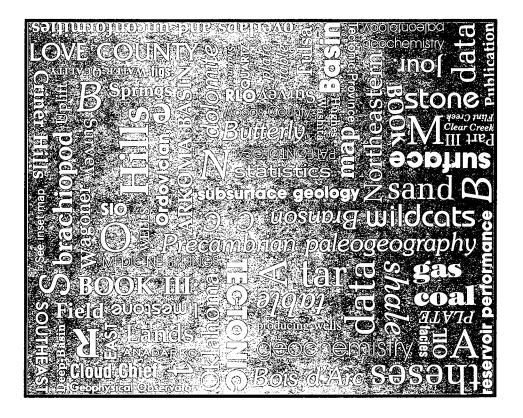


Oklahoma Geological Survey 2000

Bibliography of Copper Occurrences in Pennsylvanian and Permian Red Beds and Associated Rocks in Oklahoma, Texas, and Kansas (1805 to 1996)

compiled by ROBERT O. FAY





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SPECIAL PUBLICATION SERIES

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Bibliography of Copper Occurrences in Pennsylvanian and Permian Red Beds and Associated Rocks in Oklahoma, Texas, and Kansas

(1805 to 1996)

compiled by **Robert O. Fay** Oklahoma Geological Survey Norman, Oklahoma

Widespread occurrences of copper mineralization in Pennsylvanian and Permian red-bed deposits in the Midcontinent have long been known. Some of these accumulations have been sufficiently large to support mining activities. While much data have been collected from these occurrences, a generally accepted explanation for their origin has yet to emerge. This bibliography serves to provide data that can be used as a starting point for an investigation of these unusual deposits.

- (1) Acker, Eva (1939), The development of the mineral resources of Texas: East Texas State Teachers College M.A. thesis. (p. 47, in 1920, Jones County, near Stamford, a car load of copper ore was taken from the Pyron mine, but the copper had no value when smelted.)
- (2) Alipouraghtapeh, Samad (1979), Geochemistry of major and trace elements of the Raggedy Mountain Gabbro Group, Wichita Mountains, southwestern Oklahoma: Oklahoma State University M.S. thesis, 117 p. (The Cu is 5–195 ppm, with Zone G averaging 61 ppm. The Cu substitutes for Fe and Na in plagioclase and apatite.)
- (3) Allen, E. T. (1904a), Report of assays for gold, silver, copper and lead, made on material collected by H. F. Bain, in the Wichita Mountains, Oklahoma: U.S. Senate Document No. 149, 58th Congress, 2nd Session, Feb. 8, 1904, p. 10. (Bain sent samples Nov. 5, 1903.)
- (4) ——— (1904b), Report of assays for gold, silver, copper, and lead, in Bain, H. F., An appendix on reported ore deposits of the Wichita Mountains: U.S. Geological Survey Professional Paper 31, p. 92.
- (5) Al-Shaieb, Zuhair; and Heine, Richard R. (1976), Geochemical exploration for red bed copper deposits in north-central Oklahoma, in Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 69–75.
- (6) Al-Shaieb, Zuhair; Thomas, R. G.; and Stewart, G. F. (1980), Uranium resource evaluation, Lawton Quadrangle, Oklahoma and Texas: Contract report to Bendix Field Engineering Corp., Subcontract 78-131-E and Contract DE-AC13-76 GO 1664.
- (7) Anderson, Kenneth Clyde (1946), The occurrence and origin of pegmatites and miarolitic cavities in the Wichita Mountain System, Oklahoma: University of Oklahoma M.S. thesis, 66 p. (p. 35, malachite, azurite, cuprite, and native copper in sec. 9, T. 3 N., R. 15 W., associated with Hale Copper Prospect; and p. 41, Ison Prospects near C sec. 26, T. 3 N., R. 15 W.)
- (8) Argall, George O., Jr. (1975), Eagle-Picher strips 45 feet to mine: World Mining, May 1975, p. 40–42. (Creta deposit, Jackson County, Oklahoma.)

- (9) Bachman, G. O.; and O'Sullivan, R. B. (1954), Preliminary report on uranium occurrences; Oklahoma, Cotton County: U.S. Geological Survey, Preliminary Reconnaissance Report F-1028, 1 p. (Cu in NE¼NE¼ sec. 3, T. 5 S., R. 11 W., 400 yds. west of section line, in sandstone in bluffs along Red River; 0.3% Cu.)
- (10) Bain, Harry Foster (1904a), Reported gold deposits of the Wichita Mountains: U.S. Senate Document No. 149, 58th Congress, 2nd Session, Feb. 8, 1904, p. 1–10. (Samples collected in October 1903.)
- (11) ——— (1904b), An appendix on reported ore deposits of the Wichita Mountains: U.S. Geological Survey Professional Paper 31, p. 82–97.
- (12) (1904c), Reported gold deposits of the Wichita Mountains: U.S. Geological Survey Bulletin 225, p. 120–122. (Hale Copper Mine, 0.35% Cu; Kiowa Copper Co. Mine, 10.81% Cu.)
- (13) Baker, Charles Laurence (1929), Depositional history of the red beds and saline residues of the Texas Permian: Texas Bureau of Economic Geology Bulletin 2901, p. 3–72.
- (14) (1934), Metallic and non-metallic minerals and ores, *in* Sellards, E. H.; and Baker, C. L., The geology of Texas, v. II, Structural and economic geology: Texas Bureau of Economic Geology Bulletin 3401, p. 402–482. (Cu, p. 409–413.)
- (15) Barker, Eugene C. (1925), Descriptions of Texas by Stephen F. Austin, 1828: Southwestern Historical Quarterly, v. 28, no. 2, October 1924, p. 98–121. (p. 99–100, Cu found in high regions of Colorado River, but not mined.)
- (16) Barnes, Virgil E.; and others (1967a), Geologic atlas of Texas—Lubbock sheet: Texas Bureau of Economic Geology, scale 1: 250,000.
- (17) ——— (1967b), Geologic atlas of Texas—Sherman sheet: Texas Bureau of Economic Geology, 8 p., scale 1:250.000.
- (18) (1972), Geologic atlas of Texas—Abilene sheet: Texas Bureau of Economic Geology, 15 p., scale 1:250,000.
- (19) ——— (1974a), Geologic atlas of Texas—Big Spring sheet: Texas Bureau of Economic Geology, 6 p., scale 1:250,000.

- (20) ——— (1974b), Geologic atlas of Texas—San Angelo sheet: Texas Bureau of Economic Geology, 5 p., scale 1:250,000.
- (21) ——— (1987), Geologic atlas of Texas—Wichita Falls/ Lawton sheet: Texas Bureau of Economic Geology, 21 p., scale 1:250,000. (Many new names and revisions introduced.)
- (22) Bastin, Edson S. (1933), The chalcocite and native copper types of ore deposits: Economic Geology, v. 28, no. 5, p. 407–446. (p. 413, 419–421, 444, Oklahoma and Texas.)
- (23) Beede, J. W. (1918), Further notes on the structure near Robert Lee, Coke County, Texas: Texas Bureau of Economic Geology Bulletin 1847, 7 p.
- (24) (1919), Notes on the structure and oil showings in the red beds of Coke County, Texas: American Association of Petroleum Geologists Bulletin, v. 3, p. 117– 123.
- (25) Beede, J. W.; and Bentley, W. P. (1918), The geology of Coke County, Texas: Texas Bureau of Economic Geology Bulletin 1850, 82 p.
- (26) Beede, J. W.; and Christner, D. D. (1926a), The San Angelo Formation: Texas Bureau of Economic Geology Bulletin 2607, p. 1–17. (p. 11, Cu.)
- (27) ——— (1926b), The geology of Foard County, Texas: Texas Bureau of Economic Geology Bulletin 2607, p. 18–57. (p. 25, 38, map, Cu, McClellan Mine.)
- (28) Beede, J. W.; and Waite, V. V. (1918), The geology of Runnels County, Texas: Texas Bureau of Economic Geology Bulletin 1816, 64 p. (p. 59, Cu.)
- (29) Berendsen, Pieter (1980), Permian red bed copper mineralization in south-central Kansas [abstract]: Kansas Academy of Science, Transactions, v. 83, no. 3, p. 122.
- (30) Berendsen, Pieter; and Lambert, Michael W. (1981), Copper sulfides in the Lower Permian red beds of southcentral Kansas: stratigraphy and host-rock lithology: Kansas Geological Survey Bulletin 223, part 1, 86 p. (Milan Limestone and Runnymede Sandstone in Sedgwick, Sumner, and Harper Counties.)
- (31) Beroni, E. P. (1954a), Permian red bed deposits, southwestern Oklahoma, in Geologic investigations of radioactive deposits; Semiannual Progress Report, Dec. 1, 1953, to May 31, 1954: U.S. Geological Survey and U.S. Atomic Energy Commission, Trace Element Investigations Report 440 (TEI-440), p. 170–171. (Cu in Lee Uto Prospect, Pawnee County, Oklahoma.)
- (32) (1954b), Preliminary report on uranium occurrences; Oklahoma, Cotton County: U.S. Geological Survey Preliminary Reconnaissance Report M-1591, 1 p. (Cu in Eastman Prospect, sec. 30, T. 5 S., R. 12 W., 1 mi south of Clinton Byers house, on bank of Red River, in Garber Sandstone, 600 ft lens, 25 ft thick, 300 ft wide; bulldozed 150-ft trench; malachite, azurite, chalcopyrite, torbernite, bayleyite, autunite, carnotite, uranophane, uraninite, pyrite, galena, and fossil wood, trending N. 20° E.).
- (33) ——— (1954c), Preliminary report on uranium occurrences; Oklahoma, Tillman and Comanche Counties: U.S. Geological Survey Preliminary Reconnais-

- sance Report M-1586, 1 p. (Mathis and Oberlander pits 9.5 mi east of Manitou, in NE¼ sec. 1, T. 1 S., R. 16 W. and SW¼ sec. 31, T. 1 S., R. 15 W., in Garber Sandstone.)
- (34) ——— (1954d), Geologic investigations of radioactive deposits; Semiannual Progress Report, South Central District: U.S. Geological Survey and U.S. Atomic Energy Commission, Trace Element Investigations Report 490 (TEI-490), p. 213–218. (Cu in sec. 30, T. 5 S., R. 12 W., Cotton County, Oklahoma.)
- (35) Bibliographies of Texas to 1985. See Hill (1887); Simonds (1900); Texas Bureau of Economic Geology Bulletins 3232 and 5910; Moore and Brown (1972); Moore (1976); Masterson (1981); and Masterson and Dieterich (1990).
- (36) Billings, Roger Lewis (1956), Geology of eastern Noble County, Oklahoma: University of Oklahoma M.S. thesis, 56 p. (p. 9, Cu.)
- (37) Bingham, Roy H.; and Bergman, DeRoy L. (1980), Reconnaissance of the water resources of the Enid quadrangle, north-central Oklahoma: Oklahoma Geological Survey Hydrologic Atlas 7, scale 1:250,000.
- (38) Bitner, Julia Grace (1931), History of Tom Green Co., Texas: University of Texas M.A. thesis, 133 p.
- (39) Blair, Robert G.; Stehle, Frederick T.; and Levich, Robert A. (1973), Report on airborne radioactivity surveys and the uranium deposits in the Red River region of Texas and Oklahoma: U.S. Atomic Energy Commission, Grand Junction, Colorado, Technical Memorandum 190 (TM-190), 16 p.
- (40) Boll, Jacob (1880), Geological examinations in Texas: American Naturalist, v. 14, p. 684–686. (Texas Copper Mining and Manufacturing Co., and malachite and azurite mentioned along Big and Little Wichita Rivers.)
- (41) Branson, Carl C.; Burwell, A. L.; and Chase, G. W. (1955), Uranium in Oklahoma, 1955: Oklahoma Geological Survey Mineral Report 27, 22 p. (Cu is associated with many uranium areas.)
- (42) Brown, A. C. (1981), The timing of mineralization in stratiform copper deposits, *in* Wolf, K. H. (ed.), Handbook of strata-bound and stratiform ore deposits: Elsevier Publishing Co., Amsterdam, v. 9, p. 1–23.
- (43) Brown, L. F., Jr. (1969), Geometry and distribution of fluvial and deltaic sandstones (Pennsylvanian and Permian), north-central Texas: Texas Bureau of Economic Geology Geological Circular 69-4, 15 p.
- (44) Brown, L. F., Jr.; and Goodson, J. L. (compilers) (1972), in Barnes, V. E.; and others, Geologic atlas of Texas—Abilene sheet: Texas Bureau of Economic Geology, 15 p., scale 1:250,000.
- (45) Brown, L. F., Jr.; Solis-Iriarte, R. F.; and Johns, D. A. (1990), Regional depositional systems tracts, paleogeography, and sequence stratigraphy, Upper Pennsylvanian and Lower Permian strata, north- and west-central Texas: Texas Bureau of Economic Geology Report of Investigations 197, 116 p.
- (46) Brown, Thomas E. (1963), Index to areal geologic maps in Texas, 1891–1961: Texas Bureau of Economic Geology, Austin.

- (47) Buckley, S. B. (1866), A preliminary report of the geological and agricultural survey of Texas: Texas Geological Survey, Austin, 85 p.
- (48) ——— (1868), The mineral resources of Texas: Texas Almanac for 1868, p. 79–82. (Mentions Cu examined in 1861 in Archer, Clay, and Young Counties.)
- (49) (1874), First annual report of the Geological and Agricultural Survey of Texas: Houston, 142 p. (Cu, p. 5–6, 39–44, 48, 77, 131, in Archer, Clay, Haskell, Jones, Knox, Llano, Montague, Throckmorton, Wichita, and Young Counties).
- (50) Budnik, Roy T. (1989), Tectonic structures of the Palo Duro basin, Texas Panhandle: Texas Bureau of Economic Geology Report of Investigations 187, 43 p.
- (51) Bullard, Fred M.; and Cuyler, Robert H. (1930), A preliminary report on the geology of Montague County, Texas: Texas Bureau of Economic Geology Bulletin 3001, p. 57–76.
- (52) (1935), The Upper Pennsylvanian and Lower Permian section of the Colorado River Valley, Texas: Texas Bureau of Economic Geology Bulletin 3501, p. 191–258.
- (53) Bunn, John R. (1930), Jefferson County, in Oil and gas in Oklahoma, v. II: Oklahoma Geological Survey Bulletin 40-PP, 45 p.
- (54) Butler, B. S.; and Dunlop, J. P. (1916), Silver, copper, lead, and zinc in the Central States: U.S. Geological Survey, Mineral Resources of the United States, 1914, part I, Metals, p. 27–124. (p. 29, 31, 106, 114, Byars deposit, McClain County, Oklahoma.)
- (55) Carr, Jerry E.; and Bergman, DeRoy L. (1976), Reconnaissance of the water resources of the Clinton quadrangle, west-central Oklahoma: Oklahoma Geological Survey Hydrologic Atlas 5, scale 1:250,000.
- (56) Castaneda, Carlos E. (1925), Statistical report on Texas by Juan N. Almonte, 1835, translated by C. E. Castaneda: Southwestern Historical Quarterly, v. 28, no. 3, p. 177–222. (p. 183, copper mines known in Comanche Indian Country.)
- (57) Chase, Gerald Warren (1950a), The igneous rocks of the Roosevelt area, Oklahoma: University of Oklahoma M.S. thesis, 108 p. (p. 44, 48–49, 71, 73–75, 87, malachite, azurite, cuprite, and navite copper in troctolite and olivine gabbro, cut magnetite dikes in sec. 7, T. 4 N., R. 16 W.; then later reworked in Permian time.)
- (58) (1950b), Geologic map of basic igneous rocks in the Raggedy Mountains, Wichita Mountain System, Oklahoma: Oklahoma Geological Survey Miscellaneous Map A-1, scale 1:31,680.
- (59) (1951), Titaniferous magnetite in basic rocks of the Wichita Mountains, Oklahoma: [Oklahoma Geological Survey] The Hopper, v. 11, no. 2, p. 11–20. (Locates some prospect pits in detail.)
- (60) (1954), Occurrence of radioactive material in sandstone lenses of southwestern Oklahoma: Oklahoma Geological Survey Mineral Report 26, 7 p. (Cu on Byers farm, SW¼ sec. 30, T. 5 S., R. 12 W.; and Miller farm, SW¼ sec. 7, T. 5 S., R. 8 W., Cotton and Jefferson Counties.)

- (61) Cheney, M. G. (1929), Stratigraphic and structural studies in north-central Texas: Texas Bureau of Economic Geology Bulletin 2913, 28 p.
- (62) ——— (1940), Geology of north-central Texas: American Association of Petroleum Geologists Bulletin, v. 24, no. 1, p. 65–118.
- (63) Clifton, R. L. (1928), Harmon, Greer, Jackson, and Tillman Counties, in Oil and gas in Oklahoma, v. III: Oklahoma Geological Survey Bulletin 40-Y, 24 p.
- (64) Cloud, W. F. (1930), Cotton County, in Oil and gas in Oklahoma, v. II: Oklahoma Geological Survey Bulletin 40-MM, 21 p.
- (65) Cockrell, Simon N. (1892), Deposition by Simon N. Cockrell, *in* The United States vs. The State of Texas, Austin. (Greer County and Texas–Indian Territory boundary dispute. Mr. Cockrell was born in 1799 and was a resident of Archer County, Texas. He and Holland Coffee and others established Coffee's Trading Post in May 1833, about 1.5 mi below confluence of North Fork and Prairie Dog Town Fork, in Tillman County, Oklahoma. In 1833, he visited the Devils Canyon area of the Wichita Mountains, in Kiowa County, Oklahoma, and saw Spanish miners working in Devils Canyon. Their oblong houses were northwest of the creek.)
- (66) Comstock, Theodore B. (1890), A preliminary report on the geology of the Central Mineral Region of Texas: Texas Geological Survey, First Annual Report for 1889, p. 235–391. (p. 260, 334–339, Cu.)
- (67) (1891), Report on the geology and mineral resources of the Central Mineral Region of Texas: Texas Geological Survey, Second Annual Report, p. 553–664.
- (68) Connor, Seymour V. (1954), West Texas County histories: Archives Division, Texas State Library, Austin, 22 p.
- (69) Cooper, Roger W. (1986), Platinum-group-element potential of the Glen Mountains Layered Complex, Oklahoma, in Gilbert, M. C. (ed.), Petrology of the Cambrian Wichita Mountains igneous suite: Oklahoma Geological Survey Guidebook 23, p. 65–72. (p. 68, Chalcopyrite, pyrite, pyrrhotite, and pentlandite are associated with platinum, gold, silver, and palladium alloys, 2–10 microns in size. The sulfides may be hydrothermal and magmatic. The sulfides increase in hydrothermally altered areas adjacent to the Cold Springs Breccia and granite intrusions.)
- (70) Copley, Albert J. (1961), Areal geology of the Duke area, Oklahoma: University of Oklahoma M.S. thesis, 100 p. (T. 2–3 N., R. 21–24 W.)
- (71) Cox, Roy Edwin (1978), Subsurface geochemical exploration of stratabound copper in Lower Permian beds in north-central Oklahoma: Oklahoma State University M.S. thesis, 117 p.
- (72) Cragin, F. W. (1896), The Permian System in Kansas: Colorado College Studies, v. 6, 48 p. (p. 20, Cu in Harper Sandstone at Caldwell and west of Harper, Kansas.)
- (73) Crouch, Carrie J. (1956), A history of Young County, Texas: Texas State Historical Association, Austin, 326 p. (p. 10, Ft. Belknap history; p. 250–251, Maj. Robert S. Neighbors history, 1815–1859.)

- (74) Cummins, W. F. (1890), The Permian of Texas and its overlying beds: Texas Geological Survey, First Annual Report for 1889, Austin, p. 183–197. (Mentions copper occurrences in many Texas counties, and some early history of copper mining.)
- (75) (1891), Report of the geology of northwestern Texas: Texas Geological Survey, Second Annual Report, p. 359–552. (Gives map of copper occurrences and history of copper mining in several counties.)
- (76) ——— (1892), Report on the geography, topography, and geology of the Llano Estacado or staked plains: Texas Geological Survey, Third Annual Report for 1891, p. 129–223.
- (77) (1893), Notes on the geology of northwest Texas: Texas Geological Survey, Fourth Annual Report, No. 1, p. 177–238. (p. 232–238, discusses copper occurrences in 11 counties.)
- (78) ——— (1897), Texas Permian: Texas Academy of Science, Transactions, v. 2, no. 1, p. 93–98.
- (79) (1908), The localities and horizons of Permian vertebrate fossils in Texas: Journal of Geology, v. 16, no. 8, p. 737–745. (p. 740, Cu in Archer County.)
- (80) Cummins, W. F.; and Lerch, Otto (1890), A geological survey of the Concho Country, State of Texas: American Geologist, v. 5, no. 6, p. 321–335.
- (81) Curtis, Neville M. (1956), Some facts about Oklahoma uranium: Oklahoma Geology Notes, v. 16, no. 10, p. 106–120.
- (82) DeBarr, Edwin (1904), Report of mineral deposits in the Wichita Mountains, in Woodruff, E. G., Present status of the mining industry in the Wichita Mountains of Oklahoma: Oklahoma Territory Department of Geology and Natural History Survey, Third Biennial Report, p. 34–36. (197 samples assayed.)
- (83) DeCordova, Jacob (1858), Texas, her resources and her public men. A companion for J. DeCordova's new and correct map of the State of Texas: J. B. Lippincott and Co., Philadelphia, 375 p., plus 32 p. on Lecture on Texas. Reprinted by the Texian Press, Waco, Texas, 1969, with introduction by Dayton Kelley. (p. 99, 293; p. 21 in Lectures, mentions the copper on Mabel Gilbert's place in Wichita County on Red River, in Young Land District.)
- (84) Dent, Willard L. (1949), History of Stonewall County, Texas: East Texas State Teachers College M.A. thesis, 129 p.
- (85) DeRyee, William (1868), Report to Texas Copper Mining and Manufacturing Company, on copper in Archer County, Texas, *in* Cummins, W. F. (1890, The Permian of Texas and its overlying beds, p. 186): Texas Geological Survey, First Annual Report for 1889, Austin, p. 183–197.
- (86) DeRyee, William; and Cummins, W. F. (1883), Charter and by-laws of the Texas Copper Mining and Manufacturing Company. A history of the company. Letter from the Department of the Interior, by Joseph S. Wilson, Commissioner: Dallas, Texas, 11 p. Geological reports of Prof. William DeRyee, Texas State Chemist, and W. F. Cummins. (Listed by Hill, 1887, p. 65–66.)

- (87) Dingess, Paul R. (1976), Geology and mining operations at the Creta copper deposit of Eagle-Picher Industries, Inc., *in* Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 15–24.
- (88) Dixon, George H. (1967), Northeastern New Mexico and Texas-Oklahoma Panhandles, *in* McKee, Edwin; and others, Paleotectonic investigations of the Permian System in the United States: U.S. Geological Survey Professional Paper 515-D, p. 61-80.
- (89) Drake, Noah F. (1893), Report on the Colorado coal field of Texas: Texas Geological Survey, Fourth Annual Report, part 7, p. 354–446.
- (90) Dumble, E. T. (1890), Report of the State geologist for 1889: Texas Geological Survey, First Annual Report, p. xvii–lxxv. (p. lviii-lix, lxix, lxx, copper.)
- (91) ——— (1891), Report of the State geologist for 1890: Texas Geological Survey, Second Annual Report, p. i–cix, Index, p. 739–756.
- (92) Dumble, E. T.; and Cummins, W. F. (1892), The Double Mountain Section: American Geologist, v. 9, no. 6, p. 346–351. (Stonewall County, Texas.)
- (93) Dunlop, J. P. (1916), Oklahoma, *in* Butler, B. S.; and Dunlop, J. P., Silver, copper, lead, and zinc in the Central States: U.S. Geological Survey, Mineral Resources of the United States, 1914, part I, Metals, p. 104–114. (Byars deposit, McClain County, Oklahoma.)
- (94) Edward, David B. (1836), The history of Texas: J. A. James and Co., Cincinnati, 336 p. (p. 44–45, map, copper mine shown in north-central Texas.)
- (95) Edwards, John D. (1958), Areal geology of the northwest Mangum area: University of Oklahoma M.S. thesis, 96 p. (T. 5 N., R. 22–24 W., E½ R. 25 W.; T. 6 N., R. 25–26 W. and part of R. 24, 27 W.)
- (96) Eifler, Gus K., Jr. (compiler) (1974a), in Barnes, V. E.; and others, Geologic atlas of Texas—Big Spring sheet: Texas Bureau of Economic Geology, 6 p., scale 1:250,000.
- (97) ——— (compiler) (1974b), *in* Barnes, V. E.; and others, Geologic atlas of Texas—San Angelo sheet: Texas Bureau of Economic Geology, 5 p., scale 1:250,000.
- (98) Elrod, Dennis Dean (1980), A geochemical and petrographic survey of the Wellington Formation, northcentral Oklahoma: Oklahoma State University M.S. thesis, 100 p.
- (99) Emmons, William Harvey (1917), The enrichment of ore deposits: U.S. Geological Survey Bulletin 625, 530 p. (p. 189, Cu in sec. 22, T. 20 N., R. 3 E., Burwell farm, Payne County, Oklahoma.)
- (100) Estes, Larry Douglas (1980), Geology of the Saddle Mountain quadrangle and petrology of the Layered Series, eastern Wichita Mountains, Oklahoma: University of Texas (Arlington) M.S. thesis, 172 p.
- (101) Ewing, Floyd E., Jr. (1954), Copper mining in West Texas; early interest and development: West Texas Historical Association, Abilene, Yearbook, v. 30, p. 17–29. (The copper was known and worked by the early Spanish.)

- (102) Fath, A. E. (1915), Copper deposits in the red beds of southwestern Oklahoma: Economic Geology, v. 10, no. 2, p. 140–150. (Fath collected the specimens in 1913 when he assisted Carroll Wegemann.)
- (103) Fay, Robert O. (1962), Stratigraphy and general geology of Blaine County, *part I of* Geology and mineral resources of Blaine County, Oklahoma: Oklahoma Geological Survey Bulletin 89, p. 12–99; 194–247. (p. 27, 34, 201, 205, 209, 214, Cu in Cedar Springs Dolomite and upper 12 ft of Flowerpot Shale.)
- (104) (1964), The Blaine and related formations of northwestern Oklahoma and southern Kansas: Oklahoma Geological Survey Bulletin 98, 238 p. (p. 32–33, 95–96, 198, 203–204, 207, 214–215, Cu in Magpie Dolomite, Cedar Springs Dolomite, and Flowerpot Shale in Blaine County, Oklahoma.)
- (105) ——— (1965), Geology and mineral resources of Woods County, Oklahoma: Oklahoma Geological Survey Bulletin 106, 189 p. (Structure map, base Whitehorse, northwestern Oklahoma and Texas Panhandle.)
- (106) ——— (1975), A possible origin for copper in Oklahoma: Oklahoma Geology Notes, v. 35, no. 4, p. 151–153.
- (107) ——— (1980), Geologic and historic notes on the La Harpe expedition into Oklahoma in 1719: Oklahoma Geology Notes, v. 40, no. 6, p. 254–261. (One of the earliest mentions of copper in Oklahoma.)
- (108) ——— (1996), History and mapping of the Paden copper prospect, Okfuskee County, Oklahoma: Oklahoma Geology Notes, v. 56, no. 4, p. 136–146.
- (109) Finch, Warren I. (1967), Geology of epigenetic uranium deposits in sandstone in the United States: U.S. Geological Survey Professional Paper 538, 121 p. (p. 21, 24–26, 54, 71, 87, 94, 96, table 3, Cu in Oklahoma and Texas.)
- (110) Fischer, Richard Philip (1937), Sedimentary deposits of copper, vanadium, uranium, and silver in southwestern United States: Economic Geology, v. 32, p. 906–951. (Also Ph.D. dissertation, 1936, Princeton University.)
- (111) Fischer, Richard Philip; and Stewart, J. H. (1960), Distribution and lithologic characteristics of sandstone beds that contain deposits of copper, vanadium, and uranium: U.S. Geological Survey Professional Papers 400-B, p. 42–44.
- (112) Fisher, R. Stephen; and Kreitler, Charles W. (1987), Origin and evolution of deep-basin brines, Palo Duro basin, Texas: Texas Bureau of Economic Geology Report of Investigations 166, 33 p.
- (113) Fisher, R. Stephen; and Posey, Harry H. (1990), Deposition and diagenesis in a marine-to-evaporite sequence; Permian Upper Wolfcamp Formation and Lower Wichita Group, Palo Duro basin, Texas Panhandle: Texas Bureau of Economic Geology Report of Investigations 195, 34 p.
- (114) Friend, Llerna (1967), M. K. Kellogg's Texas Journal 1872: University of Texas Press, Austin. (Kellogg was on the Roessler expedition in north-central Texas.)
- (115) Furman, John H. (1881), The geology of the copper region of northern Texas and the Indian Territory:

- New York Academy of Sciences, Transactions, v. 1, p. 15–20.
- (116) Galloway, William E. (1970), Preliminary report on Permian red bed copper deposits, north-central Texas: Texas Bureau of Economic Geology Open-File Report 1970-6, 19 p., 6 appendices.
- (117) Galloway, William E.; and Brown, L. F., Jr. (1972), Depositional systems and shelf-slope relationships in Upper Pennsylvanian rocks, north-central Texas: Texas Bureau of Economic Geology Report of Investigations 75, 62 p.
- (118) Gann, Delbert E. (1976), The geology and microscopy of the Prewitt Copper shale (Permian), Jackson County, Oklahoma: University of Missouri (Rolla) Ph.D. dissertation, 425 p.
- (119) Gann, Delbert E.; and Hagni, Richard D. (1974), Ore microscopy of copper ore at the Creta mine, southern Oklahoma [abstract]: Geological Society of America Abstracts with Programs, v. 6, no. 2, p. 104.
- (120) Garrett, M. M.; Lloyd, A. M.; and Laskey, G. E. (compilers) (1930), Geologic map of Baylor County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (121) Geiser, S. W. (1944), Note on Dr. Francis Moore (1808–1864): Southwestern Historical Quarterly, v. 47, no. 4, p. 419–425. (Came to Texas in 1836 and purchased the Telegraph and Texas Register in Galveston. Became second State Geologist of Texas. Visited copper deposits in north-central Texas in 1861 with S. B. Buckley. In 1843, he published notes on the copper in north-central Texas.)
- (122) ——— (1958–1959), Men of science in Texas, 1820–1880 [in 5 parts]: Field and Laboratory, Southern Methodist University, Dallas, pt. I, v. 26, nos. 3–4, p. 86–139; pt. II, v. 27, no. 1, p. 20–48; pt. III, v. 27, no. 2, p. 81–96; pt. IV, v. 27, no. 3, p. 111–160; pt. V, v. 27, no. 4, p. 163–256. (p. 187, Anton Rudolf Roessler.)
- (123) Genth, Frederick Augustus (1868), On cupriferous ores from Archer County, Texas: Philadelphia Academy of Natural Sciences, Proceedings, 1868, p. 227–228.
- (124) Gilbert, M. Charles (1960), The geology of the western Glen Mountains, Oklahoma: University of Oklahoma M.S. thesis, 48 p.
- (125) (1982a), Geologic setting of the eastern Wichita Mountains, with a brief discussion of unresolved problems, in Gilbert, M. C.; and Donovan, R. N. (eds.), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, p. 1–30.
- (126) (1982b), Stop 6—French Lake Dam, in Gilbert, M. C.; and Donovan, R. N. (eds.), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, p. 130–134.
- (127) Gilbert, M. Charles; and Donovan, R. Nowell (eds.) (1982), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, 160 p.
- (128) Gilbert, M. C.; and Myers, J. D. (1986), Overview of the Wichita Granite Group, *in* Gilbert, M. C. (ed.), Petrology of the Cambrian Wichita Mountains igneous suite: Oklahoma Geological Survey Guidebook 23, p. 107–116.

- (129) Girard, Roselle M. (1959), Bibliography and index of Texas geology, 1933–1950: Texas Bureau of Economic Geology Bulletin 5910, 238 p. (p. 11, 16, 78, 129, 159, Cu.)
- (130) Gordon, C. H. (1913), Geology and underground waters of the Wichita region, north-central Texas: U.S. Geological Survey Water-Supply Paper 317, 88 p. (p. 25, 45, 55, Cu in Archer, Clay, and Wichita Counties.)
- (131) Gordon, C. H.; Girty, George H.; and White, David (1911), The Wichita Formation of northern Texas: Journal of Geology, v. 19, no. 2, p. 110–134. (p. 113, Cu in Archer and Wichita Counties.)
- (132) Gould, Charles Newton (1905), Geology and water resources of Oklahoma: U.S. Geological Survey Water-Supply and Irrigation Paper 148, 178 p.
- (133) Gould, Charles Newton; Hutchison, L. L.; and Nelson, Gaylord (1908), Preliminary report on the mineral resources of Oklahoma: Oklahoma Geological Survey Bulletin 1, 88 p. (p. 78–79, Cu.)
- (134) Grant, Ben L. (1936), The early history of Shackelford County, Texas: Hardin-Simmons University M.A. thesis, 155 p.
- (135) Greig, Paul B., Jr. (1959), Geology of Pawnee County, Oklahoma: Oklahoma Geological Survey Bulletin 83, 188 p. (p. 8, 141–142, Cu.)
- (136) Hagni, Richard D. (1980), The role of megaspores and iron sulfide in the genesis of copper deposits in the Permian Flowerpot Shale, southwestern Oklahoma, U.S.A. [abstract]: 26th International Geological Congress, Abstracts, v. 3, p. 941.
- (137) (1988a), Ore microscopy, electron microprobe analyses, and paragenesis of Creta, Oklahoma, copper shale, *in* Zachrisson, Ebbe (ed.), Proceedings of the Seventh Quadrennial International Association on the Genesis of Ore Deposits: E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, p. 163–166.
- (138) ——— (1988b), Mineralogy, origin, and potential for discovery of Creta, Oklahoma, copper shale-type deposits in Oklahoma, Texas, and Kansas, in Kisvarsanyi, Geza; and Grant, S. K. (eds.), Proceedings of the North American Conference on Tectonic Control of Ore Deposits and the Vertical and Horizontal Extent of Ore Systems: University of Missouri, Rolla, p. 455–467.
- (139) ——— (1988c), A comparative ore microscopic study of the sediment-hosted stratiform copper deposit at Creta, Oklahoma, with the European Kupferschiefer: Missouri Academy of Science, Transactions, v. 22, p. 139.
- (140) ——— (1989), A comparative ore microscopic study of the sediment-hosted stratiform copper deposit at Creta, Oklahoma, with the European Kupferschiefer: 28th International Geological Congress, Abstracts, v. 2, p. 7.
- (141) ——— (1992a), Comparative ore microscopy of the redbed sandstone-hosted silver-copper deposit at Paoli, Oklahoma, with the shale-hosted coppersilver deposit at Creta, Oklahoma [abstract]: Geological Society of America Abstracts with Programs, v. 24, no. 4, p. 17.

- (142) (1992b), Ore microscopic textures and paragenetic sequence of Permian shale- and-sandstonehosted copper-silver deposits at Paoli and Creta, Oklahoma [abstract]: Geological Society of America Abstracts with Programs, v. 24, no. 7, p. 234.
- (143) (1993), A comparison of the mineralogy, ore textures, paragenetic sequence, and occurrence of the Permian sandstone-hosted Ag–Cu deposit at Paoli, Oklahoma, with the shale-hosted Cu–Ag deposit at Creta, Oklahoma [abstract]: Geological Society of America Abstracts with Programs, v. 25, no. 3, p. 23–24.
- (144) Hagni, Richard D.; and Gann, Delbert E. (1976a), Microscopy of copper ore at the Creta mine, southwestern Oklahoma, *in* Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 40–50.
- (145) ——— (1976b), Character of copper ore in Prewitt Shale (Permian) at Creta mine, southwestern Oklahoma [abstract]: Geological Survey of America Abstracts with Programs, v. 8, no. 6, p. 899.
- (146) (1985), Ore microscopy and genesis of the copper-shale deposits at Creta, Oklahoma, *in* Hausen, D. M.; and Kopp, O. C. (eds.), Mineralogy—applications to the minerals industry; proceedings of the Paul F. Kerr memorial symposium: American Institute of Mining and Metallurgical and Petroleum Engineers, New York, p. 209–239.
- (147) Haines, G. I. (1955), Preliminary report on uranium occurrences; Cotton County, Oklahoma: U.S. Geological Survey, Preliminary Reconnaissance Report, DEB-P-5-2426, 1 p. (Cu in Garber Sandstone in SE¼ sec. 7, T. 4 S., R. 12 W.)
- (148) Hale, Duane Kendall (1972), Evidence of early Spanish mining in the Big Country of West Texas: Abilene Christian College M.A. thesis, 230 p.
- (149) ——— (1977), Prospecting and mining on the Texas frontier: Oklahoma State University Ph.D. dissertation, 344 p.
- (150) ——— (1981a), Mineral exploration in the Spanish borderlands, 1513–1846: Journal of the West, v. 20, no. 2, p. 5–20.
- (151) ——— (1981b), Gold in Oklahoma: The Chronicles of Oklahoma, v. 59, no. 3, p. 304–319.
- (152) Halloran, Arthur F.; and Haley, Jack D. (1962), A bibliography of the Wichita Mountains of Oklahoma: Great Plains Journal [Lawton, Oklahoma], Spring, 26 p.
- (153) Ham, William E.; and Johnson, Kenneth S. (1964), Copper in the Flowerpot Shale (Permian) of the Creta area, Jackson County, Oklahoma: Oklahoma Geological Survey Circular 64, 32 p.
- (154) Hamilton, Warren B. (1959), Chemistry of granophyres from Wichita lopolith, Oklahoma: Geological Society of America Bulletin, v. 70, no. 8, p. 1119–1126. (Cu is 0.0003% to 0.0007% in granites.)
- (155) Handford, C. R. (1980), Lower Permian facies of the Palo Duro basin, Texas: Texas Bureau of Economic Geology Report of Investigations 102, 31 p.

- (156) Hansen, Robert F., Jr. (1958), Areal geology of the southwest Mangum area, Oklahoma: University of Oklahoma M.S. thesis, 101 p. (T. 3 N., R. 22–24 W.; T. 4 N., R. 22–26 W., R. 27 W. in part).
- (157) Hanson, Richard Eric (1977), Petrology and geochemistry of the Carlton Rhyolite, southern Oklahoma: Oklahoma State University M.S. thesis, 162 p. (p. 63–65, 78, 118, 136–144, 150–156, 158, Cu is 3 to 59 ppm, averaging 9 ppm.)
- (158) Hart, Donald L., Jr. (1974), Reconnaissance of the water resources of the Ardmore and Sherman quadrangles, southern Oklahoma: Oklahoma Geological Survey Hydrologic Atlas 3, scale 1:250,000.
- (159) Havens, John S. (1977), Reconnaissance of the water resources of the Lawton quadrangle, southwestern Oklahoma: Oklahoma Geological Survey Hydrologic Atlas 6, scale 1:250,000.
- (160) Haworth, Erasmus; and Bennett, John (1900), Native copper near Enid, Oklahoma: Geological Society of America Bulletin, v. 12, p. 2–4.
- (161) Hedrick, O. F.; Owens, Ed; and Meyers, P. A. (compilers) (1929), Geologic map of Shackelford County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (162) Heine, Richard Ralph (1975), Geochemistry and mineralogy of the Permian red beds and related copper deposits, Payne, Pawnee, and Noble Counties, Oklahoma: Oklahoma State University M.S. thesis, 71 p.
- (163) Henderson, Charles W. (1912), Gold, silver, copper, lead, and zinc in Texas: U.S. Geological Survey, Mineral Resources of the United States, 1911, part I, Metals, p. 739–740. (Knox County.)
- (164) ——— (1913), Gold, silver, copper, lead, and zinc in Texas: U.S. Geological Survey, Mineral Resources of the United States, 1912, part I, Metals, p. 876–881. (Knox County.)
- (165) ——— (1919), Gold, silver, copper, lead, and zinc in Texas: U.S. Geological Survey, Mineral Resources of the United States, 1916, part I, Metals, p. 211–213. (Knox and Foard Counties.)
- (166) (1921a), Gold, silver, copper, lead, and zinc in Texas: U.S. Geological Survey, Mineral Resources of the United States, 1917, part I, Metals, p. 721–722. (Knox, Hademan, Foard, and Coleman Counties.)
- (167) (1921b), Gold, silver, copper, lead, and zinc in Texas: U.S. Geological Survey, Mineral Resources of the United States, 1918, part I, Metals, p. 327–328. (Knox and Coleman Counties.)
- (168) Henderson, George G. (1928), The geology of Tom Green County, Texas: Texas Bureau of Economic Geology Bulletin 2807, 116 p.
- (169) Hentz, Tucker F. (1968), Lithostratigraphy and paleoenvironments of Upper Paleozoic continental red beds, north-central Texas; Bowie (New) and Wichita (Revised) Groups: Texas Bureau of Economic Geology Report of Investigations 170, 55 p.
- (170) Hill, Robert T. (1887), The present condition of knowledge of the geology of Texas: U.S. Geological Survey Bulletin 45, 95 p.
- (171) Hill, Walter E., Jr. (1967), Copper in red beds of southcentral Kansas: Kansas Geological Survey Bulletin 187, pt. 1, p. 13–14.

- (172) Hillard, G. S. (1864), Life and campaigns of George B. McClellan: J. B. Lippincott and Co., Philadelphia, 396 p.
- (173) Hitchcock, Edward (1853–1854), Report upon the specimens of rocks and minerals collected, *in* Marcy, R. B.; and McClellan, G. B., Exploration of the Red River of Louisiana in the year 1852: U.S. 32nd Congress, 2nd Session, Senate Executive Document 54, p. 163–178 (1853). U.S. 33rd Congress, 1st Session, House Executive Document, p. 140–155 (1854). U.S. 33rd Congress, 1st Session, Senate Executive Document, Appendix D, p. 150–166 (1854).
- (174) Hornaday, W. D. (1932), Famous yankee general McClellan, visiting West Texas in 1877. Found gold and copper: West Texas Today [Abilene], v. 13, p. 5, 17. (Mentions 8,900 acres of copper prospects near Crowell, to be mined by Winton Watkins.)
- (175) Hornberger, Joseph, Jr. (1932), The geology of Throckmorton County, Texas: University of Texas (Austin) M.A. thesis, 256 p.
- (176) Huang, Walter T. (1955), Occurrences of Leucogranogabbro and associated igneous rocks in the Wichita Mountains, Oklahoma: American Journal of Science, v. 253, p. 341–357.
- (177) ——— (1956), Novaculite from the Wichita Mountains, Oklahoma: American Mineralogist, v. 41, p. 152–153. (In T. 3 N., R. 18 W., 0.5 mi northwest of Twin Mountain, in red sandstone, associated with malachite, limonite, and calcite.)
- (178) ——— (1957), Titanclinohumite from the Wichita Mountains, Oklahoma: American Mineralogist, v. 42, p. 686–688. (Cu is associated with granophyre pegmatites along contact zones of magnetite gabbro and troctolite at Iron Mountain in secs. 7 and 12, T. 4 N., R. 16 W.; and diallagite in NW¼ sec. 30, T. 4 N., R. 14 W., 6 mi northwest of Meers. Cu was 0.01% to 0.005% in titanclinohumite in Meers area, and 0.0005% in olivine in Meers, and 0.005% in olivine in Iron Mountain area.)
- (179) Hubbard, W. E.; and Fischer, R. W. (compilers) (1930), Geologic map of King County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (180) Hubbard, W. E.; and Thompson, W. C. (1926), The geology and oil fields of Archer County, Texas: American Association of Petroleum Geologists Bulletin, v. 10, no. 5, p. 457–481.
- (181) Hudnall, J. S.; and Pirtle, G. W. (compilers) (1929), Geologic map of Coleman County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (182) Johnson, Eben Lennart (1955), Geology of the pegmatites in the Hale Spring area, Wichita Mountains, Oklahoma: University of Oklahoma M.S. thesis, 87 p.
- (183) Johnson, Kenneth S. (1962), Areal geology of the Sentinel–Gotebo area, Kiowa and Washita Counties, Oklahoma: University of Oklahoma M.S. thesis, 99 p.
- (184) ——— (1967), Stratigraphy of the Permian Blaine Formation and associated strata in southwestern Oklahoma: University of Illinois Ph.D. dissertation, 247 p.
- (185) ——— (1969), Mineral map of Oklahoma (exclusive of oil and gas fields): Oklahoma Geological Survey Geologic Map 15, scale 1:750,000.

- (186) (1974), Permian copper shales of southwestern United States, *in* Bartholome, P.; and others (eds.), Gisements stratiforms et provinces cupriferes: Centenaire de la Société Géologique de Belgique (Liege), p. 383–393.
- (187) ——— (1976a), Introduction to the symposium, in Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 1–2.
- (188) (1976b), Permian copper shales of southwestern Oklahoma, *in* Johnson, K. S.; and Croy. R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 3–14.
- (189) (1990), Standard outcrop section of the Blaine Formation and associated strata in southwestern Oklahoma: Oklahoma Geology Notes, v. 50, no. 5, p. 144–168. (The Blaine Formation in Texas is in need of major revision.)
- (190) Johnson, Kenneth S.; and Brockie, Douglas C. (1973), Stop 10—Eagle-Picher Industries, Inc.'s copper mine at Creta, in Johnson, K. S.; and Denison, R. E., Igneous geology of the Wichita Mountains and economic geology of Permian rocks in southwestern Oklahoma: Oklahoma Geological Survey Special Publication 73-2, p. 29–32.
- (191) Johnson, Kenneth S.; and Croy, Rosemary L. (eds.) (1976), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, 99 p.
- (192) Jones, James Ogden (1971), The Blaine Formation of North Texas: University of Iowa Ph.D. dissertation, 173 p. (p. 2, 21, 30–31, 48, 53, 156, Cu in San Angelo Sandstone and Flowerpot Shale; the Blaine Formation is in need of revision.)
- (193) Jones, John Paul (1949), History of Hardeman County, Texas: North Texas State College M.A. thesis, 128 p.
- (194) Jowett, E. Craig (1986), Genesis of Kupferschiefer Cu–Ag deposits by convective flow of Rotliegende brines during Triassic rifting: Economic Geology, v. 81, no. 8, p. 1823–1837.
- (195) Kennedy, William (1841), The rise, progress, and prospects of the Republic of Texas: London, 2 vols., with map by John Arrowsmith; vol. 1, 378 p., 4 maps, book 1, p. 1–201, book 2, p. 202–378; vol. 2, 546 p., plus 8 appendices, April 17, 1841. Reprinted in 1925 by The Molyneaux Craftsman, Inc., Fort Worth. (p. 117, 158, Ag mine shown near 100° longitude by 31° latitude on a branch of the Colorado River, Menard County.)
- (196) Kidwell, Albert L.; and Bower, Richard R. (1974), Mineralogy and microtextures of sulfides in the Flowerpot Shale of Oklahoma and Texas [abstract]: Geological Society of America Abstracts with Programs, v. 6, no. 2, p. 110.
- (197) ——— (1976), Mineralogy and microtextures of sulfides in the Flowerpot Shale of Oklahoma and Texas, *in* Johnson, Kenneth S.; and Croy, Rosemary L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 51–60.

- (198) Krason, Jan (1976), Central European versus south-central U.S.A. geologic settings of the Permian basins and associated copper mineralization [abstract], in Johnson, Kenneth S.; and Croy, Rosemary L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 98.
- (199) Lambert, Michael W. (1979), Copper sulfides in the Permian red beds of Kansas: University of Indiana (Bloomington) M.A. thesis, 99 p. Also Kansas Geological Survey Open-File Report 79-3.
- (200) Lambert, Michael W.; Berendsen, Pieter; and Ripley, Edward M. (1981), Copper sulfides in the Lower Permian red beds of south-central Kansas: ore mineralogy: Kansas Geological Survey Bulletin 223, part 2, 15 p.
- (201) Lambert, Michael W.; and Ripley, E. M. (1979), Mineralogy and paragenesis of red bed copper mineralization in the Permian of south-central Kansas [abstract]: Geological Society of America Abstracts with Programs, v. 11, no. 2, p. 163.
- (202) Landers, Emmett M. (1929), A short history of Taylor County, Texas: Hardin-Simmons University M.A. thesis, 178 p.
- (203) Larsen, Esper S., Jr.; Waring, C. L.; and Berman, Joseph (1953), Zoned zircon from Oklahoma: American Mineralogist, v. 38, nos. 11–12, p. 1118–1125. (Specimens from sec. 21, T. 3 N., R. 15 W. had 0.005% to 0.01% Cu.)
- (204) Lee, E. F. (1836), Map of Texas containing the latest grants and discoveries: J. A. James and Co., Cincinnati, Ohio. (Silver mine shown south of San Saba River, about 99° longitude by 31° latitude, which would be near the San Saba and Llano county line.)
- (205) Lerch, Otto (1891), Remarks on the geology of the Concho country, State of Texas: American Geologist, v. 7, no. 2, p. 73–77. (p. 77, proposed the name San Angelo Beds.)
- (206) Lloyd, A. M.; and Thompson, W. C. (compilers) (1929a), Areal map showing outcrops on the eastern side of the Permian basin of West Texas: Texas Bureau of Economic Geology, scale 1:220,000.
- (207) ——— (1929b), Correlation of Permian outcrops on eastern side of the West Texas basin: American Association of Petroleum Geologists Bulletin, v. 13, no. 8, p. 945–956.
- (208) Lobell, Joseph (1986), Brochantite and other minerals from the Paoli, Oklahoma, area: Mineralogical Record, v. 17, p. 371–374.
- (209) Lockwood, Richard Patrick (1972), Geochemistry and petrology of some Oklahoma redbed copper occurrences: University of Oklahoma Ph.D. dissertation, 125 p. (Cu in Flowerot Shale, near Creta and Mangum, Jackson and Greer Counties.)
- (210) ——— (1976), Geochemistry and petrology of some Oklahoma red-bed copper occurrences, in Johnson, Kenneth S.; and Croy, Rosemary L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 61–68.

- (211) Loew, Oscar; and Roessler, A. R. (1873), Erforschung des Nordwestheiles von Texas im Jahre 1872: Mittheilungen aus Justus Perthes Geographischer Anstalt über wichtige neue Erforschungen auf dem Gesammtgebiete der geographie, von D. A. Petermann (or Petermann's Mittheilungen), v. 19, p. 453-467 (Gotha, Germany). (p. 458, 460, 462–463, Cu was known in this area for more than 50 years before 1872. The Texas Land and Copper Mining Association consisted of Col. McCarthy, director; A.R. Roessler, mineralogist and cartographer; Dr. Oskar Loew, chemist; Ferner V. Crenneville, asst. geologist; Capt. C. Plummer, engineer; Jos. Kellogg, draftsman; G. Trautmann, photographer; L. V. Wenkebach, asst. geometric engineer; C. H. Chandler, business manager; Richard Peters, his assistant; and Mr. Robbins and Mr. Humphrey of the U.S. Army. Describes the itinerary of the expedition.)
- (212) Long, D. T.; and Angino, E. E. (1976), Occurrence of copper sulfide in the (Permian Age) Milan Dolomite, south-central Kansas: Economic Geology, v. 71, p. 656–661.
- (213) Louis, Henry (1897), Copper-ores in the Permian of Texas (discussion of the paper by E. J. Schmitz): American Institute of Mining Engineers, Transactions, v. 26, p. 1051–1052.
- (214) MacLachlan, Marjorie E. (1967), Oklahoma, *in* McKee, E. D.; and others, Paleotectonic investigations of the Permian System in the United States: U.S. Geological Survey Professional Paper 515-E, p. 81–92.
- (215) Maley, John (1810–1813), Journal of John Maley's wanderings in the Red River Country of the Southwest, 1810–1813; journal of his trip up Red River for the Texas iron: Yale University, Silliman Family Papers, Manuscripts and Archives, Manuscript No. 450, unpublished diary and journal, 2 vols.; v. 1, 90 p., v. 2, 86 p., hand written. (Describes older copper mine and smelter and copper deposits around Kiowa Peak, Stonewall County, Texas, and mines at Devils Canyon, Wichita Mountains, Kiowa County, Oklahoma, along with the Texas Meteorite possibly in Throckmorton or Haskell Counties, Texas, and general features of the region.)
- (216) Marcy, Randolph B., Capt. (1853–1854), Exploration of the Red River of Louisiana in the year 1852: U.S. 32nd Congress, 2nd Session, Senate Executive Document 54, 310 p. (1853); U.S. 33rd Congress, 1st Session, Senate Executive Document (1854); U.S. 33rd Congress, 1st Session, House Executive Document (1854).
- (217) (1856), Report of an expedition to the sources of the Brazos and Big Wichita Rivers during the summer of 1854: U.S. 34th Congress, 1st Session, Senate Executive Document No. 60, 48 p. (p. 8, Cu, Tabletop Mountain, Baylor County, Texas.)
- (218) ——— (1866), Thirty years Army life on the border: Harper and Brothers, New York, 442 p. (p. 120–123, 188, Cu in Byars area, McClain County, Oklahoma, smelted in England in 1850; Cu along Red River area and Wichita Mountains in 1852; and Cu at Tabletop Mountain, Baylor County, Texas, in 1854 mentioned.)

- (219) Margry, Pierre (1888), Bénard de LaHarpe, envoyé pour établir le poste des Cadodaquios, cherche a reconnaitre la source de la Rivière Rouge et celle de l'Arkansas, il contracte alliance avec plusieurs nations voisines du Nouveau Mexique. Sa réception les Youacaras, in Découvertes et établissements des Francais dans l'Ouest et dans le Sud de l'Amérique Septentrionale (1614–1754). Mémoires et documents originaux, in 6 vols., Maisonneuve et Ch. Leclerc, editors, Paris. Vol. 6, Exploration des affluents du Mississipi et découverte des Montagnes Rocheuses (1679–1754), Chapter 7, p. 239–306. (Mentions trading goods for malachite and azurite with the Touacara Indians near Tulsa, Oklahoma, area.)
- (220) Martin, James C.; and Martin, Robert Sidney (1984), Maps of Texas and the Southwest, 1513–1900: New Mexico University Press, Albuquerque [published for Amon Carter Museum], 174 p., 59 maps. (p. 122– 123, David H. Burr's map, 1833, showing copper mine northeast of Brazos River headwaters; p. 124– 125, Thomas Gamaliel Bradford's map, 1835, shows same copper mine.)
- (221) Masters, Kenneth E. (1955), Geology of the Prague area, Lincoln and Pottawatomie Counties, Oklahoma: University of Oklahoma M.S. thesis, 37 p.
- (222) Masterson, Amanda R. (1981), Bibliography and index of Texas geology, 1975–1980: Texas Bureau of Economic Geology, 335 p. (p. 223, Cu.)
- (223) Masterson, Amanda R.; and Dieterich, Lana (1990), Bibliography and index of Texas geology, 1981–1985: Texas Bureau of Economic Geology, 463 p. (p. 348, Cu.)
- (224) Mayes, John Wilmot (1947), A further study of the Tepee Creek Formation, Wichita Mountains, Oklahoma: University of Oklahoma M.S. thesis, 45 p. (p. 9–10, located Last Drive Claim near C sec. 7, T. 4 N., R. 16 W., south of Glen Creek.)
- (225) Mazzullo, S. J. (1982), Stratigraphy and depositional mosaics of lower Clear Fork and Wichita Groups (Permian), northern Midland basin, Texas: American Association of Petroleum Geologists Bulletin, v. 66, no. 2, p. 210–227.
- (226) McClellan, George Brinton (1887), McClellan's own story; edited by W. C. Prime; copyright 1886 by Ellen Marcy McClellan: C. L. Webster and Co., New York, 678 p. (Born Dec. 3, 1826; resigned from Army Jan. 1857 and Nov. 8, 1864; governor of New Jersey, 1877–1881; died Oct. 29, 1885, buried at Trenton, New Jersey; married daughter of Randolph B. Marcy.)
- (227) McClellan, George B., Jr. (1956), The gentleman and the tiger; the autobiography of George B. McClellan, Jr.; edited by Harold C. Syrett: J. B. Lippincott Co., Philadelphia and New York, 375 p. (Born 1865; died 1942; his wife died in 1952; Grand Belt Copper Co., p. 63.)
- (228) McConnell, H. H. (1889), Five years of cavalry man or sketches of regular army life on the Texas frontier, twenty odd years ago; Late, Sixth U.S. Cavalry: J. N. Rogers and Co., Jacksboro, Texas, 319 p. (p. 215–217, 288–297, in 1867–1868 and 1872, he was one of the soldiers with the Roessler party, looking for copper at Kiowa Peak and other localities in north-central Texas.)

- (229) McIntosh, Willard L.; and Eister, Margaret F. (1979), Geologic map index of Texas: U.S. Geological Survey, 11 p., map.
- (230) McMaster, Frank (1897a), The Wichita Mountains; their mineral and mineral products, location, extent, and history: McMaster's Magazine, v. 8, no. 1, p. 4–17.
- (231) ——— (1897b), Wichita Mountains and Greer County: McMaster's Magazine, v. 8, no. 2, p. 67–85.
- (232) McSpadden, Willard (1940), Permian copper deposits in Texas: Compass of Sigma Gamma Epsilon, v. 20, no. 3, p. 175–178. (Foard and Hardeman Counties, Texas.)
- (233) Merritt, Clifford A. (1938), The magnetite deposits of the Wichita Mountains, Oklahoma: Oklahoma Academy of Science, Proceedings, v. 18, p. 51–55. (p. 51, 53–55, Cu in arkosic granite wash and labradorite in SW¼ sec. 7, T. 4 N., R. 16 W.; in SE¼SE¼SE¼ sec. 18, T. 4 N., R. 16 W. in altered anorthosite; Kiowa County; chalcopyrite, malachite, azurite.)
- (234) (1939), The iron ores of the Wichita Mountains, Oklahoma: Economic Geology, v. 34, no. 3, p. 268–286. (p. 275–276, 278–279, Cu, Kiowa County, chalcopyrite, malachite, azurite, in anorthosite and quartz stringers in SE¼SE¼SE¼ sec. 18, T. 4 N., R. 16 W.)
- (235) ——— (1940), Copper in the "red beds" of Oklahoma: Oklahoma Geological Survey Mineral Report 8, 20 p. (Brief summary of many of the copper occurrences in Oklahoma.)
- (236) (1952), Mineralogy of the miarolitic cavities of the granites, Wichita Mountains, Oklahoma: Oklahoma Academy of Science, Proceedings, v. 33, p. 189–190.
- (237) ——— (1958), Igneous geology of the Lake Altus area, Oklahoma: Oklahoma Geological Survey Bulletin 76, 70 p.
- (238) ——— (1967), Names and relative ages of granites and rhyolites in the Wichita Mountains, Oklahoma: Oklahoma Geology Notes, v. 27, no. 3, p. 45–53.
- (239) Meyers, P. A.; and Morley, H. T. (compilers) (1929a), Geologic map of Taylor County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (240) ——— (1929b), Geologic map of Jones County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (241) Moore, Elizabeth T. (1976), Bibliography and index of Texas geology, 1961–1974: Texas Bureau of Economic Geology, 446 p. (p. 347, Cu.)
- (242) Moore, Elizabeth T.; and Brown, Margaret D. (1972), Bibliography and index of Texas geology, 1951– 1960: Texas Bureau of Economic Geology, 575 p. (p. 203, Cu.)
- (243) Moore, Francis, Jr. (1840), Map and description of Texas: H. Tanner, Jr., Philadelphia, 143 p. Reprinted in 1965 by James M. Day, Texian Press, Waco, Texas. (Born April 20, 1808, Salem, Massachusetts; came to Texas in 1836; bought Telegraph and Texas Register on March 9, 1837, at Columbia, later moved to Houston, sold out in 1854; was Mayor of Houston 1838, 1843, 1849–1852, and Senator from Harris County, 1839–1842; Texas State Geologist 1860–1861; died at Duluth, Minnesota, Sept. 1, 1864; bur-

- ied in Greenwood Cemetery, Brooklyn, New York. His 1839–1840 map was compiled by Stephen F. Austin; p. 14, copper mine near Brazos River, 150 mi above the Falls, Milam County, probably would be near Olney, Young County; p. 37, San Saba silver mine shown southeast of San Saba Mission.)
- (244) ——— (1859), Geological sketch of Texas, *in* Texas almanac for 1860, part 3: Richardson and Co., Galveston, p. 91–99.
- (245) Moore, R. C.; Frye, J. C.; Jewett, J. M.; Lee, Wallace; and O'Connor, H. G. (1951), The Kansas rock column: Kansas Geological Survey Bulletin 89, 132 p.
- (246) Morgan, Buford (1957), Treasures of the Wichitas: Chronicles of Comanche County, first 4 parts of mining in the Wichita Mountains, v. 3, no. 1, p. 36– 41; v. 3, no. 2, p. 88–96; v. 4, no. 1, p. 18–28; v. 4, no. 2, p. 99–107.
- (247) Morgan, George D. (1924), Geology of the Stonewall quadrangle, Oklahoma: Oklahoma Bureau of Geology Bulletin 2, 248 p.
- (248) Morley, H. T. (compiler) (1929), Geologic map of Fisher County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (249) Morton, Robert B. (1980), Reconnaissance of the water resources of the Woodward quadrangle, northwestern Oklahoma: Oklahoma Geological Survey Hydrologic Atlas 8, scale 1:250,000.
- (250) Mudge, Melville R. (1967), Central Midcontinent region, in McKee, E. D.; and others (eds.), Paleotectonic investigations of the Permian System in the United States: U.S. Geological Survey Professional Paper 515-F, p. 93–123.
- (251) Muehlberger, William R.; Denison, Rodger E.; and Lidiak, Edward G. (1967), Basement rocks in continental interior of United States: American Association of Petroleum Geologists Bulletin, v. 51, no. 12, p. 2351–2380.
- (252) Muehlberger, William R.; Hedge, Carl E.; Denison, Rodger E.; and Marvin, Richard F. (1966), Geochronology of the Midcontinent region, United States; part 3, southern area: Journal of Geophysical Research, v. 71, no. 22, p. 5409–5426.
- (253) Munn, Malcolm J. (1914), Reconnaissance of the Grandfield District, Oklahoma: U.S. Geological Survey Bulletin 547, 83 p. (T. 3–5 S., R. 12–16 W.; T. 4–5 S., R. 11 W.; p. 20, Cu in SW¼ sec. 30, T. 5 S., R. 12 W.; p. 23, type Augur or Auger Conglomerate.)
- (254) Murphey, Clifford W. (1958), Areal geology of the Erick area, Beckham and Greer Counties, Oklahoma: University of Oklahoma M.S. thesis, 102 p. (T. 7–8 N., R. 23–27 W.; T. 9 N., R. 25–26 W.)
- (255) Naff, John D. (1981), Guidebook for geologic field trips in north-central Oklahoma: Oklahoma Geological Survey Educational Publication 4, 42 p. (p. 24–41, Cu.)
- (256) Nakayama, Eugene (1955), Geology of southeastern Payne County, Oklahoma: University of Oklahoma M.S. thesis, 69 p.
- (257) Neighbours, Kenneth Franklin (1975), Robert Simpson Neighbors and the Texas frontier, 1836–1859: Texian Press, Waco, Texas, 349 p. (Born Nov. 3, 1815, Char-

- lotte County, Virginia, as Samuel Robertson Neighbors, but a guardian renamed him Robert Simpson Neighbors; came to Texas in 1836; commissioned in Army Jan. 30, 1839; prisoner in Mexico 1842–1844; had hotel business in Houston 1844–1845; Indian agent Feb. 12, 1845; on expedition with Marcy in 1854 in north-central Texas, where they saw copper at Tabletop Mountain [p. 116–117, 140, 163, 304]; had notes on Texas meteorite [p. 65, 172]; killed at Ft. Belknap, Sept. 14, 1859, and buried there.)
- (258) Nichols, Clayton Ralph (1968), Alteration of igneous rocks in the Lugert area, Kiowa County, Oklahoma: University of Oklahoma M.S. thesis, 140 p. (Six Cu prospects in Flattop Mountain area, secs. 2–3, T. 4 N., R. 20 W. and sec. 35, T. 5 N., R. 20 W.)
- (259) Nickell, Clarence Oliver (1932), The Coleman Junction horizon in Archer and Clay Counties, Texas: University of Texas (Austin) M.A. thesis, 40 p.
- (260) Norton, George H. (1939), Permian red beds of Kansas: American Association of Petroleum Geologists Bulletin, v. 23, p. 1751–1819.
- (261) Olson, Everett C. (1939), The fauna of the *Lysorophus* pockets in the Clear Fork Permian, Baylor County, Texas: Journal of Geology, v. 47, no. 4, p. 389–397.
- (262) (1947), The family Diadectidae and its bearing on the classification of reptiles: Fieldiana, Geology, v. 11, no. 1, p. 1–53.
- (263) ——— (1948), A preliminary report on vertebrates from the Permian Vale Formation of Texas: Journal of Geology, v. 56, no. 3, p. 186–198.
- (264) ——— (1950), The temporal region of the Permian reptile *Diadectes*: Fieldiana, Geology, v. 10, no. 9, p. 63–77.
- (265) (1951a), *Diplocaulus*; a study in growth and variation: Fieldiana, Geology, v. 11, no. 2, p. 55–154.
- (266) (1951b), Fauna of the upper Vale and Choza, 1–5: Fieldiana, Geology, v. 10, no. 11, p. 89–128.
- (267) ——— (1951c), Vertebrates from the Choza Formation, Permian of Texas: Journal of Geology, v. 59, no. 2, p. 178–181.
- (268) (1952a), Vertebrates from the San Angelo Formation, Early Permian of Texas: Journal of Geology, v. 60, no. 3, p. 286–288.
- (269) ——— (1952b), Fauna of the upper Vale and Choza, 6; Diplocaulus: Fieldiana, Geology, v. 10, no. 14, p. 147–166.
- (270) (1954a), Fauna of the Vale and Choza, 7; Pelycosauria; Family Caseidae: Fieldiana, Geology, v. 10, no. 17, p. 193–204.
- (271) (1954b), Fauna of the Vale and Choza, 8; Pelycosauria; *Dimetrodon*: Fieldiana, Geology, v. 10, no. 18, p. 205–210.
- (272) (1954c), Fauna of the Vale and Choza, 9; Captorhiniomorpha: Fieldiana, Geology, v. 10, no. 19, p. 211–218.
- (273) ——— (1955), Fauna of the Vale and Choza, 10; *Trimerorhachis*, including a revision of pre-Vale species: Fieldiana, Geology, v. 10, no. 21, p. 225–274.
- (274) ——— (1956a), Fauna of the Vale and Choza, 11; Lysorophus, Vale and Choza; Diplocaulus, Cacops, and

- Eryopidae, Choza: Fieldiana, Geology, v. 10, no. 25, p. 313–322.
- (275) ——— (1956b), Fauna of the Vale and Choza, 12; a new Trematopsid amphibian from the Vale Formation: Fieldiana, Geology, v. 10, no. 26, p. 323–328.
- (276) ——— (1956c), Fauna of the Vale and Choza, 13; Diadectes, Xenacanthus, and specimens of uncertain affinities: Fieldiana, Geology, v. 10, no. 27, p. 329–334.
- (277) ——— (1958), Fauna of the Vale and Choza, 14; summary, review, and integration of the geology and the faunas: Fieldiana, Geology, v. 10, no. 32, p. 397–448.
- (278) (1962), Late Permian terrestrial vertebrates, USA and USSR: American Philosophical Society, Transactions, new series, v. 52, pt. 2, 224 p. (p. 102, 107, copper in San Angelo Sandstone.)
- (279) Olson, Everett C.; and Beerbower, James R. (1953), The San Angelo Formation, Permian of Texas, and its vertebrates: Journal of Geology, v. 61, no. 5, p. 389–423.
- (280) Oriel, S. S.; Myers, D. A.; and Crosby, E. J. (1967), West Texas Permian region, *in* McKee, E. D.; and others (eds.), Paleotectonic investigations of the Permian System in the United States: U.S. Geological Survey Professional Paper 515-C, p. 21–60.
- (281) Paige, Sidney (1911), Mineral resources of the Llano–Burnet region, Texas, with an account of the Pre-Cambrian geology: U.S. Geological Survey Bulletin 450, 103 p. (p. 54–55, old Spanish mine of 1753 is arsenopyrite mine 1 mi north of Honey Creek, later called the Old Lost San Saba Silver Mine; p. 73–74, copper.)
- (282) Parker, William B. (1856), Notes taken during the expedition commanded by Capt. R. B. Marcy, USA, through unexplored Texas in the Summer and Fall of 1854: Hays and Zell, Philadelphia, 242 p. (p. 140–141, 151, Cu.)
- (283) Parrish, Walter C. (1978), Paleoenvironmental analysis of a Lower Permian bone bed and adjacent sediments, Wichita County, Texas: Palaeogeography, Palaeoclimatology, Palaeoecology [Amsterdam], v. 24, no. 3, p. 209–237. (p. 219, 234–235, Cu; Thrift bone bed is about equal to Bead Mountain Formation.)
- (284) Patten, Roderick B. (1970), Miranda's inspection of Los Almagres; his journal, report, and petition: Southwestern Historical Quarterly, v. 74, no. 2, p. 223–254. (Report on the Lost San Saba Silver Mine, opened 1753, 1 mi north of Honey Creek, Llano County, Texas. Also, another red bed mine was known, much father west or northwest, in Comanche Indian country, on upper Colorado River, supposedly worked by Indians for silver before 1756.)
- (285) Patton, L. T. (1930), The geology of Stonewall County, Texas: Texas Bureau of Economic Geology Bulletin 3027, 77 p. (p. 20, 23, 75, Cu in Clear Fork, San Angelo, and Double Mountain Formations.)
- (286) Petermann, A. (1959), Kapitan R. B. Marcy's Erforschung des Quellgebietes des Big Witchita und Brazos im Innern von Nord-Amerika: Mittheilungen aus Justus Perthes Geographischer Anstalt über Wichtige Neue Erforschungen auf dem Gesammtgebiete der geographie von Dr. A. Petermann, or Petermann's Mittheilungen, v. 5, p. 36–40, map. (p. 38, Cu in Tabletop Mountain area, Baylor County, Texas.)

- (287) Phelps, David William (1975), Phase chemistry of the Layered Series, Raggedy Mountain Gabbro Group, Oklahoma: Rice University M.A. thesis, 122 p.
- (288) Phillips, L. C. (1917a), The copper beds of Knox County, Texas: Texas Bureau of Economic Geology Open-File Report, 14 p.
- (289) (1917b), Report on the property of the Foard County Copper Company: Texas Bureau of Economic Geology Open-File Report, 6 p.
- (290) Phillips, William Battle (1911), The Permian copper ores in Texas: Engineering and Mining Journal, v. 92, no. 25, p. 1181–1182.
- (291) ——— (1914), The mineral resources of Texas: Texas Bureau of Economic Geology Bulletin 365, 362 p. (p. 1, 3–5, 9–10, 15, 37, 47, 49–51, 58, 64, 81, 102, 114, 124, 137, 142, 158–159, 169, 222, 244, Cu in 10 counties of north-central Texas.)
- (292) Plummer, Fred B.; Fuqua, H. B.; and others (compilers) (1929), Geologic map of Wichita County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (293) ——— (compilers) (1930), Geologic map of Young County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (294) Plummer, Fred B.; and Hornberger, Joseph, Jr. (compilers) (1932), Geologic map of Callahan County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (295) Polk, Thomas Robb (1948), A study of the igneous rocks of the Devils Canyon Mountain Group, Wichita Mountains, Oklahoma: University of Oklahoma M.G.E. thesis, 87 p. (p. 36, Cu in SE¼NE¼NE¼ sec. 3, T. 4 N., R. 20 W., in granite porphyry.)
- (296) Powell, B. N. (1986), The Raggedy Mountain Gabbro Group, *in* Gilbert, M. C. (ed.), Petrology of the Cambrian Wichita Mountains igneous suite: Oklahoma Geological Survey Guidebook 23, p. 21–52. (p. 47, Chalcopyrite in hydrothermal veins of Mount Scott Granite in Sandy Creek Gabbro.)
- (297) Powell, B. N.; Stockton, M. L.; Giddens, J. D., III; and Gilbert, M. C. (1982), Stop 3—Hale Spring locality, in Gilbert, M. C.; and Donovan, R. N. (eds.), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, p. 102–117.
- (298) Raasch, Gilbert Oscar (1946), The Wellington Formation in Oklahoma: University of Wisconsin Ph.D. dissertation, 157 p. (p. 53–54, 59, 104, 154, Cu.)
- (299) Railsback, George Dewey (1940), History of Stonewall County, Texas: Hardin-Simmons University M.A. thesis, 106 p.
- (300) Ray, Cyrus N. (1929), Red Paint Mine: Texas Archaeological and Paleontological Society Bulletin 1, 17 p.
- (301) ——— (1931), Recent archeological researches in the Abilene section: Texas Archeological and Paleontological Society Bulletin 3, p. 76–89.
- (302) Read, William F. (1943), Environmental significance of a small deposit in the Texas Permian: Journal of Geology, v. 51, no. 7, p. 473–487. (Wichita beds of Baylor County.)

- (303) Redfield, John S. (1927), Mineral resources in Oklahoma: Oklahoma Geological Survey Bulletin 42, 130 p. (p. 112, 116, Cu.)
- (304) Reiter, A. F. (1921), Present status of copper mining in Garfield County: Oklahoma Academy of Science, Proceedings, v. 1, p. 67.
- (305) Renfro, A. R. (1974), Genesis of evaporite-associated stratiform metalliferous deposits—a sabkha process: Economic Geology, v. 69, p. 33–45. (p. 35, Cu in Oklahoma.)
- (306) Richard, Louis M. (1915), Copper deposits in the red beds of Texas: Economic Geology, v. 10, no. 7, p. 634–650. (Cu in 15 counties.)
- (307) Richter, Robert W. (1960), Areal geology of the Creta area, Jackson County, Oklahoma: University of Oklahoma M.S. thesis, 126 p. (T. 1 N., T. 1 S., T. 2 S., R. 21–23 W.).
- (308) Ries, Edward Richard (1951), The geology of Okfuskee County, Oklahoma: University of Oklahoma Ph.D. dissertation, 213 p.
- (309) ——— (1954), Geology and mineral resources of Okfuskee County, Oklahoma: Oklahoma Geological Survey Bulletin 71, 120 p.
- (310) Ripley, Edward M. (1980), Thermochemical evaluation of copper sulfide paragenesis in red bed and related deposits [abstract]: Geological Society of America Abstracts with Programs, v. 12, no. 5, p. 255.
- (311) Ripley, Edward M.; Lambert, Michael W.; and Berendsen, Pieter (1980), Mineralogy and paragenesis of red-bed copper mineralization in the Lower Permian of south-central Kansas: Economic Geology, v. 75, no. 5, p. 722–729.
- (312) Rister, Carl Coke (1942), Land hunger: David L. Payne and the Oklahoma Boomers: University of Oklahoma Press, Norman, p. 140. (Copper mine, Medicine Mounds, Hardeman County, Texas, dated 1847.)
- (313) Robinson, Heath M. (1922) (1921), Geologic structure and oil and gas prospects of a part of Jefferson County, Oklahoma: U.S. Geological Survey Bulletin 726-F, p. 277–302. (p. 279, Cu.)
- (314) Roessler, Anton Rudolph (1868), Geologische Untersuchungen in Texas: Kaiserlich-Königlichen Geologischen Reischsanstalt (Vienna), Verhandlungen, Jahrgang 1868, p. 188–190. Abstract, Geological Society of London, Quarterly Journal, v. 25, pt. 2, p. 5–6, 1869.
- (315) (1869), Kupfererze u.s.w. in Texas: Kaiserlich-Königlichen Geologischen Reichsanstalt (Vienna), Verhandlungen, Jahrgang 1869, no. 1, p. 2.
- (316) (1874), A. R. Roessler's latest map of the State of Texas: Edward Wellke and Brother, New York, scale 1 in. = 40 mi.
- (317) ——— (1876a), Some account of the mineral wealth of Texas, *in* Albert Hanford's Texas State Register for 1876, p. 86–90.
- (318) ——— (1876b), Maps of Archer, Brown, Comanche, Fayette, Galveston, Gillespie, Hamilton, Haskell, Jack, Llano, McCulloch, Marion, Montague, Rains, Red River, San Saba, and Young Counties, Texas:

- The Texas Land and Immigration Co., 35 Broad Street., New York; H. G. Gilbert, president, A. R. Roessler, secretary; scale 1 in. = 2 mi or 4,000 varas. (Shows geology and mineral localities; many copies in Texas State Library, Texas Archives and Library Bldg., Box 12927, Capitol Station, Austin, TX 78711.) (See Geiser, 1959, p. 187, for biography.)
- (319) Rogers, Austin F. (1916), Origin of copper ores of the red beds type: Economic Geology, v. 11, no. 4, p. 366– 380. (p. 372, 375, Payne County, Oklahoma.)
- (320) Romer, Alfred Sherwood (1928), Vertebrate faunal horizons in the Texas Permo-Carboniferous red beds: Texas Bureau of Economic Geology Bulletin 2801, p. 67–108. (p. 79–80, copper mines of Archer County near Long Creek locality.)
- (321) (1935), Early history of Texas red beds vertebrates: Geological Society of America Bulletin, v. 46, no. 11, p. 1597–1657. (p. 1600, 1617–1618, Cu in Archer County.)
- (322) ——— (1958), The Texas Permian red beds and their vertebrate fauna, *in* Westoll, T. S. (ed.), Studies on fossil vertebrates; essays presented to D.M.S. Watson: Athlone Press, London, p. 157–179.
- (323) (1974), The stratigraphy of the Permian Wichita red beds of Texas: Breviora [Harvard Museum of Comparative Zoology], no. 427, 31 p.
- (324) Rose, Arthur W. (1976), The effect of cuprous chloride complexes in the origin of red-bed copper and related deposits: Economic Geology, v. 71, no. 6, p. 1036–1048.
- (325) Rose, C. W. (1910), Mining in Wichita Mountains: Sturms Oklahoma Magazine, v. 10, no. 5, p. 46–48.
- (326) Ross, Charles P.; and Rouse, T. L. (1933), Early day history of Wilbarger County, Texas: Vernon Times, 208 p.
- (327) Ross, John S. (1972), Geology of central Payne County, Oklahoma: Oklahoma State University M.S. thesis, 87 p.
- (328) Roth, Robert (1942), West Texas barred basin: Geological Society of America Bulletin, v. 53, no. 11, p. 1659–1674.
- (329) ——— (1945), Permian Pease River Group of Texas: Geological Society of America Bulletin, v. 56, no. 10, p. 893–907. (p. 904–905, Cu in Knox County, in San Angelo–Flowerpot.)
- (330) Scales, B. F. (1959), Copper and gypsum deposits of north-central Texas: North Texas Geological Society Guidebook, p. 35–40. (Jones Vaughn was supposedly the first white man to discover the copper in Foard County, which led to the McClellan expedition.)
- (331) Schaller, Waldemar T. (1922), Thorium, zirconium, and rare earth minerals: U.S. Geological Survey, Mineral Resources of the United States, 1919, pt. 2, Nonmetals, p. 1–32. (p. 22–23, zircon mine, sec. 21, T. 3 N., R. 15 W., Wichita Mountains, Oklahoma.)
- (332) Schmitz, E. J. (1897), Copper ores in the Permian of Texas: American Institute of Mining and Metallurgical Engineers, Transactions, v. 26, p. 97–108.
- (333) Schoch, E. P. (1918), Chemical analyses of Texas rocks and minerals: Texas Bureau of Economic Geology Bulletin 1814, 256 p. (p. v, vi, 108, 111–112, 164, Cu.)

- (334) Schoenike, Howard G.; and Zeballow, Raul A. (1976),
 The geology, exploration, and development of the
 stratiform copper deposit located northwest of
 Crowell, Texas [abstract], in Johnson, K. S.; and
 Croy, R. L. (eds.), Stratiform copper deposits of the
 Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 99.
- (335) Schoonover, Floyd Eldon (1948), The igneous rocks of the Fort Sill Reservation, Oklahoma: University of Oklahoma M.G.E. thesis, 123 p.
- (336) Scofield, Nancy; and Gilbert, M. Charles (1982), Alkali amphiboles of the Wichita Mountains, *in* Gilbert, M. C.; and Donovan, R. N. (eds.), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, p. 60–64. (Have picture of Hale Spring outcrop.)
- (337) Scofield, Nancy; and Roggenthen, W. M. (1986), Fe–Ti oxide and sulfide mineralogy of the Glen Mountains Layered Complex, *in* Gilbert, M. C. (ed.), Petrology of the Cambrian Wichita Mountains igneous suite: Oklahoma Geological Survey Guidebook 23, p. 60–64. (p. 63, chalcopyrite, pyrrhotite, and pentlandite are considered to be late magmatic.)
- (338) Scott, George L., Jr. (1955), Areal geology of portions of Beckham, Greer, Kiowa, and Washita Counties, Oklahoma: University of Oklahoma M.S. thesis, 108 p.
- (339) Scott, George L., Jr.; and Ham, William E. (1957), Geology and gypsum resources of the Carter area, Oklahoma: Oklahoma Geological Survey Circular 42, 64 p. (p. 13, 50, in lower Flowerpot and Duncan Formations.)
- (340) Scull, Berton James (1947), A further study of the igneous rocks in the Granite-Lugert area, Oklahoma: University of Oklahoma M.S. thesis, 65 p.
- (341) Self, Houston Bailey (1931), History of Runnels County, Texas: Texas Technological College M.A. thesis, 116 p.
- (342) Sellards, E. H.; and Evans, Glen L. (1943) (1946), Index to Texas mineral resources: Texas Bureau of Economic Geology Bulletin 4301, p. 359–383. (p. 359–360, 366–367, copper. Statistics began on copper in Texas in 1906.)
- (343) Seltin, R. J. (1959), A review of the Captorhinidae: Fieldiana, Geology, v. 10, no. 34, p. 461–509.
- (344) Shannon, C. W. (1916), Handbook on the natural resources of Oklahoma: Oklahoma Geological Survey Miscellaneous Publication 2, 98 p. (p. 77, 79, Cu.)
- (345) Shead, A. C.; Williams, G. Y.; and Gould, C. N. (1929), Chemical analyses of Oklahoma mineral raw materials: Oklahoma Geological Survey Bulletin 14, 138 p.
- (346) Shelton, John W.; Al-Shaieb, Zuhair; Olmsted, Richard W.; Hanson, Richard E.; May, Richard T.; and Owens, Richard T. (1976), Summary of the stratigraphy, sedimentology, and mineralogy of Pennsylvanian and Permian rocks of Oklahoma in relation to uranium resource potential: Oklahoma State University, U.S. Energy Research Development Administration Report, Contract AT (05-1)-1641, 156 p.
- (347) Shelton, John W.; Jenkins, W. A.; and Bingham, R. H. (1979), Geology and mineral resources of Noble County, Oklahoma: Oklahoma Geological Survey Bulletin 128, 66 p. (p. 40–41, Cu.)

- (348) Shelton, John W.; Ross, John S.; Garden, Arthur J.; and Franks, James L. (1985), Geology and mineral resources of Payne County, Oklahoma: Oklahoma Geological Survey Bulletin 137, 92 p. (p. 45–46, Cu.)
- (349) Shepard, Charles Upham (1853, 1854), Mineralogy; report on the minerals collected, *in* Marcy, Randolph B., Exploration of the Red River of Louisiana in the year 1852: U.S. 32nd Congress, 2nd Session, Senate Executive Document 54, p. 155–159 (1853); U.S. 33rd Congress, 1st Session, Senate Executive Document, Appendix C, p. 145–149 (1854); U.S. 33rd Congress, 1st Session, House Executive Document, p. 135–139 (1854).
- (350) Sherrill, R. E. (1924), Lost copper mines and Spanish gold, Haskell County: Legends of Texas, Texas Folk-Lore Society, Austin, no. 3, p. 72–77. (The copper mines in Stonewall County were known by at least 1774.)
- (351) Shockey, P. N.; Renfro, A. R.; and Peterson, R. J. (1974), Copper–silver solution fronts at Paoli, Oklahoma: Economic Geology, v. 69, no. 2, p. 266–268.
- (352) Shumard, George Gettz (1853, 1854), Remarks upon the general geology of the country passed over by the exploring expedition to the sources of Red River, in Marcy, Randolph B., Exploration of the Red River of Louisiana in the year 1852: U.S. 32nd Congress, 2nd Session, Senate Executive Document 54, p. 179–195 (1853); U.S. 33rd Congress, 1st Session, House Executive Document, p. 156–172 (1854); U.S. 33rd Congress, 1st Session, Senate Executive Document, Appendix D, p. 167–185 (1854).
- (353) ——— (1886), A partial report on the geology of western Texas—during 1855 and 1856, with an appendix on Grayson County: Austin, late edition after Dr. Shumard died, from his notes, 145 p.
- (354) Sibley, John (1805), Letter from John Sibley at Natchitoches, April 10, 1805, to General Henry Dearborn, at St. Louis. Account of the Red River: U.S. Congress, American State Papers, v. 5, Class 2, Indian Affairs, Documents, Legislative and Executive, of the Congress of the United States, from the First Session of the First to the Third Session of the 13th Congress inclusive, commencing March 5, 1789, and ending March 3, 1815. Selected and edited by Walter Lowrie and Matthew St. Clair Clarke. Gales and Seaton, Washington, D.C., published in 1832, p. 725–731. (Brevel account of mining in the Wichita Mountains in the late 1700s.)
- (355) Simonds, Frederic W. (1900), A record of the geology of Texas for the decade ending December 31, 1896: Texas Academy of Science, Transactions, v. 3, 280 p. (p. 204–206, Cu.)
- (356) Smiley, H. F. (1930), Structure and stratigraphy of Wichita Falls area—Wilbarger-Wichita-Clay-Archer, and north Young Counties, Texas: Deep Oil Development Co., private publication, Wichita Falls, Texas, 24 p.
- (357) Smith, Gary E. (1974a), Depositional systems and facies control of copper mineralization—San Angelo Formation (Permian), North Texas: University of Texas (Austin) M.S. thesis, 178 p.
- (358) ——— (1974b), Depositional systems, San Angelo Formation (Permian), North Texas; facies control of red

- bed copper mineralization: Texas Bureau of Economic Geology Report of Investigations 80, 84 p.
- (359) ——— (1976a), Sabkha and tidal-flat facies control of stratiform copper deposits in North Texas, in Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 25–39.
- (360) ——— (1976b), Sabkha and tidal-flat facies control of stratiform copper deposits in North Texas, in Wolf, K. H. (ed.), Handbook of strata-bound and stratiform ore deposits: Elsevier Publishing Co., Amsterdam, v. 6, p. 407–446.
- (361) (1986), Ore-mineral zonation and paleoaquifers as clues to ore genesis in a postorogenic tectonic setting, North Texas copper district [abstract]: Geological Association of Canada, Mineralogical Association of Canada, and Canadian Geophysical Union, 1986 Annual Meeting, Program with Abstracts, v. 11, p. 129.
- (362) Smith, Ralph A. (1976), Old West Texas limekilns are mostly memories, and material remains: West Texas Historical Association Yearbook, v. 52, p. 16–37. (The kilns date back to at least 1720, made by the Spanish.)
- (363) Smith, Riley S., Jr. (1951), Igneous rocks of the Snyder Lake area, Oklahoma: University of Tulsa M.S. thesis, 59 p. (Mostly in T. 3 N., R. 17 W.)
- (364) Snider, Luther Crocker (1912), Preliminary report on the lead and zinc of Oklahoma: Oklahoma Geological Survey Bulletin 9, 97 p.
- (365) Spencer, Alexander B. (1961), Geology of the basic rocks of the eastern portion of the Raggedy Mountains, southwestern Oklahoma: University of Oklahoma M.S. thesis, 46 p.
- (366) Spencer, A. C. (1899), Report upon rocks of Wichita Mountains, *in* Vaughan, T. Wayland, Geological notes on the Wichita Mountains, Oklahoma, and the Arbuckle Hills, Indian Territory: American Geologist, v. 24, p. 47–48.
- (367) Spraight, A. W. (1882), The resources, soil, and climate of Texas: A. H. Belo and Co., Galveston.
- (368) Stafford, Philip T. (1960), Stratigraphy of the Wichita Group in part of the Brazos River Valley, North Texas: U.S. Geological Survey Bulletin 1081-G, p. 261–280.
- (369) Sterrett, Douglas B. (1908), Monazite and zircon: U.S. Geological Survey, Mineral Resources of the United States, 1907, pt. 2—Nonmetallic products, p. 785– 794. (Zircon mine in sec. 21, T. 3 N., R. 15 W., Wichita Mountains, discovered by Frank Rush, 1907, forest supervisor of Wichita National Forest, Oklahoma.)
- (370) Stockton, Marjorie (1984), Geology of the gabbroic rocks in southern Cooperton quadrangle and northern Odetta quadrangle, Oklahoma: University of Texas (Arlington) M.S. thesis, 83 p. (p. VII, 59, 64–65, pl. 6d, Hale Spring pegmatite and copper prospect.)
- (371) Stockton, Marjorie; and Giddens, Joe D., III (1982), Igneous geology of Cooperton quadrangle, Wichita Mountains, *in* Gilbert, M. C.; and Donovan, R. N. (eds.), Geology of the eastern Wichita Mountains, southwestern Oklahoma: Oklahoma Geological Survey Guidebook 21, p. 47–50. (Map of Hale Spring pegmatite.)

- (372) Stone, George T. (ed.) (1967), The structure and igneous rocks of the Wichita Mountains, Oklahoma: Geological Society of America Guidebook, South-Central Section, 1st Annual Meeting, Field Trip, 46 p.
- (373) Storm, L. W. (compiler) (1929), Geologic map of Stonewall County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (374) Stroud, R. B.; McMahan, A. B.; Stroup, R. K.; and Hibpshman, M. H. (1970), Production potential of copper deposits associated with Permian red bed formations in Texas, Oklahoma, and Kansas: U.S. Bureau of Mines Report of Investigations 7422, 103 p.
- (375) Sturms Magazine (1909), Wichita Mountain region: Sturms Oklahoma Magazine, v. 8, no. 3, p. 34–40.
- (376) Swineford, Ada (1955), Petrography of Upper Permian rocks in south-central Kansas: Kansas Geological Survey Bulletin 111, 179 p.
- (377) Taff, Joseph A. (1904), Preliminary report on the geology of the Arbuckle and Wichita Mountains in Indian Territory and Oklahoma: U.S. Geological Survey Professional Paper 31, 81 p. (p. 62, Hale copper mine in SE¼ sec. 4, T. 4 N., R. 13 W., 40-ft granitic aplite dike in gabbro.)
- (378) Tarr, William Arthur (1910), Copper in the red beds of Oklahoma: Economic Geology, v. 5, no. 3, p. 221– 226. (Payne and Garfield Counties.)
- (379) Thoburn, Joseph B. (1916), A standard history of Oklahoma: The American Historical Society, Chicago and New York, 5 vols., 2192 p.; v. 1, 448 p. (p. 19–21, Spanish mining in Wichita Mountains in 1650; p. 28–33, La Harpe's expedition in 1719.)
- (380) Thomas, Craig Anthony (1990), Ore microscopy of the Paoli Ag–Cu deposits, Paoli, Oklahoma: University of Missouri (Rolla) M.S. thesis, 101 p.
- (381) Thompson, W. C.; Foster, F. K.; and Garrett, M. M. (compilers) (1930), Geologic map of Foard County, Texas: Texas Bureau of Economic Geology, scale 1:48,000.
- (382) Thornton, Edward C. (1975), Anorthosite–gabbro–granophyre relationships, Mount Sheridan area, Oklahoma: Rice University M.A. thesis, 65 p.
- (383) Tilton, G. R.; Davis, G. L.; Wetherill, G. W.; and Aldrich, L. T. (1957), Isotopic ages of zircon from granites and pegmatites: American Geophysical Union, Transactions, v. 38, no. 3, p. 360–371. (Zircons in Wichita Mountains in sec. 21, T. 3 N., R. 15 W. were dated at 480 to 650 million years old, depending upon methods used.)
- (384) Tilton, G. R.; Wetherill, G. W.; and Davis, G. L. (1962), Mineral ages from the Wichita and Arbuckle Mountains, Oklahoma, and the St. Francois Mountains, Missouri: Journal of Geophysical Research, v. 67, no. 10, p. 4011–4019. (Carlton Rhyolite, 400–505 my; Lugert Granite, 480–520 my; Quanah pegmatite, 495–550 my; Headquarters Granite, 520 my; and Mt. Sheridan Gabbro, 510–535 my.)
- (385) Totten, Matthew W.; and Fay, R. O. (1982), Map of Oklahoma showing localities of reported uranium and radioactivity values: Oklahoma Geological Survey Geologic Map 25, 16-p. text, scale 1:750,000.

- (386) Tyler, Paul M. (1931), Hafnium: U.S. Bureau of Mines Information Circular 6457, 11 p. (p. 8, zircon mine, Wichita Mountains, sec. 21, T. 3 N., R. 15 W.)
- (387) Udden, Johan August; Baker, C. L.; and Böse, Emil (1916), Review of the geology of Texas: Texas Bureau of Economic Geology and Technology Bulletin 1916, no. 44, 164 p. (p. 32, 116, 120–121, Cu.)
- (388) Udden, Johan August; and Phillips, Drury McNeil (1912), A reconnaissance report on the geology of the oil and gas fields of Wichita and Clay Counties, Texas: Texas Bureau of Economic Geology Bulletin 246, 308 p. (p. xii, 3, 23, pl. 18, Cu.)
- (389) U.S. Atomic Energy Commission and U.S. Geological Survey (1968), Preliminary reconnaissance for uranium in Kansas, Nebraska, and Oklahoma, 1951– 1956: U.S. Atomic Energy Commission Report RME-151, 73 p.
- (390) U.S. Bureau of Mines (1969), Data on copper occurrences associated with Permian formations in Texas, Oklahoma, and Kansas: U.S. Bureau of Mines Open-File Report 10-69.
- (391) Vaughan, T. Wayland (1899), Geological notes on the Wichita Mountains, Oklahoma, and the Arbuckle Hills, Indian Territory, with a report upon the rocks of Wichita Mountains by A. C. Spencer: American Geologist, v. 24, p. 44–55.
- (392) Vidrine, Dana M.; and Fernandez, Louis A. (1986), Geochemistry and petrology of the Cold Springs Breccia, Wichita Mountains, Oklahoma; and Stop 2—Cold Springs Breccia, *in* Gilbert, M. C. (ed.), Petrology of the Cambrian Wichita Mountains igneous suite: Oklahoma Geological Survey Guidebook 23, p. 86–106, 149–158.
- (393) Vine, James D.; and Tourtelot, E. B. (1974), Red beds and copper deposits—why the association? [abstract]: Geological Society of America Abstracts with Programs, v. 6, no. 2, p. 127.
- (394) Walper, Jack Louis (1949), Igneous rocks of the Cold Springs area, Wichita Mountains, Oklahoma: University of Oklahoma M.S. thesis, 71 p. (Kiowa County, T. 4 N., R. 17 W.)
- (395) ——— (1951), Assimilation in the Cold Springs area of the Wichita Mountains igneous complex, Oklahoma: American Journal of Science, v. 249, no. 1, p. 47–65.
- (396) Wasteneys, Richard Alan (1962), Headquarters Granite of the Wichita Mountains, Oklahoma: University of Oklahoma M.S. thesis, 48 p. (Greer County, T. 6 N., R. 21 W.)
- (397) Waugh, T. C.; and Brady, L. L. (1974), Copper occurrences associated with Permian rocks in south-central Kansas [abstract]: Geological Society of America Abstracts with Programs, v. 6, no. 2, p. 129.
- (398) ——— (1976), Copper occurrences associated with Permian rocks in south-central Kansas, in Johnson, K. S.; and Croy, R. L. (eds.), Stratiform copper deposits of the Midcontinent region, a symposium: Oklahoma Geological Survey Circular 77, p. 76–79.
- (399) Weddle, Robert S. (1964), The San Saba Mission, Spanish pivot in Texas: University of Texas Press, Austin, 238 p. (p. 24–29, 58–59, 74, 104–107, 140–143, 188–189, 198–209, discusses the lost San Saba mines.)

- (400) Wegemann, Carroll Harvey (1915), Anticlinal structure in parts of Cotton and Jefferson Counties, Oklahoma: U.S. Geological Survey Bulletin 602, 108 p. (Copper beds in measured sections.)
- (401) Weissenborn, A. E. (1948), Copper, *in* Geological resources of the Trinity River tributary area in Oklahoma and Texas: Texas Bureau of Economic Geology Bulletin 4824, p. 180–184.
- (402) West, Elizabeth Howard (1904), Bonilla's breve compendio (brief compendium) of the history of Texas, 1772: Texas State Historical Association Quarterly, v. 8, no. 1, p. 3–78. (p. 54, 63–64, Los Almagres Mines or San Saba Mines, 1753–1770.)
- (403) Whitmire, Jerome R. (1936), The history of Stonewall County, Texas: Texas Technological College (Lubbock) M.A. thesis, 156 p. (p. 34–36, copper mines, 1886–1917).
- (404) Williams, J. W. (1942), Military roads of the 1850's in central-west Texas: West Texas Historical Association Yearbook, v. 18, p. 77–91.
- (405) ——— (1943), Marcy's road from Dona Ana: West Texas Historical Association Yearbook, v. 19, p. 128–152.
- (406) Williams, J. W.; and Lee, Ernest (1947), Marcy's exploration to relocate the Texas Indian Reservation in 1854: West Texas Historical Association Yearbook, v. 23, p. 107–132. (p. 117, Cu, Tabletop Mountain, Baylor County.)
- (407) Wilson, Clarence Stephen (1960), Mines, mining, and minerals in the Wichita Mountains: Oklahoma Junior Academy of Science, Transactions, v. 3, p. 12–19. (p. 14–15, Hale Copper Mine.)
- (408) (1963), Oklahoma's greatest gold rush: University of Oklahoma, 8th Biennial Geological Symposium, Proceedings, p. 149–160. (p. 155, Hale Copper Mine, filed on by Clifford Ison, June 25, 1959, Wichita Mountains.)
- (409) ——— (1976), Oklahoma treasures and treasure tales: University of Oklahoma Press, Norman, 326 p., 17 maps.
- (410) ——— (1980), Dauntless gold seekers of the Wichitas: Oklahoma Today [Oklahoma Tourism Department, Oklahoma City], v. 30, no. 2, p. 11–15.
- (411) Wilson, Torrence Bement, Jr. (1938), History of Wilbarger County, Texas: University of Texas (Austin) M.A. thesis, 121 p.

- (412) Woodruff, E. G. (1904), Present status of the mining industry in the Wichita Mountains of Oklahoma; with a report of mineral deposits in the Wichita Mountains, by Edwin DeBarr: Oklahoma Territory Department of Geology and Natural History Survey, 3rd Biennial Report, p. 23–36.
- (413) Wrather, W. E. (1917), Notes on the Texas Permian: Southwestern Association of Petroleum Geologists [American Association of Petroleum Geologists] Bulletin, v. 1, p. 93–106.
- (414) Wright, Muriel H. (1956), A Spanish *arrastra* in McClain County: Chronicles of Oklahoma, v. 34, no. 4, p. 484. (Byar's Mine, McClain County, Oklahoma, near C sec. 33, T. 5 N., R. 2 E., found by George Shirk and others in 1952 on the west side of a dry branch. Possibly this was the work of Marcy in 1850.)
- (415) Wu, Dah Cheng (1969), Clay mineralogy and geochemistry of the upper Flowerpot Shale in Major and Blaine Counties, Oklahoma: University of Oklahoma Ph.D. dissertation, 107 p.
- (416) Yang, Shyue-Rong Vincent (1985), Petrological and geochemical approaches to the origin of the San Angelo-Flowerpot red beds (Permian) and their associated stratiform copper mineralizations in north-central Texas and southwestern Oklahoma: University of Texas (Dallas) Ph.D. dissertation, 319 p.
- (417) Young, Keith (1965), The Roessler maps: Texas Journal of Science, v. 17, no. 1, p. 28–45, published by Texas Academy of Science. (18 county maps, drafted about 1867, and printed up to 1883, using Shumard's 1860 geological nomenclature on bases of the Texas General Land Office, bearing name of the Texas Land and Immigration Co., 35 Broad St., New York. One set is in Texas Archives (Austin) and two sets were in Washington, D.C., in U.S. Geological Survey Library, in 1893. Archer, Brown, Colorado, Comanche, Fayette, Galveston, Gillespie, Hamilton, Haskell, Jack, Llano, McCulloch, Marion, Montague, Rains, Red River, San Saba, and Young Counties, Texas.)
- (418) Youngman, E. P. (1931), Zirconium; domestic and foreign deposits: U.S. Bureau of Mines Information Circular 6456, 63 p. (p. 17–18, Wichita Mountains, sec. 21, T. 3 N., R. 15 W., Oklahoma, zircons mined from 1907 to 1931, by Hockney and Sons, LaHarpe, Kansas.)
- (419) Zeller, D. E. (1968), The stratigraphic succession in Kansas: Kansas Geological Survey Bulletin 189, 81 p.