: Parkinson, R.W., 1982
- see also* Lenapah Limestone
- Northview Shale**
- paleoecology: Lane, H.R., 1978
- see also* Northview shale member
- Northview shale member**
- stratigraphy: Lee, Wallace, 1940a, 1940b
- see also* Northview Shale
- Nowata Shale**
- guidebooks: Murray, F.N., 1976
- sedimentary rocks: White, S.M., 1960
- stratigraphy: Jewett, J.M., 1943, 1945
- see also* Walter Johnson sandstone member, "Wayside sand"
- Noxide sandstone member**
- stratigraphy: Haggiagi, M.A., 1970; Schulte, G.S., 1958, 1959
- see also* Chanute Shale
- Nyman coal bed**
- coal deposits: Whittle, R.E., 1940
- see also* Pillsbury Shale
- Odee formation**
- areal geology: Stevens, J.B., 1963
- invertebrate paleontology: Gutentag, E.D., 1958, 1962
- Odell Shale**
- biostratigraphy: Wind, F.H., 1973
- clay mineralogy: Bryson, W.R., 1959
- ground water: Bell, T.C., 1974
- invertebrate paleontology: Pattengill, M.G., 1964
- stratigraphy: Carl, M.F., 1980; Russell, J.L., 1967; Wilson, L.R., 1980
- see also* Enterprise shale
- Ogallala aquifer**
- engineering geology: Smith, J.W., 1975
- geophysical surveys: Macfarlane, P.A., 1982
- ground water: Buller, O.H., 1982; Camp Dresser and McKee, Inc., 1979, 1982; Gutentag, E.D., 1977; Halepaska, J.C., 1975b; Jenkins, E.D., 1974, 1983; Krothe, N.C., 1982; O'Connor, H.G., 1981; Spinazola, J.M., 1983; Wagner, John P., 1980, 1982
- water resources: McCray, Kevin, 1982; Walsh, J., 1980
- see also* Ogallala Formation
- Ogallala Formation**
- areal geology: Bayne, C.K., 1972d, 1974a; Elias, M.K., 1931; Hodson, W.G., 1965; Lane, C.W., 1960; Merriam, D.F., 1955c; Sigma Gamma Epsilon, Alpha Nu Chapter, 1952; Stevens, J.B., 1963; Stramel, G.J., 1958
- cartography: Williams, T.H.L., 1981
- clay deposits: Ives, William, Jr., 1960a
- construction materials: Frye, J.C., 1946d
- data processing: McClain, T.J., 1970b; Yukler, M.A., 1979
- geomorphology: Hoppie, J.R., 1980
- ground water: Angino, E.E., 1972a; Bittinger, M.W., 1980a; Dealy, M.T., 1984; Dunlap, L.E., 1981, 1981a, 1981b, 1982, 1982a, 1984a; Gutentag, E.D., 1973, 1984a; Hathaway, L.R., 1975, 1979a; Jenkins, E.D., 1967, 1969, 1970, 1975; Johnson, C.R., 1954; Johnson, M.S., 1978; Krieger, R.A., 1957; Krothe, N.C., 1980, 1980a, 1983; McClain, T.J., 1970, 1970a; Oliver, Joseph W., 1981; Pabst, M.E., 1978c, 1979b; Power, J.A., Jr., 1976a; Rayner, F.A., 1970; Schmidt, Gene W., 1961; Slagle, S.E., 1973; Sophocleous, M.A., 1982e; Spinazola, J.M., 1982; Yukler, M.A., 1976, 1977
- hydrology: Stuifken, L.E., 1984
- invertebrate paleontology: Gutentag, E.D., 1958; Pearl, R.H., 1970
- limestone deposits: Kansas Geological Survey, 1931
- metal ores: James, G.W., 1978
- minerals: Franks, P.C., 1959c; Swineford, Ada, 1959
- nonmetal deposits: Kinney, E.D., 1942b
- paleobotany: Daily, F.K., 1979; Elias, M.K., 1932b; Hanna, G.D., 1932; Segal, R.H., 1964, 1965, 1966a, 1966b, 1966c; Selva, S.B., 1981; Stearns, R.A., 1976; Thomasson, J.R., 1976, 1976a, 1976b, 1979
- petroleum: Jameson, J.S., 1983
- sedimentary structures: Swineford, Ada, 1958
- sedimentation: Elias, M.K., 1932a, 1933
- sediments: Reimer, L.J., 1975; Swineford, Ada, 1945b, 1946, 1946a
- soils: Glover, R.K., 1968
- stratigraphy: Bayne, C.K., 1968a; Bennett, D.K., 1984; Courtier, W.H., 1934; Frye, J.C., 1941b, 1951e, 1951f, 1956, 1978; Hesse, C.J., 1931, 1932; Kovach, J.T., 1979, 1980; Merriam, D.F., 1954a; Spicer, S.R., 1975; Trimble, D.E., 1980
- structural analysis: Izzett, G.A., 1980
- uranium ores: Berendsen, Pieter, 1977, 1981; Geodata International, Inc., 1981
- vertebrate paleontology: Baskin, J.A., 1982; Bennett, D.K., 1977, 1978a, 1979; Brodkorb, Pierce, 1962; Carleton, M.D., 1979; Harrison, J.A., 1979a, 1979b, 1983; Hibbard, C.W., 1934, 1938a, 1942a, 1942d; Hubbs, C.L., 1951; Tallan, M.E., 1978; Taylor, E.H., 1941a; Wilson, R.L., 1968, 1968a, 1968b; Wood, A.E., 1936
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- see also* Ash Hollow formation, Ash Hollow member, Emma Creek formation, High Plains aquifer, Kimball formation, Kimball member, Loup Fork beds, Loup Fork formation, Loup Fork group, Loup River beds, "mortor beds," Ogallala aquifer, Ogallala group, Valentine member
- Ogallala group**
- vertebrate paleontology: Martin, L.D., 1975
- see also* Ogallala Formation
- Oketo Shale Member**
- invertebrate paleontology: Byrne, F.E., 1941, 1942; Pattengill, M.G., 1964
- paleoecology: Griffin, J.R., Jr., 1974; Kues, B.S., 1975, 1975a; McMillen, K.J., 1972
- sedimentary rocks: Irvine, Robert, 1959
- stratigraphy: Carl, M.F., 1980
- Omadi formation**
- petroleum: Merriam, D.F., 1959b
- Omadi sandstone**
- sedimentary structures: Mizula, J.W., 1960
- see also* Dakota Sandstone
- Onaga Shale**
- areal geology: Mudge, M.R., 1962
- paleobotany: Barker, G.W., 1983, 1984
- stratigraphy: Bemasek, R.A., 1967; Girardot, S.L., 1962

- Plattsburg Limestone**
areal geology: Dean, T.J., 1973
biogeography: Pabian, R.K., 1977a
data processing: Harbaugh, J.W., 1967
invertebrate paleontology: Cocke, J.M., 1970, 1970a, 1970b; Newell, N.D., 1931b; Weller, J.M., 1935
limestone deposits: Jewett, J.M., 1947; Runnels, R.T., 1951
popular geology: Graffham, A.A., 1946a
sedimentary rocks: Buczynski, Chris, 1982; Conley, C.D., 1974, 1977; Davis, J.C., 1959; Edson, M.W., 1984; Harbaugh, J.W., 1959, 1960, 1960a, 1962, 1965; Kettenbrink, E.C., 1971; Nelson, D.L., 1978; Schroeder, R.J., 1967, 1968; Wilkinson, B.H., 1984
sedimentary structures: Harbaugh, J.W., 1964c; Manger, W.L., 1970
stratigraphy: Mann, C.J., 1957
structural analysis: Chelikowsky, J.R., 1947
- Plattsmouth Limestone Member**
areal geology: Wallace, M.H., 1941
geochemistry: Galle, O.K., 1964
geomorphology: Parizek, E.J., 1959
invertebrate paleontology: Bridwell, Arthur, 1939; Grinnell, R.S., Jr., 1958
minerals: Tien, Pei-Lin, 1970c
paleoecology: von Bitter, P.H., 1979, 1979a
sedimentary rocks: Angino, E.E., 1959; Bergstrom, R.E., 1953; Galle, O.K., 1960, 1966, 1966a, 1967; Hill, W.E., Jr., 1964; Lane, D.W., 1958; Mathews, W.L., 1978; Ronca, L.B., 1959
sedimentary structures: Kansas Geological Society, 1983; Merriam, D.F., 1983a; Wolf, G.V., 1984a
stratigraphy: Baptist, O.C., 1941; Smith, C.C., 1938
structural analysis: Stewart, G.F., 1967
vertebrate paleontology: Miller, H.W., Jr., 1957; Tway, L.E., 1982, 1982a
- Pleasanton Formation**
biostratigraphy: Boardman, D.R., II, 1984
enhanced recovery: Ebanks, W.J., Jr., 1975a
phosphate deposits: Randle, R.F., 1949
see also Exline shale member, Pleasanton shale
- Pleasanton Group**
geochemistry: Rubey, W.W., 1954
geomorphology: Simms, J.J., 1975
invertebrate paleontology: Nodine-Zeller, D.E., 1978
mineral resources: Berendsen, Pieter, 1978
petroleum: Hardy, R.G., 1977
sedimentary rocks: Cubitt, J.M., 1984; Rose, K.E., 1967
sedimentary structures: Berendsen, Pieter, 1978a
stratigraphy: Emery, P.A., 1962; Hatcher, D.A., 1961; Jewett, J.M., 1965b; Jungmann, W.L., 1964; Miller, D.E., 1963; Ravn, R.L., 1981, 1982; Singler, C.R., 1965, 1965a
see also Bourbon formation, Hepler sandstone member, Seminole formation, South Mound shale member, Tackett formation, Warrensburg sandstone
- Pleasanton shale**
coal deposits: Haworth, Erasmus, 1895f
remote sensing: Pincomb, Arthur, 1971
stratigraphy: Haworth, Erasmus, 1895b, 1895e
see also Pleasanton Formation
- Pony Creek Shale Member**
invertebrate paleontology: Elias, M.K., 1950
paleobotany: Jizba, K.M.M., 1962; Morgan, B.E., 1973; Schaeffer, K.M.M., 1960
sedimentary rocks: Brookins, D.G., 1970j
sedimentary structures: Mudge, M.R., 1956
vertebrate paleontology: Dunkle, D.H., 1962
- Pottawatomie formation**
invertebrate paleontology: Rogers, A.F., 1900d
- Pottawatomie stage**
vertebrate paleontology: Crum, E.R., 1917
- Powell Dolomite**
sedimentary rocks: McCracken, Earl, 1953, 1955
- "Purdy sandstone"**
petroleum: Panhandle Eastern Pipe Line Company, Geology Department, 1959
sedimentary rocks: Abels, T.A., 1958, 1959
see also Morrowan Series
- Queen Hill Shale Member**
invertebrate paleontology: Maerz, R.H., Jr., 1976; von Bitter, P.H., 1980
paleoecology: Boardman, D.R., II, 1984a
- Quindaro Shale Member**
sedimentary rocks: Crowley, D.J., 1966, 1967, 1969
stratigraphy: Wilson, James A., 1959
- Quivira Member**
paleoecology: Boardman, D.R., II, 1984a; Merrill, G.K., 1978
phosphate deposits: Randle, R.F., 1949
- Rawlins ash bed**
sediments: Swineford, Ada, 1955d
- Raytown Limestone Member**
construction materials: Wheeler, B.D., 1967
paleoecology: Spencer, R.S., 1978
sedimentary rocks: Dawson, W.C., 1983, 1984; Mitchell, J.C., 1981, 1981a
- Reading Limestone Member**
areal geology: Smith, A.J., 1905
invertebrate paleontology: Pearce, R.W., 1973a
paleoecology: Pearce, R.W., 1973; Scott, D.R., 1973
sedimentary rocks: Wahrhaftig, Leon, 1952
stratigraphy: Gilmore, John B., 1972; Underwood, J.O., 1964
- Reagan Sandstone**
natural gas: Miller, R.R., 1968
petroleum: Merriam, D.F., 1954b
sedimentary petrology: McElroy, M.N., 1965b
statistical analysis: Kaesler, R.L., 1966
stratigraphy: McElroy, M.N., 1965, 1965a; Siler, J.C., 1958
structural analysis: Mehl, R.L., 1959
- Reager ash bed**
sediments: Swineford, Ada, 1955d
volcanic ash deposits: Carey, J.S., 1952
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sediments: Swineford, Ada, 1955d
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- "red beds"**
areal geology: Norton, G.H., 1939
stratigraphy: Buchanan, G.S., 1925; Keyes, C.R., 1938a, 1938c, 1941a; Norton, G.H., 1937, 1939a; Prosser, C.S., 1897, 1905; Vaughan, T.W., 1897
see also Cimmerian stage, Custerian stage
- Red Eagle cyclothem**
stratigraphy: McCrone, A.W., 1960, 1963
see also Johnson Shale, Red Eagle Limestone, Roca Shale
- Red Eagle formation**
stratigraphy: O'Connor, H.G., 1952
- Red Eagle Limestone**
areal geology: Mudge, M.R., 1962
invertebrate paleontology: Ehret, A.L., Jr., 1961; Little, J.M., 1965
limestone deposits: Runnels, R.T., 1951
paleoecology: Lane, N.G., 1964
sedimentary rocks: Al-Khersan, H.F., 1969, 1969a
stratigraphy: Avers, D.D., 1968; McCrone, A.W., 1960, 1963
vertebrate paleontology: Hansen, M.C., 1980
see also Elmdale shale, Red Eagle cyclothem
- Red Fork sandstone**
petroleum: Weirich, T.E., 1953a
sedimentary rocks: Hudson, A.S., 1970
see also Burbank sand, Cabaniss Formation
- Reeds Spring formation**
mineral deposits: Hagni, R.D., 1962, 1962a
- Reeds Spring limestone**
stratigraphy: Lee, Wallace, 1940a, 1940b
see also Reeds Spring Limestone Member
- Reeds Spring Limestone Member**
biostratigraphy: Goebel, E.D., 1988f
lead ores: Harbaugh, J.W., 1950, 1950a; Ruhl, Otto, 1949a; Wallace, M.H., 1942
paleoecology: Lane, H.R., 1978
zinc ores: Wei, Chi-Sheng, 1975
see also Reeds Spring limestone
- Rexroad Formation**
areal geology: Stevens, J.B., 1963; Woodburne, M.O., 1960, 1961
biostratigraphy: Bayne, C.K., 1976a
invertebrate paleontology: Franzen, D.S., 1946; Gutentag, E.D., 1958, 1962; Miller, B.B., 1963, 1964a
paleoecology: Hibbard, C.W., 1945; Miller, B.B., 1964
stratigraphy: Bayne, C.K., 1968a; Frye, J.C., 1945a; Kovach, J.T., 1979, 1980
structural analysis: Izett, G.A., 1980
vertebrate paleontology: Bjork, P.R., 1973; Breyer, J., 1976; Brodkorb, Pierce, 1964, 1969; Carleton, M.D., 1979; Etheridge, Richard, 1960; Feduccia, J.A., 1967, 1970; Ford, N.L., 1966; Franzen, D.S., 1947a; Hibbard, C.W., 1941, 1941a, 1941b, 1941c, 1950, 1951c, 1952, 1953a, 1953c, 1954, 1963, 1963a, 1967; Moseley, Carolyn, 1975; Oelrich, T.M., 1952, 1953a, 1954; Peters, J.A., 1953; Stephens, J.J., III, 1959; Stevens, M.S., 1965; Taylor, E.H., 1941; Tihen, J.A., 1955; Tordoff, H.B., 1951, 1959; Wetmore, Alexander, 1944; Zakrzewski, R.J., 1967, 1970
see also Rexroad member
- Rexroad member**
stratigraphy: Frye, J.C., 1941b
see also Rexroad Formation
- Rice Formation**
geophysical surveys: Knapp, R.W., 1984
stratigraphy: Goebel, E.D., 1968a; Scott, R.W., 1966
tectonophysics: Berendsen, Pieter, 1979a
- Richardson subgroup**
areal geology: Beck, H.V., 1955, 1959
see also Wabaunsee Group
- Riley cherty limestone**
sedimentation: Keyes, C.R., 1938b
- Riverton coal bed**
paleobotany: Morgan, J.L., 1955, 1955a
paleoecology: Rosowitz, D.W., 1982, 1982a
see also Krebs Formation
- Riverton formation**
geomorphology: Saueracker, P.R., 1966
- Robbins Shale Member**
clay mineralogy: Jamkhindikar, S.M., 1969, 1970
sedimentary rocks: Rutan, Debra, 1980
sedimentary structures: Miller, H.W., Jr., 1957d, 1973
stratigraphy: Ball, S.M., 1964
- Robinson Branch coal bed**
paleobotany: Otto, D.A., 1967, 1968
see also Cabaniss Formation
- Roca Shale**
areal geology: Mudge, M.R., 1962
clay mineralogy: Asmussen, L.E., 1958; Hargadine, G.D., 1959
paleobotany: Warren, K.M., Jr., 1969, 1969a
paleoecology: Lane, N.G., 1964
sedimentary rocks: Irvine, Robert, 1959; Waterman, W.D., 1951
stratigraphy: Avers, D.D., 1968; McCrone, A.W., 1960, 1963; Snyder, B.L., 1968
see also Elmdale shale, Red Eagle cyclothem
- Rock Bluff Limestone Member**
invertebrate paleontology: Brainard, R.H., 1978, 1978a; Maerz, R.H., Jr., 1976a
sedimentary rocks: Bergstrom, R.E., 1953; Boerngen, J.G., 1975; Connor, J.J., 1980; Ronca, L.B., 1959

- sedimentary rocks: Borak, B., 1982
- stratigraphy: Adkison, W.L., 1972; Anonymous, 1982; Bradley, W.C., 1961; Cole, V.B., 1975a, 1980; Cramer, H.R., 1965; Dapples, E.C., 1955; Goebel, E.D., 1968c; Ireland, H.A., 1946, 1965; Kistler, J.O., 1952; Leatherrock, Constance, 1945; McClellan, H.W., 1930a; Worden, J.A., 1959, 1960
- structural analysis: Anderson, T.E., 1949; Berendsen, Pieter, 1984; Briggeman, H.W., 1959; Soucek, C.H., 1959; Strong, R.M., 1960; Wynn, L.L., 1959
- structural features: Kennedy, C.L., 1982
- well logging: Doveton, J.H., 1984
- see also* Bromide formation, McLish formation, Simpson sandstone
- Simpson sandstone**
- petroleum: King, C.R., 1967; McCaslin, J.C., 1981b; Young, R.T., 1960
- see also* Simpson Group
- Sioux quartzite**
- geomorphology: Aber, J.S., 1977, 1981; Willard, J.M., 1982
- igneous rocks: Denison, R.E., 1977
- minerals: Gundersen, J.N., 1982
- soils: Mason, R.M., 1971
- Skelton shale**
- stratigraphy: Barwick, J.S., 1928
- see also* Chattanooga Shale
- Skinner sandstone**
- sedimentary rocks: Hulse, W.J., 1978; Van Dyke, R.J., 1976, 1976a
- well logging: Doveton, J.H., 1980
- see also* Cabaniss Formation
- Slate Creek limestone member**
- stratigraphy: Ver Wiebe, W.A., 1937b
- Smithville Formation**
- sedimentary rocks: McCracken, Earl, 1953, 1955
- Smoky Hill Chalk Member**
- areal geology: Russell, W.L., 1929a; Stoner, O.E., 1934
- biostratigraphy: Martin, L.G., 1984
- geochemistry: Search, Herman, 1939
- geomorphology: Russell, W.L., 1929
- ground water: Johnson, C.R., 1954
- invertebrate paleontology: Dring, N.B., 1977; Frerichs, W.E., 1981; Green, R.G., 1977; Hattin, D.E., 1977, 1981, 1984; Miller, H.W., Jr., 1957c; Neugebauer, J., 1978
- natural gas: Lockridge, J.P., 1983, 1984; Smagala, T., 1981
- paleoecology: Stewart, J.D., 1984
- sedimentary rocks: Arthur, M.A., 1981; Hattin, D.E., 1977a, 1981a; Honjo, Susumu, 1970; Singh, Gambhir, 1965
- sediments: Reimer, L.J., 1975
- stratigraphy: Hattin, D.E., 1982; Keyes, C.R., 1941k; Miller, H.W., Jr., 1958c
- vertebrate paleontology: Martin, L.D., 1984; Osborn, H.F., 1899; Sternberg, G.F., 1958; Stewart, J.D., 1982
- Sniabar limestone member**
- stratigraphy: Ravn, R.L., 1981, 1982
- see also* Hertha Limestone
- Snyderville Shale Member**
- areal geology: Wallace, M.H., 1941
- invertebrate paleontology: Brainard, R.H., 1978b
- sedimentary structures: Merriam, D.F., 1983a
- stratigraphy: Baptist, O.C., 1941; Smith, C.C., 1938
- Soldier Creek Shale Member**
- paleoecology: Sawin, R.S., 1977, 1979
- sedimentary rocks: Ross, D.A., 1960
- vertebrate paleontology: Chom, J.D., 1984
- "Sooy" conglomerate**
- stratigraphy: Edson, F.C., 1934
- see also* Gorham sand, Mississippian "chat"
- South Bend Limestone Member**
- biogeography: Pabian, R.K., 1977a
- invertebrate paleontology: Roy, M.B., 1966
- paleoecology: Boardman, D.R., II, 1984a; Brondos, M.D., 1983, 1983a; Hakes, W.G., 1975, 1976, 1976a, 1976b; Spencer, R.S., 1978
- sedimentary rocks: Harbaugh, J.W., 1960; Kahle, C.F., 1962; Moussavi-Harami, Reza, 1980b; Pabian, R.K., 1978
- sedimentation: Heckel, P.H., 1975
- stratigraphy: Ball, S.M., 1959
- South Mound shale member**
- stratigraphy: Jewett, J.M., 1965b
- see also* Pleasanton Group
- Speiser Shale**
- clay mineralogy: McPherron, D.S., 1956
- environmental geology: Hall, R.A., 1979
- invertebrate paleontology: Garihan, A.B.L., 1973, 1974; Hattin, D.E., 1959; Newton, G.B., 1970, 1971, 1971a; Pattengill, M.G., 1964; Simonsen, A.H., 1977, 1977a
- paleobotany: Jizba, K.M.M., 1962; Schaeffer, K.M.M., 1960
- sedimentary rocks: Hartig, R.L., 1954; Irvine, Robert, 1959; Waterman, W.D., 1951
- stratigraphy: Bigelow, Nelson, Jr., 1954; Dishman, B.D., 1969; Empie, J.S., 1961; Hattin, D.E., 1954, 1957
- vertebrate paleontology: Coldiron, R.W., 1978; Hotton, Nicholas, III, 1959; Schultze, H.-P., 1980
- Spergen limestone**
- petroleum: Marion, R.C., 1959
- stratigraphy: Cole, V.B., 1975; Irion, R.L., 1963
- Spring Branch Limestone Member**
- geochemistry: Galle, O.K., 1964
- sedimentary rocks: Bergstrom, R.E., 1953; Ronca, L.B., 1959
- Spring Creek clay**
- stratigraphy: Bullard, F.M., 1928
- see also* Belvidere formation
- Springer-Morrow series**
- structural features: Kennedy, C.L., 1982
- see also* Morrowan Series
- Spring Hill Limestone Member**
- invertebrate paleontology: Grinnell, R.S., Jr., 1958; Merchant, F.E., 1939; Roy, M.B., 1966
- sedimentary rocks: Buczynski, Chris, 1982; Edson, M.W., 1984; Harbaugh, J.W., 1959, 1960, 1961; Nelson, D.L., 1978; Wilkinson, B.H., 1984
- sedimentary structures: Manger, W.L., 1970
- stratigraphy: Heckel, P.H., 1978b
- Spring Rock series**
- areal geology: Swallow, G.C., 1867
- "squirrel sandstone"**
- petroleum: Jewett, J.M., 1940a; Mahony, B.J., 1964; Tulsa Geological Society, Research Committee, 1946, 1947
- sedimentary rocks: Lardner, J.E., 1984
- see also* Cabaniss Formation
- "Stalaker sandstone"**
- sedimentation: Rich, J.L., 1931
- stratigraphy: Winchell, R.L., 1957, 1957a
- structural analysis: Soucek, C.H., 1959
- see also* Tonganoxie Sandstone Member
- Stanton cyclothem**
- paleoecology: Wood, R.H., II, 1977a
- see also* Stanton Limestone, Vilas Shale, Weston Shale Member
- Stanton Formation**
- paleoecology: Brondos, M.D., 1983a; Heaton, M.J., 1980
- sedimentary rocks: Brenner, R.L., 1980
- Stanton Limestone**
- areal geology: Dean, T.J., 1973; Swallow, G.C., 1867
- geomorphology: Aber, J.S., 1977; Davis, J.C., 1955
- invertebrate paleontology: Beede, J.W., 1906; Bridwell, Arthur, 1939; Carpenter, F.M., 1940; Cocke, J.M., 1968, 1970, 1970a, 1970b; Macurda, D.B., Jr., 1982; Pabian, R.K., 1974c
- limestone deposits: Jewett, J.M., 1947; Runnels, R.T., 1951
- paleobotany: Gupta, Sujoy, 1969; Heckel, P.H., 1975a; Mapes, G.K., 1978, 1979
- paleoecology: Brondos, M.D., 1983; Senich, M.A., 1975, 1978, 1978a; Wood, R.H., II, 1977
- sedimentary rocks: Harbaugh, J.W., 1962, 1965; Heckel, P.H., 1968, 1972, 1975b; Kahle, C.F., 1962; Malinky, J.M., 1980; Moussavi-Harami, Reza, 1980, 1980a, 1980b, 1984; Schoewe, W.H., 1938e; Schroeder, R.J., 1967, 1968; Wilson, F.W., 1957, 1957a, 1957b
- sedimentary structures: Harbaugh, J.W., 1964c
- sedimentation: Heckel, P.H., 1975; Malinky, J.M., 1982
- stratigraphy: Bal, S.M., 1959; Heckel, P.H., 1978
- structural analysis: Chelkowsky, J.R., 1947
- vertebrate paleontology: Eaton, T.H., Jr., 1960a, 1973; Peabody, F.E., 1954; Reisz, R.R., 1982
- see also* Stanton cyclothem
- Stark Shale Member**
- paleoecology: Boardman, D.R., II, 1984a; Frost, J.G., 1968, 1968a
- sedimentary rocks: Bennisson, A.P., 1983; Coveney, R.M., Jr., 1977, 1979, 1979a; Kidder, D.L., 1982; Leventhal, J.S., 1983; Schutter, S.R., 1983; Stanton, M.R., 1983
- Stearns Shale**
- clay mineralogy: McPherron, D.S., 1956
- environmental geology: Hall, R.A., 1979
- sedimentary rocks: Brookins, D.G., 1973; Chaudhuri, Sambudhas, 1967, 1969
- stratigraphy: Dishman, B.D., 1969; Snyder, B.L., 1968
- Ste. Genevieve Limestone**
- biostratigraphy: Thompson, T.L., 1963b, 1968
- geochemistry: Nicastro, L.J., 1983
- invertebrate paleontology: Thompson, T.L., 1965, 1965a
- paleoecology: Swanson, D.C., 1968d, 1968e
- petroleum: Fugitt, L.B., 1959
- stratigraphy: Cole, V.B., 1975; Severy, C.L., 1975
- structural analysis: Funk, T.J., 1982
- St. Joe Limestone Member**
- lead ores: Harbaugh, J.W., 1950, 1950a; Wallace, M.H., 1942
- paleoecology: Lane, H.R., 1978
- stratigraphy: Lee, Wallace, 1940a, 1940b
- St. Louis Limestone**
- biostratigraphy: Thompson, T.L., 1963b, 1968
- geochemistry: Nicastro, L.J., 1983
- ground water: Krothe, N.C., 1982
- invertebrate paleontology: Thompson, T.L., 1965, 1965a
- petroleum: Aukerman, R.A., 1959, 1959a; Roby, R.E., 1959; Schmidlapp, R.L., 1959
- sedimentary rocks: Ball, S.M., 1966; Robinson, R.J., 1983
- stratigraphy: Cole, V.B., 1975; Severy, C.L., 1975
- structural analysis: Funk, T.J., 1982
- Stokes sand**
- petroleum: Fath, A.E., 1921
- see also* Kansas City Group
- Stone Corral dolomite**
- petroleum: Putman, B.M., 1960
- stratigraphy: Swineford, Ada, 1955
- Stone Corral Formation**
- areal geology: Bayne, C.K., 1974a; Kansas Geological Society, 1938; Lee, Wallace, 1954b; Norton, G.H., 1939
- data processing: Harbaugh, J.W., 1963; Srivastava, G.S., 1974
- environmental geology: Smith, B.J. (Stout), 1976
- geophysical surveys: Knapp, R.W., 1981; Pakiser, L.C., 1954, 1954a
- magnesium ores: Frye, J.C., 1942c
- maps: Merriam, D.F., 1958a
- petroleum: Demirmen, Ferruh, 1973; James, Alfred, III, 1965; McCoy, J.R., 1965; Prelat, A.E., 1974, 1974a, 1974b; Willis, P.D., 1965
- salt deposits: Goebel, E.D., 1972b
- sedimentary rocks: Hylton, Alisa, 1983
- stratigraphy: Broin, T.L., 1957, 1958; Campbell, C.L., 1963; Merriam, D.F., 1955, 1955b, 1957b; Vincent, D.A., 1965

- Towanda Limestone Member**
 clay mineralogy: Bryson, W.R., 1959; Watkins, K.N., 1957
 construction materials: Special Aggregates Committee, 1958
 sedimentary rocks: Irvine, Robert, 1959
- Towle Shale Member**
 paleobotany: Barker, G.W., 1983, 1984
- Turner Creek Shale Member**
 stratigraphy: Jeffords, R.M., 1940
- "upper Bluejacket" sandstone**
 sedimentary rocks: Worthington, R.E., 1982, 1982a
see also Bluejacket Sandstone Member
- upper Sibley coal bed**
 coal deposits: Bowsher, A.L., 1943
see also Tonganoxie Sandstone Member
- upper Williamsburg coal bed**
 coal deposits: Bowsher, A.L., 1943
see also Lawrence Formation
- Urschell lime**
 stratigraphy: Barwick, J.S., 1928; McClellan, H.W., 1930a
see also Viola Limestone
- Utopia Limestone Member**
 geochemistry: Myers, J.E., 1970
 natural gas: Trotter, S.F., 1982a
 sedimentary rocks: Fullerton, L.B., 1970; Trotter, S.F., 1982
 stratigraphy: Andersen, R.E., 1982; Mendoza, H.A., 1959; Merriam, D.F., 1982a; Trotter, S.F., 1981
 vertebrate paleontology: Mudge, B.F., 1873, 1874a; Schoewe, W.H., 1956
- "V" shale**
 petroleum: Angino, E.E., 1981; Schlinsog, D.G., 1982, 1983
- Valentine member**
 areal geology: Merriam, D.F., 1955c
 minerals: Swineford, Ada, 1959
 sediments: Swineford, Ada, 1955d
 stratigraphy: Bayne, C.K., 1968a; Frye, J.C., 1956
see also Ogallala Formation
- Vanhem Formation**
 biostratigraphy: Bayne, C.K., 1976a
 invertebrate paleontology: Gutentag, E.D., 1958, 1962
 stratigraphy: Spicer, S.R., 1975
 vertebrate paleontology: Zakrzewski, R.J., 1975
- Verdigris Limestone Member**
 biostratigraphy: Swade, J.W., 1984
 paleogeography: Wright, C.R., 1965
 sedimentary rocks: Brenner, R.L., 1981
 sedimentation: Wright, C.R., 1975
 stratigraphy: Denesen, S.L., 1984
see also Ardmore limestone
- Verdigris shale**
 sedimentary rocks: Hatch, J.R., 1984
- Victory Junction sandstone**
 sedimentary rocks: Wainner, K.F., 1939, 1939a
see also Rock Lake Shale Member
- Vilas Shale**
 areal geology: Dean, T.J., 1973
 clay mineralogy: Kinell, C.B., III, 1964
 paleoecology: Hakes, W.G., 1979
 sedimentary rocks: Boerngen, J.G., 1975; Connor, J.J., 1980; Davis, J.C., 1959; Harbaugh, J.W., 1959, 1960, 1960a, 1962, 1965; Schutter, S.R., 1983
 structural analysis: Chelikowsky, J.R., 1947
see also Stanton cyclothem
- Vinland Shale Member**
 invertebrate paleontology: Bandel, Klaus, 1967; Burke, J.J., 1974; Strimple, H.L., 1971
 sedimentary rocks: Wainner, K.F., 1939, 1939a
 sedimentary structures: Bower, R.R., 1961
 stratigraphy: Ball, S.M., 1964
 vertebrate paleontology: Poplin, C.M., 1974
- Viola dolomite**
 petroleum: Young, R.T., 1960
- Viola Limestone**
 biostratigraphy: Goebel, E.D., 1969a, 1979a; Sweet, W.C., 1979
 data processing: Demirmen, Ferruh, 1972
 geochemistry: Jeffords, R.M., 1948; McClure, J.W., Jr., 1973
 ground water: Pollock, L.[M].J., 1982
 paleobotany: Wright, R.P., 1981
 petroleum: Bunte, A.S., 1939; Imbt, W.C., 1941, 1942a; King, C.R., 1967; McCaleb, G.A., 1965; McCaslin, J.C., 1981b, 1981c, 1982; Oros, M.O., 1965; Thompson, J.W., 1956; Tucker, V.M., 1956; Wright, B.J., 1960
 sedimentary rocks: Biederman, E.W., Jr., 1966; Ockerman, J.W., 1931; St. Clair, P.N., 1982
 sedimentation: Rich, J.L., 1931
 stratigraphy: Adkison, W.L., 1972; Anonymous, 1982; Carmody, R.A., 1947; Cole, V.B., 1975a, 1980; Goebel, E.D., 1968c; Ireland, H.A., 1966a; Johnston, L.A., 1934; Kidd, R.L., 1930; Taylor, M.H., [Jr.], 1947; Ver Wiebe, W.A., 1947; Worden, J.A., 1959, 1960
 structural analysis: Anderson, T.E., 1949; Briggeman, H.W., 1959; Gerhard, R.G., 1965; Hays, J.K., 1961; Kotoyantz, A.A., 1956; Lippert, R.H., 1964; Myers, R.E., 1959; Olson, D.R., 1956; Pan, Chih-Wei, 1959; Reynolds, D.H., 1937; Strong, R.M., 1960
 structural features: Koester, E.A., 1935, 1935a
 well logging: Bornemann, Erhard, 1979, 1980, 1982, 1983; Doveton, J.H., 1980, 1981
 zinc ores: Seward, P.A., 1982
see also Urschell lime
- Virgilian Series**
 biostratigraphy: Clendening, J.A., 1975
 invertebrate paleontology: Jeffords, R.M., 1946, 1947, 1948a; Spencer, R.S., 1962, 1967; Strimple, H.L., 1947
 natural gas: Wingerter, H.R., 1959
 sedimentary rocks: von Bitter, P.H., 1978
 stratigraphy: Miller, W.F., 1955; Moore, R.C., 1937f; Myers, D.E., 1968
 structural features: Koester, E.A., 1935, 1935a
 well logging: Canard, C.R., 1966
- Wabaunsee formation**
 stratigraphy: Haworth, Erasmus, 1895b; Prosser, C.S., 1895, 1897b
see also Wabaunsee Group
- Wabaunsee Group**
 areal geology: Beck, H.V., 1955, 1959; Lumb, W.E., 1933; Mudge, M.R., 1962; Schoewe, W.H., 1932
 coal deposits: Brady, L.L., 1976b; Schoewe, W.H., 1946
 ground water: Gogel, A.J., 1969; Runyon, H.E., 1936; Stone, W.A., 1965
 hydrology: Scobee, E.R., 1967
 invertebrate paleontology: Beede, J.W., 1902; Duncan, Helen, 1962; Gordon, Mackenzie, Jr., 1962; Gunnell, F.H., 1933; Ireland, H.A., 1956; Johnson, J.H., 1947; Kellett, Betty, 1933, 1934, 1935; Perlmutter, Barry, 1971, 1971a, 1975, 1975a; Richards, H.G., 1955; Squires, J.M., 1952; Strimple, H.L., 1962; Williams, C.C., 1941
 paleoecology: Sawin, R.S., 1977
 paleogeography: Rascoe, Bailey, Jr., 1978
 petroleum: McCaslin, J.C., 1977a
 sedimentary rocks: Boerngen, J.G., 1975; Connor, J.J., 1980; Cubitt, J.M., 1975, 1979, 1984; Erlenwein, S.D., 1978; McMillan, N.J., 1955, 1956; Voss, J.D., 1972
 stratigraphy: Beede, J.W., 1898; Fudge, M.R., 1974; Girardot, S.L., 1962; Hockens, S.N., 1959; Keyes, C.R., 1937c; Merriam, D.F., 1959a, 1982a; Moore, R.C., 1956; Verville, G.J., 1951
 structural analysis: Steeples, D.W., 1982
- vertebrate paleontology: Crum, E.R., 1917; Williston, S.W., 1899a
see also Admire shale, Atchison shale, Nemaha subgroup, Richardson subgroup, Sacfox subgroup, Wabaunsee formation
- Wakarusa Limestone Member**
 paleoecology: Sawin, R.S., 1977
 sedimentary rocks: Wahrhaftig, Leon, 1952
- "Walchia beds"**
 biostratigraphy: Elias, M.K., 1937a
 invertebrate paleontology: Elias, M.K., 1937
 paleobotany: Moore, R.C., 1936c
- "Waldrup no. 2 limestone"**
 invertebrate paleontology: Pabian, R.K., 1981
- Walter Johnson sandstone member**
 sedimentary rocks: White, S.M., 1960
see also Nowata Shale, "Wayside sand"
- Wamego Shale Member**
 stratigraphy: Wood, R.L., 1959
see also Pierson Point shale, Stormont limestone bed
- Warner Sandstone Member**
 petroleum: Elanc, R., 1984; Ebanks, W.J., Jr., 1977c; French, M.S., 1977
 stratigraphy: Ebanks, W.J., Jr., 1979a
 uranium ores: Emerson, J.W., 1978
see also Burgess sand, Little Cabin sandstone
- Warrensburg sandstone**
 sedimentary rocks: Emerson, J.W., 1981; Hinds, Henry, 1926
 uranium ores: Johnson, V.C., 1977
see also Pleasanton Group
- Warsaw Formation**
 geochemistry: Broedel, V.J., 1982
 mineral deposits: Hagni, R.D., 1962a
- Warsaw Limestone**
 biostratigraphy: Thompson, T.L., 1963b, 1968
 fluid inclusions: Schmidt, R.A., 1962
 geochemistry: Broedel, V.J., 1984; Nicastro, L.J., 1983
 geophysical methods: Crumpton, C.F., 1959
 ground water: Abernathy, G.E., 1948
 invertebrate paleontology: Thompson, T.L., 1965, 1965a
 lead ores: Fowler, G.M., 1939; Harbaugh, J.W., 1950, 1950a; Moore, R.C., 1939b; Wallace, M.H., 1942
 mineral deposits: Hagni, R.D., 1962; Schmidt, R.A., 1959
 mineral resources: Kinney, E.D., 1941
 petroleum: Ebanks, W.J., Jr., 1976, 1977b
 sedimentary rocks: Saadallah, A.A., 1964
 stratigraphy: Cole, V.B., 1975; Irion, R.L., 1963; Lee, Wallace, 1940a, 1940b; Moore, R.C., 1939c
 structural analysis: Funk, T.J., 1982
 zinc ores: Brichta, L.C., 1950
- Watchorn Formation**
 stratigraphy: Lee, Wallace, 1940b
- Wathena shale member**
 clay mineralogy: Jamkhindikar, S.M., 1969, 1970
 stratigraphy: Ball, S.M., 1964
see also Lawrence Shale
- Wauneta limestone bed**
 stratigraphy: Mendoza, H.A., 1959; Merriam, D.F., 1982a
see also Aarde Shale Member
- "Wayside sand"**
 petroleum: Williams, D.W., 1921
 sedimentary rocks: White, S.M., 1960
see also Nowata Shale, Walter Johnson sandstone member
- Weir-Pittsburg coal bed**
 coal deposits: Abernathy, G.E., 1926, 1944
 environmental geology: Powell, W.E., 1982
 geochemistry: Kopsick, D.A., 1980
 paleobotany: Baxter, R.W., 1965a; Bond, T.A., 1963; Good, C.W., 1975; Leisman, G.A., 1970, 1971a; Van Landingham, S.L., 1961
 sedimentary rocks: Hambleton, W.W., 1951, 1953
 structural analysis: Abernathy, G.E., 1925; Pierce, W.G., 1935a
see also Cabaniss Formation

