Contributions of the Mathematical Geology Section Kansas Geological Survey, 1962—2002

JoAnne DeGraffenreid

Mathematical Geology Section
Kansas Geological Survey
1930 Constant Avenue
Lawrence, KS 66047



Open-file Report No. 2002–39

September, 2002

KANSAS GEOLOGICAL SURVEY
OPEN-FILE REPORT 2002-39

Contributions of the Mathematical Geology Section
Kansas Geological Survey, 1962-2002

compiled by

JoAnne DeGraffenreid

Disclaimer

The Kansas Geological Survey does not guarantee this document to be free from errors or inaccuracies and disclaims any responsibility or liability for interpretations based on data used in the production of this document or decisions based thereon. This report is intended to make results of research available at the earliest possible date, but is not intended to constitute final or formal publications.

Kansas Geological Survey
1930 Constant Avenue
University of Kansas
Lawrence, KS 66047-3726

Selected Bibliography from Currently Available Sources

1962-2002

Books, Chapters in Books, Journal Articles, Open-File Reports, Reviews, Abstracts and Presentations, Posters, Translations, Software, Maps, Manuals, Grants, Proposals, and Legislative Communications by Kansas Geological Survey Mathematical Geology Section Scientists and Research Support Staff (identified by boldface type) and (in boldface italic) Mathematical Geology Section Visiting Research Scientists, Industrial Scientists, and Scholars, and M.S., Ph.D., and Post-Doc. Students.

Prepared August-September 2002

Agterberg*, *F.P., 1970, Autocorrelation functions in geology, *in* **D.F. Merriam** (Ed.), *Geostatistics, A Colloquium*: Plenum Press, New York, p. 113-142.

Agterberg*, *F.P., 1970, Multivariate prediction equations in geology: *Jour. Intl. Assoc. Math. Geology*, v. 2, no. 3, p. 319-324.

Agterberg*, *F.P., 1974, *Geomathematics: Mathematical Backgrounds and Geo-Science Applications*: Elsevier Sci. Publ. Co., Amsterdam, 596 p.

[*N.B.* Quoting Dr. Agterberg (Geological Survey of Canada), p. *ix-x*, "Several chapters [9-13] were prepared during 1969-1970, when I was a visiting research scientist with the Kansas Geological Survey." Frits Agterberg was the second Mathematical Geology Section "Visiting Research Scientist," following Prof. R.A. Reyment, Uppsala Univ., Sweden. Richard Reyment was a founding member (1968) of the International Association for Mathematical Geology (IAMG). Ironically, Prof. A.B. Vistelius, Laboratory of Mathematical Geology, Leningrad, USSR, was the first IAMG president. The IAMG was born during the 23rd International Geologic Congress in Prague in 1968, even as the Soviet tanks rolled into the city. As a matter of further interest, Wichita State Univ. Prof. Emeritus Dr. D.F. Merriam of the Kansas Geological Survey, who founded the KGS Mathematical Geology Section (known at the time as Geologic Research) ca. 1962, has been humorously referred to as the "godfather of Mathematical Geology." Dan Merriam established the IAMG journals, *Mathematical Geology* and *Computers & Geosciences*. Currently (Sept. 2002), Dan is editor of the IAMG journal, *Natural Resources Research*, and is at work mapping Franklin Co., Kansas, for the Kansas Geological Survey—*gratis*.]

Agterberg*, *F.P., 2001, Multifractal simulation of geochemical map patterns, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation, Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 327-346.

Agterberg*, *F.P., and Cabilio, P., 1969, Two-stage least squares model for the relationship between mappable geological variables: *Jour. Intl. Assoc. Math. Geol.*, v. 1, no. 2, p. 137-153.

Agterberg, ***F.P.***, Bonham-Carter, G.F., Cheng, Q., and Wright, D.F., 1993, Weights of evidence modeling and weighted logistic regression for mineral potential mapping, *in* **Davis**, **J.C.**, and ***Herzfeld***, ***U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 13-32.

Andrén, T., Bjerkeus, M., Flodén, T., ***Harff***, ***J.***, Heiser, U., Kunzendorf, H., Larsen, B., Neuman, T., Nytoft, P., Kotilainen, A., **Olea**, **R.A.**, Repecka, M., Struck, U., Vallius, B.H., Voss, M., and Winterhalter, B., 1997, Research for BASYS—Baltic Sea System Studies: Bericht der IOW, Institut für Ostseeforschung, Warnemünde, Germany, 90 p.

Arteaga-Ruiz, R., and **McElwee**, **C.D.**, 1995, A method of modifying parameter zonation to obtain a better conditioned groundwater inverse problem: Open-File Rept. 1995-77, Kansas Geol. Survey, 174 p.

Arteaga-Ruiz, R., and **McElwee**, **C.D.**, 1995, A method of modifying parameter zonation to obtain a better conditioned groundwater inverse problem [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 77, no. 17, p. 146.

Barceló, C., ***Pawlowsky-Glahn***, ***V.***, and **Bohling**, **G.C.**, 1996, Classification of compositional data using mixture models: A case study using granulometric data [Abs.]: *in* International Symposium on Computerized Modeling of Sedimentary Systems, October, Güstrow, Germany.

Barceló, C., ***Pawlowsky-Glahn***, ***V.***, and **Bohling**, **G.C.**, 1999, Classification of compositional data using mixture models: A case study using granulometric data, *in* ***J. Harff***, W. Lemke, and K. Stattegger (Eds.), *Computerized Modeling in Sedimentary Systems*: Springer-Verlag, Berlin, p. 00.

Bennison, A.P., and **Collins**, **D.R.**, 1996, Geologic map of Montgomery County, Kansas, Map Series M-44, scale 1:50,000: Kansas Geol. Survey, Lawrence, Kansas.

Bennison, A.P., and **Collins**, **D.R.**, 1998, Geologic map of Montgomery County, Kansas, Map Series M-44a, scale 1:100,000: Kansas Geol. Survey, Lawrence, Kansas.

Berendsen, P., and **Doveton**, **J.H.**, 1988, Oolitic limestones from the lower St. Peter Sandstone (Middle Ordovician) in northeast Kansas [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 20, no. 2, p. 91.

Berendsen, P., and **Doveton**, **J.H.**, 1990, Oolitic ironstones from the lower St. Peter Sandstone (Middle Ordovician) in northeast Kansas and their paleogeomorphological implications [Abs.]: Kansas Acad. Sci. 122nd Ann. Meeting, Kansas State Univ., March, Manhattan, Kansas, Abstracts, v. 9, p. 9.

Berendsen, P., and **Doveton**, **J.H.**, 1994, Middle Ordovician ironstones in Kansas: Subsurface markers of paleoshorelines for the Midcontinent [Abs.]: *in* Proc. Workshop on Simpson and Viola groups in the southern Midcontinent, Norman, Oklahoma, Abstracts vol., p. 15.

Berendsen, P., and **Doveton, J.H.**, 1997, Middle Ordovician ironstones in Kansas: Subsurface markers of paleoshorelines for the Midcontinent, *in* K.S. Johnson (Ed.), Symposium on Simpson and Viola groups in the southern Midcontinent: Oklahoma Geol. Survey Circ. 99, p. 164-171.

Berendsen, P., Borcherding, R.M., **Doveton, J.H.**, Gerhard, L.C., Newell, K.D., Steeples, D.W., and Watney, W.L., 1988, Texaco Poersch #1, Washington County, Kansas— Preliminary geologic report of the pre-Phanerozoic rocks: Open-File Rept. 1988-22, Kansas Geol. Survey, Lawrence, Kansas, 116 p.

Berendsen, P., **Doveton, J.H.**, and Speczik, S., 1992, Distribution of Middle Ordovician oolitic ironstones in northeastern Kansas and their paleogeomorphological implications: *Sed. Geology*, v. 76, no. 3/4, p. 207-219.

Berendsen, P., **Doveton, J.H.**, Gerhard, L.C., Newell, K.D., Steeples, D.W., Watney, W.L., and Borcherding, R.M., 1988, Preliminary geologic report of the Texaco Poersch #1 borehole: *Oil and Gas Jour.*, v. 86, no. 44, p. 48-54.

Berendsen, P., Newell, K.D., **Doveton, J.H.**, and Watney, W.L., 1989, Descriptive and geophysical logs of the Poersch #1 drill hole, Washington County, Kansas: Open-File Rept. 1989-12, Kansas Geol. Survey, Lawrence, Kansas, 2 sheets.

Berendsen, P., Newell, K.D., Watney, W.L., **Doveton, J.H.**, and Steeples, D.W., 1989, Preliminary report on the Texaco deep Precambrian drill hole in the Midcontinent Rift System [Abs.], *in* W.P. Pratt and M.B. Goldhaber (Eds.), U.S. Geol. Survey/Missouri Geol. Survey Symposium, "Mineral-resource Potential of the Midcontinent": U.S. Geol. Survey Open-File Rept. 89-0169, p. 2. [Published in U.S. Geol. Survey Circ. 1043, 42 p., 1990.]

Berlanga, Juan M., 1978, Contour mapping of highly faulted geologic structures using SURFACE II: Unpub. Rept., Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 20 p. [Appdx. II (17 p.) comprises Computer program FAULT.]

Berlanga, Juan M., and ***Harbaugh, J.W.***, 1981, Use of seismic data for statistical estimaton of outcome probabilities of complexly faulted structures in Tabasco Basin, Mexico: *Bull. Am. Assoc. Petroleum Geologists*, v. 65, no. 3, p. 422-437.

Bhattacharya, S., Byrnes, A.P., Gerlach, P., and **Olea, R.A.**, 2002, Reservoir characterization to inexpensively evaluate the exploration potential of a small Morrow incised valley-fill field [Abs.]: Am. Assoc. Petroleum Geologists Ann. Convention, Houston. [poster]

Bhattacharya, S., Watney, W.L., **Doveton, J.H.**, Guy, W.J., and **Bohling, G.C.**, 1999, From geomodels to engineering models—Opportunities for spreadsheet computing: *in* Proc. GCS/SEPM Foundation 19th Ann. Research Conference on Advanced Reservoir Characterization, p. 179-191.

Bobertz, Bernd, 1998, Fundamental concepts in geostatistics: Unpub. Rept., Mathematical Geology, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

Bohling, G.C., 1992, SUPRPUMP: An interactive program for well test analysis and design [Abs.], *in* Proc. "Assessment and Mitigation at Hazardous Waste Sites: A 6th Research Update," July: UCSD Extension, La Jolla, California.

Bohling, G.C., 1993, Hydraulic tomography in two-dimensional, steady-state groundwater flow: Open-File Rept. 1993-17, Kansas Geol. Survey, Lawrence, Kansas, 23 p.

Bohling, G.C., 1993, Hydraulic tomography in two-dimensional, steady-state groundwater flow [Abs.], *in* Am. Geophysical Union, 1993 Spring Meeting Supplement: *Eos, Transactions Amer. Geophys. Union*, v. 74, p. 141.

Bohling, G.C., 1994, Review. *GSLIB: Geostatistical Software Library and User's Guide*, by C.V. Deutsch and A.G. Journel: *Computers & Geosciences*, v. 20, no. 6, p. 1063-1064.

Bohling, G.C., 1997, Canonical variate and principal component analyses of the Darss Sill granulometic data, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 163-168.

Bohling, G.C., 1997, GSLIB-style programs for discriminant analysis and regionalized classification: *Computers & Geosciences*, v. 23, no. 7, p. 739-761.

Bohling, G.C., 1997, PfEFFER Version 1.1: A program for spreadsheet-based well log analysis [Abs.]: Petroleum Technology Transfer Center Software, RLO Software Demo/Training Workshop, Feb. 13-15, 1997, Golden, CO.

Bohling, G.C., 1997, Review. *Spatial Reasoning for Effective GIS*, by J.K. Berry: *Computers & Geosciences*: v. 23, no. 2, p. 226-227.

Bohling, G.C., 1998, Review. *Applied Contaminant Transport Modeling: Theory and Practice*, by Chunmiao Zheng and Gordon D. Bennett: *Computers & Geosciences*, v. 24, no. 2, p. 207-208.

Bohling, G.C., 1998, Review. *Computational Geoscience* [journal edited by van Duijn and Wheeler]: *Computers & Geosciences*, v. 24, no. 3, p. 295-296.

Bohling, G.C., 1998, Review. *Environmental Stats for S-Plus, Version 1.0*, by Stephen P. Millard: *Computers & Geosciences*, v. 24, no. 6, p. 597-602.

Bohling, G.C., 1998, Review. *Introduction to Geostatistics: Applications in Hydrogeology*, by P.K. Kitanidis: *Computers & Geosciences*, v. 24, no. 3, p. 293-294.

Bohling, G.C., 1999, A radial-coordinate groundwater flow model for analysis of well tests in heterogeneous formations, *in* A.S.J. Lippard, A. Næss, and ***R. Sinding-Larsen*** (Eds.), *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*: Tapir Printers, Trondheim, Norway, p. 693-697.

Bohling, G.C., 1999, Comparative assessment of well-testing methodologies and an induced-gradient tracer test in an alluvial sand and gravel aquifer [Abs.]: *in* Colloquium Proc., Univ. Kansas Geology Dept., September 1999.

Bohling, G.C., 1999, Evaluation of an Induced Gradient Tracer Test in an Alluvial Aquifer: Ph.D. Dissertation, Dept. Geology, Univ. Kansas, Lawrence, Kansas, 224 p. [Available as Kansas Geol. Survey Open-File Rept. 1999-6].

Bohling, G.C., 1999, Grant. Research visit to Baltic Sea Research Institute, Warnemünde, Germany, to collaborate on statistical subdivision and correlation of Baltic Sea sediment cores: European Community BASYS Program, DM 1817 (US $900).

Bohling, G.C., 2000, Review. *GS+ for Windows, Version 3.1*, by Gamma Design Software: *Computers & Geosciences*, v. 26., no. 7, p. 855-863.

Bohling, G.C., 2001, Review. *VARIOWIN: Software for Spatial Data Analysis in 2D*, by Yvan Pannetier: *Computers & Geosciences*, v. 27, no. 1, p. 125-127.

Bohling, G.C., and Butler, J.J., Jr., 2001, **lr2dinv**: A finite-difference model for inverse analysis of two-dimensional linear or radial groundwater flow: *Computers & Geosciences*, v. 27, no. 10, p. 1147-1156.

Bohling, G.C., and **Davis, J.C.**, 1993, A FORTRAN program for Monte Carlo simulation of oil-field discovery sequences: *Computers & Geosciences*, v. 19, no. 10, p. 1529-1543.

Bohling, G.C., and **Doveton, J.H.**, 1992, KIPLING: CMAC neural emulation software for the prediction of permeability from wireline logs and other applications: First Year Rept., Kansas Geol. Survey–Marathon Oil Coop. Project, 55 p.

Bohling, G.C., and **Doveton, J.H.**, 1999, KIPLING.XLA: An Excel Add-in for Nonparametric Regression and Classification: Amoco Petrophysics School, MONTH, Tulsa, Oklahoma, p. 00

Bohling, G.C., and **Doveton, J.H.**, 2000, KIPLING.XLA [software]: An Excel add-in for nonparametric regression and classification, Excel 97 and Excel 2000 [distributed by the Kansas Geol. Survey, Lawrence, Kansas].

Bohling, G.C., and **Doveton, J.H.**, 2000, KIPLING.XLA manual: Computer Program Series 2000-1, Kansas Geol. Survey, Lawrence, Kansas, 69 p.

Bohling, G.C., and **Doveton, J.H.**, 2002, A petrophysical education: Learning borehole geology in a university setting using web-based technology [Abs.]: Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Abstracts vol., p. 48. [available as pdf file, 15 p.]

Bohling, G.C., and ***Harff, J.***, 1999, Zonation and correlation of Holocene sediments from the Gotland Basin by multivariate statistical methods [Abs.]: *in* Proc. Geomodeling Seminar, Univ. Greifswald, Greifswald, Germany.

Bohling, G.C., and **McElwee, C.D.**, 1989, Pumping test design and analysis using sensitivity coefficients [Abs.], Am. Geophysical Union, 1989 Fall meeting, San Francisco: *Eos, Transactions Amer. Geophys. Union*, v. 70, no. 43, p. 1078.

Bohling, G.C., and **McElwee, C.D.**, 1989, Pumping test design and analysis using sensitivity coefficients: Open-File Rept. 1989-34, Kansas Geol. Survey, Lawrence, Kansas, 22 p.

Bohling, G.C., and **McElwee, C.D.**, 1992, SUPRPUMP: An interactive program for well test analysis and design: *Ground Water*, v. 30, no. 2, p. 262-268.

Bohling, G.C., Anderson, M.P., and Bentley, C.R., 1989, Use of ground penetrating radar to define recharge areas in the Central Sand Plain: Water Resources Center Technical Rept. WIS WRC 89-01, Univ. Wisconsin-Madison, 62 p.

Bohling, G.C., Butler, J.J., Jr., and **McElwee, C.D.**, 1997, Inverse modeling of a radially convergent tracer test in a sand and gravel aquifer [Abs.]: *in* Proc. 4th SIAM Conference, "Mathematical and Computational Issues in the Geosciences," Albuquerque, New Mexico, *Final Program and Abstracts*, p. 00.

Bohling, G.C., Davis, J.C., Olea, R.A., and ***Harff, J.***, 1998, Singularity and nonnormality in the classification of compositional data: *Math. Geology*, v. 30, no. 1, p. 5-20.

Bohling, G.C., Doveton, J.H., and ***Hoth, Peer***, 1997, Probabilistic classification and prediction of facies types in a Mid-continent Cretaceous deltaic-marine sequence from petrophysical log descriptors using a CMAC procedure, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 242-247.

Bohling, G.C., Doveton, J.H., and Watney, W.L., 1996, Systematic identification of sequence stratigraphic units from wireline logs, *in* J.A. Pacht, R.E. Sheriff, and B.F. Perkins (Eds.), *Stratigraphic Analysis Utilizing Advanced Geophysical, Wireline and Borehole Technology For Petroleum Exploration and Production*: Proc. SEPM, Gulf Coast Section, 17th Ann. Research Conference, p. 29-37.

Bohling, G.C., Doveton, J.H., Guy, W.J., and Watney, W.L., 1998, PfEFFER 1.1: User's Manual, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Bohling, G.C., Doveton, J.H., Guy, W.J., Watney, W.L., and Bhattacharya, S., 1998, PfEFFER 2.0: User's Manual, Kansas Geol. Survey, Lawrence, Kansas, 164 p.

Bohling, G.C., ***Harff, J.***, and **Davis, J.C.**, 1991, Regionalized classification: Ideas and applications [Abs.]: *in* Proc. 5th Canadian-American Conf. on Hydrology, September, Banff, Canada.

Bohling, G.C., ***Harff, J.***, and **Davis, J.C.**, 1991, Regionalized classification: Ideas and applications, *in* S. Bachu (Ed.), *Proceedings of the Fifth Canadian/American Conference on Hydrogeology: Parameter Identification and Estimation for Aquifer and Reservoir Characterization*: National Water Well Assoc., Dublin, Ohio, p. 229-242.

Bohling, G.C., ***Hyder, Z.***, Liu, W.Z., Butler, J.J., Jr., and **McElwee, C.D.**, 1991, A numerical model of slug tests in layered geologic systems: Open-File Rept. 1991-62, Kansas Geol. Survey, Lawrence, Kansas, 22 p.

Bohling, G.C., ***Hyder, Z.***, Liu, W.Z., Butler, J.J., Jr., and **McElwee, C.D.**, 1991, A numerical model of slug tests in layered geologic systems [Abs.], *in* Am. Geophysical Union, 1991 Fall Meeting Supplement: *Eos, Transactions Amer. Geophys. Union*, v. 72, no. 0, p. 146.

Bohling, G.C., McElwee, C.D., and Butler, J.J., Jr., 1990, A decision support system for pumping test analysis [Abs.]: Am. Geophysical Union, 1990 Fall Meeting: *Eos, Transactions Amer. Geophys. Union*, v. 71, no. 43, p. 1315.

Bohling, G.C., McElwee, C.D., and Butler, J.J., Jr., 1990, A decision support system for pumping test analysis: Open-File Rept. 1990-40, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

Bohling, G.C., McElwee, C.D., Butler, J.J., Jr., and Liu, W.Z., 1993, User's guide to well test design and analysis with SUPRPUMP version 1.1: Tech. Series Pub. no. 00, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Bohling, G.C., McElwee, C.D., Butler, J.J., Jr., and Liu, W.Z., 1990, User's guide to well test design and analysis with SUPRPUMP version 1.0: Computer Program Series 90-3, Kansas Geol. Survey, Lawrence, Kansas, 95 p.

Bohling, G.C., McElwee, C.D., Butler, J.J., Jr., Orcutt, M., and Macpherson, G.L., 1995, GEMSTRAC1, an induced gradient tracer test in an alluvial sand and gravel aquifer: Open-File Rept. 1995-80, Kansas Geol. Survey, Lawrence, Kansas, 20 p.

Bohling, G.C., McElwee, C.D., Butler, J.J., Jr., Orcutt, M., and Macpherson, G.L., 1995, GEMSTRAC1, An induced gradient tracer test in an alluvial sand and gravel aquifer [Abs.]: International Union of Geodesy and Geophysics, XXI General Assembly, Boulder, Colorado, Abstracts vol., p. 231.

Bohling, G.C., Zhan, X., Butler, J.J., Jr., and Zheng, L., 2000, Inversion of hydraulic tomography data: The steady-shape approach [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 81, no. 48, p. F433.

Bohling, G.C., Zhan, X., Butler, J.J., Jr., and Zheng, L., 2002, Steady-shape analysis of tomographic pumping tests for characterization of aquifer heterogeneities: *Water Resources Research* [in press].

Bornemann, E., 1979, Well-log analysis as a tool for lithofacies determination in the Viola Limestone (Ordovician) of south-central Kansas: Unpub. Ph.D. dissertation, Dept. Geology, Syracuse Univ., Syracuse, New York, 151 p. (Avail. as Kans. Geol. Survey Open-File Rept. 1979-9.)

Bornemann, E., 1980, Well-log analysis as a tool for lithofacies determination in the Viola Limestone (Ordovician) of south-central Kansas [Abs.]: Dissertation Abstracts International, Section B, v. 40, no. 12, p. 5583B.

Bornemann, E., and **Doveton, J.H.**, 1980, Automated lithofacies analysis of the Viola of south-central Kansas using petrophysical logs [Abs.], *in* SEPM Computer Technology Research Group Colloquium: Am. Assoc. Petroleum Geologists-SEPM Ann. Meeting, Denver, Colorado, Abstracts vol., p. 00.

Bornemann, ***E.***, and **Doveton**, **J.H.**, 1983, Lithofacies mapping of the Viola Limestone in south-central Kansas based on wireline logs: *Bull. Am. Assoc. Petroleum Geologists*, v. 67, no. 4, p. 609-623.

Bornemann, ***E.***, **Doveton**, **J.H.**, and ***St. Clair***, ***P.N.***, 1982, Lithofacies analysis of the Viola Limestone in south-central Kansas: Petrophysical Series no. 3, Kansas Geol. Survey, Lawrence, Kansas, 44 p.

Brady, L.L., and **Collins**, **D.R.**, 1988, The digital geologic mapping program and digital mapping database development (a 5-year program) [Abs.], Preliminary (July) Report KDHE and EPA: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brady, L.L., and **Ross**, **J.A.**, 1998, Geologic mapping and the STATEMAP program at the Kansas Geological Survey—An overview [Abs.]: *in* Geol. Soc. America, *Abstracts with Programs*, v. 30, no. 3, p. 2-3.

Brady, L.L., and **Ross**, **J.A.**, 1998, Geologic mapping and the STATEMAP program at the Kansas Geological Survey—An overview: Geol. Soc. America, South-Central Section 32nd Ann. Meeting, Norman, Oklahoma. [poster]

Brady, L.L., Johnson, W.C., West, R.R., McCauley, J.R., and **Collins**, **D.R.**, 1997, A proposal submitted to the STATEMAP program, U.S. Geol. Survey, for continuation of geologic mapping and compilation of digitized county databases: Open-File Rept. 1997-90, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Brady, L.L., Johnson, W.C., West, R.R., McCauley, J.R., Merriam, D.F., and **Collins**, **D.R.**, 1996, A proposal submitted to the STATEMAP program, U.S. Geol. Survey, for continuation of geologic mapping and compilation of digitized county databases: Open-File Rept. 1996-56, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Brentano, **J.E.**, 1982, Archeological contour maps produced for the National Park Service, Southeast Archeological Center: Kansas Geol. Survey, Lawrence, Kansas (map).

Brentano, **J.E.**, 1982, Geological map production using a minicomputer with GIMMAP: *in* Proc. Math. Geologists of the United States First Ann. Conf., "Management, Analysis, and Display of Geoscience Data," January, Golden Colorado.

Brentano, **J.E.**, 1982, Groundwater Management District No. 5--Kansas Database Demonstration: Kansas Geol. Survey, Lawrence, Kansas (map).

Brentano, **J.E.**, 1983, High Plains aquifer, Kansas (map series), *in* R.A. Olea, Systematic sampling of spatial functions: Series on Spatial Analysis no. 7, Kansas Geol. Survey, Lawrence, Kansas, 57 p.

Brentano, **J.E.**, 1983, Pratt County, Kansas: Kansas Geol. Survey, Lawrence, Kansas (map).

Brentano, J.E., 1983, Series of color maps for lithofacies analysis of the Viola Limestone, *in* ***E. Bornemann***, **J.H. Doveton**, and ***P.N. St. Clair***, Lithofacies analysis of the Viola Limestone in south-central Kansas: Petrophysical Series no. 3, Kansas Geol. Survey, Lawrence, Kansas, 44 p.

Brentano, J.E., and **Ross, C.G.**, 1982, Geology of Colorado—Color separations and color-proof demonstration for the Geological Society of America: Kansas Geol. Survey, Lawrence, Kansas (map).

Brentano, J.E., and **Ross, C.G.**, 1984, COLORZ: A FORTRAN program to provide color display of geologic (and other areal) maps, with colors assigned by percentage of primary color derived from printing process: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brooker, P.I., 1983, Semi-variogram estimation using a simulated deposit: *Mining Engr.*, v. 35, no. 1, p. 37-42.

Brooker, P.I., 1984, Two dimensional simulation by turning bands: Soc. Mining Engineers of AIME, preprint 84-78, p. 1-5.

Brooker, P.I., 1985, Two-dimensional simulation by turning bands: *Math. Geology*, v. 17, no. 1, p. 81-90.

Brown, S.S.L., 1967, General stratigraphy and depositional environment of the Elgin sandstone in south-central Kansas: Unpub. M.S. thesis, Geol. Dept., Univ. Kansas, Lawrence, Kansas, 52.

Brown, S.S.L., 1967, Stratigraphy and depositional environment of the Elgin Sandstone (Pennsylvanian) in south-central Kansas: Kansas Geol. Survey Bull. 187, pt. 3, 9 p.

Brownrigg R., Collins, D.R., and **Ross, J.A.**, 1995, Changing the face of geologic mapping: Technology and data source integration for improved geologic map production [Abs.], *in* Proc. 9th Ann. Symposium on Geographic Information Systems in Natural Resources Management, Vancouver, BC, Canada: *GIS World*, v. 1, p. 257.

Brownrigg, R., 1984, Towards efficient database access of viewing windows [Abs.]: *in* Proc. URISA'84, Urban and Regional Information Systems Assoc. Ann. Conf., August, Seattle, Washington.

Brownrigg, R., 1986, Overlaying GIMMAP and SURFACE II plots—GIMMAP Tech. Note: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brownrigg, R., and **Ross, C.G.**, 1984, MAPDIG—FORTRAN 77 program tailored to map digitization for the Kansas Database and other GIMMAP projects: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brownrigg, R., and **Ross, C.G.**, 1984, MAPLINK—FORTRAN 77 system and associated database to support production of maps of oil and gas data using attribute data in secondary attribute database and graphical information extracted from GIMMAP cartographic database: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brownrigg, R., and **Ross, C.G.**, 1985, CYMBAL—Re-design and implementation of a FORTRAN 77 system for the interactive specification of high-quality labeling and annotation of GIMMAP cartographic products, with emphasis on man-machine interface and machine performance: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brownrigg, R., and **Ross, C.G.**, 1985, POSTER—FORTRAN 77 program for posting of spatial data incorporating various geologic symbologies and optional projection of X-Y coordinates for overlay with GIMMAP products: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Brownrigg, R., and **Ross, C.G.**, 1985, SYMGEN—FORTRAN 77 program for re-projecting, merging, extracting, and rescaling of symbology for GIMMAP databases: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Buchanan, R., and **Davis, J.C.**, 2000-2001, Grant. Assessment of Kansans' knowledge about water issues: Kansas Water Office, $35,000.

Buchanan, R., and **Davis, J.C.**, 2001, Information and assessment report to the Kansas Water Office: Open-File Rept. 2001-22, Kansas Geol. Survey, Lawrence, Kansas, 152 p.

Butler, J.J., Jr., and **Bohling, G.C.**, 1995, Grant. Assessment of hydraulic and tracer tests at the Waste Isolation Pilot Plant: Sandia National Laboratory, $9,767.

Butler, J.J., Jr., and **McElwee, C.D.**, 1987, A new approach for pumping tests in nonuniform aquifers: Open-File Rept. 1987-29, Kansas Geol. Survey, Lawrence, Kansas, 9 p.

Butler, J.J., Jr., and **McElwee, C.D.**, 1987, A new approach for pumping tests in nonuniform aquifers [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 68, no. 44, p. 1295.

Butler, J.J., Jr., and **McElwee, C.D.**, 1990, Variable-rate pumping tests for radially symmetric nonuniform aquifers: *Water Resources Research*, v. 26, no. 2, p. 291-306.

Butler, J.J., Jr., and **McElwee, C.D.**, 1991, Hydrogeologic characterization of hazardous waste sites [Abs.]: Water and Future of Kansas Conference, Proceedings, no. 8, p. 10-11.

Butler, J.J., Jr., and **McElwee, C.D.**, 1992, Subsurface flow of hazardous wastes [Abs.]: *in* Proc. 9th Ann. Water and the Future of Kansas Conference, p. 12-13.

Butler, J.J., Jr., and **McElwee, C.D.**, 1994, Improving the reliability of parameter estimates obtained from slug tests [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 75, no. 16, p. 151.

Butler, J.J., Jr., and **McElwee, C.D.**, 1994, Improving the reliability of parameter estimates obtained from slug tests: Open-File Rept. 1994-21, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Butler, J.J., Jr., and **McElwee, C.D.**, 1994, Slug tests in unconfined aquifers [Abs.]: *in* Proc. 11th Ann. Water and the Future of Kansas Conference, p. 5-7.

Butler, J.J., Jr., and **McElwee, C.D.**, 1994, Well-testing methodologies for characterizing heterogeneities in alluvial–aquifer systems: 2nd Year Project Report to U.S. Geol. Survey, Water Resources Research Program, U.S. Dept. of Interior, 171 p.

Butler, J.J., Jr., **Bohling, G.C.**, ***Hyder, Z.***, and **McElwee, C.D.**, 1994, The use of slug tests to describe vertical variations in hydraulic conductivity: *Jour. Hydrology*, v. 156, p. 137-162.

Butler, J.J., Jr., **Bohling, G.C.**, **McElwee, C.D.**, and Zheng, L., 1999, Grant. A new method for identification of preferential flow paths at sites of groundwater contamination: Hydrologic Sciences Program, National Science Foundation, $226,538.

Butler, J.J., Jr., Liu, W.Z., and **McElwee, C.D.**, 1991, Discussion of "Type Curves for two-regime well flow," by Z. Sen: ASCE *Jour. Hydraulic Engineering*, v. 117, no. 1, p. 122-124.

Butler, J.J., Jr., **McElwee, C.D.**, and **Bohling, G.C.**, 1995, Grant. Identification of preferential flow paths at sites of groundwater contamination: National Science Foundation, $49,998, 28 p.

Butler, J.J., Jr., **McElwee, C.D.**, and **Bohling, G.C.**, 1997, Proposal. A new method for identification of preferential flow paths at sites of groundwater contamination. Hydrologic Sciences Program: National Science Foundation, $64,211 [not funded].

Butler, J.J., Jr., **McElwee, C.D.**, and **Bohling, G.C.**, 1997, Transient head data from multilevel samplers: A promising new approach for subsurface characterization [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 78, no. 17, p. S146.

Butler, J.J., Jr., **McElwee, C.D.**, and **Bohling, G.C.**, 1997, Transient head data from multilevel samplers: A promising new approach for subsurface characterization: Open-File Rept. 1997-36, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Butler, J.J., Jr., **McElwee, C.D.**, and **Bohling, G.C.**, 1999, Pumping tests in networks of multilevel sampling wells—Motivation and methodology: *Water Resources Research*, v. 35, no. 11, p. 3553-3560.

Butler, J.J., Jr., **McElwee, C.D.**, and Davies, D.D., 1997, Hydraulic tracers, a new tool for characterizing subsurface variations in hydraulic conductivity: Open-File Rept. 1997-70, Kansas Geol. Survey, Lawrence, Kansas, 18 p.

Butler, J.J., Jr., **McElwee, C.D.**, and Healey, J.M., 1989, Site characterization in the Kansas River alluvium and letter to Kathryn Hess concerning the KGS modified cutting shoe: Open-File Rept. 1989-16, Kansas Geol. Survey, Lawrence, Kansas, 14 p.

Butler, J.J., Jr., **McElwee, C.D.**, and Healey, J.M., 1989, Site characterization in the Kansas River alluvium [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 70, no. 15, p. 331.

Butler, J.J., Jr., **McElwee, C.D.**, and ***Hyder, Z.***, 1994, Slug tests in unconfined aquifers (year 2): Kansas Water Resources Research Institute Contribution no. 310, 104 p.

Butler, J.J., Jr., **McElwee, C.D.**, and Liu, W.Z., 1996, Improving the quality of parameter estimates obtained from slug tests: *Ground Water*, v. 34, no. 3, p. 480-490.

Butler, J.J., Jr., **McElwee, C.D., Bohling, G.C.**, and Healey, J.M., 1990, Hydrogeologic characterization of hazardous waste sites—year one: Kansas Water Resources Research Institute Contribution no. 283, 114 p.

Butler, J.J., Jr., **McElwee, C.D., Bohling, G.C.**, Healey, J.M., and ***Jiang, X.***, 1991, Hydrogeologic characterization of hazardous waste sites—year two: Kansas Water Resources Research Institute, Contribution, no. 289, 129 p.

Butler, J.J., Jr., **McElwee, C.D., Bohling, G.C.**, ***Hyder, Z.***, Liu, W., ***Mennicke, C.M.***, and Orcutt, M.D., 1992, Well-testing methodologies for characterizing heterogeneities in alluvial-aquifer systems, first year (8/1/91-7/31/92) report: Open-File Rept. 1992-53, Kansas Geol. Survey, Lawrence, Kansas, 142 p.

Butler, J.J., Jr., **McElwee, C.D., Bohling, G.C.**, ***Hyder, Z.***, ***Mennicke, C.M.***, Orcutt, M.D., and ***Zenner, M.A.***, 1994, Well-testing methodologies for characterizing heterogeneities in alluvial-aquifer systems, 2nd year (8/1/92-7/31/93) report: Open-File Rept. 1994-27, Kansas Geol. Survey, Lawrence, Kansas, 171 p.

Butler, J.J., Jr., **McElwee, C.D., Bohling, G.C.**, Liu, W., ***Hyder, Z.***, ***Mennicke, C.M.***, Orcutt, M.D., ***Zenner, M.A.***, and Beilfuss, M.L., 1995, Well-testing methodologies for characterizing heterogeneities in alluvial-aquifer systems, final technical report: Open-File Rept. 1995-75, Kansas Geol. Survey, Lawrence, Kansas, 320 p.

Butler, J.J., Liu, W., and **McElwee, C.D.**, 1989, Flow to a well in radially nonuniform media: Open-File Rept. 1989-36, Kansas Geol. Survey, Lawrence, Kansas, 41 p.

Cable, H.W., 1978, MAPRO: A geographic mapping program [Abs.]: *in* Proc. 63rd Ann. Meeting, Am. Assoc. Petroleum Geologists, April, Oklahoma City, Oklahoma.

Campbell, J.B., Jr., 1972, Reconnaissance soil mapping from radar imagery: Center for Research, Inc., CRES Tech. Rept. 177-30, Univ. Kansas, Lawrence, Kansas, 131 p.

Campbell, J.B., Jr., 1976, Geographic analysis of variation across a soil boundary and within soil mapping units: Unpub. Ph.D. dissertation, Univ. of Kansas, Lawrence, Kansas: Univ. Microfilms, Ann Arbor, Michigan, 267 p. [Diss. Abstr. 37:3840-B]

Campbell, J.B., Jr., 1976, Spatial variation of sand content and pH within two soil mapping units [Abs.]: *in* Proc. Soil Sci. Soc. Meeting, November, Houston, Texas: Contrib. Kansas Geol. Survey/Dept. Geography-Meteorology, Univ. Kansas, Lawrence, Kansas, 24 p.

Campbell, J.B., Jr., 1977, Variation of selected properties across a soil boundary: *Jour. Soil Sci.*, v. 41, no. 00, p. 00. [in press 1977]

Campbell, J.B., Jr., 1978, The Wakarusa, Kansas planning atlas, an experimental computer cartography project, *in* **J.C. Davis** and S. Levi de Lopez (Eds.), *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis, Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, p 231-240.

Campbell, J.B., Jr., 1982, Soil map generalization: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 38 p.

Campbell, J.B., Jr., and Morain, S.A., 1972, Soil mapping from radar imagery: Theory and preliminary applications: Center for Research, Inc., CRES Tech. Rept. 177-23, Univ. Kansas, Lawrence, Kansas, 22 p.

Campbell, J.B., Jr., and Morain, S.A., 1974, Radar theory applied to reconnaissance soil surveys: *Soil Sci. Soc. America Proceedings*, v. 38, p. 818-826.

Campbell, J.B., Jr., **Davis, J.C.**, and Natural Environment Research Council, Experimental Cartography Unit [NERC, London, U.K.], 1979, Northern part of the Wakarusa Quadrangle, Kansas atlas: Series on Spatial Analysis no. 5, Kansas Geol. Survey, Lawrence, Kansas, 29 p. [oversized]

Candela, L., and **Olea, R.A.**, 1987, Lognormal kriging to evaluate sampling efficiency of Llobregat delta quality control groundwater network, Barcelona, Spain [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 68, no. 16, p. 312.

Candela, L., **Olea, R.A.**, and Custodio, E., 1988, Lognormal kriging for the assessment of reliability in groundwater quality control observation networks: *Jour. Hydrology*, v. 103, no. 1/2, p. 67-84.

Cao, T.T., 1977, GIMMAP: A Geographic Information and Management Mapping system: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Cao, T.T., 1978, GIMMAP: A geographic information management and mapping sytem, *in* **J.C. Davis** and S. Levi de Lopez (Eds.), *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis, Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, p. 86-95.

Carr, T.R., and **Ross, J.A.**, 1995, Producing horizons of oil and gas fields in the Hugoton Basin, Kansas: Map Series M-42, scale 1:1,000,000, Kansas Geol. Survey, Lawrence, Kansas.

Carr, T.R., Beene, D., and Collins, D.R., 1995, Kansas oil and gas production trends, 1995: Open-File Rept. 1995-42, Kansas Geol. Survey, Lawrence, Kansas, 12 p.

Carr, T.R., Bhattacharya, S., Franseen, E.K., Gerlach, P.M., Guy, W.J., **Doveton, J.H.**, Watney, W.L., Adkins-Heljeson, D., Hopkins, J.F., Beaty, S., Reynolds, R., and Vossough, S., 1997, Improved oil recovery in Mississippian carbonate reservoirs of Kansas, near term, class 2, annual report, Year 2: Open-File Rept. 1997-24, Kansas Geol. Survey, Lawrence, Kansas, 235 p. [Available online at http.www.kgs.ukans.edu/PRS/Info/webPubs97-24.html]

Carr, T.R., Hopkins, J.F., Feldman, H., Feltz, A., **Doveton, J.H.**, and **Collins, D.R.**, 1995, Transforms of wireline logs as pseudo-seismic traces: *Tech. Newsletter for Landmark Users*, January-February, p. 16-21.

Carr, T.R., Hopkins, J.F., Feldman, H., Feltz, A., **Doveton, J.H.**, and **Collins, D.R.**, 1995, Transforms of wireline logs as pseudo-seismic traces: *UserNet*, January-February, p. 1-6.

Carr, T.R., ***Hoth***, ***Peer***, and Bau, Michael, 1999, Trace and rare-earth elemental variation in a Midcontinent carbonate sequence—Understanding reservoir development [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 8, p. 21-22.

Carr, T.R., Jaech, J., Guy, W.J., Hopkins, J.F., and ***Hoth***, ***Peer***, 1995, Use of gamma-ray spectral log to recognize exposure surfaces and associated water tables in a Midcontinent carbonate sequence, Kansas [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Houston, Texas, Abstracts, v. 4, p. 15.

Charpentier, R.R., and **Doveton, J.H.**, 1988, Regional stratigraphy and facies of the Middle Ordovician Simpson Group, southwest Kansas [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 20, no. 2, p. 94.

Charpentier, R.R., and **Doveton, J.H.**, 1988, Regional stratigraphy and facies of the Middle Ordovician Simpson Group, southwest Kansas: *in* Geol. Soc. America South-Central Section, Abstracts vol., p. 94. Reprinted in *Oklahoma Geology Notes*, 1988, v. 48, no. 4, p. 191-192.

Charpentier, R.R., and **Doveton, J.H.**, 1989, Stratigraphy and facies in the Middle Ordovician Simpson Group, southwestern Kansas and western Oklahoma [Abs.], *in* Barker C.E. and A.B. Coury (Eds.), Abstracts of the U.S. Geological Survey, central region: Selected poster papers presented at scientific meetings, 1989: U.S. Geol. Survey Open-File Rept. no. 89-0644, p. 6.

Charpentier, R.R., and **Doveton, J.H.**, 1991, Stratigraphy and facies in the Middle Ordovician Simpson Group, southwestern Kansas and western Oklahoma [Abs.], *in* K.S. Johnson (Ed.), Proc. 1989 Symposium "Late Cambrian-Ordovician Geology of the Southern Midcontinent": Oklahoma Geol. Survey Circ. 92, p. 211.

Chaves, ***H.A.F.***, 1993, Characteristic analysis as an oil exploration tool, *in* **Davis, J.C.**, and ***Herzfeld***, ***U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 99-112.

Chorn, John, and **Conley, C.D.**, 1978, A Late Pennsylvanian vertebrate assemblage from stromatolites in the Bern Limestone, northeastern Kansas [Abs.]: *Transactions*, Kansas Acad. Sci. 110th Ann. Meeting, v. 81, no. 2, p. 139.

Christakos, G., 1886, Space transformations in a study of multidimensional functions in the hydrologic sciences: *Advances in Water Resources*, v. 9, no. 1, p. 42-48.

Christakos, G., 1986, Nonstochastic functional estimation of nonstationary spatial functions: Open-File Rept. 1986-28, Kansas Geol. Survey, Lawrence, Kansas, 31 p.

Christakos, G., 1986, Recursive parameter estimation of nonlinear state nonlinear observations systems, Part I: On-line data: Open-File Rept. 1986-29, Kansas Geol. Survey, Lawrence, Kansas, 85 p.

Christakos, G., 1986, Stochastic approach in the quantitative analysis of soil data: Research Rept., Inst. Geology and Mineral Exploration, Athens, Greece.

Christakos, G., 1987, A multiple-objective optimal exploration strategy [Abs.]: *in* Proc. 2nd Congress on Greek Mineral Resources, March, Technical Chamber of Greece, Athens, reprint, 2 p.

Christakos, G., 1987, A stochastic approach in modelling and estimating geotechnical data: *Intl. Jour. Numerical and Analytical Methods in Geomechanics*, v. 11, no. 1, p. 79-102.

Christakos, G., 1987, Stochastic approach and expert systems in the quantitative analysis of soils [Abs.]: *in* Proc. 5th International Conference on Application of Statistics and Probability in Soil and Structural Engineering: Inst. for Risk Research, May (Univ. Waterloo), Vancouver, Canada, v. 2, p. 741-748.

Christakos, G., 1987, Stochastic simulation of spatially correlated geoprocesses: *Math. Geology*, v. 19, no. 8, p. 803-827.

Christakos, G., 1987, The space transformations in the simulation of multidimensional random fields: *Jour. Math. and Computers in Simulation*, v. 29, p. 313-319.

Christakos, G., 1988, A simple approach to nonlinear estimation of physical systems: *Jour. Math. and Computer Modelling*, v. 11, p. 583-588.

Christakos, G., 1988, Modelling and estimation of nonlinear systems [Abs.]: *in* Proc. 12th International Assoc. for Mathematics and Computers in Simulation, IMACS World Congress, Paris, Abstracts, v. 2, p. 377-379.

Christakos, G., 1988, On-line estimation of nonlinear physical systems: *Math. Geology*, v. 20, no. 2, p. 111-133.

Christakos, G., 1988, Review. *Geostatistical Case Studies*, by. G. Matheron and M. Armstrong, D. Reidel Publ. Co., Boston, 1987: *Jour. Am. Statistical Assoc.*, p. 242-244.

Christakos, G., 1990, A Bayesian/maximum-entropy view to the spatial estimation problem: *Math. Geology*, v. 22, no. 7, p. 763-778.

Christakos, G., 1992, *Random Field Models in Earth Sciences*: Academic Press, Inc., San Diego, 473 p. [Originally intended for publication in 1990 as a Kansas Geol. Survey *Bulletin* with title, "Spatial and Spatiotemporal Random Field Models: Theory and Applications."]

Christakos, ***G.***, 2000, *Modern Spatiotemporal Geostatistics*: Studies in Math. Geology no. 6, Oxford Univ. Press, New York, 288 p.

Christakos, **G.**, and **Olea**, **R.A.**, 1987, A multiple objective exploration strategy: *in* Proc. 6th International Conf. on Mathematical Modelling, August, St. Louis, Missouri., 6 p.

Christakos, **G.**, and **Olea**, **R.A.**, 1988, A multiple-objective optimal exploration strategy: *Mathematical and Computer Modelling*, v. 11, p. 413-418.

Christakos, ***G.***, and **Olea**, **R.A.**, 1990, An optimal hydrologic network design method: *Water Resources Research*, v. 00, no. 00, p. 00.

Christakos, ***G.***, and **Olea**, **R.A.**, 1992, Sampling design for spatially distributed hydrogeologic and environmental processes: *Advances in Water Resources*, v. 15, no. 4, p. 219-237.

Christakos, ***G.***, and **Olea**, **R.A.**, 1992, Sampling design for spatially distributed hydrogeologic and environmental processes: *Advances in Water Resources*, v. 15, no. 4, p. 219-237.

Christakos, **G.**, and Pantelias, 1987, Optimal sampling strategy and its applications in geologic and mineral exploration (in Greek with English abstract): *in* Proc. 2nd Congress on the Greek Mineral Resources, March, Athens, v. 2, p. 149-161.

Christakos, **G.**, and Paraskevopouplos, P.N., 1987, On the functional optimization of a certain class of nonstationary spatial functions: *Jour. Optimization Theory and Applications*, v. 52, no. 2, p. 191-208.

Christakos, **G.**, and Sophocleous, M., 1987, Real-time estimation of nonlinear hydrologic systems: *in* Proc. Am. Geophysical Union Fall Meeting, San Francisco, California, v. 00, p. 00.

Cobb, P.M., and **McElwee**, **C.D.**, 1981, Saltwater upconing beneath a gaining stream [Abs.]: Eos, v. 62, no. 17, p. 286-287.

Cobb, P.M., McClain, T.J., **McElwee**, **C.D.**, Hathaway, L.R., Whittemore, D.O., and Kleinschmidt, M.K., 1979, Managing low quality water in the eastern Great Bend Prairie, a progress report [Abs.]: *Transactions*, Kansas Acad. Sci. 111th Ann. Meeting, v. 82, no. 2, p. 97.

Cobb, P.M., **McElwee**, **C.D.**, and Butt, M.A., 1981, Evaluation of leaky aquifer pumping test data, an automated numerical solution using sensitivity analysis: Open-File Rept. 1981-2, Kansas Geol. Survey, Lawrence, Kansas, 73 p.

Coburn, ***T.C.***, 2001, John W. Harbaugh's contributions to the evolution of stochastic analysis and modeling in geology, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation, Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 15-44.

Cocke*, *J.M., 1969, Taxonomic and environmental study of two dibunophyllid coral species from Upper Pennsylvanian rocks of Kansas: Paleo. Contribution, Univ. Kansas, Lawrence, Kansas, Paper 44, 11 p.

Cocke*, *J.M., and **Cocke, N.C.**, 1968, Classification and distribution of Missourian (Upper Pennsylvanian) geyerophyllid corals from Kansas: *Transactions*, Kansas Acad. Science, v. 71, no. 1, p. 38-48.

Cocke*, *J.M., and **Cocke, N.C.**, 1969, Redescription of a Pennsylvanian geyerophyllid coral species from Iowa: *Jour. Paleo.*, v. 43, no. 4, p. 941-946.

Cole, A.J., Jordan, C., and **Merriam, D.F.**, 1967, FORTRAN II program for progressive linear fit of surfaces on a quadratic base using an IBM 1620 computer: Computer Contribution 15, Kansas Geol. Survey, Lawrence, Kansas, 54 p.

Cole, V.B., **Merriam, D.F.**, and Hambleton, W.W., 1964, Activities of the Kansas Basement Rocks Committee in 1963 and additional Precambrian wells: Kansas Geol. Survey Bull. 170, pt. 4, Lawrence, Kansas, p. 1-11.

Collins, D.R. (Chm.), Gerhard, L.C., Watney, W.L., Carr, T.R., and Newell, K.D. [Crude Oil Potential Committee], 1994, Potential for discovery and production from the Kansas Crude Oil Resource Base: Open-File Rept. 1994-30, Kansas Geol. Survey, Lawrence, Kansas, 10 p.

Collins, D.R., 1979, Comments on the valuation and taxation of oil and gas properties in Kansas [Abs.]: Special Committee on Assessment and Taxation, Kansas Legislature, July, Topeka, Kansas.

Collins, D.R., 1979, The impact of irrigated agriculture development on the size distribution of firms in the Midwest beef packing industry [Abs.]: *in* Proc. 43rd Ann. Meeting, Midwest Economics Assoc., April, Chicago, Illinois.

Collins, D.R., 1980, Groundwater Allocation Mechanisms: The case of Western Kansas: Unpub. Ph.D. Dissertation, Dept. Economics, Univ. Kansas, 107 p.

Collins, D.R., 1980, Property rights in a fugitive resource: Alternative mechanisms for control of water resource development in western Kansas [Abs.]: Kansas Acad. Science 112th Ann. Meeting, Fort Hays State Univ., Hays, Kansas, Abstracts, v. 00, p. 00.

Collins, D.R., 1981, Optimal development of natural resources: The comparison of alternative control mechanisms [Abs.]: *in* Proc. 45th Ann. Meeting, Midwest Economics Assoc., April, Louisville, Kentucky.

Collins, D.R., 1982, Regional assessment and inter-regional comparison of oil exploration potential, breaking the time barrier [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 66, no. 5, p. 559.

Collins, D.R., 1983, Changes in drilling density and discovery rate through time [Abs.], *in* Proc. 12th Ann. Geochautauqua, "Computer Methods and the Subsurface": Kansas Geol. Survey/Univ. Kansas, Lawrence, Kansas.

Collins, D.R., 1983, COLORMAP: FORTRAN 77 program for color graphics display of regionalized variables: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1984, ICON: FORTRAN 77 program for color display of rapid lithology classification based upon multiple well logs: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1985, Changes in drilling density and discovery rates through time: *Math. Geology*, v. 17, no. 4, p. 375-393.

Collins, D.R., 1986, Exemptions and the severance tax—Who escapes from a sinking ship? [Abs.]: Committee on Revision of Severance Tax, Sen. Fred Kerr, Chm., February, Topeka, Kansas.

Collins, D.R., 1986, KORVUS: FORTRAN 77 program to generate stratigraphic correlation based on Markov transition probability matrix of lithological successions: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1987, [TIS] Kansas Geological Survey Technical Information Services [Abs.]: *in* Proc. Kansas Geol. Survey Advisory Council [GSAC], May, Lawrence, Kansas.

Collins, D.R., 1987, Alternatives to SB 1: Tech. Rept. to Sen. Gerald Karr, February, Topeka, Kansas.

Collins, D.R., 1987, An introduction to Technical Information Services and background information for demonstration of groundwater HYDADS system [Abs.]: *in* Proc. Kansas Water Authority Meeting, Fort Hays State Univ., Hays, Kansas.

Collins, D.R., 1987, Computing and mapping facilities of the Kansas Geological Survey [Abs.]: *in* Proc. Data General Users Group Seminar, Univ. Kansas, Lawrence, Kansas.

Collins, D.R., 1987, Evaluation of HB 2249: Tech. Rept. to Gary L. Stotts, Division of Budget, February, Topeka, Kansas.

Collins, D.R., 1987, HB 2249 and SB 1: Tech. Rept. to Rep. Ken Grotwiel, February, Topeka, Kansas.

Collins, D.R., 1987, Oil and gas information in Kansas: Current activities, future trends [Abs.]: *in* Proc. Conference on Oil and Gas Information and Database Management: DOE/Oklahoma Geol. Survey, MONTH, Norman, Oklahoma.

Collins, D.R., 1987, Technical Information Services [TIS]: Progress from reorganization [Abs.]: *in* Proc. Kansas Geol. Survey Advisory Council [GSAC], October, Lawrence, Kansas.

Collins, D.R., 1987, Technical Information Services of the Kansas Geological Survey, 1988 and beyond [Abs.]: *in* Proc. Workshop on Concepts of Technology Transfer and Information Communication, MONTH, Univ. Kansas, Lawrence, Kansas.

Collins, D.R., 1987, Testimony regarding Senate Bill 1 [Abs.]: Hearings of the Senate Committee on Assessment and Taxation, February, Topeka, Kansas.

Collins, D.R., 1987, Trends and alternatives in county property taxation [Abs.]: Tax Board/Kansas Independent Oil and Gas Assoc., December, Wichita, Kansas.

Collins, D.R., 1988, Geographic Information Systems Technology Institute, *in* Kansas Water Data Committee (September), *Kansas Geographic Information Systems Initiative*, p. 80-94; 113-122.

Collins, D.R., 1988, KUTRAT: FORTRAN 77 program for display of lithologic images derived from Potassium-Thorium-Uranium spectral logs and other wireline data: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1988, Oil and gas information in Kansas—Current activities, future trends [Abs.], *in* M.J. Summers, Proc. First Conference on Oil and Gas Information and Database Management: Oklahoma Geol. Survey, Special Pub. no. 88-3 (266 p.).

Collins, D.R., 1988, Recent trends of the county property tax as they relate to the oil and gas industry in Kansas [Abs.]: Special Committee on Assessment and Taxation, Sen. Dan Thiessen, Chm., October, Topeka, Kansas.

Collins, D.R., 1988, Taxes on the Kansas oil and gas industry [Abs.], *in* Proc. Kansas Independent Oil and Gas Assoc. 51st Ann. Meeting, Wichita, Kansas.

Collins, D.R., 1988, Technical Information Services [TIS] Section Ann. Report to the Director: Unpub. Rept. (March), Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1989, DLOGSH: FORTRAN 77 program for display of transects based on GR log database of over 1000 wells in western Kansas (program generates color plots of stratigraphic cross-section for selected transect): Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1989, Statement on HB 2042 and HB 2184 (modification of severance tax statutes) [Abs.]: House Committee on Taxation, Rep. Keith Roe, Chairman, February, Topeka, Kansas.

Collins, D.R., 1989, The Public Land Survey in Kansas: History and new directions [Abs.], *in* Proc. Soc. Independent Professional Earth Scientists, December, Wichita, Kansas.

Collins, D.R., 1989, The public land survey system in Kansas; a brief historical review: Open-File Rept. 1989-24, Kansas Geol. Survey, Lawrence, Kansas, 3 p.

Collins, D.R., 1990, A Kansas perspective relating to taxes on Kansas oil and gas production, with exhibits [Abs.]: Kansas Inc. study, "Strategic Analysis of the Oil and Gas Industry in Kansas," September, Topeka, Kansas.

Collins, D.R., 1990, Analysis of the fiscal impacts of proposed property tax exemptions for oil and gas properties [Abs.]: Interim Committee on Assessment and Taxation, October, Topeka, Kansas.

Collins, D.R., 1990, GIS and Computer Mapping for Publications [Abs.], *in* Proc. Assoc. Earth Science Editors Ann. Meeting, Tulsa, Oklahoma.

Collins, D.R., 1990, How to stay afloat in choppy waters [Abs.], *in* Proc., Petroleum Accountants Soc. Kansas, September, Wichita, Kansas.

Collins, D.R., 1990, Tax policy recommendation (requested by Vice-Chm.; adopted by Interim Committee on Assessment and Taxation, Oct. 4), October, Topeka, Kansas.

Collins, D.R., 1990, The development of data exchange standards [Abs.], *in* Proc. Mid-America GIS Symposium, April 30-May 3, Overland Park, Kansas.

Collins, D.R., 1991, Remarks before the House Appropriations Committee relating to the Geographic Information Systems Implementation Plan [Abs.], March, Topeka, Kansas.

Collins, D.R., 1991, Statement on SB 127 (regarding modifications of property tax statutes relating to marginal oil properties) to Senate Taxation Committee, February, Topeka, Kansas.

Collins, D.R., 1991, Statement to the House Appropriations Committee on bills related to SB 127, March, Topeka, Kansas.

Collins, D.R., 1991, The Kansas Geological Survey experience in co-op database development projects with the U.S. Geological Survey [Abs.], *in* Proc. Mid-Continent Cluster Meeting on Map and Cartographic Data Development Needs, Mid-Continent Mapping Center: U.S. Geol. Survey, Rolla, Missouri.

Collins, D.R., 1992, Report to the Special Committee on Assessment and Taxation updating Strategic Analysis of the Oil and Gas Industry in Kansas by Kansas Inc., 1992 interim session of the Kansas Legislature, Topeka, Kansas.

Collins, D.R., 1992, Statement on HB 2125 to the House Appropriations Committee, February, Topeka, Kansas.

Collins, D.R., 1992, Statement on HB 2125 to the House Appropriations Committee, March, Topeka, Kansas.

Collins, D.R., 1993, An overview of the natural gas resource base in Kansas: Testimony presented to the Senate Transportation Committee and the House Energy and Natural Resources Committee, 1993 interim session of the Kansas Legislature, October, Topeka, Kansas.

Collins, D.R., 1993, Impact of discovery and development on Kansas' petroleum resource base: Open-File Rept. 1993-50, Kansas Geol. Survey, Lawrence, Kansas, 35 p.

Collins, D.R., 1993, Proposed modifications to the severance tax on Kansas natural gas production: An analysis of fiscal impacts: Open-File Rept. 1993-8, Kansas Geol. Survey, Lawrence, Kansas, 10 p.

Collins, D.R., 1993, Stability/reliability of Kansas' conventional fuels resource base—Impact of discovery and development [Abs.]: *in* Proc. Governor's Conference on Kansas Energy Policy, October, Topeka, Kansas.

Collins, D.R., 1993, The impact of oil discovery and development in Kansas, an expanded report [Abs.]: Proc. Kansas Geol. Survey Advisory Council [GSAC], November, Lawrence, Kansas.

Collins, D.R., 1994, Regional gamma-ray intensity cross sections of the Permian-Cretaceous sequence in western Kansas: Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Denver, Colorado. [poster]

Collins, D.R., 1995, The "new deal" in geologic mapping: GPS, GIS, DEM, DLG, and DOQQ's: Open-File Rept. 1995-79, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., 1996, Automated conversion between public land survey and geographic reference systems in Kansas: Open-File Rept. 1996-64, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., 1996, Mining information from published geologic maps (an extractive industry): Open-File Rept. 1996-44, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., 1996, Programs for analysis and visualization of lithodensity logs to enhance petroleum exploration efficiency [Abs.], *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 218-220.

Collins, D.R., 1996, User manual for the LEO System, Version 3: Open-File Rept. 1996-65, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., 1997, Desperately seeking leases, furiously finding fields: Comparison of predictions using different targets in discovery process models [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists, Mid-Continent Regional Conference, Oklahoma City, Oklahoma: *Bull. Am. Assoc. Petroleum Geologists*, v. 81, no. 8, p. 1349.

Collins, D.R., 1997, Mining information from previously published maps (an extractive industry, *in* D.R. Soller (Ed.), "Proceedings of a workshop on digital mapping techniques—Methods for geologic map data capture, management, and publication": U.S. Geol. Survey Open-File Rept. 97-269, p. 47-50 [online at http://pubs.usgs.gov/openfile/of97-269/collins.html].

Collins, D.R., 1997, Source code for the COLORLITH program for visualization of well log data from multiple logs and multiple wells: Open-File Rept. 1997-89, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., 1997, The history of Indian treaties and Indian lands in Kansas as reflected in the United States Public Land Surveys, 1854-1877 [Abs.]: Kansas Acad. Sci. 129th Ann. Meeting, April, Fort Hays State Univ., Hays, Kansas, Abstracts, v. 16, p. 12.

Collins, D.R., 1998 Proposal. GIS Database Development Project: Proposal to add boundaries of Indian lands existing at the time of the original Public Land Surveys to the Kansas GIS Core Database, $12,700.

Collins, D.R., 1998, Colour imaging from digital logs—Visualisation of stratigraphy [Abs.], "Conf. on Geological Applications of Wireline Logs (GAWL III)": The Geological Society, Burlington House, London, 20-21st January, 1999.

Collins, D.R., 1998, Geologic quadrangles (1:24,000), Chase County, Kansas: Hymer, Strong City, Saffordville, Elmdale, Cottonwood Falls, Gladstone, Homestead, Matfield Green, Thrall NW, major portions of Wonsevue, Cedar Point, and Lincolnville NE, and parts of 13 other quadrangles): Open-File Rept. 1998- : 1-25, Kansas Geol. Survey, Lawrence, Kansas (25 maps).

Collins, D.R., 1998, Proposal. A proposal submitted to the STATEMAP program for compilation of digital geologic map databases from existing maps in Franklin, Johnson, Osage, and Shawnee counties, Kansas: U.S. Geol. Survey, $14,700.

Collins, D.R., 1998, Proposal. Reformat well log data from the Dakota Project: Internal proposal, Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1998, Proposal. Reformat well log data from the Morton County study by John Hopkins: Internal proposal, Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 1998, Visualization of subsurface geology from wireline logs, *in* D.R. Soller (Ed.), "Digital Mapping Techniques '98 —Workshop Proceedings": U.S. Geol. Survey Open-File Rept. 1998-487, p. 61-66 [online at http://pubs.usgs.gov/openfile/of98-487/collins.html].

Collins, D.R., 1998, Visualizing regional subsurface geology in Kansas through digital well log databases [Abs.]: Kansas Acad. Sci. 130th Ann. Meeting, Wichita State Univ., Wichita, Kansas, Abstracts, v. 17.

Collins, D.R., 1999, Geologic quadrangles (1:24,000), Osage County, Kansas: Osage City, Lyndon NW, Vassar, Osage City SE, Lyndon, Quenemo, Burlingame, Carbondale, Overbrook, major portions of Harveyville, Miller, Reading, Lebo NW, Lebo, Waverly NW and Waverly, and minor parts of parts of 4 other quadrangles): Open-File Rept. 1999- : 1-16, Kansas Geol. Survey, Lawrence, Kansas (16 maps).

Collins, D.R., 1999, Grant. Database development of large scale (1:24K) surface geology: Kansas GIS Policy Board, $38,000.

Collins, D.R., 1999, Progress in development of digital geologic map databases in Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1203.

Collins, D.R., 1999, Proposal. A proposal submitted to the STATEMAP program for compilation of digital geologic map databases from existing maps in Pottawatomie County, Kansas: U.S. Geol. Survey, $30,628.

Collins, D.R., 1999, Proposal. Database development of Indian boundaries of the Public Land Survey of Kansas: Kansas GIS Policy Board, $16,000.

Collins, D.R., 1999, Proposal. Database development related to historical Native American lands in Kansas: Kansas Historical Society, $13,000.

Collins, D.R., 1999, User's guide to the LEO System: Open-File Rept. 1999-48, Kansas Geol. Survey, Lawrence, Kansas, 13 p.

Collins, D.R., 2000, Geologic base maps for STATEMAP compiled on 1:24,000 scale quadrangles, Pottawatomie County, Kansas: Frankfort SW, Blue Rapids SE, Blue Rapids SW, Olsburg NW, Olsburg, Olsburg SW, Tuttle Creek Dam: Open-File Rept. 2001-64 [common Open-File Rept. number for all geologic base maps in the Pottawatomie County project], Kansas Geol. Survey, Lawrence, Kansas (7 maps).

Collins, D.R., 2000, Geologic map of Osage County, Kansas, by H. G. O'Connor, 1955, interpreted and revised: Map Series M-54, scale 1:50,000 (compiled at 1:24,000): Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 2000, Grant. Database development related to Historical Native American Lands in Kansas: Kansas State Historical Society, $13,000.

Collins, D.R., 2000, Grant. Development of 262 large-scale (24K), 30-meter digital elevation models for 7.5-minute quadrangles in Kansas: U.S. Geol. Survey Mid-Continent Mapping Center. Workshare $62,880 (equivalent).

Collins, D.R., 2000, Grant. DISC: Database and software development for enhanced conversion between Public Land Survey locations and mappable coordinate descriptors: Kansas Department of Administration, $32,000.

Collins, D.R., 2000, Proposal. Development of large-scale (24K), 30-meter digital elevation models for 7.5-minute quadrangles in Kansas: Kansas GIS Policy Board. Proposed project budget: $62,880 (approved first-half increment for 2001 award with tentative approval of second-half increment for 2002 award).

Collins, D.R., 2001, Geologic base maps for STATEMAP compiled on 1:24,000 scale quadrangles, Pottawatomie County, Kansas: Westmorland, Flush, Manhattan, Saint George, Wamego: Open-File Rept. 2001-64 [common Open-File Rept. number for all geologic base maps in the Pottawatomie County project], Kansas Geol. Survey, Lawrence, Kansas (5 maps).

Collins, D.R., 2001, Geologic Map of the Cottonwood Falls 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-24, Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 2001, Geologic map of the Elmdale 7.5-minute Quadrangle, Chase County, Kansas scale 1:24,000: Open-File Rept. 2001-31, Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., 2001, Geologic Map of the Gladstone 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-27, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Homestead 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-25, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Hymer 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-30, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Lyndon 7.5-minute Quadrangle, Osage County, Kansas, scale 1:24,000: Open-File Rept. 2001-42, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Matfield Green 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-26, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Osage City 7.5-minute Quadrangle, Osage County, Kansas, scale 1:24,000: Open-File Rept. 2001-53, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Osage City SE 7.5-minute Quadrangle, Osage County, Kansas, scale 1:24,000: Open-File Rept. 2001-54, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Saffordville 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-28, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Strong City 7.5-minute Quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2000-87, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Thrall NW quadrangle, Chase County, Kansas, scale 1:24,000: Open-File Rept. 2001-29, 1 sheet, scale 1:24,000, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, 2001, Geologic Map of the Waverly NW 7.5-minute Quadrangle, Osage County, Kansas, scale 1:24,000: Open-File Rept. 2001-43, Kansas Geol. Survey, Lawrence, Kansas.

Collins, **D.R.**, and **Brownrigg**, **R.**, 1985, Spatial distribution of petroleum resources [Abs.], *in* Proceedings of the 6th Ann. Conference and Exposition, Dallas, Texas: National Computer Graphics Assoc., Abstracts, v. 3, p. 859-861.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1985, Color image logs of subsurface geology from wireline log combinations [Abs.]: *in* Proc. Kansas Well Logging Society, Wichita, Kansas, Abstracts vol.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1985, Color images of Kansas subsurface geology from well logs [Abs.], *in* Proc. 14th Geochautauqua, "Computer Applications in Oil and Gas Exploration and Development," Wichita, Kansas, p. 6-7.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1986, Color image transformations of wireline logs as a medium for sedimentary profile analysis [Abs.]: *in* Proc. 15th Geochautauqua, "Computers in the Petroleum Industry—Integrated Approaches," Calgary, Alberta, Canada, p. 5.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1986, Color images of Kansas subsurface geology from well logs: *Computers and Geosciences*, v. 12, no. 4B, p. 519-526.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1986, Colorlogs: Kansas Geological Survey Seminar, February, Unpub. Internal Rept., Kansas Geol. Survey, Lawrence, Kansas, p. 00.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1987, KORVUS: An artificial intelligence system for stratigraphic correlation based on lithological succession [Abs.], *in* Proc. Math. Geologists of the United States Ann. Conference, "Emerging Concepts," Redwood City, California, April, Abstracts vol., p. 44.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1988, Application of color information theory to the display of lithologic images from wireline logs [Abs.]: *The Log Analyst*, v. 29, no. 1, p. 74.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1988, Application of color information theory to the display of lithologic images from wireline logs: *Trans. Soc. Prof. Well Log Analysts*, 29th Ann. Logging Symposium, Paper II, 15 p. Reprinted in *Geobyte*, 1989, v. 4, no. 1, p. 16-24.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1988, Color image transformations of wireline logs as a medium for sedimentary profile analysis: *Bull. Canadian Petroleum Geology*, v. 36, no. 2, p. 186-190.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1989, Applying color information theory to the display of lithologic images from wireline logs: *Geobyte*, v. 4, no. 1, p. 16-24.

Collins, **D.R.**, and **Doveton**, **J.H.**, 1993, Automated correlation based on Markov analysis of vertical successions and Walther's Law, *in* **J.C. Davis** and ***U.C. Herzfeld*** (Eds.), *Computers in geology—25 years of progress*: Studies in Math. Geology 5, Oxford Univ. Press, New York, p. 121-132.

Collins, **D.R.**, and Eck, C.R., 1984, Economic aspects of oil exploration in Kansas: *Kansas Business Review*, v. 7, no. 3, p. 1-8.

Collins, **D.R.**, and Look, K.K., 1999, Development of the Kansas Geologic Names Database: A link to implementing the Geologic Map Data Model Standards, *in* D.R. Soller (Ed.), "Digital Mapping Techniques '99—Workshop Proceedings": U.S. Geol. Survey Open-File Rept. 99-386, p. 107-112 [online at http://pubs.usgs.gov/openfile/of99-386/collins.html].

Collins, **D.R.**, and Raje, M., 1995, KOGVIEW: an extensive set of FORTRAN (UNIX) programs for creation and quality control of petroleum related databases with many additional scripts written in AVENUE to manage, query and manipulate the databases in an ArcView geographic information system application (unpublished).

Collins, D.R., and **Ross, C.G.**, 1986, Potential radon hazard map, scale 0:00,000: Unpub. map, Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., and **Ross, C.G.**, 1988, Computer-aided mapping at the Kansas Geological Survey: *in* Proc. 31st Ann. Meeting, Assoc. Engineering Geologists, October, Kansas City, Missouri. [poster]

Collins, D.R., and **Ross, C.G.**, 1988, Proposal. Development of a digital cartographic database of the surface geology of Kansas: The Center for Science Education, Kansas State Univ., Manhattan, Kansas, AMOUNT.

Collins, D.R., and **Ross, C.G.**, 1990, Problems and methods in conversion between Public Land Survey and geographic reference [Abs.], *in* Proc. Mid-America GIS Symposium, April 30-May 3, Overland Park, Kansas.

Collins, D.R., and **Ross, C.G.**, 1991, Proposal. A joint proposal to produce Public Land Survey System Digital Line Graph databases for the USGS 1:24,000 basemap series, with cost-share funding by, and distribution to, the Kansas GIS Policy Board, AMOUNT.

Collins, D.R., and **Ross, J.A.**, 1991, Figure 1 (map)—Sensitive ground water areas (as referenced in K.A.R. 82-3-600 *et seq.*), prepared for the Kansas Corporation Commission: Open-File Rept. 1991-19, Kansas Geol. Survey, Lawrence, Kansas (1 map sheet, scale 1:500,000).

Collins, D.R., and **Ross, J.A.**, 1995, KOGVIEW—User friendly interface to Kansas oil and gas production data, charts, and maps through an ArcView application: Open-File Rept. 1995-61, Kansas Geol. Survey, Lawrence, Kansas, 18 p.

Collins, D.R., and **Ross, J.A.**, 1997, Grant. Conversion of the U.S. Geol. Survey Public Land Survey System DLG's to Arc/Info format, tiled by county: State of Kansas GIS Policy Board, $20,400.

Collins, D.R., and **Ross, J.A.**, 1997, Metadata for the Public Land Survey data: A report on data converted from the U.S. Geol. Survey Digital Line Graph 1:24,000 scale quadrangle data format to county databases in ARC/INFO export formats: Open-File Rept. 1997-88, Kansas Geol. Survey, Lawrence, Kansas (digital file).

Collins, D.R., and **Ross, J.A.**, 1998, Proposal. GIS database development project to compile digital geologic map databases, primarily from information available on previously published maps. Amount requested, $20,400.

Collins, D.R., and **Ross, J.A.**, 1999, Grant. Compilation of digital geologic map databases from existing maps in Johnson and Osage counties, Kansas: U.S. Geol. Survey, STATEMAP Subproject (State Geologic Mapping Program for FY2000), $7,500.

Collins, D.R., and **Ross, J.A.**, 1999, Sensitive groundwater areas (as referenced in K.A.R. 82-3-600 *et seq.*; prepared for Conservation Div., Kansas Corporation Commission): Open-File Rept. 1999-26, Kansas Geol. Survey, Lawrence, Kansas (1 map sheet, scale 1:500,000).

Collins, D.R., and **Ross, J.A.**, 2000, Grant. Proposal for subproject to STATEMAP program for compilation of digital geologic map databases from existing maps in eastern Pottawatomie County, northern Wabaunsee County, and the 30 x 60 degree El Dorado quadrangle in Kansas: U.S. Geol. Survey, $47,999.

Collins, D.R., and **Ross, J.A.**, 2000, Major components of the Kansas geologic map data model [Abs.]: *in* Proc. DMT'00 Workshop, MONTH, Lexington, Kentucky.

Collins, D.R., and **Ross, J.A.**, 2000, Proposal. Proposal for subproject to STATEMAP program, for compilation of digital geologic map databases from existing maps in western Pottawatomie County, Kansas: U.S. Geol. Survey $15,000+.

Collins, D.R., and **Sampson, R.J.**, 1996, Source code for the LEO System for automated conversion between public land survey and geographic reference systems in Kansas, Version 3.4: Open-File Rept. 1996-66, Kansas Geol. Survey, Lawrence, Kansas, 129 p.

Collins, D.R., and Sorenson, C.J., 1988, Proposal. A pre-proposal (Kansas Geol. Survey/KU Dept. Geog.) for software development of a cartographic information display system to enhance geographic literacy: National Geographic Society, Washington, D.C.

Collins, D.R., and Watney, W.L., 1986, Survey of Kansas petroleum geology and the problem of staying afloat in choppy waters [Abs.]: 31st Ann. Petroleum Accounting Conference, October, Wichita, Kansas.

Collins, D.R., Berendsen, P., and **Ross, J.A.**, 1997, Digital geologic map development with integration of multiple information sources: A case study in the area of the Elmdale Dome, Chase County, Kansas: Geol. Soc. America Ann. Meeting, Salt Lake City, Utah. [poster]

Collins, D.R., Berendsen, P., and **Ross, J.A.**, 1997, Digital geologic map development with integration of multiple information sources: A case study in the area of the Elmdale Dome, Chase County, Kansas [Abs.]: Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 29, no. 6, p. A-293.

Collins, D.R., **Crouse, E.C.**, and **Ross, J.A.**, 1998, The geologic map of Chase County, Kansas, Map Series M-56, scale 1:50,000: Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., ***Doherr, D.***, and **Ross, J.A.**, 2001, Geologic maps and databases in the age of geoinformatics in the Internet, *in* Proc. International Assoc. Math. Geology Ann. Meeting, Cancún, Mexico, 00 p. [on CD-ROM; available online at http://www.kgs.ukans.edu/Conferences/IAMG/Sessions/F/Papers/collins.pdf].

Collins, D.R., **Doveton, J.H.**, and Macfarlane, P.A., 1992, Regional gamma-ray intensity images of the Permian-Cretaceous sequence of western Kansas [Abs.]: *in* SEPM 1992 Midyear Theme Meeting, Ft. Collins, Colorado. [poster]

Collins, D.R., **Doveton, J.H.**, and Macfarlane, P.A., 1993, Regional gamma-ray gray-tone intensity images of the Permian-Cretaceous sequence of western Kansas: Open-File Rept. 1993-49, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Collins, D.R., *et al.*, 1988, Background material relating to the ad valorem taxes on oil and gas production: Open-File Rept. 1988-11, Kansas Geol. Survey, Lawrence, Kansas (5 maps).

Collins, D.R., *et al.*, 1990, Grant. Development of unique well identification numbers for oil & gas wells drilled in Kansas prior to 1965: Kansas Corp. Commission, $13,000.

Collins, D.R., *et al.*, 1991, Grant. Database development projects related to the Kansas GIS Policy Board: Kansas Water Office, $38,000+.

Collins, D.R., *et al.*, 1991, Kansas standards, policies and procedures for exchange of spatial data: Tech. Advisory Committee, Kansas GIS Policy Board, 00 p.

Collins, D.R., ***Hausberger, G.***, **Ross, J.A.**, and **Davis, J.C.**, 2000, Proposal. Database and software development for an interactive drainage basin model of Kansas: Kansas GIS Policy Board. Proposed budget $50,000 [not funded].

Collins, D.R., Look, K.K., and **Ross, J.A.**, 2000, Links to the history of regional geologic understanding through the Kansas Geologic Names Database project [Abs.], 5th International Symposium—Cultural Heritage in Geosciences, Mining and Metallurgy, July, Golden, Colorado.

Collins, D.R., **Ross, C.G.**, and Bird, D., 1987, Map of Drilling Activity in 1986, NE Kansas, scale 1:500,000: Kansas Geol. Survey, Lawrence, Kansas.

Collins, D.R., **Ross, C.G.**, and Bird, D., 1988, Recent drilling trends in Kansas, 1986 completion reports: Open-File Rept. 1988-23, Kansas Geol. Survey, Lawrence, Kansas (1 map sheet, scale 1:500,000).

Collins, D.R., **Ross, C.G.**, and Bird, D., 1988, Recent drilling trends in Kansas, 1987 completion reports: Open-File Rept. 1988-24, Kansas Geol. Survey, Lawrence, Kansas (1 map sheet, scale 1:500,000).

Collins, D.R., **Ross, C.G.**, and **Brownrigg, R.**, 1988, Background material related to the ad valorem taxes on oil and gas production for Governor Mike Hayden (February): Open-File Rept. 1988-11, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., **Ross, J.A.**, and **Brownrigg, R.**, 1995, Management, analysis and display of digital well-log data for presentation of geologic information in the third dimension [Abs.], *in* Proc. 9th Ann. Symposium on Geographic Information Systems in Natural Resources Management, Vancouver, BC, Canada: *GIS World*, v. 1, p. 266-268.

Collins, D.R., **Ross, J.A.**, and **Crouse, E.C.**, 1999, Progress in development of digital geologic map databases in Kansas [Abs.]: *in* Proc. Mid-Continent Section Meeting, *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1203. [poster]

Collins, D.R., Ross, J.A., and ***Doherr, D.***, 2001, Interactive geologic maps using ArcIMS, with links to related data and images, *in* D.R. Soller (Ed.), *Digital Mapping Techniques '01—Workshop Proceedings*: U.S. Geol. Survey Open-File Rept. no. 2001-223, p. 136-152 [Available online at http://pubs.usgs.gov/openfile/of01-223/collins.html].

Collins, D.R., Ross, J.A., and Raje, M., 1995, "ArcView" as a user-friendly interface to oil and gas production data, charts and maps [Abs.]: Petrophysics Seminar Series no. 50, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Collins, D.R., Ross, J.A., Brownrigg, R., and Beene, D.L., 1993, Watershed districts in Kansas: Map Series M-32, Kansas Geol. Survey, Lawrence, Kansas (1 sheet, scale 1:500,000).

Concha, R., González, E., and **Olea, R.A.**, 1977, Simulation model for economic evaluation of prospecting plays in Magallanes, Chile (in Spanish): Proc. XXVII Reunión de Expertos de ARPEL: *Boletín Técnico de Arpel*, v. 6, no. 3, Montevideo, Uruguay, p. 227-257.

Conley, C.D., 1968, Reconnaissance study of Mesozoic carbonate rocks of Greece [Abs]: *in* Geol. Soc. America Ann. Meeting, *Programs with Abstracts*, p. 61-62.

Conley, C.D., 1970, Studies of modern carbonate sediments applied to limestones [Abs.]: Kansas Acad. Sci. 102nd Ann. Meeting, Wichita, Kansas, Abstracts, p. 00.

Conley, C.D., 1971, Petrology of Mesozoic carbonate rocks of central Greece [Abs]: *in* Proc. 8th Intl. Sedimentol. Congress, *Programs with Abstracts*, p. 19.

Conley, C.D., 1971, Stratigraphy and lithofacies of lower Paleocene rocks, Sirte Basin, Libya: *in* Proc. Symposium on the Geology of Libya, April, Univ. Libya, Tripoli, p. 127-140.

Conley, C.D., 1972, Depositional and diagenetic history of Mississippian Leadville Formation, White River Plateau, Colorado: *Colorado Sch. Mines Quart.*, v. 67, no. 4, p. 103-135

Conley, C.D., 1974, Distorted pisoliths and compaction [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Ann. Meeting, Abstracts, v. 1, p. 19-20.

Conley, C.D., 1977, Origin of distorted ooliths and pisoliths: *Jour. Sed. Petrology*, v. 47, no. 2, p. 554-564.

Conley, C.D., 1980, Petrology of Arbuckle Group, central Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 64, no. 6, p. 960.

Conley, C.D., and Chorn, John, 1979, Stromatolites in a schizohaline environment: A vertebrate death-trap from the Pennsylvanian of northeast Kansas [Abs.]: Ann. Meeting Geol. Soc. America, San Diego, California, *Abstracts with Programs*, v. 11, no. 7, p. 404.

Conley, C.D., and **Davis, J.C.**, 1971, Optically derived numerical descriptors for classification of carbonate rock fabrics: 46th Ann. Fall Meeting, Soc. Petroleum Engineers of AIME, Preprint no. SPE 3611, 10 p.

Conley, C.D., and **Davis, J.C.**, 1973, Carbonate petrography by pattern recognition: *Bull. Am. Assoc. Petroleum Geologists*, v. 57, no. 2, p. 399-406.

Conley, C.D., and Preston, F.W., 1976, Variation in petorgraphic characteristics of reservoir sandstones determined by image analysis [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 8, no. 6, p. 819.

Conley, C.D., Davis, J.C., Green, D.W., and Preston, F.W., 1971, Grant. Prediction of reservoir fluid flow properties and their spatial variation: First Semi-Ann. Rept. to American Petroleum Institute, Research Project no. 131: KU Center for Research, Inc./Kansas Geol. Survey, Lawrence, Kansas, 26 p. [3-yr project; $10,000/yr].

Conley, C.D., Green, D.W., **Davis, J.C.**, and Preston, F.W., 1971, Prediction of reservoir fluid flow properties and their spatial variation: First Ann. Rept. to American Petroleum Institute, Research Project no. 131: KU Center for Research, Inc./Kansas Geol. Survey, Lawrence, Kansas, 57 p.

Cook, A.C., 1977, Vitrinite reflectance measurements: Open-file Rept. 1977-17, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Crandal, K.H., and ***Harbaugh, J.W.*** (Convenors), 1974, "Methods of estimating the volume of undiscovered oil and gas resources": Am. Assoc. Petroleum Geologists Research Symposium, Stanford Univ., Stanford, California, 407 p.

Crossfield née **DeGraffenreid, J.A.** (Ed.), 1970, Reports of Studies: Kansas Geol. Survey Bull. 199. *Part 2*. Rb-Sr geochronologic investigations of basic and ultrabasic xenoliths from the Stockdale kimberlite, Riley County, Kansas, by D.G. Brookins and M.J. Woods, 12 p.; *Part 3*. High pressure mineral reactions in a pyroxenite granulite nodule from the Stockdale kimberlite, Riley County, Kansas, by D.G. Brookins and M.J. Woods, 6 p.; *Part 4*. Factors governing emplacement of Riley County, Kansas, kimberlites, by D.G. Brookins, 17 p., Univ. Kansas, Lawrence, Kansas.

Crossfield née **DeGraffenreid, J.A.** (Ed.), 1971, Reports of Studies: Kansas Geol. Survey Bull. 202. *Part 1*. Short papers on research in 1970, 30 p.; *Part 2*. Techniques for determining coccolith abundance in shaly chalk of Greenhorn Limestone (Upper Cretaceous) of Kansas, by D.E. Hattin and D.A. Darko, 11 p.; *Part 3*. Patrognathus and Siphonodella (Conodonta) from the Kinderhookian (Lower Mississippian) of western Kansas and southwestern Nebraska, by Gilbert Klapper, 14 p., Univ. Kansas, Lawrence, Kansas.

Crouse, E.C., Collins, D.R., and **Ross, J.A.**, 1998, The geologic map of Jefferson County, Kansas, Map Series M-55, scale 1:50,000: Kansas Geol. Survey, Lawrence, Kansas.

Cubitt, J.M., 1975, A computer analysis of the geochemistry and mineralogy together with the petrology of the Upper Pennsylvanian and Lower Permian shales of Kansas, U.S.A.: Unpubl. Ph.D. dissertation, University of Leicester, Leicester, U.K., 366 p. [Available as Open-File Rept. 1975-1, Kansas Geol. Survey, Lawrence, Kansas.]

Cubitt, J.M., 1975, A regression technique for the analysis of shales by X-ray diffractometry: *Jour. Sed. Petrology*, v. 45, no. 2, p. 546-553.

Cubitt, J.M., 1976, A management and analysis system suitable for sedimentological data, *in* D.F. Merriam (Ed.), *Quantitative techniques for the analysis of sediments*: Pergamon Press, Oxford, U.K., p. 1-9.

Cubitt, J.M., 1978, Geochemistry and mineralogy of Pennsylvanian and Permian shales in Kansas [Abs.]: *in* Proc. 27th Ann. Clay Minerals Conf., Bloomington, Indiana.

Cubitt, J.M., 1979, Geochemistry, mineralogy and petrology of the Upper Paleozoic shales in Kansas: Kansas Geol. Survey Bull. 217, Lawrence, Kansas, 117 p.

Cubitt, J.M., and Celenk, O., 1976, FORTRAN program for producing stereograms in geology: *Computers & Geosciences*, v. 1, no. 3, p. 207-211.

Cubitt, J.M., and **Davis, J.C.**, 1976, Preparation of shales for X-ray diffraction analysis by suction-onto-membrane filter method: *Am. Mineralogist*, v. 00, ??

Cubitt, J.M., and Merriam, D.F., 1979, Geochemical distributions in Pennsylvanian cyclic sediments in the Midcontinent (USA) [Abs.]: 9th Intl. Congress Carbonif. Strat. and Geology, Abstracts of Papers, p. 48.

Cubitt, J.M., and Merriam, D.F., 1984, Geochemical distributions in Pennsylvanian cyclic sediments of the Midcontinent (USA), *in* H.H.J. Geldsetzer *et al.* (Eds.), Sedimentology and Geochemistry, pt. 3: Proc. International Congress Carbonif. Strat. and Geology, v. 9, no. 3, p. 633-640.

Cubitt, J.M., and Shaw, B.R., 1976, The geological implications of steady state mechanisms in Catastrophe Theory: *Jour. Intl. Assoc. for Math. Geology*, v. 8, no. 6, p. 657-662.

Cubitt, J.M., and Wilkinson, J.G., 1974, A novel method for the study and classification of shales: *Chem. Geology*, v. 13, no. 1, p. 57-61.

Cubitt, J.M., and Wilkinson, J.G., 1976, A classification study of shales in Kansas using electron spin resonance spectroscopy: *Jour. Intl. Assoc. for Math. Geology*, v. 8, no. 3, p. 337-344.

Davis, J.C. (Chm.), 1982, CODATA/COGEODATA Working Group on Geology—Survey on time- and space-dependent data in the Earth sciences, *in* **J.A. DeGraffenreid** (Ed.): Series on Spatial Analysis no. 6, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

Davis, J.C., (Chm.), 1984, *A Review of the Annual Survey of Domestic Oil and Gas Reserves Conducted by the Energy Information Agency*: NRC/NDAB, National Academy Press, Washington, D.C., 32 p.

Davis, J.C., 1965, Bentonite of the Clay Spur District, Crook and Weston counties, Wyoming: Prelim. Rept. 4, Wyoming Geol. Survey, 17 p.

Davis, J.C., 1966, Programming the discriminant classification function for small computers, *in* **D.F. Merriam** (Ed.), Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, p. 1-4.

Davis, J.C., 1967, Absence of detectable trends in the rate of bentonite occurrences in the Mowry Shale (Cretaceous) of Wyoming, *in* **D.F. Merriam** (Ed.), Colloquium on Time Series Analysis: Computer Contribution 18, Kansas Geol. Survey, Lawrence, Kansas, p. 73-75.

Davis, J.C., 1967, Application of response-surface analysis to sedimentary petrology, *in* **D.F. Merriam** and **N.C. Cocke** (Eds.), Colloquium on Trend Analysis: Computer Contribution 12, Kansas Geol. Survey, Lawrence, Kansas, p. 57-62.

Davis, J.C., 1967, Petrology of the Mowry Shale: Unpub. Ph.D. dissertation, Dept. Geology, Univ. Wyoming, 141 p.

Davis, J.C., 1969, Distribution of hydrocarbons in three dimensions: Am. Assoc. Petroleum Geologists 54th Ann. Meeting, April, Dallas, Texas, Abstracts vol., p. 00.

Davis, J.C., 1969, Distribution of hydrocarbons in three dimensions, *in* **D.F. Merriam** (Ed.), Symposium on Computer Applications in Petroleum Exploration: Computer Contribution 40, Kansas Geol. Survey, Lawrence, Kansas, p. 34-40.

Davis, J.C., 1969, Optical processing of microporous fabrics: *in* Proc. Systematics Assoc. 7th Ann. Meeting, September, Cambridge, U.K., Abstracts vol., p. 00.

Davis, J.C., 1970, Grant. Image analysis using optical processing: Shell Development Corp., Dallas, Texas, May 10. Gift of optical table and allied equipment, $22,000.

Davis, J.C., 1970, Information contained in sediment-size analyses: *Math. Geology*, v. 2, no. 2, p. 105-112.

Davis, J.C., 1970, Optical processing of microporous media, *in* J.L. Cutbill (Ed.), *Data Processing in Biology and Geology*: Academic Press, London, p. 69-87.

Davis, J.C., 1970, Petrology of the Cretaceous Mowry Shale of Wyoming: *Bull. Am. Assoc. Petroleum Geologists*, v. 54, no. 3, p. 487-502.

Davis, J.C., 1971, Should I use a computer to make contour maps?: Unpub. Tech. Rept. no. 2, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 4 p.

Davis, J.C., 1971, TITLE Something or other on computer mapping: *in* Proc. Intl. Sedimentol. Congress, August, Heidelberg, Germany, Abstracts vol., p. 00.

Davis, J.C., 1971, What are trend surfaces?: Unpub. Tech. Rept. no. 1, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 4 p.

Davis, J.C., 1972, An adventure in card filing or KARP, the friendly retrieval system: Unpub. Tech. Rept. no.4, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Davis, J.C., 1972, Correlating geologic sections by computer: Unpub. Tech. Rept. no. 3, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 3 p.

Davis, J.C., 1972, Everybody should have a model!: Unpub. Tech. Rept. no. 5, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Davis, J.C., 1973, *Statistics and Data Analysis in Geology*: John Wiley & Sons, Inc., New York, 550 p. [Translated into Russian.]

Davis, J.C., 1975, Computer graphics for petroleum exploration [Abs.], *in* Proc. "Symposium on Capture, Management, and Display of Geologic Data with Emphasis on Energy and Mineral Resources": COGEODATA, Paris.

Davis, J.C., 1975, Contouring algorithms, *in* R.T. Aangeenbrug (Ed.), *Proceedings of the 2nd International Symposium on Computer-Assisted Cartography* (AUTO-CARTO II, Reston, Virginia): Am. Congress on Surveying and Mapping, U.S. Bureau Census, Washington, D.C., p. 352-359.

Davis, J.C., 1975, Training geologists in geomathematics and use of computers: *Bull. Am. Assoc. Petroleum Geologists*, v. 59, no. 1, p. 159.

Davis, J.C., 1976, Computer mapping in the geological sciences [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, Denver, Colorado.

Davis, J.C., 1976, Estimation of the probabiliy of success in petroleum exploration [Abs.]: *in* Proc. 25th Intl. Geol. Congress, Sydney, Australia.

Davis, J.C., 1976, Probabilistic assessments from structural data: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 8 p.

Davis, J.C., 1976, Probability mapping for petroleum exploration [Abs.]: *Newsletter*, Tulsa Geol. Society, v. 13, no. 5, Tulsa, Oklahoma.

Davis, J.C., 1976, Probability methods of oil exploration in northwestern Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 60, no. 2, p. 318-319.

Davis, J.C., 1976, Review. *Sampling in Archaeology*—A review: *Plains Anthropologist*, 21-74, p. 321-323.

Davis, J.C., 1976, The Kansas Geological Survey's Automated Resource Evaluation System [ARES]: *Bull. Interstate Oil Compact Commission Committee*, v. XVIII, no. 1, p. 44-49.

Davis, J.C., 1977, Estimation of the probability of success in petroleum exploration: *Jour. Intl. Assoc. Math. Geology*, v. 9, no. 4, p. 409-427.

Davis, J.C., 1977, Review. *Sedimentation Models in Quantitative Stratigraphy*—A review: *Bull. Am. Assoc. Petroleum Geologists*, v. 61, no. 6, p. 946-948.

Davis, J.C., 1977, *Statistika i Analiz Geologicheskikh Dannykh*: Izdatelstvo "MIR," Moscow, USSR, 571 p.

Davis, J.C., 1978, Review. *Geological Factor Analysis*—A review: *Sedimentary Geology*, v. 20, p. 75-77.

Davis, J.C., 1979, Better exploration decisions with probability analysis: Kansas Geol. Survey, Lawrence, Kansas, *The Journal*, v. 1, no. 5, p. 6-8.

Davis, J.C., 1979, Petroleum exploration in Kansas by grid drilling: An assessment procedure: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 18 p.

Davis, J.C., 1979, Review. *Computational Methods of Multivariate Analysis in Physical Geography*—A review: *Sedimentary Geology*, v. 24, p. 185-187.

Davis, J.C., 1979, Review. *Geostatistical Ore Reserve Estimation*—A review: *Geo-Processing*, v. 1, p. 101-103.

Davis, J.C., 1979, Review. *Statistical Methods in Hydrology*—A review: *Jour. Hydrology*, v. 41, p. 190-192.

Davis, J.C., 1980, Automated stratigraphic correlation [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Denver, Colorado, Abstracts vol., p. 00.

Davis, J.C., 1980, Review. *Harvard Library of Computer Graphics 1979 Mapping Collection*—A review: *Bull. Am. Assoc. Petroleum Geologists*, v. 65, no. 2, p. 355-356.

Davis, J.C., 1980, Review. *Técnicas de Cuantificación en Geografía*—A review: *Math. Geology*, v. 12, no. 6, p. 618-619.

Davis, J.C., 1981, Classification and correlation of geochemical properties of hydrocarbons, Part 1: Multivariate analysis of crude oils: Unpub. Rept., Cities Service Oil Co., Tulsa, Oklahoma, 105 p.

Davis, J.C., 1981, Looking harder and finding less—Use of the computer in petroleum exploration, *in* D.F. Merriam (Ed.), *Computer Applications in the Earth Sciences—An Update of the 70's*: Plenum Press, New York, p. 125-144.

Davis, J.C., 1981, Spatial data manipulation and analysis [Abs.], *in* "Workshop on Research and Development Needs in Spatial Data Handling": USGS/International Geographical Union Commission on Geographical Data Sensing and Processing, Reston, Virginia, 3 p.

Davis, J.C., 1981, Statistical techniques in petroleum exploration, *in* K.V. Mardia (Ed.), "Statistics in Earth Sciences": *Commun. Statis.-Theor. Meth.*, A10(15), p. 1479-1503.

Davis, J.C., 1982, Geographic information systems for geologic data, *in* Proc. Joint U.S./Australia Workshop, *The Design and Implementation of Computer-Based Geographic Information System*: IGU Commission on Geographic Data Sensing and Processing, Honolulu, Hawaii, p. 127-132.

Davis, J.C., 1982, Realistic applications of geographic information processing to problems in geological and petroleum exploration, *in* D.H. Douglas and A.R. Boyle (Eds.), *Computer Assisted Cartography and Geographic Information Processing—Hope and Realism*: Canadian Cartographic Assoc., Univ. Calgary, Canada, p. 1-8, 15-20.

Davis, J.C., 1982, Review. *Morphometric Methods in Biostratigraphy*—A review: *Jour. Geology*, v. 90, no. 6, p. 746.

Davis, J.C., 1983, Natural resources and energy: Group summary, *in* National Data Advisory Board [NDAB], *Collected Presentations—Workshop Towards a National S&T Data Policy*: National Research Council, Washington, D.C., p. 106-108.

Davis, J.C., 1983, Statistics and geochemical research [Abs.]: *in* Proc. NATO Advanced Study Institute on Chemometrics, September, Cosenza, Italy.

Davis, J.C., 1984, An integrated system for petroleum exploration, *in* International Assoc. Math. Geology, *Proc. 13th Ann. Geochautauqua*: West Virginia Geol. & Econ. Survey, Morgantown, West Virginia, p. 1-13.

Davis, J.C., 1984, Computer graphics: *The Journal*, v. 6, no. 1, Kansas Geol. Survey, Lawrence, Kansas, p. 6-8.

Davis, J.C., 1984, Review. *Computer Applications in Petroleum Geology*—A review: *The American Cartographer*, v. 11, no. 2, p. 178-179.

Davis, J.C., 1984, Variation in space: An introduction to regionalized variables, *in* B.R. Kowalski (Ed.), *Mathematics and Statistics in Chemistry*: D. Reidel Publ. Co., Dordrecht, Holland, p. 419-437.

Davis, J.C., 1985, Contour Mapping for Oil and Profit, *in* Am. Assoc. Petroleum Geologists, *Computer Applications in Petroleum Geology*: AAPG Dept. Educ., Houston, Texas, 87 p. [Reprinted and reissued, CAPG School, Dallas, Texas, 1986.]

Davis, J.C., 1985, Introduction, *in* Proc. 12th Geochautauqua—Think deep: Computer methods and the subsurface: *Math. Geology*, v. 17, no. 5, p. 333-34.

Davis, J.C., 1985, Review. *Statistical Methods in Geology*—A review: *Math. Geology*, v. 17, no. 5, p. 589-590.

Davis, J.C., 1986, Probabilistic and regionalized-variable methods for assessing petroleum prospects, *in* LX RANE de ARPEL, *Presente y Futuro de la Exploracion por Hidrocarburos en las Cuencas Latinoamericana*: PETROPERU SA, Lima, Peru, Tomo 3, art. 6, 9 p.

Davis, J.C., 1986, Statistical evaluation of petroleum deposits before and after discovery [preprint]: NATO Advanced Study Institute, "Statistical Treatment for Estimation of Mineral and Energy Resources," June-July, Lucca, Italy, 123 p.

Davis, J.C., 1986, *Statistics and Data Analysis in Geology*, 2nd ed: John Wiley & Sons, New York, 646 p., diskette. [Translated into Chinese and Russian.]

Davis, J.C., 1986, The hasbeens, neverweres, and maybes—Evolution in geological software: *in* Proc. Houston Geotech '86, MONTH, Houston, Texas, 16 p.

Davis, J.C., 1987, Contour Mapping and SURFACE II: *Science*, v. 237, Aug. 7, p. 669-672.

Davis, J.C., 1987, New approaches in elementary statistics and their relevance to geology, *in* L.H. Wickstrom (Ed.), *Computer-Aided Analysis of Geologic Data*, Am. Assoc. Petroleum Geologists Eastern Section Meeting: Ohio Geol. Soc., Columbus, Ohio, p. 1-14.

Davis, J.C., 1987, Proposal for a computer system for three-dimensional modeling of the geology of the Dakota Formation: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 12 p.

Davis, J.C., 1987, Proposal. Methods for interpretation of regional stream sediment geochemical surveys—U.S./Austria Coop. Research Project: NSF Research Proposal INT-8722129, National Sci. Foundation, Washington, D.C., 51 p. [not funded]

Davis, J.C., 1987, Review. *Contouring Geologic Surfaces with the Computer*—A review: *Bull. Am. Assoc. Petroleum Geologists*, v. 71, no. 7, p. 905.

Davis, J.C., 1987, Review. *Quantitative Stratigraphy*—A review: *Bull. Am. Assoc. Petroleum Geologists*, v. 71, no. 1, p. 115-116.

Davis, J.C., 1988, *Di Zhi Xue Zong De Shu Li Tong Ji He Shu Ju Fen Xi*: Geological Publishing House, Beijing, China, 468 p.

Davis, J.C., 1988, Grant. Mathematical geology and probability methods in the Earth sciences: Academia Sinica Lecture Series (3-day seminars; funded by Acad. Sci. China, $10,000): Ghangzhou, Wuhan, Xi'an, Beijing, and Guilin, Peoples Republic of China, Sept. 13–Oct. 2, 1988. [Co-lecturer: Prof. John Aitchison, Dept. Statistics, Univ. Hong Kong; Acad. Sci. liaison: ***Zhou Di***, South China Sea Institute of Oceanology, Guangzhou.]

Davis, J.C., 1988, Preliminary evaluation of data from the Mühlviertel area [report to Geologische Bundesanstalt (GBA, Vienna) setting forth preliminary evaluation and plans for continued study of stream sediment geochemistry data from Mühlviertel area, Austria]: Unpub. Rept., Kansas Geol. Survey–GBA Coop. Project, 7 p.

Davis, J.C., 1988, Review. *Pattern Recognition & Image Processing*—A review: *Math. Geology*, v. 20, no. 7, p. 905-906.

Davis, J.C., 1988, Spatial analysis in the assessment of petroleum reservoirs, *in* B. Namyslowska-Wilczynska and J.J. Royer (Eds.), "Geomathematics and Geo-statistics Analysis Applied to Space and Time Dependent Data": *Sciences de la Terre*, no. 27, pt. 2, p. 367-380.

Davis, J.C., 1988, Statistical evaluation of petroleum deposits before discovery, *in* C.F. Chung *et al.* (Eds.), *Quantitative Analysis of Mineral and Energy Resources*: D. Reidel Publ. Co., Dordrecht, Holland, p. 161-186.

Davis, J.C., 1988, Statistics for reservoir characterization [Abs.]: SPE Forum Series (Invited Speaker), "Frontiers of Technology"—Forum IV: Reservoir Conformance Enhancement, August 7-12, Crested Butte, Colorado.

Davis, J.C., 1989, Major new trends in quantitative methods for predicting and resource evaluation of mineral, oil, and gas deposits: *Math. Geology*, v. 21, no. 6, p. 589-591.

Davis, J.C., 1989, Review. *Geostatistics, sensitivity, and uncertainty methods for ground-water flow and radionuclide transport modelling*—A review: *Math. Geology*, v. 21, no. 7, p. 799-801.

Davis, J.C., 1990, Regional assessment based on models of field-size distributions [Abs.]: Zentralinstitut für Physik der Erde, Bereich III, September, Potsdam, DDR.

Davis, J.C., 1990, *Statistika i Analiz Geologicheskikh Dannykh, B2*: Nedra, Moscow, USSR, Vol. 1, 319 p., Vol. 2, 427 p.

Davis, J.C., 1991, Risk assessment of petroleum prospects in Kansas [Abs.]: *in* Am. Assoc. Petroleum Geologists Mid-Continent Section Meeting, Wichita, Kansas, Abstracts vol., p. 00.

Davis, J.C., 1991, Risk assessment of petroleum prospects in Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 75, no. 8, p. 1394.

Davis, J.C., 1992, Preface, *in* ***G. Christakos***, *Random Field Models in Earth Sciences:* Academic Press, San Diego, California, p. *xvii-xix*.

Davis, J.C., 1992, Proposal. Design and testing of most effective mapping conventions for display of multivariate environmental data: A research proposal to the Office of Exploratory Research, U.S. Environmental Protection Agency, 20 p. [not funded]

Davis, J.C., 1992, Review. *A User's Guide to Principal Components*, by J. Edward Jackson: *Math. Geology*, v. 24, no. 5, p. 577.

Davis, J.C., 1992, Risk assessment for the independent—The Monte Carlo approach: *Geobyte*, v. 7, no. 6, p. 57-65.

Davis, J.C., 1994, Information content of map symbols [Abs.]: *in* Papers and Extended Abstracts for Technical Program, International Assoc. Math. Geology Ann. Meeting, October, Mont Tremblant, Quebec, Canada, p. 109.

Davis, J.C., 1995, Both sides of the coin—The role of probabilistic modeling in the minerals industry: *Berg- und Hüttenmännische Monatshefte*, Jahrgang 140, Heft 4, Springer-Verlag, Vienna, S. 190-194.

Davis, J.C., 1996, Final Project Report for Award No. 9111646, U.S.-Germany Cooperative Research on Three-Dimensional Regionalization and Modeling for Sedimentary Basin Analysis, NSF form 98A, 00 p.

Davis, J.C., 1997, Grant. Managing the Baltic—A tale of science, environment, and politics in the new Europe: German-American Academic Council Foundation Distinguished Scholar Grant, [start 1998], US $6,700.

Davis, J.C., 1998, Jan Eduard Harff—1996 William Christian Krumbein medalist of the International Association for Mathematical Gelogy, *in* A. Buccianti, G. Nardi, and R. Potenza (Eds.), *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*, Part 1, De Frede Editore, Naples, Italy, p. 20-22.

Davis, J.C., 1998, Multivariate statistical analysis of Erzgebirge granite composition: Open-File Rept. 1998-3, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Davis, J.C., 1998, Use of multivariate statistics for environmental mapping, *in* Tagungsband der 4. Arbeitstagung des Bereiches Umwelt, *Erdwissenschaftliche Aspekte des Umweltschutzes*, p. 99-104 [ISBN 3-9500844-0-1].

Davis, J.C., 1999, Jan Harff, 1996 Krumbein Medalist: *Math. Geology*, v. 31, no. 2, p. 245-248.

Davis, J.C., 1999, Review. *Regression Graphics: Ideas for Studying Regressions Through Graphics*—A review: *Computers & Geosciences*, v. 25, no. 6, p. 713-714.

Davis, J.C., 2000, Assessing the Kansas water-level monitoring program: An example of the application of classical statistics to a geological problem: *Compass*, v. 75, no. 2-3, p. 116-121.

Davis, J.C., 2000, Preliminary report on statistical quality control for year 2000 water well measurements: Open-File Rept. 2000-7, Kansas Geol. Survey, Lawrence, Kansas, 25 p.

Davis, J.C., 2001, Introduction to the volume, Chapter 1, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation, Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 7-13.

Davis, J.C., 2001, Statistical quality control for year 2001 water well measurements: Open-File Rept. 2001-2, Kansas Geol. Survey, Lawrence, Kansas, 23 p.

Davis, J.C., 2002, Field size distribution in an area of the Former Soviet Union [Abs.]: *in* Proc. Canadian Gas Potential Committee (CGPC) "Symposium on Resource Assessment Methodologies," Calgary, Canada [in prep.].

Davis, J.C., 2002, Mapping of multivariate sediment properties [Abs.]: Proc. Baltic-7 Meeting, Kaliningrad, Russia, April 21-26 [Proceeding vol. in prep.].

Davis, J.C., 2002, Statistical quality control for year 2002 water well measurements: Open-File Rept. 2002-5, Kansas Geol. Survey, Lawrence, Kansas, 20 p.

Davis, J.C., 2002, *Statistics and Data Analysis in Geology*, 3rd ed.: John Wiley & Sons, Inc., New York, 638 p. [Exercises on line http://www.wiley.com/college/davis and http://www.kgs.ku.edu/]

Davis, J.C., and **Bohling, G.C.**, 1993, Review. *Contouring: a Guide to the Analysis and Display of Spatial Data*, by David F. Watson: *Computers & Geosciences*, v. 19, no. 9, p. 1389-1391.

Davis, **J.C.**, and **Bohling**, **G.C.**, 2000, The search for patterns in ice core temperature curves [Abs]: *in* Am. Assoc. Petroleum Geologists Ann. Meeting, New Orleans, Abstracts vol., p. A36.

Davis, **J.C.**, and **Bohling**, **G.C.**, 2001, The search for patterns in ice core temperature curves [Chap. 11], *in* L.C. Gerhard, W. Harrison, and B. Hanson (Eds.), *Global Perspectives of Global Change*: Am. Assoc. Petroleum Geologists, Studies in Geology 47, p. 213-229.

Davis, **J.C.**, and ***Chang***, ***T.***, 1989, Estimating potential for small fields in mature petroleum province: *Bull. Am. Assoc. Petroleum Geologists*, v. 73, no. 8, p. 967-976.

Davis, **J.C.**, and ***Chang***, ***T.***, 1990, Estimating potential for small fields in mature petroleum province, Reply: *Bull. Am. Assoc. Petroleum Geologists*, v. 74, no. 11, p. 1764-1765.

Davis, **J.C.**, and ***Chang***, ***T.***, 1990, Multivariate statistical procedures for improving geochemical surveys [Abs.]: *in* Proc. 43rd Ann. Meeting, Rocky Mtn. Section, Geol. Soc. America, Jackson, Wyoming, p. 00.

Davis, **J.C.**, and ***Chang***, ***T.***, 1990, Multivariate statistical procedures for improving geochemical surveys [Abs.]: *in* Proc. Geol. Soc. America 43rd Ann. Meeting, Rocky Mountain Section, Jackson, Wyoming, *Abstracts with Programs*, v. 22, no. 6, p. 7.

Davis, **J.C.**, and ***Chang***, ***T.***, 1990, Regional assessment based on models of field-size distributions [Abs.]: *in* Proc. CSPG Ann. Meeting, "Basin Perspectives," Calgary, Canada, p. 41.

Davis, **J.C.**, and ***Chang***, ***T.***, *n.d.*, Predicting reservoir life by statistical decline curve analysis (for *SPE Trans.*), 30 p. [in prep.].

Davis, **J.C.**, and Cocke, J.M., 1972, Interpretation of complex lithologic successions by substitutability analysis, *in* D.F. Merriam (Ed.), *Mathematical Models of Sedimentary Processes*: Plenum Press, New York, p. 27-52.

Davis, **J.C.**, and **Conley**, **C.D.**, 1970, Grant. Optically derived numerical descriptors for classification of carbonate rock fabrics: American Petroleum Institute [J.C. Davis, PI; 3-yr project], $5000/yr.

Davis, **J.C.**, and **Conley**, **C.D.**, 1971, Optical processors as a research and exploration tool: *in* Proc. 2nd National Colloquium on Mathematical Models in Geosciences, September, Bucharest, Romania, Preprint, 35 p.

Davis, **J.C.**, and **Conley**, **C.D.**, 1977, Relation between variability in grain size and area of samples on a carbonate sand beach: *Jour. Sed. Petrology*, v. 47, no. 1, p. 251-256.

Davis, **J.C.**, and **Doveton**, **J.H.**, 1987, Proposal. Evaluation of resource potential of western desert in Egypt—Response to RFP from Agency for International Development/National Petroleum Co. of Egypt. [not funded]

Davis, J.C., and **Doveton, J.H.**, 1990, Overview of statistical methods in log analysis [Abs.]: *in* Proc. Soc. Prof. Well Log Analysts Computer Applications Workshop, Lafayette, Louisiana, Abstracts vol.

Davis, J.C., and **Doveton, J.H.**, 1992, Grant. Development of predictive statistical indicators for potential hydrocarbon target reservoirs in West Siberia, USSR. $1000 [Bequest to Petrophysics Research Fund, KU Endowment Assoc., Univ. Kansas, Lawrence, Kansas].

Davis, J.C., and ***Förster, H.-J.***, 1998, Canonical analysis of composition of granite plutons from the German Erzgebirge: Implications for granite classification and petrogenesis, *in* A. Buccianti, G. Nardi, and R. Potenza (Eds.), *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*, Part 1, De Frede Editore, Naples, Italy, p. 410-414.

Davis, J.C., and ***Förster, H.-J.***, 2000, Use of multivariate statistical methods in interpreting granitic plutons: *in* Proc. 31st Intl. Geol. Congress, Session S-1, Rio de Janeiro, Abstracts vol., 6 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1977, Alternative objectives in the exploration of the National Petroleum Reserve—Alaska: Report to Office of Minerals Policy and Resource Analysis, U.S. Dept. Interior, Washington, D.C., 48 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1977, Probabilistic evaluation of the petroleum potential in the National Petroleum Reserve—Alaska (NPR–A): Report to Office of Minerals Policy and Resource Analysis, U.S. Dept. Interior, Washington, D.C., 56 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1977, Recommendations for the NPR–A Exploration Management Team: Report to Office of Minerals Policy and Resource Analysis, U.S. Dept. Interior, Washington, D.C. (unnum.).

Davis, J.C., and ***Harbaugh, J.W.***, 1978, Exploration simulation model for investigating leasing policy on the U.S. Outer Continental Shelf: Report to Leasing Programs Office, U.S. Dept. Energy, Washington, D.C., 53 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1978, Objective petroleum resource appraisal of the U.S. Outer Continental Shelves with special reference to the Atlantic OCS: Report to Leasing Programs Office, U.S. Dept. Energy, Washington, D.C., 39 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1978, Probability methods and assessment of drilling outcomes in frontier areas [Abs.]: CSPG Ann. Meeting, Calgary, Canada.

Davis, J.C., and ***Harbaugh, J.W.***, 1979, A simulation model for oil exploration policy on federal lands of the U.S. Outer Continental Shelves [Abs.]: New York Univ./C.V. Starr Center for Applied Economics Conf. on Economics of Exploration for Energy Resources, May 17-18, New York, p. 30.

Davis, J.C., and ***Harbaugh, J.W.***, 1980, Estimating the petroleum potential of the Outer Continental Shelves and other offshore regions [Abs.]: *in* Proc. 26th International Geol. Congress, Paris, Abstracts vol., p. 00.

Davis, J.C., and ***Harbaugh, J.W.***, 1980, Oil and gas in offshore tracts: Inexactness of resource estimates prior to drilling: *Science*, v. 209, Aug. 29, p. 1047-1048.

Davis, J.C., and ***Harbaugh, J.W.***, 1981, A method for rapid evaluation of oil and gas prospects in OCS regions: Report, U.S. Dept. Interior, U.S. Geol. Survey, no. 14-08 0001-18785, 62 p.

Davis, J.C., and ***Harbaugh, J.W.***, 1981, A simulation model for oil exploration policy on federal lands of the U.S. Outer Continental Shelves, *in* J.B. Ramsey (Ed.), *Economics of Exploration for Energy Resources*: JAI Press, Greenwich, Connecticut, p. 19-49.

Davis, J.C., and ***Harbaugh, J.W.***, 1981, Alternative objectives for oil exploration by the United States government: The dilemma of the National Petroleum Reserve in Alaska, *in* R.G. Craig and M.L. Labovitz (Eds.), *Future Trends in Geomathematics*: Pion Ltd., London, p. 221-240.

Davis, J.C., and ***Harbaugh, J.W.***, 1981, Statistical evaluation of oil and gas prospects in the Outer Continental Shelf of the U.S. Gulf Coast [Abs.]: 10th Geochautauqua—Use of Computers in Mineral-Resources Evaluation, IAMG/IGCP/Syracuse Univ.: Geol. Survey Canada, Ottawa, Ontario, p. 5.

Davis, J.C., and ***Harbaugh, J.W.***, 1983, Statistical appraisal of seismic prospects in Louisiana-Texas Outer Continental Shelf: Am. Assoc. Petroleum Geologists *Bulletin*, v. 67, no. 3, p. 349-358.

Davis, J.C., and ***Harbaugh, J.W.***, 1987, Statistical Appraisal of Seismic Prospects in Louisiana-Texas Outer Continental Shelf [©AAPG, 1983], *in* N.H. Foster, and E.A. Beaumont (Compilers), *Geologic Basins II—Evaluation, Resource Appraisal, and World Occurrence of Oil and Gas*: Am. Assoc. Petroleum Geologists, *Treatise of Petroleum Geology* Reprint Series no. 2, p. 305-314.

Davis, J.C., and ***Harff, J.***, 1990, Regionalization in geology by multivariate classification [Abs.]: *in* Proc. Forschungsseminar "Mathematische Statistik," Karl-Weierstraß-Institut für Mathematik der AdW der DDR, October, Humboldt-Universität, Berlin.

Davis, J.C., and ***Harff, J.***, 1991, An international joint venture in computer modeling for oil and gas [Tech. Program Abs.]: *Bull. Kansas Geol. Society*, v. 67, no. 1 (September).

Davis, J.C., and ***Harff, J.***, 1991, Computer assisted basin analysis and regionalization of the North German Basin and the western Kansas shelf [Abs.]: *Tulsa Geol. Soc. Newsletter*, v. 29, no. 8, p. 4-6.

Davis, J.C., and ***Harff, J.***, 1998, Grant. Deutsche Forschungsgemeinschaft Travel Grant, US $4,800.

Davis, J.C., and ***Harff, J.***, 2000, Generalizing geologic data in deposit modeling—Keynote presentation: *in* Proc. 31st Intl. Geol. Congress, Session H-1, Rio de Janeiro, Abstracts vol., 6 p.

Davis, **J.C.**, and *Hausberger*, ***G.***, 1998, Grant. Metallogenetische Karte unter ARC-VIEW: Austrian Bundesministerium für Handel, Gewerbe und Industrie, Vienna, US $5,050.

Davis, **J.C.**, and ***Hausberger***, ***G.***, 2001, Constructing drainage basin models from DEM's—A case study of Chase County, Kansas: *in* Proc. International Assoc. Math. Geology Ann. Meeting, Cancún, Mexico, 15 p. [on CD-ROM].

Davis, **J.C.**, and ***Herzfeld***, ***U.C.*** (Eds.), 1993, *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, 298 p.

Davis, **J.C.**, and Levi de Lopez, S. (Eds.), 1978, *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis: Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, 307 p.

Davis, **J.C.**, and *McCullagh*, *M.J.* (Eds.), 1974, *Display and Analysis of Spatial Data*: Wiley-Interscience, John Wiley & Sons, Ltd., London, 378 p.

Davis, **J.C.**, and **Merriam**, **D.F.**, 1968, *Empleo de sistemas electronicos en la geologia*: Yacimientos Petroliferos Fiscales Bolivianos, La Paz, Bolivia, 136 p.

Davis, **J.C.**, and Ohlmacher, G.C., 2002, Landslide hazard prediction using generalized logistic regression: Proc. International Assoc. Math. Geology, Ann. Meeting, 15-20 September, Berlin, Germany, 6 p. [pending].

Davis, **J.C.**, and **Olea**, **R.A.**, 1980, Optimal design of a network of groundwater observation wells in Kansas: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 13 p.

Davis, **J.C.**, and **Olea**, **R.A.**, 1985, Assessing petroleum prospects defined by seismic surveys, *in* Proc. International Symposium on Major New Trends in Quantitative Methods for Predicting and Resources Evaluation of Mineral, Oil and Gas Deposits: USSR-KazSSR-IAMG, Alma-Ata, USSR, 21 p.

Davis, **J.C.**, and **Olea**, **R.A.**, 1988, Artificial intelligence for the correlation of wells logs: *in* Proc. Colloquium on Statistical Applications in the Earth Sciences, Geol. Survey of Canada, November, Ottawa, Canada.

Davis, **J.C.**, and **Olea**, **R.A.**, 1989, Artificial intelligence for the correlation of well logs, *in* ***F.P. Agterberg*** and G.F. Bonham-Carter (Eds.), *Statistical Applications in the Earth Sciences*: Geol. Survey of Canada, Paper 89-9, p. 389-394.

Davis, **J.C.**, and **Olea**, **R.A.**, 1992, Addendum to Re-evaluation of Marathon Oil Company's Soil-Gas Surveys, Zarzis Peninsula, Tunisia: Unpub. Rept., Marathon Oil Company, Houston, Texas, 12 p.

Davis, **J.C.**, and **Olea**, **R.A.**, 1992, Re-evaluation of Marathon Oil Company's soil-gas surveys, Zarzis Peninsula, Tunisia: Unpub. Rept., Marathon Oil Company, Houston, Texas, Vol. 1, 70 p., Vol. 2, 46 p.

Davis, J.C., and Preston, F.W., 1969, Optical processing, an attempt to avoid the computer: Geol. Soc. America, 82nd Ann. Meeting, November, Atlantic City, New Jersey, *Abstracts with Programs*, p. 00.

Davis, J.C., and Preston, F.W., 1971, Size distribution by optical Fourier analysis [Abs.]: *in* Proc. 3rd International Stereological Congress, August, Berne, Switzerland.

Davis, J.C., and Preston, F.W., 1972, Optical processing, an alternative to digital computing, *in* P. Fenner (Ed.), *Symposium on Quantitative Geology*: Geol. Soc. America, Special Paper 146, p. 49-68.

Davis, J.C., and Preston, F.W., 1976, Numerical characterization of sandstone pore structure [Abs.]: *in* Proc. 61st Ann. Meeting, Am. Assoc. Petroleum Geologists, New Orleans, Louisiana.

Davis, J.C., and **Sampson, R.J.**, 1966, FORTRAN II program for multivariate discriminant analysis using an IBM 1620 computer: Computer Contribution 4, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

Davis, J.C., and **Sampson, R.J.**, 1967, FORTRAN II time-trend package for the IBM computer: Computer Contribution 19, Kansas Geol. Survey, Lawrence, Kansas, 28 p.

Davis, J.C., and **Sampson, R.J.**, 1974, Contouring geologic data by computer [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Joint Ann. Meeting, San Antonio, Texas.

Davis, J.C., and **Sampson, R.J.**, 1992, Trend surface analysis: *Geobyte*, v. 7, no. 4, p. 38-43.

Davis, J.C., and Van Driel, N. (Eds.), 1989, *Digital Geologic and Geographic Information Systems* (28th Intl. Geol. Congress Short Course S8A): Am. Geophys. Union, *Short Course in Geology*, v. 10, Am. Geophysical Union, Washington, D.C., 62 p.

Davis, J.C., and Watney, W.L., 1987, Proposal. Stratigraphic and spatial distribution of component gases in the supergiant Hugoton-Panhandle gas field in Kansas, Oklahoma, and Texas: Am. Chem. Society Proposal ACS-PRF 19753-AC2, Washington, D.C., 64 p. [not funded]

Davis, J.C., Bohling, G.C., and **Olea, R.A.**, 2001-2002, Grant. Numerical correlation of Late-Quaternary sediments from the Baltic Sea, Kattegat, Skagerrak and North Atlantic with regard to their role as paleoclimate indicators. National Science Foundation, $13,920.

Davis, J.C., Brownrigg, R., and ***Weber, L.***, 1987, Geostatistical interpretation of the Grazer Paläozoikum: Unpub. Rept., Geologische Bundesanstalt, Austria/Kansas Geol. Survey, 24 p., Appdx., 7 maps.

Davis, J.C., ***Chang, T.***, and ***Shermann, O.***, 1988, Assessing the contribution of source rocks to stream sediment composition in the Austrian Mühlviertel: *in* Proc. 17th Geochautauqua, "Computers for the Analysis of Geochemical and Hydrochemical Data," October 7-8, Tucson, Arizona.

Davis, **J.C.**, ***Chang***, ***T.***, **Brownrigg**, **R.**, and **Sampson**, **R.J.**, 1988, Preliminary evaluation of cobalt data from map sheets 18 and 35: Unpub. Rept., Geologische Bundesanstalt, Austria/Kansas Geol. Survey Coop. Project, 13 p., Appdx.

Davis, **J.C.**, **Doveton**, **J.H.**, and Hambleton, W.W., 1975, Oil Exploration by Probabilistic Analysis—A Case History: Am. Assoc. Petroleum Geologists Ann. Meeting, Dallas, Texas, *Program with Abstracts*, v. 2, p. 18.

Davis, **J.C.**, **Doveton**, **J.H.**, and ***Harbaugh***, ***J.W.***, 1975, Convenors' Notes: AAPG Research Symposium, "Probability Methods in Oil Exploration," Kansas Geol. Survey/Dept. Applied Earth Sci., Stanford Univ., August 20-22, Stanford, California, 70 p.

Davis, **J.C.**, **Doveton**, **J.H.**, and ***Harbaugh***, ***J.W.***, 1977, *Puzzles and Gushers*: Probability Short Course Group, Stanford, California, 232 p.

Davis, **J.C.**, **Doveton**, **J.H.**, and **Sampson**, **R.J.**, 1975, Métodos Probabilisticos na Exploraçao do Petróleo: Petrobras Training Manual, Rio de Janeiro, 108 p.

Davis, **J.C.**, **Doveton**, **J.H.**, and **Sampson**, **R.J.**, 1975, Probabilistic oil exploration: methodology and field-case studies [Abs.]: Canadian Soc. Petroleum Geologists/CSEG Ann. Meeting, May, Calgary, Canada, *Program and Abstracts*, p. 53.

Davis, **J.C.**, Fenske, P.R., and Ore, H.T., 1965, Geological evaluation of the Haskett Site: *Tebiwa*, v. 8, p. 29-31.

Davis, **J.C.**, ***Harff***, ***J.***, and Watney, W.L., 1990, Determination of homogeneous components of a sedimentary basin, *in* R. Pflug and K. Bitzer (Eds.), *Three-dimensional Computer Graphics in Modeling Geologic Structures and Simulating Geologic Processes*: Freiburger geowiss. Beitr., Band 2, Freiburg, FRG, p. 22-24.

Davis, **J.C.**, ***Harff***, ***J.***, Lemke, W., **Olea**, **R.A.**, and ***Tauber***, ***F.***, 1995, Sedimentary facies analysis by regionalized classification [Abs.]: *Abstract Volume 4th Marine Geological Conference*, Geol. Survey Sweden/Stockholm Center for Marine Research, October, Uppsala, Sweden, p. 24 (unnum.).

Davis, **J.C.**, ***Harff***, ***J.***, Lemke, W., **Olea**, **R.A.**, ***Tauber***, ***F.***, and **Bohling**, **G.C.**, 1996, Analysis of Baltic sedimentary facies by regionalized classification: *Die Geowissenschaften*, v. 14, no. 2, p. 67-72.

Davis, **J.C.**, ***Harff***, ***J.***, Lemke, W., **Olea**, **R.A.**, ***Tauber***, ***F.***, **Bohling**, **G.C.**, and ***Zhou***, ***D.***, 1995, Analysis of sedimentary facies by regionalized classification: Open-File Rept. 1995-4, Kansas Geol. Survey, Lawrence, Kansas, 28 p.

Davis, **J.C.**, ***Harff***, ***J.***, **Olea**, **R.A.**, and **Bohling**, **G.C.**, 1997, Regionalized classification of the Darss Sill sediments, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 145-150.

Davis, **J.C.**, ***Hausberger***, ***G.***, ***Schermann***, ***O.***, and **Bohling**, **G.C.**, 1994, Multivariate adjustment of geochemical data for geological mapping [Abs.]: *in* Papers and Extended Abstracts for Technical Program, International Assoc. Math. Geology Ann. Meeting, October, Mont Tremblant, Quebec, Canada, p. 110.

Davis, **J.C.**, ***Hausberger***, ***G.***, ***Schermann***, ***O.***, and **Bohling**, **G.C.**, 1995, Adjusting stream-sediment geochemical maps in the Austrian Bohemian Massif by analysis of variance: *Math. Geology*, v. 27, no. 2, p. 279-299.

Davis, **J.C.**, Merriam, D.F., and ***Förster***, ***A.***, 1995, Statistical analysis of regional geothermal data for basin analysis [Abs.]: *in* Am. Assoc. Petroleum Geologists, Midcontinent Regional Meeting, Tulsa, Oklahoma, Abstracts vol., p. A6-7.

Davis, **J.C.**, Merriam, D.F., and ***Förster***, ***A.***, 1995, Statistical analysis of regional geothermal data for basin analysis [Abs.]: *in* International Assoc. Math. Geology 2nd Ann. Meeting, Osaka, Japan, Abstracts vol., p. 179.

Davis, **J.C.**, Miller, R.D., and **Olea**, **R.A.**, 1999, Use of statistics for quality assurance in an observation well monitoring program, *in* A.S.J. Lippard, A. Næss, and ***R. Sinding-Larsen*** (Eds.), *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*: Tapir Printers, Trondheim, Norway, p. 177-181.

Davis, **J.C.**, **Olea**, **R.A.**, and ***Pawlowsky-Glahn***, ***V.***, 1991, Indikator-Kriging zur Festlegung von Grenzen geologischer Körper [Indicator kriging for determining the boundaries of geologic bodies]—eine Fallstudie [Abs.], *in* Deutsche Arbeitskreis für Mathematische Geologie und Geoinformatik: *Anwendung geostatischer Verfahren—Wissenbasierte Systeme*, Jahrestagung 1991, Freie Universität Berlin, Berlin, p. 2-3.

Davis, **J.C.**, **Olea**, **R.A.**, and Watney, W.L., 1992, Grant. U.S.-Germany Cooperative Research on Three-Dimensional Regionalization and Modeling for Sedimentary Basin Analysis: Grant No. INT-9111646, US $10, 150.

Davis, **J.C.**, **Olea**, **R.A.**, **Bohling**, **G.C.**, Watney, W.L., and ***Harff***, ***J.***, 1996, Regionalized classification as a tool for modeling the geometry of sedimentary basins [Abs.]: *in* Proc. International Symposium on Computerized Modeling of Sedimentary Systems, October, Güstrow, Germany, Abstracts vol., p. 00.

Davis, **J.C.**, **Ross**, **J.A.**, *et al.*, 1995, Generalized geologic map of the Istrian Peninsula, Croatia: Institute of Geology, Zagreb, Croatia and Geol. Survey of Vienna, Austria, scale 1:100,000.

Davis, **J.C.**, ***Schermann***, ***O.***, ***Chang***, ***T.***, and ***Hausberger***, ***G.***, 1990, Statistical correction for bias in stream-sediment geochemical data from the Austrian Mühlviertel: *XXII Internationales Symposium APCOM*, Technische Universität Berlin, Heft 51, Band II, Berlin, p. 411-423.

Davis, **J.C.**, Ulaby, F.T., and McNaughton, J.L., 1974, Ground pattern analysis in the Great Plains: Kansas University Center for Research, Inc., Remote Sensing Laboratory, Technical Report no. KU-RSL-2266-10, 9 p. (NTIS no. E74-10595).

Davis, J.C., Watney, W.L., **Olea, R.A.**, and ***Harff, J.***, 1991, Grant. Three-dimensional regionalization and modeling for sedimentary basin analysis: U.S. National Science Foundation Cooperative Science, Engineering, and Science Education Programs with Western Europe [J.C. Davis, PI; start date April 15, 1992], US $10,150.

DeGraffenreid, J.A. (Ed.), 1982, Time- and space-dependent data in the Earth sciences—A CODATA/COGEODATA survey: Series on Spatial Analysis no. 6, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

DeGraffenreid, J.A. (Ed.), 1988, SURFACE II Version 3.0 User's Manual, by R.J. Sampson, 478 p., camera-ready. [Kansas Geol. Survey, Series on Spatial Analysis No. 8; never published. Distribution of SURFACE II was licensed to ICI, a Lawrence, Kansas-based, commercial firm who subsequently produced their own documentation.]

DeGraffenreid, J.A., 1977, T.T. Cao—Survey VRS for 1977-78: 500-word press release, *Lawrence Journal-World*, Lawrence, Kansas.

DeGraffenreid, J.A., 1978, Report on International Conference on Computer Mapping for Resource Analysis, Mexico City, May 8-10, 1978, *IAMG News Letter* no. 16-17: Kansas Geol. Survey, Lawrence, Kansas.

DeGraffenreid, J.A., 1978, Time- and space-dependent data in the Earth sciences—A CODATA survey: Geol. Soc. America, *Abstracts with Programs*, v. 10, no. 7, p. 387.

DeGraffenreid, J.A., 1979, Changing patterns in geoscience communication and the proliferation of "non-publications": *in* Proc. Association of Earth Science Editors, Ann. Meeting, October, Tulsa, Oklahoma, 34 p.

DeGraffenreid, J.A., 1979, Changing patterns in geoscience communication and the proliferation of "non-publications" [Abs.]: Assoc. Earth Science Editors, *Blueline*, v. 12, no. 3, p. 6.

DeGraffenreid, J.A., 1980, KGS—Geologic Research Section: Purpose, Objective, Method: Brochure, Kansas Geol. Survey, Lawrence, Kanas, 8 p. [Prepared for Kansas Geol. Survey Advisory Council (GSAC) Meeting, October; camera-ready.]

DeGraffenreid, J.A., 1981, International Association for Mathematical Geology: Brochure, Kansas Geol. Survey, Lawrence, Kansas, 12 p. [Camera-ready; updated and reprinted, 1983.]

DeGraffenreid, J.A., 1981, Survey of E&P training resources—A list of relevant courses: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 54 p.

DeGraffenreid, J.A., 1982, *IAMG News Letter* no. 28-29: Kansas Geol. Survey, Lawrence, Kansas, 12 p.

DeGraffenreid, J.A., 1984, Address of the IAMG Secretary-General–V General Assembly, 27th Intl. Geol. Congress, Aug. 4–14, Moscow, USSR: Office of the IAMG Sec.-General, Lawrence, Kansas, 14 p.

DeGraffenreid, J.A., 1984, Annual Report of the IAMG to International Union of Geological Sciences, Nov. 1984, Office of the IAMG Sec.-General, Lawrence, Kansas, 13 p.

DeGraffenreid, J.A., 1984, *IAMG News Letter* no. 30, Kansas Geol. Survey, Lawrence, Kansas, 6 p.

DeGraffenreid, J.A., 1984, *IAMG News Letter* no. 31–32: Kansas Geol. Survey, Lawrence, Kansas, 6 p.

DeGraffenreid, J.A., 1984, John Davis to Head International Geology Group: 200-word press release (Sept.), *The Baldwin Ledger*, Baldwin City, Kansas.

DeGraffenreid, J.A., 1984, Minutes of the V General Assembly, IAMG: Office of the IAMG Sec.-General, Lawrence, Kansas, 17 p.

DeGraffenreid, J.A., 1985, *IAMG News Letter* no. 33, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

DeGraffenreid, J.A., 1986 [English transl.: Benutzer Documentation— MINI-CAD/VA]. User Documentation—MINICAD/VA, by ***M. Moser*** and H. Majer, 1986: Voest-Alpine AG, Leoben, Austria, 34 p.

DeGraffenreid, J.A., 1986, *IAMG News Letter* no. 36, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

DeGraffenreid, J.A., 1987 [English transl.: Economic geology and geological interpretation of the Graz Paleozoic test area by means of factor analysis]. Geologisch-lagerstättenkundliche Interpretation der Ergebnisse der Faktorenanalyse an Hand des Testgebietes Grazer Paläozoikum, by ***L. Weber***, 1987: Federal Ministry of Economic Affairs, Vienna, 21 p.

DeGraffenreid, J.A., 1987 [English transl.: Minigraph Benutzer-Documentation 2.0]. Minigraph User Documentation, Version 2.0, by J. Gumpinger, ***M. Moser***, and H. Majer, 1987: Voest-Alpine AG, Leoben, Austria, 78 p.

DeGraffenreid, J.A., 1987 [English transl.]. Development of methods for interpretation of geochemical survey data—Geologische Bundesanstalt Project Proposal to the Foundation for Advancement of Scientific Research, by ***O. Schermann***, 1987: Geologische Bundesanstalt, Vienna, 18 p.

DeGraffenreid, J.A., 1987 [English transl.]. Report on the discussion of results from the Graz Paleozoic produced by Prof. J. Davis—Austrian Geological Survey (Geologische Bundesanstalt) cooperation with the Kansas Geological Survey in the area of interpretation of geochemical data, by ***O. Schermann***, 1987: Geologische Bundesanstalt, Vienna, 3 p.

DeGraffenreid, J.A., 1987 [English transl.]. Report on the visit to the Kansas Geological Survey with reference to methods for interpretation of geochemical data, by ***O. Schermann***, 1987: Geologische Bundesanstalt, Vienna, 4 p.

DeGraffenreid, J.A., 1987, *IAMG News Letter* no. 37, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

DeGraffenreid, J.A., 1987, KU Scientist Gets International Award: 125-word press release (May), *The Baldwin Ledger*, *Lawrence Journal-World*, *Independence Reporter*, *Oread*, *AAPG Explorer*, *AGI Geotimes*.

DeGraffenreid, J.A., 1988, *IAMG News Letter* no. 38, Kansas Geol. Survey, Lawrence, Kansas, 8 p.

DeGraffenreid, J.A., 1989 [English transl.: Anthropogenic silver "anomalies" in the Eastern Central Alps region, *in* Workshop on Geochemistry—Diagnostic Images from the Natural and the Contaminated Environment]. Anthropogene Silber 'Anomalien' im östlichen Zentralalpenbereich, *in* Workshop über Geochemie-Diagnosebilder aus der natürlichen und der belasteten Umwelt, by G. Malecki, 1989: Geologische Bundesanstalt, June 22, Vienna, 6 p.

DeGraffenreid, J.A., 1989 [English transl.: Robust principal components analysis for delimiting prospective regions]. Robuste Hauptkomponenten-Analyse zur Abgrenzung prospektiver Bereiche, by ***L. Weber***,1989, *in* Workshop on Geochemistry—Diagnostic Images from the Natural and the Contaminated Environment, Geologische Bundesanstalt, June 22, Vienna, 5 p.

DeGraffenreid, J.A., 1989 [English transl.: Simulation of deposits including the "turning band" method and simulation in one dimension]. *Geostatistik—Eine Einführung mit Anwendungen*, by R. Dutter, 1985: B.G. Teubner, Stuttgart. Chapter 7, p. 142–152.

DeGraffenreid, J.A., 1989 [English transl.: Spatial structure analysis and estimation of regionalized compositions with examples of geological applications, 156 p.]. Räumliche Strukturanalyse und Schätzung ortsabhängiger Kompositionen mit Anwendungsbeispielen aus der Geologie, by ***V. Pawlowsky-Glahn***, 1986: D.sc. Dissertation, Freie Univ. Berlin, Berlin, 170 p.

DeGraffenreid, J.A., 1989 [English transl.: Statistical Methods for Earth Scientists]. *Statistische Methoden für Erdwissenschaftler*, by D. Marsal, 1967: E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, p. VIII–IX.

DeGraffenreid, J.A., 1989 [English transl.: The Geochemical Ground Survey of the Federal Territory—A contribution for soil science investigations with regard to determination of soil condition and evaluation of land]. Die geochemische Basisaufnahme des Bundesgebietes—ein Beitrag für Bodenkundliche Untersuchungen in Hinblick auf Ermittlung des Bodenzustandes und der Bodenbewertung, by ***F. Thalmann***, 1989, *in* Workshop on Geochemistry—Diagnostic Images from the Natural and the Contaminated Environment, Geologische Bundesanstalt, June 22, Vienna, 5 p.

DeGraffenreid, J.A., 1990 [English transl.: The Geochemical Ground Survey of the Federal Territory: A basis for continuing investigations?]. Geochemische Basisaufnahme des Bundesgebietes: Eine Grundlage für Weiterführende Untersuchungen?, by ***F. Thalmann***, 1989, *in* Workshop on Geochemistry—Diagnostic Images from the Natural and the Contaminated Environment, Geologische Bundesanstalt, June 22, Vienna, 6 p.

DeGraffenreid, J.A., 1991 [English transl.: Indicator kriging for determining the boundaries of geological bodies–A case study: Proc. Conference of the German Association for Mathematical Geology and Informatics]. Indikator-Kriging zur Festlegung von Grenzen geologischer Körper–Eine Fallstudie, by **J.C. Davis**, **R.A. Olea**, and ***V. Pawlowsky-Glahn***, 1991 [Abs.], *in* Deutsche Arbeitskreis für Mathematische Geologie und Geoinformatik: *Anwendung geostatischer Verfahren—Wissenbasierte Systeme*, Jahrestagung 1991, Freie Universität Berlin, Berlin, p. 2-3.

DeGraffenreid, J.A., 1991 [English transl.: Interpretation of geochemical data (stream sediment geochemistry) from regions of Weinsberger Granite drainage areas]. Interpretation geochemischer Daten (Bachsedimentgeochemie) aus Bereichen von Weinsbergergranit-Einzugsgebieten, by H. Pirkl, *n.d.*: Unpub. Rept., GBA/Voest-Alpine Coop. (Alps-Adria: Austria, Slovenia, Croatia, Yugoslavia) Project, Vienna, 15 p., Appdx.

DeGraffenreid, J.A., 1992 [English transl.]. Minutes of the Annual General Meeting, by W. Skala, 1992: 2nd annual meeting of the German Working Group for Mathematical Geology and Geoinformatics [Deutscher Arbeitskreis für Mathematische Geologie und Geoinformatik], November, Bergakademie Freiberg, Freiberg (Saxony), Germany.

DeGraffenreid, J.A., 1993 [English transl.: Predicting spatial structures in the KW–Exploration using geostatistical procedures]. Prädiktion räumlicher Strukturen in der KW–Exploration mittels geostatistischer Verfahren, by H. Burger, M. Eder, A. Mannaa, and W. Skala, 1990: *Z. dt. geol. Ges.*, 141, Hannover, p. 175–183.

DeGraffenreid, J.A., 1993 [English transl.]. Voest/Alpine AG, *n.d.*, Internal report to the project management of the project: Systematic Geochemical Exploration of the Federal Regions, Leoben/Eisenerz, Austria.

DeGraffenreid, J.A., 1993, A proposal to develop an annotated bibliography (in English) of German-language literature on environmental geochemical research: Kansas Geol. Survey, Lawrence, Kansas, 10 p.

DeGraffenreid, J.A., 1994 [English transl.: Converting coastline files for PC-use from BSH data—Description of binary coastal files, Example EUROPE] by R. Feistel, 1993: Sektion Marine Geologie, Inst. für Ostseeforschung Warnemünde, Univ. Rostock, Germany.

DeGraffenreid, J.A., 1994 [English transl.: Magneto- and cyclostratigraphic investigations of the Lower Cretaceous in the Southern Alps, Italy]. Magnetostratigraphische und zyklo-Untersuchungen in der Unterkreide der Südalpen (Italien), ***H. Mayer***, 1993: Projektskizze zu einer Dissertation [by H. Mayer] an der Geowissenschaftlichen Fakultät der Eberhard-Karls-Universität Tübingen.

DeGraffenreid, J.A., 1995 [English transl.: Optimal solutions of interval systems of equations]. Optimale Lösung von Intervallgleichungssystemen, by W. Barth, and E. Nuding, 1974: *Computing* 12 (1974), Springer-Verlag, Berlin, p. 117–125.

DeGraffenreid, J.A., 1995 [English transl.: Soil Geochemistry for the Soil-Condition Survey; Environmental Inventory in the Region of the Voitsberg–Köflach Basin, Austria]. Bodengeochemie zur Bodenzustandserhebung Umweltbestandsaufnahme im Gebiet des Voitsberger-Köflacher Beckens, by ***G. Hausberger***, **J.C. Davis**, D. Bukovec, and M. Hochreiter, 1995: Geo- und Umweltinformatik, Leoben, Austria, 71 p.

DeGraffenreid, J.A., 1995 [English transl.: Standardization of investigative techniques for geochemical mapping and environmental geochemistry] Standardisierung der Untersuchungstechnik bei geochemischer Kartierung und Umweltgeochemie, by H. Pirkl, H., *n.d.*: Unpub. Rept., GBA/Voest-Alpine Coop. (Alps-Adria) Project, Eisenerz, Austria, 9 p.

DeGraffenreid, J.A., 1995 [German transl.: Methoden zur Erstellung geochemischer Karten zur Umweltuntersuchung in der Republik Österreich]. Geochemical mapping for environmental studies in Austria, by **J.C. Davis**, 1995: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 19 p. [Appeared as ***Hausberger, G.***, and **Davis, J.C.**, 1996, Methoden zur Erstellung Geochemischer Karten zur Umweltuntersuchung in der Republik Österreich: *Die Geowissenschaften*, v. 14, no. 10, p. 423–428.]

DeGraffenreid, J.A., 1996 [English transl.: Description of DAAD–NSF cooperative program—Items I, IV, and V]. Deutscher Akademischer Austauschdienst (DAAD), 1996: Federal Ministry for Education, Science, Research and Technology (BMBF), Bonn, 4 p.

DeGraffenreid, J.A., 1996 [English transl.: Markings and traces in the Hunsrück Shale: Trails as testimony about life on the ocean floor, 19 p.]. Marken und Spuren in Hunsrück-Schiefer. 3. Fährten als Zeugnisse des Lebens auf dem Meeres-Grunde, by Rud. Richter, 1941: *Senckenbergiana*, v. 23, no. 4/6, Frankfurt a.M., p. 218–260.

DeGraffenreid, J.A., 1996 [English transl.: Trace fossil structures from the Schilf Sandstone (Middle "Keuper" km 2) of NW Württemberg and their meaning for the formation history of the stage]. Lebens-Spuren aus dem Schilfsandstein (Mittl. Keuper km 2) NW-Württembergs und ihre Bedeutung für die Bildungsgeschichte der Stufe, by Otto Linck, 1948: *Jahreshefte d. Vereins f. vaterl. Naturkunde l. Württ.*, Württemberg, p. 66–69, 92.

DeGraffenreid, J.A., 1998 [Anonymous], "Letter to the Editor—More Eigenlore," *in* ***H.S. Poelchau*** (Ed.): *IAMG Newsletter* no. 56, p. 7.

DeGraffenreid, J.A., 2000 [English transl.: Hydrologic interpretation on the basis of digital ground elevation and the digital water model]. Hydrologische Auswertungen auf Basis digitaler Geländehöhen und des digitalen Gewässermodells, by ***G. Hausberger***, 1997: Geo- und Umweltinformatik, Leoben, Austria, 24 p.

DeGraffenreid, J.A., and **Cable, H.W.**, 1977, A computer aid to the distribution of geologic publications: Geol. Soc. America, *Abstracts with Programs*, v. 9, no. 7, p. 946.

DeGraffenreid, J.A., and **Cable, H.W.**, 1978, A computer aid to the distribution of geologic publications, *in* R.D. Walker (Ed.), *Geoscience Information Retrieval Update*: Geoscience Information Soc. Proceedings, v. 8, p. 57-65.

Demirmen, F., 1969, Multivariate procedures and FORTRAN IV program for evaluation and improvement of classifications: Computer Contribution 31, Kansas Geol. Survey, Lawrence, Kansas, 51 p.

Demirmen, F., 1971, Counting error in petrographic point-count analysis: A theoretical and experimental study: *Jour. Intl. Assoc. Math. Geology*, v. 3, no. 1, p. 15-41.

Demirmen, F., 1972, Mathematical procedures and FORTRAN IV program for description of three-dimensional surface configurations (module DESCRIBE): Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 131 p.

Demirmen, F., 1972, Mathematical search procedures in facies modeling in sedimentary rocks, in D.F. Merriam (Ed.), *Mathematical Models of Sedimentary Processes*: Plenum Press, New York, p. 00.

Demirmen, F., 1972, Operator error in petrographic point-count analysis, A theoretical approach: *Jour. Intl. Assoc. Math. Geology*, v. 4, no. 1, p. 35-43.

Demirmen, F., 1973, Numerical description of folded surfaces depicted by contour maps: *Jour. Geology*, v. 81, no. 5, p. 599-620.

Demirmen, F., 1973, Probabilistic study of oil occurrence based on geologic structure in Stafford County, south-central Kansas (module OCCURRENCE): Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 188 p.

Demirmen, F., 1975, Profile analysis by analytical techniques: A new approach: *Geographical Analysis*, v. 7, p. 245-266.

Doherr, Detlev, 2001, Implementing online geologic maps with interactive links to multimedia archival data: Open-File Rept. 2001-23, Kansas Geol. Survey, Lawrence, Kansas, 57 p.

Doveton, J.H., 1970, Trend analysis of a thin sedimentary sequence within the Upper Carboniferous of Ayrshire, Scotland: *Jour. Intl. Assoc. Math. Geology*, v. 2, no. 1, p. 47-62.

Doveton, J.H., 1971, An application of Markov chain analysis to the Ayrshire Coal Measures succession: *Scott. J. Geol.*, v. 7, no. 1, p. 11-27.

Doveton, J.H., 1973, An application of latent structure analysis to oil exploration outcome probability [Abs.]: SEPM Computer Technology Research Group Colloquium, Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Joint Ann. Meeting, Anaheim, California.

Doveton, J.H., 1973, Numerical analysis relating location of hydrocarbon traps to structure and stratigraphy of the Mississippian "B" of Stafford County, south-central Kansas: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 56 p.

Doveton, J.H., 1974, Analysis and interpretation of an embedded Markov chain model of a Carboniferous Coal Measures succession: [Abs.] Geol. Soc. America, *Abstracts with Programs*, Miami, Fla., v. 6, no. 7, p. 714-715.

Doveton, J.H., 1974, Discriminant function analysis of hydrocarbon traps using subsurface locus and context measures: Am. Assoc. Petroleum Geologists Ann. Meeting, Abstract vol. 1, San Antonio, Texas, p. 27.

Doveton, J.H., 1975, Multidimensional scaling ordinations of sandstones and sand depositional environments [Abs.]: *in* Proc. 9th Intl. Sedimentol. Congress, Nice, France, Abstracts vol., p. 00.

Doveton, J.H., 1975, Numerical analysis of trap locations in the Mississippian "B," Stafford County, Kansas [Abs.]: Am. Assoc. Petroleum Geologists Mid-Cont. Regional Meeting, *Abstracts with Programs*, Wichita, Kansas, p. 28.

Doveton, J.H., 1975, Probabilistic analysis of combined structural and stratigraphic data [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Research Symposium, Stanford Univ., August, Stanford, California.

Doveton, J.H., 1975, Review. *Latent Structure Analysis*, by P.F. Lazarsfeld, and N.W. Henry: *Jour. Math. Geology*, v. 7, no. 2, p. 186-187.

Doveton, J.H., 1976, Proposal. ESP—Exploration for Secondary Prospects: A proposal for evaluation of newly economic hydrocarbon resources in Kansas, 1978-1979: Kansas Geol. Survey, January 29, Lawrence, Kansas [$13,500 equipment; $9,680 contractual costs].

Doveton, J.H., 1976, Linear discriminant analysis can be used as an oil-prospect exploration guideline: *Oil and Gas Jour.*, v. 74, no. 18, p. 324-328.

Doveton, J.H., 1976, Multidimensional scaling of sedimentary rock descriptors, *in* D.F. Merriam (Ed.), *Quantitative Techniques for the Analysis of Sediment*: Pergamon Press, Oxford, U.K., p. 143-155.

Doveton, J.H., 1976, Non-linear mapping as a 3-D reconstruction technique [Abs.]: SEPM Computer Technology Research Group Colloquium, Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Joint Ann. Meeting, New Orleans, Louisiana.

Doveton, J.H., 1976, Numerical analysis of trap locations in Mississippian "B," Stafford County, Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 60, no. 2, p. 319.

Doveton, J.H., 1976, Synthesis of additive and seriative models from incidence matrices: Conodonts and graves: [Abs.] *in* Proc. 10th International Conf. on Numerical Taxonomy, October, Univ. Kansas, Lawrence, Kansas.

Doveton, J.H., 1977, The perfect martini [Abs.]: SEPM Computer Technology Research Group Colloquium, Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Joint Ann. Meeting, MONTH, Washington, D.C.

Doveton, J.H., 1978, A course on log analysis, Remote sensing in the subsurface: *Jour. Geol Education*, v. 26, no. 1, p. 22-26.

Doveton, J.H., 1979, Markov chain analysis of lithological sequences: A search for order [Abs.]: *in* Proc. 9th Intl. Carbonif. Congress, Champaign, Illinois, p. 55-56.

Doveton, J.H., 1979, Numerical methods for the reconstruction of fossil material in three dimensions: *Geol. Mag.*, v. 116, no. 3, p. 215-226.

Doveton, J.H., 1980, Interactive log analysis with the KOALA system [Abs.]: Soc. Prof. Well Log Analysts, London Chapter, October, Abstracts vol., p. 00.

Doveton, J.H., 1980, Interactive log analysis with the KOALA system [Abs.]: Norwegian Petroleum Society, Stavanger, Norway, September.

Doveton, J.H., 1980, Petrophysical stratigraphy [Abs.]: SEPM Computer Technology Research Group Colloquium, Am. Assoc. Petroleum Geologists/Soc. Econ. Paleontologists and Mineralogists Joint Ann. Meeting, Denver, Colorado.

Doveton, J.H., 1981, Automated lithofacies mapping from wireline logs [Abs.]: *in* Proc. Canadian Well Logging Society, Calgary, Canada, April, Abstracts vol., p. 00.

Doveton, J.H., 1982, Petrophysical log interpretation, *in* **J.A. DeGraffenreid** (Ed.), *Time- and Space-Dependent Data in the Earth Sciences*: Series on Spatial Analysis no. 6, Kansas Geol. Survey, Lawrence, Kansas, p. 18-19.

Doveton, J.H., 1982, Review. *Computer Applications in the Earth Sciences: An Update of the 70s*, by D.F. Merriam (Ed.): *Geology*, v. 10, no. 4, p. 224.

Doveton, J.H., 1982, Review. *Nonparametric Geostatistics*, by S. Henley: *Bull. Am. Assoc. Petroleum Geologists*, v. 66, no. 10, p. 1651.

Doveton, J.H., 1983, Automated lithofacies analysis from well logs: *in* Proc. 12th Annual Geochautauqua, Univ. Kansas, Lawrence, Kansas, Abstracts vol., p. 00.

Doveton, J.H., 1984, Computers in log analysis in 1984: Control Data Canada Petroleum Seminar, Calgary, Canada, October.

Doveton, J.H., 1984, Review. *Quantitative Stratigraphic Correlation*, by ***J.M. Cubitt*** and ***R.A. Reyment*** (Eds.): *Bull. Am. Assoc. Petroleum Geologists*, v. 68, no. 9, p. 1226.

Doveton, J.H., 1985, Review. *Graphic Display of Two- and Three-Dimensional Markov Computer Models in Geology*, by Cunshan Lin, and ***J.W. Harbaugh***: *Bull. Am. Assoc. Petroleum Geologists*, v. 69, no. 5, p. 879.

Doveton, J.H., 1986, Log analysis of Arbuckle aquifer, *in* J.E. Carr, H.E. McGovern, and Tony Gogel, "Geohydrology of and potential for fluid disposal in the Arbuckle aquifer in Kansas": U.S. Geol. Survey Open-File Rept. no. 86-0491, p. 88-101.

Doveton, J.H., 1986, *Log Analysis of Subsurface Geology*: *Concepts and Computer Methods*: Wiley-Interscience, New York, 273 p.

Doveton, J.H., 1986, Review. *Open-Hole Log Analysis and Formation Evaluation*, by Richard M. Bateman: *Bull. Am. Assoc. Petroleum Geologists*, v. 70, no. 11, p. 1755.

Doveton, J.H., 1986, Review. *Pattern Recognition Problems in Geology and Paleontology*, by Ulf Bayer: *Bull. Am. Assoc. Petroleum Geologists*, v. 70, no. 1, p. 95.

Doveton, J.H., 1986, Review. *Well Logging for Physical Properties*, by Joseph R. Hearst and Philip H. Nelson: *Bull. Am. Assoc. Petroleum Geologists*, v. 70, no. 8, p. 1029.

Doveton, J.H., 1987, Computer-aided log analysis of subsurface geology, *in* L.H. Wickstrom (Ed.), *Computer-Aided Analysis of Geologic Data*: Ohio Geol. Society, Columbus, Ohio, p. 91-100.

Doveton, J.H., 1988, Automated well-log analysis and correlation: *Bull. Interstate Oil and Gas Compact Committee*, v. 2, no. 2, p. 94-98. Reprinted in: *The American Oil & Gas Reporter*, v. 32, no. 11, p. 27-21.

Doveton, J.H., 1988, Petrography, lithofacies and geochemistry from modern wireline logs in the Kansas subsurface [Abs.]: Kansas Geol. Society Meeting, November, Wichita, Kansas, Abstracts.

Doveton, J.H., 1989, Lithofacies and geochemical-facies profiles from modern wireline logs, New subsurface templates for sedimentary modeling, *in* E.K. Franseen and W.L. Watney (Eds.), "Sedimentary modeling: Computer simulation of depositional sequences": Subsurface Geology Series no. 12, Kansas Geol. Survey, Lawrence, Kansas, p. 55-56.

Doveton, J.H., 1989, Review. *Geostatistics and Petroleum Geology*, by Michael E. Hohn: *Bull. Am. Assoc. Petroleum Geologists*, v. 73, no. 9, p. 1136.

Doveton, J.H., 1989, Subsurface lithofacies mapping from geophysical logs in Kansas, *in* Steeples, D.W. (Ed.), *Geophysics in Kansas*: Kansas Geol. Survey Bull. 226, Lawrence, Kansas, p. 177-184.

Doveton, J.H., 1990, Review. *Geological Applications of Wireline Longs*, by A. Hurst, M.A. Lovell, and A.C. Morton (Eds.): *The Log Analyst*, v. 31, no. 6, p. 425.

Doveton, J.H., 1991, Geological applications of the spectral gamma-ray logging tool in Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 75, no. 8, p. 1394.

Doveton, J.H., 1991, Lithofacies and geochemical facies profiles from nuclear wire-line logs, New subsurface templates for sedimentary modeling, *in* E.K. Franseen, W.L. Watney, C.G.St.C. Kendall, and W. Ross (Eds.), "Sedimentary modeling: Computer simulations and methods for improving parameter definition": Kansas Geol. Survey Bull. 233, Lawrence, Kansas, p. 100-110.

Doveton, J.H., 1993, Wireline log analysis by computer: Computer Application Workshop, "PC Software for the Petroleum Industry," Technology Transfer Series 93-2, Energy Research Center, Lawrence, Kansas, p. 25-53.

Doveton, J.H., 1994, *Geologic Log Interpretation*, Short Course 29—Notes: SEPM, Tulsa, Oklahoma, 169 p.

Doveton, J.H., 1994, *Geological Log Analysis Using Computer Methods*: Am. Assoc. Petroleum Geologists, Computer Applications in Geology no. 2, Tulsa, Oklahoma, 169 p.

Doveton, J.H., 1994, Review. *Computer Modeling of Geological Surfaces and Volumes*, by D.E. Hamilton and T.A. Jones (Eds.): *The Log Analyst*,.v. 35, no. 3, p. 6.

Doveton, J.H., 1994, Wireline log analysis of aquifer properties in the Dakota Formation [Abs.]: Water and Energy Resources of the Dakota Aquifer Workshop and Clinic, April, Great Bend, Kansas.

Doveton, J.H., 1995, Theory and applications of vertical variability measures from Markov chain analysis, Chap. 6 *in* Jeffrey M. Yarus and Richard L. Chambers (Eds.), *Am. Assoc. Petroleum Geologists Computer Applications in Geology* no. 3, p. 55-64.

Doveton, J.H., 1996, Exploration and development log analysis using PC-based spreadsheet programming [Abs.]: Soc. Independent Prof. Earth Scientists (SIPES) National Convention, MONTH, Dallas, Texas.

Doveton, J.H., 1996, Formation evaluation methods in complex carbonates and clastic lithologies: Open-File Rept. 1996-59, Kansas Geol. Survey, Lawrence, Kansas, 90 p.

Doveton, J.H., 1996, Review. *Introduction to Geological Data Analysis*, by A.R.H. Swan, and M. Sandilands: *Jour. Geol. Education*, v. 44, p. 607-608.

Doveton, J.H., 1996, Review. *Practical Formation Evaluation*, by Robert C. Ransom: *The Log Analyst*,.v. 37, no. 5, p. 41.

Doveton, J.H., 1996, Short course on basic statistics for petrophysicists: Open-File Rept. 1996-60, Kansas Geol. Survey, Lawrence, Kansas, 152 p.

Doveton, J.H., 1997, Data analysis for petrophysicists: Open-File Rept. 1997-85, Kansas Geol. Survey, Lawrence, Kansas, 168 p.

Doveton, J.H., 1997, Logs to rocks: An historical overview [Abs.]: *The Log Analyst*, v. 38, no. 5, p. 77.

Doveton, J.H., 1997, Review. *Physical Properties of Rocks: Fudamentals and Principles of Petrophysics*, by Jürgen H. Schön: *The Log Analyst*,.v. 38, no. 1, p.12.

Doveton, J.H., 1998, Basic log analysis in Kansas, *in* PTTC, *Modern Techniques in Wireline Logging*: PTTC Manual, p. 1-74.

Doveton, J.H., 1998, Beyond the perfect martini: Teaching the mathematical geology of petrophysical logs *in* A. Buccianti, G. Nardi, and R. Potenza (Eds.), *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*, Part 1: De Frede Editore, Naples, Italy, p. 71-75.

Doveton, J.H., 1998, Dockum Group *in* D.L. Baars and Christopher G. Maples (Eds.), *Lexicon of Geologic Names of Kansas* [through 1995]: Kansas Geol. Survey Bull. 231, Lawrence, Kansas, p. 62-63.

Doveton, J.H., 1998, Morrison Formation *in* D.L. Baars and Christopher G. Maples (Eds.), *Lexicon of Geologic Names of Kansas* [through 1995]: Kansas Geol. Survey Bull. 231, Lawrence, Kansas, p. 163-164.

Doveton, J.H., 1998, Review. *Developments in Petrophysics*, by M.A. Lovell and ***P.K. Harvey*** (Eds.): *The Log Analyst*,.v. 39. no. 3, p. 76.

Doveton, J.H., 1999, Application of capillary pressure to log analysis: Open-File Rept. 1999-53, Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Doveton, J.H., 1999, Application of resistivity-porosity crossplot analysis to nuclear magnetic resonance logging data: Open-File Rept. 1999-51, Kansas Geol. Survey, Lawrence, Kansas, 16 p.

Doveton, J.H., 1999, Integrated petrophysical methods for the analysis of reservoir microarchitecture, a Kansas Chester Sandstone case study, *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geololgists Midcontinent Section Meeting, "Geoscience for the 21st Century": Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 91-101.

Doveton, J.H., 1999, Shaly sandstone log analysis: Conventional and Spreadsheet Optimization procedures: Open-File Rept. 1999-52, Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Doveton, J.H., 1999, Towards a virtual subsurface geology—Strategies for geological mapping from wireline logs [Abs.]: 3rd Meeting on Geological Applications of Wireline Logs, The Geol. Society, London, January 21, 1999.

Doveton, J.H., 2000, Spreadsheet log analysis of subsurface geology: *Compass*, v. 75, no. 2- 3, p. 57-67. [Chosen for inclusion in www.petroalert.info, a literature alerting service to the world-wide oil and gas community.]

Doveton, J.H., 2001, All models are wrong, but some models are useful: "Solving" the Simandoux equation: *in* Proc. International Assoc. Math. Geology Ann. Meeting, Cancún, Mexico, Session J [on CD-ROM; pdf file, 15 p.].

Doveton, J.H., 2001, Development of an Archie equation model for log analysis of Pennsylvanian oomoldic zones in Kansas: Open-File Rept. 2001- 67, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Doveton, J.H., 2001, Modeling vertical changes in reservoir pore-throat micro-architecture from petrophysical logs, Implications for petroleum geology and sedimentology, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation, Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 229-246.

Doveton, J.H., 2001, Review. *Statistical Prediction in Oil & Gas Exploration: A Non-Mathematical Guide Using Microsoft Excel*, by Richard Woodhouse: *Petrophysics*, v. 42, no. 2, p. 65.

Doveton, J.H., 2001, The log analysis yellow pages: An EXCEL 5 workbook of core and log petrophysical functions: Open-File Rept. 2001- 66, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Doveton, J.H., 2002, Dipmeter navigation of the location and orientation of a Cherokee sandstone reservoir: A Kansas case study [Abs.]: *in* Proc. Cherokee Symposium Workshop, MONTH, Oklahoma City, Oklahoma., p. 11.

Doveton, J.H., and Asquith, G., 1997, Revision of category 5A–Logging, *in* Julia A. Jackson (Ed.), *AGI Glossary of Geology*, 4th ed.: AGI, Alexandria, Virginia, p. 769.

Doveton, J.H., and ***Bornemann, E.***, 1981, Log normalization by trend surface area analysis: *Log Analyst*, v. 22, no. 4, p. 3-8.

Doveton, J.H., and **Cable, H.W.**, 1978, Matrix algebraic methods in the estimation of sedimentary lithologies from well logs: *in* 10th Intl. Sedimentol. Congress, July, Jerusalem, Israel, Abstracts, v. 1, p. 186.

Doveton, J.H., and **Cable, H.W.**, 1979, Fast matrix methods for the lithological interpretation of geophysical logs, *in* ***D. Gill*** and D.F. Merriam (Eds.), *Geomathematical and Petrophysical Studies in Sedimentology*: Computers & Geology no. 3, Pergamon Press, Oxford, U.K., p. 101-116.

Doveton, J.H., and **Cable, H.W.**, 1979, KOALA [Kansas On-line Automated Log Analysis]—Minicomputer log analysis system for geologists [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Houston, Texas, Abstracts vol., p. 77.

Doveton, J.H., and **Cable, H.W.**, 1979, KOALA minicomputer log analysis system for geologists [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 63, no. 3, p. 441.

Doveton, J.H., and **Cable, H.W.**, 1980, KOALA Kansas On-line Automated Log Analysis: Abcedarium and Flight Manual: Petrophysical Series no. 2, Kansas Geol. Survey, 190 p. [Software distributed commercially as TERRALOG and T-LOG.]

Doveton, J.H., and ***Chang, T.***, 1987, Latent facies mapping of the Morrison Formation (Jurassic) in Kansas [Abs.]: Kansas Acad. Sci. 119th Ann. Meeting, April, Wichita State Univ., Wichita, Kansas, Abstracts, v. 6, p. 13-14.

Doveton, J.H., and ***Chang, T.***, 1991, Latent facies mapping from binary geological data: *Jour. Geology*, v. 99, no. 2, p. 299-309.

Doveton, J.H., and ***Chang, T.***,1992, Latent facies analysis of the Morrison Formation (Jurassic) in Kansas from binary geological data [Abs.]: *in* Proc. SEPM 1992 Theme Meeting, Fort Collins, Colorado, Abstracts vol., p. 23.

Doveton, J.H., and **Collins, D.R.**, 1986, Images of underground geology using color theory applied to physical measurement [Abs.]: Visual Learning Group Meeting, November, Univ. Kansas, Lawrence, Kansas.

Doveton, J.H., and **Davis, J.C.**, 1992, Predictive statistical indicators of potential target reservoirs in West Siberia for enhanced oil production and regression models of oil production [*in* Dienes, L., Dobozi, I., and Radetzki, M., 1992, *Energy and Economic Reform in the Former Soviet Union: Implications for Production, Consumption and Exports, and the International Energy Markets*]: Open-File Rept. 1992-58, Kansas Geol. Survey, Lawrence, Kansas, 38 p.

Doveton, J.H., and **Davis, J.C.**, 1993, R.G.V. Eigen: Legendary father of Mathematical Geology, *in* **J.C. Davis** and ***U.C. Herzfeld*** (Eds.), *Computers in geology—25 years of progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 287-294.

Doveton, J.H., and Duff, P. McL. D., 1979, Passage-time characteristics of Pennsylvanian sequences in Illinois [Abs.]: 9th Intl. Carbonif. Congress, Champaign, Illinois, Abstracts vol., p. 56.

Doveton, J.H., and Duff, P. McL. D., 1984, Passage-time characteristics of Pennsylvanian sequences in Illinois: 9th Intl. Carbonif. Congress, *Compte Rendu*, v. 3, p. 599-604.

Doveton, J.H., and Merriam, D.F., 2001, Regional lithofacies and depositional environmental interpretation of the Morrison Formation (Upper Jurassic) in Kansas [Abs.]: Kansas Acad. Sci. 133rd Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 20, p. 25.

Doveton, J.H., and **Olea, R.A.**, 2001, Petroleum log analysis [bilingual, English and Spanish]: Open-File Rept. 2001-44, Kansas Geol. Survey, Lawrence, Kansas, 105 p.

Doveton, J.H., and Parsley, A.J., 1970, Experimental evaluation of trend surface distortions induced by inadequate data-point distributions: *Trans. Inst. Min. Metall.* [Sec. B: Appl. Earth Sci.], v. 79, p. B197-207.

Doveton, J.H., and Prensky, S.E., 1992, Geological applications of wireline logs—A synopsis of developments and trends: *The Log Analyst*, v.33, no.3, p. 286-303.

Doveton, J.H., and **Sampson, R.J.**, 1985, Three-dimensional trend mapping from wireline logs: NCGA 6th Ann. Conference Proc., vol. III, p. 866-868.

Doveton, J.H., and Skipper, K., 1974, Markov chain and substitutability analysis of a turbidite succession, Cloridorme Formation (Middle Ordovician), Gaspe, Quebec: *Canad. Jour. Earth Sci.*, v. 11, p. 472-488.

Doveton, J.H., and ***Zhu, Ke-an***, 1985, Three-dimensional trend mapping from well logs [Abs.]: *Math. Geology*, v. 17, no. 4, p. 485.

Doveton, J.H., Berendsen, P., ***Hoth***, ***Peer***, and Haug, D., 1994, Log analysis of Paleozoic ironstones in the U.S. Mid-Continent: A key to paleogeographic mapping: *Trans. Soc. Prof. Well Log Analysts*, 35th Ann. Logging Symposium, Paper ZZ, 17 p.

Doveton, J.H., Bohling, G.C., Guy, W.J., Watney, W.L., 1997, Well-log Analysis on a PC using the PfEFFER Spreadsheet Program: Computer Applications for the Petroleum Industry Short Course Manual: KUERC-PTTC, Univ. Kansas, Lawrence, Kansas, 57 p.

Doveton, J.H., Bullard, D.W., and ***Harvey***, ***P.K.***, 1974, Latent class analysis of gold concentration anomalies: Proc. XII International APCOM Symposium, Golden, Colorado, p. D28-40.

Doveton, J.H., Charpentier, R.R., and ***Metzger***, ***E.P.***, 1990, Lithofacies analysis of the Simpson Group in south-central Kansas: Petrophysical Series no. 5, Kansas Geol. Survey, Lawrence, Kansas, 34 p.

Doveton, J.H., Davis, J.C., and **Sampson, R.J.**, 1975, Notes on geostatistics: Am. Assoc. Petroleum Geologists/Geol. Soc. America Computer Applications Workshop, Syracuse, New York, 250 p.

Doveton, J.H., Davis, J.C., Gerhard, L.C., and Watney, W.L. [Kansas Geol. Survey Energy Research Center], 1991, Proposal. Development of an inductive classification of oil reservoirs for predicting performance history: Unsolicited Proposal, U.S. Dept. of Energy, 55 p., Appdx. [not funded]

Doveton, J.H., Ebanks, W.J., Jr., and **Conley, C.D.**, 1978, Integrated petrophysical and petrographic studies of sedimentary facies in some Cherokee sandstones of southeast Kansas [Abs.]: Geol Soc. America South-Central Section, Tulsa, Oklahoma, *Abstracts with Programs*, v. 10, no. 1, p. 4-5.

Doveton, J.H., ***Förster***, ***A.***, and Merriam, D.F., 1997, Predicting thermal conductivity from petrophysical logs: A Mid-Continent Paleozoic case study, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 212-217.

Doveton, J.H., ***Förster***, ***A.***, and Merriam, D.F., 2000, Estimation of heat-flow density from nuclear logs and drill-stem (DST) temperature data [Abs.], *in* Oklahoma Geol. Survey/U.S. Dept.Energy/Kansas Geol. Survey workshop, "Petroleum systems of sedimentary basins in the southern Midcontinent": Kansas Geol. Survey, Lawrence, Kansas, Abstracts vol., p. 19.

Doveton, J.H., ***Förster***, ***A.***, and Merriam, D.F., 2002, Estimation of heat-flow density from nuclear logs and drill-stem temperature data: *in* Proc. 2000 Symposium, "Petroleum Systems of Sedimentary Basins in the Southern Midcontinent," Oklahoma City, Oklahoma: Oklahoma Geol. Survey Circ. 106, p. 163-168.

Doveton, **J.H.**, ***Gill***, ***D.***, and **Tipper**, **J.C.**, 1976, Conodont distributions in the Upper Pennsylvanian of eastern Kansas: Binary pattern analyses and their paleoecological implications [Abs.]: Geol. Soc. America Ann. Meeting, Denver, Colorado, *Abstracts with Programs*, v. 8, no. 6, p. 842.

Doveton, **J.H.**, Guy, W.J., and Watney, W.L., 1997, PfEFFER—Log Analysis spreadsheet solutions for reservoir engineering and petroleum geology [Abs.]: *in* Proc. 12th Ann. TORP Conference, Univ. Kansas, Lawrence, Kansas, p. 85-90.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., 1997, The integration of pore measurements into log analysis pattern recognition procedures: Methods and examples [Abs.]: *in* Am. Assoc. Petroleum Geologists Ann. Meeting, Dallas, Texas, Abstracts vol., p. A29.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, and Bhattacharya, S., 1997, PfEFFER: The integrated analysis of wireline logs and reservoir data in a spreadsheet environment [Abs.]: *in* DOE Workshop, "Advanced Applications of Wireline Logging for Improved Oil Recovery," p. 137-150.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, and Ullah, S., 1994, Applications of computer spreadsheet programming for interactive Pickett plot petrofabrics analysis and mapping of hydrocarbon reservoirs [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 79, no. 9, p. 1402.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, and Ullah, S., 1995, Application of computer spreadsheet programming for interactive Pickett plot petrofacies analysis and mapping of hydrocarbon reservoirs [Abs.], *in* Am. Assoc. Petroleum Geologists, Mid-Continent Meeting, Tulsa, Oklahoma: *Bull. Am. Assoc. Petroleum Geologists*, v. 79, no. 9, p. 1402.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, Ullah, S., and Adkins-Heljeson, D., 1996, Log analysis of petrofacies and flow-units with microcomputer spreadsheet software, *in* D.L. Swindler and C.P. Williams (Eds.), Trans. Am. Assoc. Petroleum Geologists Midcontinent Section Meeting, "Technology Transfer, Crossroads to the Future": Tulsa Geol. So., Tulsa, Oklahoma,.p. 224-233.

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, Ullah, S., and Adkins-Heljeson, D., 1996, PfEFFER 1.0, 1.1, an EXCEL 5.0 add-in program. [Software distributed by Kansas Geol. Survey, Lawrence, Kansas.]

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, Ullah, S., and Adkins-Heljeson, D., 1998, PfEFFER 2.0, an EXCEL 97 add-in program (1998). [Software distributed by Kansas Geol. Survey, Lawrence, Kansas.]

Doveton, **J.H.**, Guy, W.J., Watney, W.L., **Bohling**, **G.C.**, Ullah, S., and Adkins-Heljeson, D., 1995, PfEFFER (Petrofacies Evaluation of Formations For Engineering Reservoirs) 1.0 manual: Open-File Rept. 1995-29, Kansas Geol. Survey, Lawrence, Kansas, 117 p.

Doveton, J.H., Macfarlane, P.A., and Coble, G., 1988, Clay-typing and recognition of depositional environments from spectral gamma ray log analysis of a Permian-Cretaceous sequence in central Kansas [Abs.]: Kansas Acad. Sci. 120th Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 7, p. 9.

Doveton, J.H., Martini, I.P., and Sagri, M., 1976, Spectral and Markovian analysis of bed thickness and lithologic periodicities in turbidite successions of the Monte Antola Formation, Northern Apennines, Italy: Am. Assoc. Petroleum Geologists Ann. Meeting, New Orleans, Abstracts vol., p. 59-60.

Doveton, J.H., Watney, W.L., and Guy, W.J., 1996, Integrated analyses of reservoir petrofacies in platform carbonates of Kansas [Abs.]: *in* Workship on Techniques and case studies—Platform carbonates in the southern Midcontinent, Norman, Oklahoma, Abstract vol., p. 00.

Doveton, J.H., Watney, W.L., and Guy, W.J., 1997, Petrofacies Analysis—The petrophysical tool for geologic/engineering reservoir characterization: *in* Proc. 4th International Reservoir Characterization Conference, p. 99-114.

Doveton, J.H., Watney, W.L., and Guy, W.J., 2000, Integrated analyses of reservoir petrofacies in platform carbonates of Kansas: Techniques and case studies, *in* K.S. Johnson (Ed.), Proc. 1996 symposium, "Platform Carbonates in the Southern Midcontinent": Oklahoma Geol. Survey Circ. 101, p. 223-225.

Doveton, J.H., Watney, W.L., **Bohling, G.C.**, Battacharya, S., and Guy, W.J., 1998, Software Demonstration Workshop—PfEFFER Version 2.0 and PfEFFER Pro: U.S. Dept. Energy National Petroleum Technology Office, Tulsa, Oklahoma.

Doveton, J.H., Watney, W.L., **Bohling, G.C.**, Battacharya, S., and Guy, W.J., 1998, PfEFFER Software Demonstration Workshop: Phillips Petroleum Company, Odessa, Texas.

Doveton, J.H., ***Zhu, Ke-An***, and **Davis, J.C.**, 1984, Three-dimensional trend mapping using gamma-ray well logs, Simpson Group, south-central Kansas: *Bull. Am. Assoc. Petroleum Geologists*, v. 68, no. 6, p. 690-703.

Ducastaing, Michel, and ***Harbaugh, J.W.***, 1982, Forecasting future oil field sizes through statistical analysis of historical changes in oil field populations, *in* I. Saul (Ed.), *Oil and Gas Supply Modeling*: U.S. National Bureau of Standards, Special Publication no. 631, p. 200-256.

Erazo, Ricardo M., and ***Vieytes, Eduardo H.***, 1979, Probabilistic study of hydrocarbon occurrence in the Magellan Strait area, Chile: Unpub. Rept., KGS/ENAP Project 1978-1979, Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 31 p., 3 plates.

Erez, J., and ***Gill, D.***, 1977, Multivariate analysis of biogenic constituents in Recent sediments off Ras Burka, Gulf of Elat, Red Sea: *Math. Geology*, v. 9, no. 1, p 77-98.

Eschner, T.R., ***Robinson, J.E.***, and Merriam, D.F., 1979, Comparison of spatially filtered geologic maps: *Bull. Geol. Soc. America*, v. 90, no. 1, pts. 1-2, p. 6-7, 104-134.

Esler, J.E., Smith, P.F., and **Davis, J.C.**, 1968, KWIKR8, a FORTRAN IV program for multiple regression and geologic trend analysis: Computer Contribution 28, Kansas Geol. Survey, Lawrence, Kansas, 31 p.

Feldman, H., Hopkins, J.F., Feltz, A., **Doveton, J.H., Collins, D.R.**, and Carr, T.R., 1994, Color image transforms of wireline logs: a seismic approach to petrophysical sequence stratigraphy [Abs.]: Landmark Users Conference.

Feldman, H.R., Hopkins, J.F., **Collins, D.R., Doveton, J.H.**, and Macfarlane, P.A., 1995, Stratigraphic architecture of the Dakota aquifer (Cretaceous) in Kansas [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 4, p. 28.

Feldman, H.R., Hopkins, J.F., Feltz, A.J., **Doveton, J.H., Collins, D.R.**, Carr, T.R., 1994, Color image transforms of wireline logs: A seismic approach to petrophysical sequence stratigraphy [Abs.]: Landmark presentation.

Ferguson, C.C., 1983, Composite flow laws derived from high temperature experimental data on limestone and marble: *Tectonophysics*, v. 95, p. 253-266.

Ferguson, C.C., 1984, A probabilistic model for the persistence of early planar fabrics in polydeformed pelitic schists: *Jour. Structural Geol.*, v. 6, p. 135-146.

Ferguson, C.C., 1984, Review: *The Variscan Fold Belt in the British Isles*, by Adam Hilger, 1983: *Mercian Geologist*, p. 184.

Ferguson, C.C., and Harte, B., 1983, Textural patterns at porphyroblast margins and their use in determining the time relations of deformation and crystallization, *in* "Fabric of Ductile Strain," *Benchmark Papers in Geology*, v. 75, p. 180-195 (reprinted from *Geol. Mag.*, v. 112).

Ferguson, C.C., and Lloyd, G.E., 1984, Extension analysis of stretched belemnites: A comparison of methods: *Tectonophysics*, v. 101, p. 199-206.

Feroci, M., **Davis, J.C.**, Miller, R.D, and Xia, Jianghai, 1997, Zeandale seismic project: Open-File Rept. 1997-68, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Fishburn, M.D., and **Davis, J.C.**, 1962, Geology of the celestite deposits of Brown County, Kansas: *Transactions*, Kansas Acad. Sci. 94th Ann. Meeting, v. 65, no. 1, p. 47-60.

Förster, A., and Merriam, D.F. (Eds.), 1996, *Geologic Modeling and Mapping*: Plenum Press, New York, 334 p.

Förster, A., and Merriam, D.F. (Eds.), 1999, *Geothermics in Basin Analysis*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, 241 p.

Förster, A., and Merriam, D.F., 1993, Geothermal field interpretation in south-central Kansas for parts of the Nemaha Anticline and flanking Cherokee and Sedgwick basins: *Basin Research*, v. 5, p. 213-234.

Förster, A., and Merriam, D.F., 1993, Heat-flow changes and relation to fluid flow—An example from the Midcontinent, USA, *in* Proc. Geofluids '93, International Conf. on Fluid Evolution, Migration and Interaction in Rocks, Torquay, England: Geol. Soc. London Publishing House, Bath,U.K., p. 103-106.

Förster, A., and Merriam, D.F., 1993, Preliminary temperature field interpretation in the southern part of the Central North American Rift System (CNARS) in Kansas [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Annual Meeting, Abstracts, v. 2, p. 103.

Förster, A., and Merriam, D.F., 1993, Use of bottomhole temperature data in recognition of geothermal anomalies in a cratonic setting [Abs.]: *in* Proc. Intl. Symp., "New Developments in Geothermal Measurements in Boreholes," Klein Köris, Germany, Abstracts vol., p. 21.

Förster, A., and Merriam, D.F., 1994, Beziehung zwischen regionalem Fluidfluss und Änderungen derWärmestromdichte - ein Beispiel zur Bewertung des geothermischen Potentials in Plattformsedimenten, Westkansas, USA [Abs.]: Geothermische Vereinigung Deutschlands, 3. Fachtagung, Schwerin, Germany, Tagungsband, S. 313.

Förster, A., and Merriam, D.F., 1994, Burial depth, missing stratigraphic section, and geothermics in the Cherokee Basin of the Midcontinent [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 3, p. 150-151.

Förster, A., and Merriam, D.F., 1994, Some aspects of geothermics in basin analysis: *Math. Geology*, v. 39, no. 1, p. 134-139.

Förster, A., and Merriam, D.F., 1995, A bottom-hole temperature analysis in the American Midcontinent (Kansas): Implications of the applicability of BHTs in geothermal studies: *in* Proc. Intl. Geothermal Assoc. World Geothermal Congress, Florence, Italy, v. 2, p. 777-782.

Förster, A., and Merriam, D.F., 1996, "Plains-type folds" (compactional features) and their geothermal fingerprint [Abs.]: *in* Proc. Geol. Vereinigung e.V. and Koninklijk Nederlands Geol. Mijnbouwkundig Genootschap, Amsterdam, The Netherlands, *Terra Nostra Abstracts*, p. 8.

Förster, A., and Merriam, D.F., 1997, Analyzing low-amplitude folds in simple geological environments, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 331-336

Förster, A., and Merriam, D.F., 1997, Heat flow in the Cretaceous of northwestern Kansas and implications for regional hydrology, *in* L. Brosius (Ed.), Current Research in Earth Sciences, 1997: Kansas Geol. Survey Bull. 240, pt. 1, Lawrence, Kansas, p. 1-11. [Available online: http://www.kgs.ukans.edu/Current/1997 /forster/forster1.html.]

Förster, A., and Merriam, D.F., 1998, Problems of borehole bottom-hole temperature (BHTs) and their treatment for determining heat flow [Abs.], *in* A. Buccianti, G. Nardi, and R. Potenza (Eds.), *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*, Part 2: De Frede Editore, Naples, Italy, p. 766.

Förster, A., and Merriam, D.F., 1999, Problems and potential of industrial temperature data from a cratonic basin environment, *in* ***A. Förster*** and D.F. Merriam (Eds.), *Geothermics in Basin Analysis*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 35-39.

Förster, A., and Merriam, D.F., 1999, Subsurface temperature as a passkey to mature basin exploration [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, San Antonio, Texas, Abstracts, v. 8, p. A42-A43.

Förster, A., and Merriam, D.F., 1999, Subsurface temperature as a passkey to mature basin exploration [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 8, p. 42-43.

Förster, A., **Doveton, J.H.**, Merriam, D.F., and Blackwell, D.D., 1998, *In situ* thermal conductivity and its importance for heat-flow studies: An example from a sedimentary environment [Abs.]: European Geophysical Society, *Annales Geophysicae*, Supplement 1, v. 16, p. C269.

Förster, A., Merriam, D.F., and Brower, J.C., 1993, Relationship of geological and geothermal field properties, Midcontinent area, USA: An example [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/Sociedad Venezolana de Geologos Joint Meeting, Caracas, Venezuela, *Bull. Am. Assoc. Petroleum Geologists*, v. 77, no. 2, p. 318-319.

Förster, A., Merriam, D.F., and Brower, J.C., 1993, Relationship of geological and geothermal field properties: Midcontinent area, USA, An example: *Math. Geology*, v. 25, no. 7, p. 937-947.

Förster, A., Merriam, D.F., and **Davis, J.C.**, 1995, Use of bottom hole temperatures and drillstem-test temperatures for basin analysis [Abs.]: International Union Geodesy and Geophysics, 21st General Assembly, Boulder, Colorado, *Program and Abstracts*, p. A–416.

Förster, A., Merriam, D.F., and **Davis, J.C.**, 1996, Statistical and spatial analysis of geothermal and geological data for basin analysis [Abs.]: *in* Proc. 30th Intl. Geol. Congress, Beijing, Abstracts, v. 3, p. 497.

Förster, A., Merriam, D.F., and **Davis, J.C.**, 1996, Statistical analysis of some bottom-hole temperature (BHT) correction factors for the Cherokee Basin, southeastern Kansas, *in* D.L. Swindler and C.P. Williams (Eds.), Trans. 1995 Am. Assoc. Petroleum Geologists Midcontinent Section Meeting, "Technology transfer, Crossroads to the future": Tulsa Geol. Soc., Tulsa, Oklahoma, p. 3-9.

Förster, A., Merriam, D.F., and **Davis, J.C.**, 1997, Spatial analysis of temperature (BHT/DST) data and consequences for heat-flow determination in sedimentary basins: International Jour. of Earth Sciences, *Geologische Rundschau*,: Springer-Verlag, Berlin, v. 86, no. 2, p. 252-261.

Förster, A., Merriam, D.F., and **Doveton, J.H.**, 1997, Prediction of thermal conductivity from wireline log measurements in Mid-Continent Paleozoic rocks [Abs.]: Canadian Soc. Petroleum Geologists/SEPM Joint Ann. Meeting, Calgary, *Program with Abstracts*, p. 100.

Förster, A., Merriam, D.F., and ***Hoth, Peer***, 1997, Geohistory and thermal maturation in the Cherokee Basin (Midcontinent, USA) [Abs.]: *in* Proc. Geologische Vereinigung e.V., 87th Ann. Meeting, Jülich, Germany, *Terra Nostra Abstracts*, v. 97, no. 1, p. 25.

Förster, A., Merriam, D.F., and ***Hoth, Peer***, 1998, Geohistory and thermal maturation in the Cherokee basin (Mid-continent, U.S.A.), Results from modeling: *Bull. Am. Assoc. Petroleum Geologists*, v. 82, no. 9, p. 1673-1693.

Förster, A., Merriam, D.F., and **Sampson, R.J.**, 1994, Mineral springs and well waters of eastern Kansas and their relation to the geothermal field: *Transactions*, Kansas Acad. Sci. 126th Ann. Meeting, Washburn Univ., Topeka, Kansas, v. 97, no. 1-2, p. 50-63.

Förster, A., Merriam, D.F., and Watney, W.L., 2000, Temperature analysis in the mature hydrocarbon province of Kansas, utilizing a large database of petrophysical well logs [Abs.], *in* "Petroleum systems of sedimentary, basins in the southern midcontinent, A workshop: Oklahoma Geol. Survey/U.S. Dept. Energy/Kansas Geol. Survey, Lawrence, Kansas, p. 28.

Förster, A., Merriam, D.F., and Watney, W.L., 2001, Temperature analysis in the mature hydrocarbon province of Kansas utilizing a large database of well-completion histories, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation—Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 285-301.

Förster, A., Schrötter, J., and Merriam, D.F., 1996, Application of optical-fibre temperature logging (DTS) in monitoring subsurface transient temperature changes resulting from fluid flow [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Annual Meeting, Abstracts, v. 5, p. 48.

Förster, A., Schrötter, J., Merriam, D.F., and Blackwell, D.D., 1997, Application of optical-fibre temperature logging—An example in a sedimentary environment: *Geophysics*, v. 62, no. 4, p. 1107-1113.

Förster, H.-J., and **Davis, J.C.**, 2000, Determination of geochemical affinities of granitic rocks from the Aue-Schwarzenberg zone (Erzgebirge, Germany) by Multivariate Statistics: *Neues Jahrb. Mineralogie und Petrologie*, v. 2000, no. 12, p. 529-542.

Förster, H.-J., **Davis, J.C.**, Tischendorf, G., and Seltman, R., 1999, Multivariate analysis of Erzgebirge granite and rhyolite composition: Implications for classification of granites and their genetic relations: *Computers & Geosciences*, v. 25, p. 533-546.

Franks, P.C., 1969, Synaeresis features and genesis of sidserite concretions, Kiowa Formation (Early Cretaceous), north-central Kansas: *Jour. Sed. Petrology*, v. 39, no. 2, p. 799-803.

Geological Survey of Austria, *et al.* [***Hausberger, G.***, **Davis, J.C.**, **Ross, J.A.**, ***Chang, T.***, **Brownrigg, R.**] 1990, Generalized geologic map, southwestern part of the Bohemian Massif, Austria, scale 1:50,000: Kansas Geol. Survey, Lawrence, Kansas.

Georgakakos, A.P., Kitanidis, P.K., Loaiciga, H.A., **Olea, R.A.**, Rouhani, S., and Yates, S.R., 1990, Review of geostatistics in geohydrology, I. Basic Concepts, and II. Applications: ASCE, *Jour. Hydraulic Engineering*, v. 116, no. 5, p. 613-632; p. 633-658.

Gerhard, L.C., Anderson, S., **Olea, R.A**, and Roberson, L., 1995, Western Cold Turkey Creek anomaly: a meteorite impact crater—Not!: *in* Proc. 7th International Williston Basin Symposium, p. 179-186, 2 plates.

Gerhard, L.C., Brady, L. Watney, W.L., and **Collins, D.R.**, 1992, Fossil energy resources in Kansas: Open-File Rept. 1992-9, Kansas Geol. Survey, Lawrence, Kansas, 53 p.

Gill, D., 1976, Source-reservoir-seal relations in productive evaporite-encased reef reservoirs: *Bull. Am. Assoc. Petroleum Geologists*, v. 60, p. 674.

Gill, D., 1977, Salina A-1 sabkha cycles and the late Silurian paleogeography of the Michigan basin: *Jour. Sed. Petrology*, v. 47, no. 3, p. 971-1009.

Gill, D., 1978, Classification of Recent Bahamian carbonate sediments by association analysis: *Geology*, v. 00, no. 00, p. 00.

Gill, D., and Merriam, D.F. (Eds.), 1979, *Geomathematical and Petrophysical Studies in Sedimentology*: Computers and Geology no. 3, Pergamon Press, Oxford, U.K., 267 p.

Gill, D., and **Tipper, J.C.**, 1976, Adequacy of presence-or-absence data for numerical classification of multivariate geological populations [Abs.]: Geol. Soc. America Ann. Meeting, Denver, Colorado, *Abstracts with Programs*, v. 8, no. 6, p. 885.

Gill, D., and **Tipper, J.C.**, 1978, The adequacy of non-metric data in geology: Tests using a divisive-omnithetic clustering technique: *Jour. Geology*, v. 86, no. 2, p. 241-259.

Gill, D., Boehm, S., and Erez, J., 1976, ASSOCA: FORTRAN IV program for Williams and Lambert association analysis with printed dendrograms: *Computers & Geosciences*, v. 2, no. 2, p. 219-247.

Gill, D., Boehm, S., Beylin, J., Frenkel, Y., and Rosental, E., 1976, Design of geological data systems for developing nations: *in* Proc. 25th Intl. Geol. Congress, Sydney, Australia, Abstracts, v. 2, p. 624-625.

Gill, D., Boehm, S., Beylin, J., Frenkel, Y., and Rosental, E., 1977, Design of geological data systems for developing nations: *Math. Geology*, v. 9, no. 2, p. 145-157.

Gill, D., *et al.*, 1993, Information management and mapping system for subsurface stratigraphic analysis, *in* **J.C. Davis** and ***U.C. Herzfeld*** (Eds.), *Computers in Geology–25 Years of Progress*: Studies in Math. Geology no. 5, Oxford University Press, New York, p. 113–119.

Green, D.W., **Davis, J.C.**, Preston, F.W., and **Conley, C.D.**, 1972, Prediction of reservoir fluid flow properties and their spatial variation: 2nd Semi-Ann. Rept. to American Petroleum Institute, Research Project no. 131: KU Center for Research, Inc./Kansas Geol. Survey, Lawrence, Kansas, 24 p.

Green, D.W., **Merriam, D.F.**, Nandan, B., and Rosenwald, G.W., 1971, Some recent advances in methods of oil and gas reserves estimates: *in* Proc. 8th World Petroleum Congress, Moscow, v. 3, p. 177.

Green, D.W., Swift, G.W., Willhite, G.P., **Conley, C.D.**, Preston, F.W., Bishop, K.A., and **Davis, J.C.**, 1972, Fluid flow in porous media and physical properties of porous media: First Ann. Rept. to Marathon Oil Co. on Projects Carried Out Under 3-Yr. Res. Grant, Univ. Kansas, 71 p.

Green, D.W., Swift, G.W., Willhite, G.P., **Conley, C.D.**, Preston, F.W., Bishop, K.A., and **Davis, J.C.**, 1973, Fluid flow in porous media and physical properties of porous media: 2nd Ann. Rept. to Marathon Oil Co. on Projects Carried Out Under 3-Yr. Res. Grant, Univ. Kansas, 55 p.

Grender, G.C., 1976, TOPO III: A FORTRAN program for terrain analysis: *Computers & Geosciences*, v. 2, p. 195-209.

Grender, G.C., and Rapoport, L.A., 1978, A computerized oil and gas exploration data base and its relation to long-range energy-supply modelling: *in* **J.C. Davis** and S. Levi de Lopez (Eds.), *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis, Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, p. 162-167.

Grender, G.C., and Rapoport, L.A., 1979, The impact of assumptions about oil exploration on projections of long-range energy supplies in the United States: *Math. Geology* OR *Computers & Geosciences*??

Grender*, *G.C., Rapoport, L.A., and Vinkovetsky, Y., 1978, Analysis of oilfield distributions for sedimentary basins of United States [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 62, p. 518.

Griffiths*, *J.C., 1966, Application of discriminant functions as a classification tool in the geosciences, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, p. 48-52.

Griffiths*, *J.C., 1967, Unit regional value concept and its application to Kansas [Abs.]: *Shale Shaker*, v. 18, no. 1, p. 13.

Griffiths*, *J.C., 1967, Unit regional value concept and its application to Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 51, no. 8, p. 1688.

Griffiths*, *J.C., 1968, The unit regional value concept and its application to Kansas, *in* Kansas Geol. Survey/Kansas Dept. Economic Development Forum on Long-range Planning for Kansas Mineral Resource Development: Kansas Dept. Economic Development, Planning for Development Rept. no. 23, p. 16-21.

Griffiths*, *J.C., 1969, Cybernetics-geomathematics interaction: Geol. Soc. America, Special Paper 146, p. 87-94.

Griffiths*, *J.C., 1969, Unit regional value concept and its application to Kansas: Special Dist. Pub. 38, Kansas Geol. Survey, Lawrence, Kansas, 48 p.

Griffiths*, *J.C., 1970, Current trends in Geomathematics: *Earth Sci. Review*, no. 6, p. 31-49.

Griffiths*, *J.C., 1973, Review [publisher's]. *Statistics and Data Analysis in Geology*, by John C. Davis, 550 p.: John Wiley & Sons, New York.

Griffiths*, *J.C., and ***Ondrick*, *C.W.***, 1968, Sampling a geological population: Computer Contribution 30, Kansas Geol. Survey, Lawrence, Kansas, 53 p.

Griffiths*, *J.C., and ***Ondrick*, *C.W.***, 1969, Modelling the petrology of detrital sediments, *in* **D.F. Merriam** (Ed.), *Computer Applications in the Earth Sciences*: Plenum Press, New York, p. 73-97.

Griffiths*, *J.C., and ***Ondrick*, *C.W.***, 1970, Structure by sampling in the geosciences, *in* G.P. Patil (Ed.), *Random Counts in Scientific Work, Vol. 3—Random Counts in Physical Sciences, Geoscience and Business*: The Penn State Statistics Series, Penn State Univ. Press, University Park, Pennsylvania, p. 31-49.

Griffiths*, *J.C., Koch, G.S., Jr., Meeves, H., and Hornbaker, A., 1965, Estimating regional unit value: *in* Proc. Mineral Industries Seminar, "Economic Analysis in the Mineral Industries," Kansas Geol. Survey/Univ. Kansas, October, Lawrence, Kansas, p. 26-101.

Grisafe, D.A., Boyd, A., **Ross, J.A.**, Beene, D.L., and Wong, J.C., 1990, Abandoned Pits and Quarries in Kansas, Map Series M-24, Kansas Geol. Survey, Lawrence, Kansas.

Guy, W.J., and **Doveton, J.H.**, 1993, New interpretation strategies for predicting oil productivity using extensions of classic log analysis techniques: *in* Proc. Reservoir Description Workshop, "Application of Underutilized Technologies": Technology Transfer Series 93-1, Energy Research Center, Kansas Geol. Survey, Lawrence, Kansas, p. 59-80.

Guy, W.J., and **Doveton, J.H.**, 1994, Water-quality determination by the use of classic wireline log analysis techniques [Abs.]: Water and Energy Resources of the Dakota Aquifer Workshop and Clinic, April, Great Bend, Kansas.

Guy, W.J., Byrnes, A.P., **Doveton, J.H.**, and Franseen, E.K., 1998, Influence of lithology and pore geometry on NMR prediction of permeability and effective porosity in Mississipian carbonates, Kansas [Abs.]: Am. Assoc. Petroleum Geologists Annual Meeting, Salt Lake City, *Expanded Abstracts*, p. 157 on CD-ROM.

Guy, W.J., Byrnes, A.P., **Doveton, J.H.**, and Franseen, E.K., 1999, Prediction of effective porosity and permeability in Mississippian carbonates [Abs.], *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geologists, Midcontinent Section Meeting, "Geoscience for the 21st Century," Wichita, Kansas: Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 103

Guy, W.J., Byrnes, A.P., **Doveton, J.H.**, and Franseen, E.K., 1999, Prediction of effective porosity and permeability in Mississippian carbonates [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1198.

Guy, W.J., **Doveton, J.H.**, Watney, W.L., Carr, T.R., and Bhattacharya, S., 1996, Reservoir characterization utilizing a low-cost resistivity-porosity crossplot and an interactive spreadsheet: Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, San Diego, California, Abstracts v. 5, p. 58.

Hagens, A., and **Doveton, J.H.**, 1991, Application of a simple cerebellar model to geologic surface mapping: *Computers & Geosciences*, v. 17, no. 4, p. 561-567.

Hambleton, W.W., **Davis, J.C.**, and **Doveton, J.H.**, 1974, Estimating exploration potential, *in* K.H. Crandal and ***J.W. Harbaugh*** (Convenors), "Methods of estimating the volume of undiscovered oil and gas resources": Am. Assoc. Petroleum Geologists Research Symposium, Stanford University, Stanford, California, p. 366-389.

Hambleton, W.W., **Davis, J.C.**, and **Doveton, J.H.**, 1975 [Reprint], Estimating exploration potential, *in* J. Haun (Ed.), *Methods of Estimating the Volume of Undiscovered Oil and Gas Resources*: Am. Assoc. Petroleum Geologists, Studies in Geology no. 1, p. 171-185.

Hanna, M.S., and **Chang, T.**, 1990, On graphically representing the confidence region for an unknown rotation in three dimensions: *Computers & Geosciences*, v. 16, no. 2, p. 163-194.

Hanna, M.S., **Davis, J.C., Olea, R.A.**, and ***Harff, J.*** [Kansas Geol. Survey/Univ. Kansas Mathematics Dept., U.S.A./GeoForschungs Zentrum Potsdam, Germany], 1991, Proposal. Collaborative Research in Geosciences, Geography and Mathematical Sciences: Improving dynamic models of geological basins by using regionalization and finite element techniques: U.S. National Science Foundation, 37 p. [not funded]

Harbaugh, J.W., 1962, Geologic guide to Pennsylvanian marine banks, southeast Kansas, *in* **D.F. Merriam**, "Geoeconomics of the Pennsylvanian marine banks in southeast Kansas": Guidebook 27th Ann. Field Conf., Kansas Geol. Society, Wichita, Kansas, p. 13-67.

Harbaugh, J.W., 1963, BALGOL program for trend-surface mapping using an IBM 7090 computer: Special Dist. Pub. 3, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

Harbaugh, J.W., 1964, A computer method for four-variable trend analysis illustrated by a study of oil-gravity variations in southeastern Kansas: Kansas Geol. Survey Bull. 171, Lawrence, Kansas, 58 p.

Harbaugh, J.W., 1964, BALGOL programs for calculation of distance coefficients and correlation coefficients using an IBM 7090 computer: Special Dist. Pub. 9, Kansas Geol. Survey, Lawrence, Kansas, 32 p.

Harbaugh, J.W., 1964, Significance of marine banks in southeastern Kansas in interpreting cyclic Pennsylvanian sediments, *in* **D.F. Merriam** (Ed.), Symposium on cyclic sedimentation: Kansas Geol. Survey Bull. 169, Lawrence, Kansas, p. 199-203.

Harbaugh, J.W., 1964, Use of factor analysis in recognizing facies boundaries [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 48, no. 4, p. 529.

Harbaugh, J.W., 1965, A computer method for four-variable trend analysis illustrated by study of oil-gravity variations in southeastern Kansas: Kansas Geol. Survey Bull. 171, 58 p.

Harbaugh, J.W., 1966, Classification in quantitative oil-exploration decision making, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, 57-63.

Harbaugh, J.W., 1966, Mathematical simulation of marine sedimentation with IBM 7090/94 computers: Computer Contribution 1, Kansas Geol. Survey, Lawrence, Kansas, 52 p.

Harbaugh, J.W., 1967, Computer simulation as an experimental tool in geology and paleontology, *in* Curt Teichert and E.L. Yochelson (Eds.), Essays in Paleontology and Stratigraphy, R.C. Moore Commemorative Volume: Univ. Kansas, Dept. Geology Special Publication no. 2, Lawrence, Kansas, p. 368-389.

Harbaugh, J.W., 1967, Computer simulation of petroleum accumulation in marine sediments: *in* Proc. 7th World Petroleum Congress, Mexico City, 1967, v. 2, p. 625-632.

Harbaugh, J.W., 1968, A state-orientated decision-making system, Mineral resource development, *in* Kansas Geol. Survey/Kansas Dept. Economic Development, "Forum on long range planning for Kansas": KDED Planning for Development, Rept. no. 23, p. 22-28.

Harbaugh, J.W., 1972, The Kansas Oil Exploration (KOX) Decision System: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 48 p.

Harbaugh, J.W., 1977, Integrated oil exploration decision systems: *Math. Geology*, v. 9, no. 4, p. 441-449.

Harbaugh, J.W., 1981, Regional mineral and fuel resource forecasting—A major challenge and opportunity for mathematical geologists, in D.F. Merriam (Ed.), *Computer Applications in the Earth Sciences—An Update of the 70's*: Plenum Press, New York, p. 169-178.

Harbaugh, J.W., and Bonham-Carter, Graeme, 1970, *Computer Simulation in Geology*: Wiley-Interscience, New York, 575 p.

Harbaugh, J.W., and Davie, William, Jr., 1964, Upper Pennsylvanian calcareous rocks cored in two wells in Rawlins and Stafford counties, Kansas: Kansas Geol. Survey Bull. 170, pt. 6, Lawrence, Kansas, 18 p.

Harbaugh, J.W., and **Davis, J.C.**, 1979, Statistical procedures for tract evaluation and estimation of petroleum potential in OCS regions—Preproposal: U.S. Geol. Survey, Conservation Div., Reston, Virginia.

Harbaugh, J.W., and **Davis, J.C.**, 1990, *Risk Analysis in Oil Exploration*©—Including RISKSTAT (A Computer Program for Statistical Calculations in Petroleum Risk Assessment, by Chris Murray) and EXSIM (An Exploration Simulation, by Johannes Wendebourg): Marathon Oil Co., Littleton, Colorado, 289 p.

Harbaugh, J.W., and **Demirmen, F.**, 1964, Application of factor analysis to petrologic variations of Americus Limestone (Lower Permian), Kansas and Oklahoma: Special Dist. Pub. 15, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

Harbaugh, J.W., and Ducastaing, Michel, 1981, Historical changes in oilfield populations as a method of forecasting field sizes of undiscovered populations—A comparison of Kansas, Wyoming, and California: Kansas Geol. Survey, Lawrence, Kansas, Subsurface Geology Series no. 5, 56 p.

Harbaugh, J.W., and **Merriam, D.F.**, 1963, Computer helps map oil structures: *Oil and Gas Jour.*, v. 61, no. 47, p. 00.

Harbaugh, J.W., and **Merriam, D.F.**, 1968, *Computer Applications in Stratigraphic Analysis*: John Wiley & Sons, New York, 282 p.

Harbaugh, ***J.W.***, and ***Prelat***, ***A.***, 1973, Research in oil exploration decision-making, estimation of wildcat well outcome probabilities, *in* 10th Intl. Symposium on the Application of Computer Methods in the Mineral Industry: South African Inst. Mining and Metallurgy, Johannesburg, South Africa, p. 83-90.

Harbaugh, ***J.W.***, and Preston, F.W., 1966, Fourier series analysis in Geology [Abs.], *in* Univ. Arizona School Mines, "Symposium on Computers and Computer Applications in Mining and Exploration," p. R1-R46. [Reprinted in B.J. Berry and D.F. Marble (Eds.), 1968, *Spatial Analysis, A Reader in Statistical Geography*: Prentice-Hall, Englewood Cliffs, New Jersey.]

Harbaugh, ***J.W.***, and ***Sackin***, ***M.J.***, 1968, FORTRAN IV program for harmonic trend analysis using double Fourier series and regularly gridded data for the GE 625 computer: Computer Contribution 29, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

Harbaugh, ***J.W.***, and **Wahlstedt**, **W.J.**, 1967, FORTRAN IV program for mathematical simulation of marine sedimentation with IBM 7040 or 7094 computers: Computer Contribution 9, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

Harbaugh, ***J.W.***, and Wendebourg, J., 1993, Risk analysis of petroleum prospects, *in* **J.C. Davis** and ***U.C. Herzfeld*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 85-98.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and **Doveton**, **J.H.**, 1977, Probability analysis aids exploration: *The Oil and Gas Jour.*, v. 75, no. 10, p. 156, 161.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and Kendall, G.R., 1979, NURE geostatistical evaluation study—Initial report: U.S. Dept. Energy, Grand Junction, Colorado.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and Wendebourg, J., 1994, The status of oil-exploration risk analysis [Abs.]: *in* Papers and Extended Abstracts for Technical Program, International Assoc. Math. Geology Ann. Meeting, October, Mont Tremblant, Quebec, Canada, p. 148-151.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and Wendebourg, J., 1995, *Computing Risk for Oil Prospects: Principles and Programs*: Computer Methods in the Geosciences Volume 14, Elsevier Science Ltd./Pergamon, Oxford, U.K., 452 p., 3 diskettes.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and Wendebourg, J., 1997, *Quantitative risk assessment and oil prospect evaluation*: École Nationale Supérieure du Pétrole et des Moteurs, Rueil-Malmaison, France, 244 p.

Harbaugh, ***J.W.***, **Davis**, **J.C.**, and Wendebourg, J., 1999, Bayesian Risk Assessment of Petroleum Prospects, *in* A.S.J. Lippard, A. Næss, and ***R. Sinding-Larsen***, (Eds.), *Proceedings of the 5th Ann. Conf. of the International Assoc. Math. Geology*: Tapir Printers, Trondheim, Norway, p. 427-433.

Harbaugh, ***J.W.***, **Doveton**, **J.H.**, and **Davis**, **J.C.**, 1977, *Probability Methods in Oil Exploration*: John Wiley & Sons, Wiley-Interscience, New York, 269 p. [Translated into Chinese and Russian.]

Harbaugh, ***J.W.***, **Doveton**, **J.H.**, and **Davis**, **J.C.**, 1981, *Primenenie Veroyatnostnykh Metodov V Poiskovorazvedochiykh, Rabotakh Ia Ieft'*: Nedra, Moscow, USSR, 246 p.

Harbaugh, ***J.W.***, **Doveton**, **J.H.**, and **Davis**, **J.C.**, 1982, *Kai Lü Fa Tsai Shih Yu K'an T'an Chung Ti Ying Yung*: Petroleum Industry Publishers, Beijing, China, 242 p.

Harbaugh, ***J.W.***, **Doveton**, **J.H.**, and **Davis**, **J.C.**, 1987, The probabilistic nature of oil exploration [reprinted from *Probability Methods in Oil Exploration*, ©1977, John Wiley & Sons, Inc.], *in* N.H. Foster, and E.A. Beaumont (Compilers), *Geologic Basins II—Evaluation, Resource Appraisal, and World Occurrence of Oil and Gas*: Am. Assoc. Petroleum Geologists, *Treatise of Petroleum Geology* Reprint Series no. 2, p. 190-235.

Harbaugh, ***J.W.***, **Merriam**, **D.F.**, Wray, J.L., and Jacques, T.E., 1965, Pennsylvanian marine banks in southeastern Kansas, Field Conference Guidebook: Geol. Soc. America and Assoc. Societies Ann. Meeting, Kansas City, Missouri, 54 p.

Harbaugh, ***J.W.***, Watney, W.L., Rankey, E.C., Slingerland, Rudy, Goldstein, R.H., and Franseen, E.K. (Eds.), 1999, Numerical experiments in stratigraphy, Recent advances in stratigraphic and sedimentologic computer simulations: Soc. Sedimentary Geology (SEPM), Special Publication no. 62, 362 p.

Harff, ***J.***, 1990, Mathematisch-numerische Struktur- und Prozeßmodellierung für die geologische Prognose: *Mitt. Gesellsch. f. geol. Wiss.*, Berlin 17, B. 4, S. 10-12.

Harff, ***J.***, 1991, Grant. Drei-dimensionale Regionalisierung und Modellierung für die Analyse sedimentärer Becken [ZIPE-Potsdam/Kansas Geol. Survey Coop. Proj., J.C. Davis, Co-PI]: Bundesministerium für Forschung und Technologie, Bonn, Germany, 25,331 DM.

Harff, ***J.***, and **Davis**, **J.C.**, 1990, Regionalization in geology by multivariate classification: *Math. Geology*, v. 22, no. 5, p. 573-588.

Harff, ***J.***, and Merriam, D.F. (Eds.), 1993, *Computerized Basin Analysis: The Prognosis of Energy and Mineral Resources*: Computer Applications in the Earth Sciences series, Plenum Press, New York, 340 p.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, and **Olea**, **R.A.**, 1999, Classification and stratigraphic correlation of Holocene sediments from the Baltic Sea according to petrophysical properties [Gliederung holozäner Ostseesedimente nach physikalischen Eigenschaften]: *Petermanns Geographische Mitteilunggen*, v. 143, p. 50-55.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, **Doveton**, **J.H.**, **Olea**, **R.A.**, Ralston, J., ***Schwarzacher***, ***W.***, 1999, Subdivision and correlation of Holocene Sediments within the Baltic Sea Basins based on Multi-Sensor Core Logs [Abs.]: 3rd BASYS Ann. Science Conference, Warnemunde, Germany, Sept. 20-22.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, Kunzendorf, H., **Olea**, **R.A.**, ***Schwarzacher***, ***W.***, and Voss, M., 2001, Physicochemical zonation of Gotland Basin (Baltic Sea) Holocene sediments, *Baltica*, v. 14, p. 58-66.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, Kunzendorf, H., **Olea**, **R.A.**, and ***Schwarzacher***, ***W.***, 2000, Baltic Sea basin sediments as indicators for the Holocene depositional environment [Abs.]: Geol. Survey Denmark and Greenland, 6th Marine Geological Conference, March, Hirtshals, Denmark, p. 32.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, Kunzendorf, H., **Olea**, **R.A.**, and ***Schwarzacher***, ***W.***, 2000, Paleoenvironment recorded in sediments—Methodology and application to the Baltic Sea: Proc. 31st Intl. Geol. Congress, Rio de Janeiro. [poster]

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, **Olea**, **R.A.**, and ***Schwarzacher***, ***W.***, 1999, Holocene sediments from the Baltic Sea basins as indicators for the paleo-environment, *in* A.S.J. Lippard, A. Næss, and ***R. Sinding-Larsen*** (Eds.), *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*: Tapir Printers, Trondheim, Norway, p. 195-200.

Harff, ***J.***, **Bohling**, **G.C.**, ***Endler***, ***R.***, **Davis**, **J.C.**, **Olea**, **R.A.**, and ***Schwarzacher***, ***W.***, 2000, A changing Paleoenvironment recorded in Holocene sediments from the Baltic Sea [Abs]: *in* Proc. 31st Intl. Geol. Congress, Symposium 24-1, Rio de Janeiro, 6 p.

Harff, ***J.***, **Davis**, **J.C.**, and Eiserbeck, W., 1992, Prediction of hydrocarbons in sedimentary basins [Abs.]: *in* Proc. 29th Intl. Geol. Congress, Kyoto, Abstract v. 3/3, p. 959.

Harff, ***J.***, **Davis**, **J.C.**, and Eiserbeck, W., 1993, Prediction of hydrocarbons in sedimentary basins: *Math. Geology*, v. 25, no. 7, p. 925-936.

Harff, ***J.***, **Davis**, **J.C.**, and **Olea**, **R.A.**, 1992, Quantitative assessment of mineral resources with an application to petroleum geology: *Nonrenewable Resources*, v. 1, no. 1, p. 74-84.

Harff, ***J.***, **Davis**, **J.C.**, **Olea**, **R.A.**, and **Bohling**, **G.C.**, 1991, Regionalization of western Kansas based on multivariate classification of stratigraphic data from oil wells, II: Open-File Rept. 1991-40, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

Harff, ***J.***, **Davis**, **J.C.**, **Olea**, **R.A.**, and **Bohling**, **G.C.**, 1993 [Abs.], Thematic geologic mapping by stochastic simulation: Program and abstracts of the Silver Anniversary Meeting, International Assoc. Math. Geology, Prague, p. 21. [poster]

Harff, ***J.***, **Davis**, **J.C.**, **Olea**, **R.A.**, and **Bohling**, **G.C.**, 1993, Computergestützte geologische Kartierung und Rohstoffperspektivität [Use of computers in geologic mapping and mining exploration], *Die Geowissenschaften*, v. 11, no. 10-11, p. 375-379.

Harff, ***J.***, **Davis**, **J.C.**, **Olea**, **R.A.**, Watney, W.L., **Doveton**, **J.H.**, **Bohling**, **G.C.**, Newell, K.D., **McElwee**, **C.D.**, ***Hoth***, ***Peer***, ***Lewerenz***, ***B.***, ***Springer***, ***J.***, **Sampson**, **R.J.**, Wong, J.C., and Cunningham, K.J., 1991, Three-dimensional regionalization and modeling for sedimentary basin analysis—The Zenith oil field, I: Open-File Rept. 1991-41, Kansas Geol. Survey, Lawrence, Kansas, 95 p.

Harff, J., **Davis, J.C.**, Watney, W.L., **Bohling, G.C.**, and Wong, J.C., 1989, Regionalization of western Kansas based on multivariate classification of stratigraphic data from oil wells: Open-File Rept. 1989-21, Kansas Geol. Survey, Lawrence, Kansas, 26 p., 9 figs., 26 maps.

Harff, J., **Davis, J.C.**, Watney, W.L., **Bohling, G.C.**, and Wong, J.C., 1990, Regionalization of western Kansas shelf based on stratigraphic data from wells [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 74, no. 5, p. 669-670.

Harff, J., **Davis, J.C.**, Watney, W.L., **Bohling, G.C.**, and Wong, J.C., 1990, Regionalization of western Kansas shelf based on stratigraphic data from wells [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, San Francisco, California, Abstracts vol., p. 98.

Harff, J., Eiserbeck, W., Hoth, Klaus, and ***Springer, J.***, 1990, Computer-assisted basin analysis and regionalization aid in search for oil and gas: *Geobyte*, no. 11, p. 11-15.

Harff, J., Eiserbeck, W., Hoth, Klaus, and ***Springer, J.***, 1990, Modellierung tiefer Sedimentärer Becken zur Perspektivitätsbewertung von Erdöl und Erdgas: *Veröff. Neidersächs. Akademie Geowiss.*, Hannover, v. 4, p. 91-95.

Harff, J., Eiserbeck, W., ***Lewerenz, B.***, and ***Springer, J.***, 1990, Space modeling and multivariate techniques for prognosis of oil and gas, *in*: G. Gaal and D.F. Merriam (Eds.), *Computer Applications in Resource Estimation*: Pergamon Press, Oxford, U.K., p. 321-337.

Harff, J., ***Hoth, Peer***, and Eiserbeck, W., 1993, Computer assisted basin analysis for the search of oil and gas in the North German Basin, *in* ***J. Harff*** and D.F. Merriam (Eds.), *Computerized Basin Analysis: The Prognosis of Energy and Mineral Resources*: Computer Applications in the Earth Sciences series, Plenum Press, New York, p. 239-254.

Harff, J., Lange, D., and **Olea, R.A.**, 1991, Geostatistics for computerized geological mapping: *Geologisches Jahrbuch*, Hannover, Germany, v. A122, p. 335-345.

Harff, J., Lemke, W., and Stattegger, K. (Eds.), 1999, *Computerized Modeling of Sedimentary Systems*, Springer-Verlag, Berlin, 452 p.

Harff, J., **Olea, R.A.**, and **Bohling, G.C.**, 1993, From multivariate sampling to thematic maps with an application to marine geochemistry, *in* **J.C. Davis** and ***U.C. Herzfeld*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 265-274.

Harff, J., **Olea, R.A.**, **Davis, J.C.**, and **Bohling, G.C.**, 1996, Geostatistical solution for the classification problem with an application to oil prospecting, *in* ***A. Förster*** and D.F. Merriam (Eds.), *Geologic Modeling and Mapping*: Plenum Press, New York, p. 263-279.

Harff, J., Schretzenmayr, S., ***Springer, J., Hoth, Peer***, Eiserbeck, W., and Süssmuth, S., 1989, Mathematisch-numerische Modellierung regionaler bis lokaler Einheiten in sedimentären Becken in einem Beispiel für die Kohlenwasserstofferkundung im Rotliegenden [in English *in* Proc. 28th Intl. Geol. Congress, Washington, D.C., Abstract vol.]: Gesellschaft für Geologische Wissenschaften der DDR, Akademie-Verlag, Berlin, *Z. geol. Wiss.*, Band 17, Heft 7, S. 747-759.

Harff, J., Watney, W.L., **Bohling, G.C., Doveton, J.H., Olea, R.A.**, and Newell, K.D., 2001, Three-dimensional regionalziation for oil field modeling, *in* D.F. Merriam and **J.C. Davis** (Eds.), *Geologic Modeling and Simulation, Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, p. 205-227.

Harvey, P.K., 1973, Geochemistry of the Gowla Amphibolite, W. Ireland: *Jour. Petrology*, v. 00, no. 00, p. 00.

Harvey, P.K., 1973, Mineralogical convergence in acidic gneisses of the South Connemara Migmatite Complex, Ireland: *Jour. Petrology*, v. 00, no. 00, p. 00.

Harvey, P.K., 1973, POGROS-1, a FORTRAN IV program for the simulation of porphyroblastic growth under metamorphic conditions: Internal Tech. Rept. [not for distribution], Geol. Research Section, Kansas Geol. Survey, Lawrence, Kansas, 121 p.

Harvey, P.K., 1973, The detection and correction of outlying observations that may occur during geochemical analysis: *Geochim. et Cosmochim. Acta*, v. 00, no. 00, p. 00. Accepted Aug. 3 (revised).

Harvey, P.K., 1973, The detection of outlying observations in replicate X-ray measurements of sample size three: *Jour. X-Ray Spectrometry*, v. 00, no. 00, p. 00. Accepted Feb. 9 (revised).

Harvey, P.K., and Eyett, J., 1973, Experience with automatic sample-loading facilities in a geochemical laboratory: ??

Hausberger, G., 1989, GIS and computer-mapping aspects of the Austrian Stream-Sediment Geochemical Sampling Project, *in* **J.C. Davis** and N. Van Driel, *Digital GeoInformation Systems*: 28th Intl. Geol. Congress, Short Course S8A, Washington, D.C., 39 p.

Hausberger, G., and **Davis, J.C.**, 1996, Methoden zur Erstellung geochemischer Karten zur Umweltuntersuchung in der Republik Österreich: *Die Geowissenschaften*, v. 14, no. 10, p. 423-428.

Hausberger, G., and **Davis, J.C.**, 1998, Geochemische Kartierung für Umweltstudien—Vier Beispiele aus Zentraleuropa [Abs.]: Tagungsband der 4. Arbeitstagung des Bereiches Umwelt, *Erdwissenschaftliche Aspekte des Umweltschutzes*, Geologische Bundesanstalt, Vienna.

Hausberger, ***G.***, **Davis**, **J.C.**, and Bukovec, D., 1995, Über Kartendokumentation und Visualisierung der Verknüpfungen zwischen geochemischen, bodenkundlichen und geologischen Parametern, Geostatistik—Forschungsprojekt Bodengeochemie zur Bodenzustandserhebung-Umweltbestandsaufnahme im Gebiet des Voitsberger-Köflacher Beckens: Alps-Adria Project Bericht, Geo- und Umweltinformatik, Leoben, Austria, 64 p., Appdx. (2 vols.), Map atlas (64 sheets).

Hausberger, ***G.***, **Davis**, **J.C.**, and ***Prohic***, ***E.***, 1994, Statistical analysis of geochemical data for environmental studies in areas of karstic soils [Abs.]: *in* Papers and Extended Abstracts for Technical Program, International Assoc. Math. Geology Ann. Meeting, October, Mont Tremblant, Quebec, Canada, p. 153.

Hausberger, ***G.***, **Davis**, **J.C.**, Hausberger, M., and Hausberger, S., 1997, Bericht über Auswertung der Korngrößenzusammensetzung von Bodenproben aus der Salzburger Bodenzustandsinventur: Geo- und Umweltinformatik, Leoben, Austria, 51 p., 7 Appdx., Map atlas (20 sheets).

Hausberger, ***G.***, **Davis**, **J.C.**, Miller, R.D., Look, K., Adkins-Heljeson, D., **Ross**, **J.A.**, Bennett, B., Schloss, J., and **Bohling**, **G.C.**, 1998, WIZARD Water Information Storage and Retrieval Database: Open-File Rept. 1998-13, Kansas Geol. Survey, Lawrence, Kansas, 59 p. (unnum.).

Hausberger, ***G.***, **Davis**, **J.C.**, ***Prohic***, ***E.***, Hochreiter, M., and Bukovec, D., 1996, Geochemical Atlas of Croatia [Abs.]: Proc. 16th Ann. ESRI User Conference, MONTH, Palm Springs, California.

Hausberger, ***G.***, **Davis**, **J.C.**, ***Prohic***, ***E.***, Hochreiter, M., and Bukovec, D., 1995, Report on map documentation, geostatistics and geochemical interpretation of a soil survey in Istria, Gorski Kotar, Cres, Rab and Krk, Croatia: Standardisation of Methods in Geochemical Mapping and Environmental Geochemistry of Carbonate Terrains in Austria, Croatia and Slovenia—Alps-Adria Project, Phase 2, Geo- und Umweltinformatik, Leoben, 135 p., Map atlas (45 sheets).

Hausberger, ***G.***, **Davis**, **J.C.**, ***Prohic***, ***E.***, Hochreiter, M., and Bukovec, D., 1995, Report on map documentation, geostatistics and geochemical interpretation of a soil survey in Istria, Gorski Kotar, Cres, Rab, and Krk, Croatia: Standardisation of Methods in Geochemical Mapping and Environmental Geochemistry of Carbonate Terrains in Austria, Croatia and Slovenia, Alps-Adria Project, Phase 2: Geo- und Umweltinformatik, Leoben, Austria, 135 p.

Hausberger, ***G.***, **Davis**, **J.C.**, ***Prohic***, ***E.***, Hochreiter, M., and Bukovec, D., 1997, Geochemical and geological maps of western Croatia—Dinaric karst area, *in* ESRI (Ed.), *GIS Our Common Language*: ESRI Map Book, vol. 12, p. 61.

Hausberger, ***G.***, **Davis**, **J.C.**, **Ross**, **J.A.**, **Siceloff**, **J.**, and **Bohling**, **G.C.**, 1999, Metallogenetische Karte von Österreich software: Österreichische Akademic der Wissenschaften, Vienna, on CD-ROM.

Hausberger, G., **Ross, J.A.**, and **Davis, J.C.**, 1998, WIZARD, a groundwater information system for Kansas: *in* Proc. 43rd Ann. Midwest Groundwater Conference, *Program and Abstracts*, p. 29. [Internet data access http:// magellan.kgs.ukans.edu/WaterLevels/].

Hausberger, G., **Ross, J.A.**, and **Davis, J.C.**, 1998, WIZARD, a groundwater information system for Kansas, USA: Angewandte Geographische Informationsverarbeitung X (AGIT 98), Salzburg, Austria. [poster]

Hausberger, G., **Ross, J.A.**, and **Davis, J.C.**, 1998, WIZARD—Ein Grundwasser-informationssystem für Kansas, USA [Abs.]: Angewandte Geographische Informationsverarbeitung, *Online Proceedings AGIT'98*, Univ. Salzburg, Austria, 2 p.

Hea, J.P., and **Conley, C.D.**, 1967, Computer usages in recording, storage, and analysis of geological data [Abs.], *in* "Petroleum Exploration Soc. Libya Exploration Computing Symposium": *Bull. Am. Assoc. Petroleum Geologists*, v. 51, no. 5, p. 813-814.

Heckel, P.H., 1965, Apparent structural control of Tully Limestone deposition in the Devonian Catskill Delta complex of New York State [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, San Francisco, Abstract vol., p. 75. [Reprinted Geol. Soc. America Spec. Paper 87, p. 76.]

Heckel, P.H., 1966, Relationship of carbonate facies in an algal mound complex in Upper Pennsylvanian of Kansas [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, San Francisco, Abstracts vol., p. 90-91. [Reprinted 1968.]

Heckel, P.H., 1967, Reeflike carbonate complex in the Tully Limestone (Devonian) in New York [Abs.]: *in* Proc. International Symposium on the Devonian System, Alberta Soc. Petroleum Geologists, Calgary, Canada, Abstract vol., p. 67.

Heckel, P.H., 1968, Basic facies pattern of outcropping Upper Pennsylvanian limestone in the Midcontinent [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, Mexico City, Abstracts vol., p. 132.

Heckel, P.H., 1968, Limestone facies in the Kansas City and Lansing Groups (Missourian, Upper Pennsylvanian) in southwestern Iowa: Geol. Soc. America Field Trip Guidebook, Ann. Meeting North-central Section, Iowa City, p. 4-29 to 4-41.

Heckel, P.H., 1968, Relationship of carbonate facies in an algal-mound complex in the Upper Pennsylvanian of Kansas: Geol. Soc. America, Special Paper 101, Abstracts vol. (1966), p. 90-91.

Heckel, P.H., 1969, Basic facies pattern of outcropping Upper Pennsylvanian limestones in the Midcontinent [Abs.]: *in* Proc. Geol. Soc. America, Special Paper no. 121, Abstracts vol. (1968), p. 132.

Heckel, P.H., 1969, Devonian Tully Limestone in Pennsylvanian and comparison to type Tully Limestone in New York: Pennsylvania Geol. Survey, Inf. Circ. 60, 4th ser., 33 p.

Heckel, P.H., 1969, Recognition of shallow marine environments [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 53, no. 00, p. 721-722.

Heckel, P.H., 1970, Organic carbonate buildups in epeiric seas: Some theoretical aspects [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 54, no. 00, p. 851-852.

Heckel, P.H., 1972, Pennsylvanian stratigraphic reefs in Kansas, some modern comparisons and implications: *Geologische Rundschau*, v. 61, no. 2, p. 584-598.

Heckel, P.H., 1975, Solenoporid red algae (Parachaetetes) from Upper Pennsylvanian rocks in Kansas: *Jour. Paleontology*, v. 49, no. 4, p. 662-673.

Heckel, P.H., 1975, Stratigraphy and depositional framework of the Stanton Formation in southeastern Kansas: Kansas Geol. Survey Bull. 210, Lawrence, Kansas, 45 p.

Heckel, P.H., and Baesemann, J.F., 1975, Environmental interpretation of conodont distribution in Upper Pennsylvanian (Missourian) megacyclothems in eastern Kansas: *Bull. Am. Assoc. Petroleum Geologists*, v. 59, no. 3, p. 486-509.

Heckel, P.H., and Cocke, J.M., 1969, Phylloid algal-mound complexes in outcropping Upper Pennsylvanian rocks of Mid-continent: *Bull. Am. Assoc. Petroleum Geologists*, v. 53, no. 5, p. 1058-1074. [Abstract reprinted in Kansas Geol. Survey Bull. 199, pt. 1.]

Herzfeld, U.C., 1993, Fractals in Geosciences—Challenges and Concerns, *in* **Davis, J.C.**, and ***Herzfeld, U.C.*** (Eds.), *Computers in Geology–25 Years of Progress*: Studies in Math. Geology no. 5, Oxford University Press, New York, p. 217–230.

Herzfeld, U.C., and Merriam, D.F., 1990, A map-comparison technique utilizing weighted input parameters, *in* G. Gaal and D.F. Merriam (Eds.), *Computer Applications in Resource Estimation, Prediction and Assessment for Metals and Petroleum*: Computers and Geology v. 7, Pergamon Press, New York, p. 43-52.

Herzfeld, U.C., and Merriam, D.F., 1990, Optimizing similarity measures of spatial graphic data [Abs.]: *Freiburger geowiss. Beitr.*, Bd. 2, S. 40.

Herzfeld, U.C., and Merriam, D.F., 1995, Optimization techniques for integrating spatial data: *Math. Geology*, v. 27, no. 5, p. 559-588.

Holnsteiner, R., ***Hausberger, G.***, **Davis, J.C.**, and Augustin-Guyrits, K., 1999, Mapping and multivariate analysis of stream sediment geochemistry in Lower Austria, *in* A.S.J. Lippard, A. Næss, and ***R. Sinding-Larsen*** (Eds.), *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*:Tapir Printers, Trondheim, Norway, p. 355-157.

Hopkins, J.F., **Doveton, J.H.**, Carr, T.R., Feldman, H., **Collins, D.R.**, and Feltz, A., 1994, 2-D and 3-D pseudo-seismic transforms of wireline logs: A seismic approach to petrophysical sequence stratigraphy [Abs.]: Landmark Users Conference, MONTH, WHERE.

Hoth, Peer, and **Doveton, J.H.**, 1999, Clay mineral estimation from nuclear petrophysical logs using a calibrated numerical inversion procedure: *Jour. Geophys. Research*, Abstracts, v. 1, no.1, p. 179.

Hoth, ***Peer***, Carr, T.R., Bau, M., and Dulski, P., 2001, Trace and rare-earth elemental variation in a midcontinent carbonate sequence: A key to understanding reservoir development [Abs.], *in* K.S. Johnson (Ed.), Proc. 1998 Symposium, "Pennsylvanian and Permian Geology and Petroleum in the Southern Midcontinent": Oklahoma Geol. Survey Circ. 104, p. 227-228.

Hoth, ***Peer***, **Doveton, J.H.**, and Feldman, H., 1994, Spectral gamma-ray and lithodensity-neutron log characterization of sedimentary facies in the Dakota Aquifer of central Kansas [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/ SEPM Ann. Meeting, Denver, Colorado, Abstracts v. 3, p. 174-175.

Huettl, T.J., Butler, J.J., Jr., and **McElwee, C.D.**, 1993, A borehole induction single-well tracer test to characterize spatial variations in aquifer flow properties [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 74, no. 43, p. 319.

Huettl, T.J., Butler, J.J., Jr., and **McElwee, C.D.**, 1993, A borehole induction single-well tracer test to characterize spatial variations in aquifer flow properties: Open-File Rept. 1993-48, Kansas Geol. Survey, Lawrence, Kansas, 19 p.

Hyder, ***Z.***, Butler, J.J., Jr., and **Bohling, G.C.**, 1993, Slug tests in unconfined aquifers [Abs.], *in* Am. Geophysical Union, 1993 Spring Meeting Supplement: *Eos, Transactions Amer. Geophys. Union*, v. 74, p. 143.

Hyder, ***Z.***, Butler, J.J., Jr., and **Bohling, G.C.**, 1993, Slug tests in unconfined aquifers: Open-File Rept. 1993-18, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Hyder, ***Z.***, Butler, J.J., Jr., and, **McElwee, C.D.**, 1993, An approximate technique for analysis of slug tests in wells screened across the water table: *Eos, Transactions Amer. Geophys. Union*, v. 74, no. 43, p. 235.

Hyder, ***Z.***, Butler, J.J., Jr., and, **McElwee, C.D.**, 1993, An approximate technique for analysis of slug tests in wells screened across the water table: Open-File Rept. 1993-44, 25 p.

Imbrie, John, Laporte, L.F., and **Merriam, D.F.**, 1964, Beattie Limestone facies (Lower Permian) of the northern Midcontinent, *in* **D.F. Merriam** (Ed.), Symposium on Cyclic Sedimentation: Kansas Geol. Survey Bull. 169 (2 vols.), Lawrence, Kansas, p. 219-238.

Jiang, X., Butler, J.J., Jr., and **McElwee, C.D.**, 1990, An investigation of hydraulic properties in the Kansas River alluvium: Open-File Rept. 1990-45, Kansas Geol. Survey, Lawrence, Kansas, 22 p.

Jiang, X., Butler, J.J., Jr., and **McElwee, C.D.**, 1990, An investigation of hydraulic properties in the Kansas River alluvium [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 71, no. 43, p. 1304.

Jiang, X., **Olea, R.A.**, and Yu, Y.-S., 1996, Semivariogram modeling by weighted least squares: *Computers & Geosciences*, v. 22, no. 4, p. 387-397.

Kansas Geological Survey [**Ross, J.A.**, *et al.*], 1999, Lake maps with lake bottom topography, scale 1:36,000. Tuttle Creek, Wilson, John Redmond, Glen Elder, Kirwin, Cedar Bluff, Marion County, Clinton, Perry, Melvern, Norton, Pomona, Cheney, Toronto, Fall River, Elk City, Milford, Kanopolis, Webster, Cheyenne Bottoms State Waterfowl Refuge, El Dorado, La Cygne, Marais des Cygnes, Quivira National Wildlife Refuge, Lake Shawnee, and Lovewell: Kansas Geol. Survey, Map Series M-60 and M-64 through 88.

Keene, K.M., and **Conley, C.D.**, 1976, Monitoring irrigated acreage in western Kansaws by video image analysis of LANDSAT images [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 8, no. 6, p. 949-950.

Keene, K.M., and **Conley, C.D.**, 1980, Measurement of irrigated acreage in western Kansas from LANDSAT images: *Environmental Geology*, v. 3, no. 2, p. 107-116.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Misc. Pub., "Mined-land redevelopment: SE Kansas portion of the Ozarks region," Mineral Resources Task Group Rept. 1969-70: Kansas Geol. Survey, Lawrence, Kansas, 173 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 53, "Pleistocene stratigraphy of Missouri River valley along the Kansas-Missouri border" by C.K. Bayne, H.G. O'Connor, S.N. Davis, and W.B. Howe: Kansas Geol. Survey, Lawrence, Kansas, 32 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 54, "Oil and gas production in Kansas during 1969" by D.L. Beene: Kansas Geol. Survey, Lawrence, Kansas, 143 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 55, "Kansas mineral industry report 1970" by L.A. Flueckinger, M.O. Oros, and E.E. Angino: Kansas Geol. Survey, Lawrence, Kansas, 36 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 57, "Secondary recovery and pressure maintenance operations in Kansas 1970" by R.L. Dilts: Kansas Geol. Survey, Lawrence, Kansas, 82 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 58, "Mined-land redevelopment workshop, Pittsburg, Kansas, May 26-27" by Mineral Resources Task Group: Kansas Geol. Survey, Lawrence, Kansas, 48 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1971, KGS Special Dist. Pub. 59, "Oil and gas production in Kansas during 1970" by D.L. Beene, 1971: Kansas Geol. Survey, Lawrence, Kansas, 142 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1972, KGS Misc. Pub., "Mined-Land Redevelopment: SE Kansas Portion of the Ozarks Region," Mineral Resources Task Group Rept. 1970-71: Kansas Geol. Survey, Lawrence, Kansas, 36 p.

Kellogg née **DeGraffenreid, J.A.** (Ed.), 1972, KGS Special Dist. Pub. 60, "Supplemental areas for storage of radioactive wastes in Kansas" compiled by C.K. Bayne: Kansas Geol. Survey, Lawrence, Kansas, 20 p.

Kellogg née **DeGraffenreid**, **J.A.** (Ed.), 1972, KGS Special Dist. Pub. 61, "Kansas mineral industry report 1971" by L.L. Brady, M.O. Oros, L.A. Flueckinger, K.Q. Camin, and R.G. Hardy: Kansas Geol. Survey, Lawrence, Kansas, 108 p.

Kellogg née **DeGraffenreid**, **J.A.** (Ed.), 1972, Reports of Studies: Kansas Geol. Survey Bull. 204: *Part 1*. Short papers on research in 1971, 38 p.; *Part 2*. Gravity and magnetic survey of an abandoned lead and zinc mine in Linn County, Kansas, by Harold Yarger and S.Z. Jarjur, 13 p.; *Part 3*. Modeling discharge and conservation water quality in the lower Kansas River basin, by W.J. O'Brien, P.B. MacRoberts, E.C. Pogge, and R.L. Smith, 18 p.; *Part 4*. Structural geology of the Manhattan, Kansas, area, by J.R. Chelikowsky, 13 p., Kansas Geol. Survey, Lawrence, Kansas.

Kellogg née **DeGraffenreid**, **J.A.**, 1971, KGS Misc. Pub., "How the Survey serves" [artwork by Charles Barksdale]: Kansas Geol. Survey, Lawrence, Kansas, 21 p.

Kelly, S.B., and ***Cubitt, J.M.***, 1993, Milankovich cyclicity in the stratigraphic record—A review, *in* **Davis, J.C.**, and ***Herzfeld, U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 133-144.

Kelly, T.E., and **Merriam, D.F.**, 1964, Structural development of the Sedgwick basin, south-central Kansas: *Transactions*, Kansas Acad. Sci. 96th Ann. Meeting, v. 67, no. 1, p. 111-125.

Kemblowski, M., and **McElwee, C.D.**, 1986, Approximate model of salt-water upconing in aquifers: Open-File Rept. 1986-8, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

King, R.J., and **Merriam, D.F.**, 1969, Origin of the "welded chert," Morrison Formation (Jurassic), Colorado: *Bull. Geol. Soc. America*, v. 80, no. 6, p. 1141-1147.

Knapp, R.W., Steeples, D.W., Miller, R.D., and **McElwee, C.D.**, 1989, Seismic-reflection surveys at sinkholes in central Kansas, *in* D.W. Steeples (Ed.), Geophysics in Kansas: Kansas Geol. Survey Bull. 226, Lawrence, Kansas, p. 99-120.

Kotov, Sergey, and Berendsen, P., 2002, Statistical characteristics of xenoliths in a kimberlite pipe: *Natural Resources Research*, v. 11, no. 4, p. 00 [in press].

Kruger, J.M., Watney, W.L., and **Olea, R.A.**, 1999, Use of gravity and magnetics for low-cost exploration and development in mature areas such as Kansas [Abs.], *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geologists Midcontinent Section Meeting, "Geoscience for the 21st Century": Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 51.

Kruger, J.M., Watney, W.L., and **Olea, R.A.**, 1999, Use of gravity and magnetics for low-cost exploration and development in mature areas such as Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1200-1201.

Kruger, J.M., Watney, W.L., **Davis, J.C.**, and **Olea, R.A.**, 1996, 3-D Statistical Modeling of Late Paleozoic Cratonic Sedimentation: Spatial and Temporal Relationships to Basement Reactivation Based on Potential Field and Well Data: NSF Tectonics Program, Division of Earth Sci., 48 p. [not funded]

Krumbein, W.C., 1964, The cyclothem as a response to sedimentary environment and tectonism, *in* **D.F. Merriam** (Ed.), Symposium on Cyclic Sedimentation: Kansas Geol. Survey Bull. 169, Lawrence, Kansas, p. 239-248.

Krumbein, W.C., 1966, Classification of map surfaces based on the structure of polynomial and Fourier coefficient matrices, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, p. 12-18.

Krumbein, W.C., 1967, FORTRAN IV computer programs for Markov chain experiments in geology: Computer Contribution 13, Kansas Geol. Survey, Lawrence, Kansas, 38 p.

Krumbein, W.C., 1967, The general linear model in map preparation and analysis, *in* **D.F. Merriam** and **N.C. Cocke** (Eds.), 1967, Computer applications in the earth sciences: Colloquium on Trend Analysis: Computer Contribution 12, Kansas Geol. Survey, Lawrence, Kansas, 38-44.

Krumbein, W.C., 1968, FORTRAN IV computer program for simulation of transgression and regression with continuous-time Markov models: Computer Contribution 26, Kansas Geol. Survey, Lawrence, Kansas, 38 p.

Krumbein, W.C., 1969, The computer in geological perspective, *in* **D.F. Merriam** (Ed.), *Computer Applications in the Earth Sciences*: Plenum Press, New York, p. 251-275.

Krumbein, W.C., 1970, Geological models in transition, *in* **D.F. Merriam** (Ed.), *Geostatistics, A Colloquium*: Plenum Press, New York, p. 143-161.

Krumbein, W.C., and Dacy, M.F., 1969, Markov chains and embedded Markov chains in geology: *Jour. Intl. Assoc. Math. Geol.*, v. 1, no. 1.

Lehman, E.P., Rozeboom, J.J., Waller, H.O., and **Conley, C.D**. (Eds), 1967, *Microfacies of Libya*: Petroleum Exploration Soc. Libya, Tripoli, 80 p.

Levine, P.A., ***Sneath, P.H.A.***, and Merriam, D.F., 1981, Segmentation of geological data using the Kolmogorov-Smirnov test: *Computers & Geosciences*, v. 7, no. 4, p. 415-426.

Lloyd, G.E., and **Ferguson, C.C.**, 1983, Applications of back-scattered SEM in structural geology [Abs.]: *Jour. Geol. Soc. London*, v. 140, p. 975.

Lloyd, G.E., and **Ferguson, C.C.**, 1983, Relationship between brittle and ductile processes in rocks: *Jour. Geol. Soc. London*, v. 140, p. 839-842.

Loudon*, *T.V., 1967, Fourier trend-surface analysis in the geometrical analysis of subsurface folds of the Michigan Basin, *in* **D.F. Merriam** and **N.C. Cocke** (Eds.), Colloquium on Trend Analysis: Computer Contribution 12, Kansas Geol. Survey, Lawrence, Kansas, p. 10-11.

Loudon*, *T.V., 1967, The use of eigenvector methods in describing surfaces, *in* **D.F. Merriam** and **N.C. Cocke** (Eds.), Colloquium on Trend Analysis: Computer Contribution 12, Kansas Geol. Survey, Lawrence, Kansas, p. 12-15.

Lovell, J.P.B., Ledger, D.C., Davies, I.M., **Tipper**, **J.C.**, 1973, Rate of sedimentation in the North Esk Reservoir, Midlothian: *Scott. Jour. Geol.*, v. 9, no. 1, p. 57-61.

Macfarlane, P.A., and **Doveton**, **J.H.**, 1988, Preliminary interpretation of depositional environments and stratigraphy of the Dakota Formation in parts of western Russell and eastern Ellis counties: Open-File Rept. 1988-40, Kansas Geol. Survey, Lawrence, Kansas, 26 p.

Macfarlane, P.A., **Doveton**, **J.H.**, and Coble, G.R., 1989, Interpretation of lithologies and depositional environments of Cretaceous and Lower Permian rocks using a diverse suite of logs from a borehole in central Kansas: *Geology*, v. 17, no. 4, p. 303-306.

Macfarlane, P.A., **Doveton**, **J.H.**, and Coleman, J.,1991, Delineation of hydrostratigraphic units within the sequence stratigraphic framework of the Dakota aquifer of Kansas:Geol. Soc. America, *Abstracts with Programs*, v. 22, no. 1, p. 35.

Macfarlane, P.A., **Doveton**, **J.H.**, and Whittemore, D.O., 1998, User's Guide to the Dakota Aquifer in Kansas: Technical Series no. 2, Kansas Geol. Survey, Lawrence, Kansas, 56 p.

Macfarlane, P.A., **Doveton**, **J.H.**, Feldman, H., Butler, J.J., Jr., Combes, J.M., and **Collins**, **D.R.**, 1994, Aquifer/aquitard units of the Dakota aquifer system in Kansas: Methods of delineation and sedimentary architecture effects on ground-water flow and flow properties: *Jour. Sed. Petrology*, v. B64, no. 4, p. 464-480.

Macfarlane, P.A., **Doveton**, **J.H.**, Feldman, H.R., Butler, J.J., Jr., **Collins**, **D.R.**, and Combes, J.M., 1994, The influence of sedimentary processes on scale-dependent heterogeneity in the Dakota Aquifer system of Kansas [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 26, no. 7, p. 204.

Macfarlane, P.A., **Doveton**, **J.H.**, **Olea**, **R.A.**, Feldman, H., Holbrook, J.M., and Ray, T., 1996 [Abs.], A multifaceted approach to the analysis of aquifer/aquitard unit distribution in the Dakota aquifer of Kansas: Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, San Diego, Abstracts, v. 5, p. A87.

Macfarlane, P.A., **Doveton**, **J.H.**, Wade, A., and Hamilton,V.J., 1991, Revised stratigraphic interpretation and implications for pre-Graneros paleogeography from test-Hole drilling in central Kansas: Open-File Rept. 1991-1A, Kansas Geol. Survey, Lawrence, Kansas, 73 p.

Macfarlane, P.A., Townsend, M.A., Whittemore, D.O., **Doveton**, **J.H.**, and Staton, M.D., 1988, Hydrogeology and water chemistry of the Great Plains (Dakota, Kiowa, and Cheyenne) and Cedar Hills aquifers in central Kansas: Open-File Rept. 1988-39, Kansas Geol. Survey, Lawrence, Kansas, 193 p.

Macfarlane, P.A., Townsend, M.A., Whittemore, D.O., Miller, R.E., **Collins**, **D.R.**, **Doveton**, **J.H.**, Wade, A., Hoaglund, J., and Hamilton, V.J., 1988, Interim technical report to the Kansas legislature on the first year of the Dakota Aquifer Program: Open-File Rept. 1988-43, Kansas Geol. Survey, Lawrence, Kansas, 79 p.

Macfarlane, P.A., Whittemore, D.O., and **Doveton**, **J.H.**, 1998, Information resources for ground-water exploration in the Dakota aquifer: Public Information Circ. 10, Kansas Geol. Survey, Lawrence, Kansas, 6 p. [Available online at http://www.kgs.ukans.edu/Publications/pic10/pic10_1.html.]

Macfarlane, P.A., Whittemore, D.O., Butler, J.J., Jr., Wade, A., Coleman, J., Townsend, M.A., Meehan, T.J., **Doveton**, **J.H.**, **Bohling**, **G.C.**, Macpherson, G.L., and Hamilton, V.J., 1991, The FY90 Annual Report of the Dakota Aquifer Program: Open-File Rept. 1991-1, Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Macfarlane, P.A., Whittemore, D.O., Chu, T.-M., Butler, J.J., Jr., Wade, A., Coleman, J., **Doveton**, **J.H.**, Mitchell, J.E., and Kay, S., 1992, The FY91 Annual Report of the Dakota Aquifer Program: Open-File Rept. 1992-1, Kansas Geol. Survey, Lawrence, Kansas, 93 p.

Macfarlane, P.A., Whittemore, D.O., **Doveton**, **J.H.**, Chu, T.-M., Smith, M., Feldman, H.R., Myers, N.C., and Gillespie, J.B., 1994, The FY93 Annual Report of the Dakota Aquifer Program: Open-File Rept. 1994-1, Kansas Geol. Survey, Lawrence, Kansas, 115 p.

Macfarlane, P.A., Whittemore, D.O., Townsend, M.A., **Doveton**, **J.H.**, Hamilton, V.J., Coyle, W.G., III, Wade, A., Macpherson, G.L., and Black, R.D., 1990, The FY89 Annual Report of the Dakota Aquifer Program: Open-File Rept. 1990-27, Kansas Geol. Survey, Lawrence, Kansas, 301 p.

Macfarlane, P.A., Whittemore, D.O., Townsend, M.A., **Doveton**, **J.H.**, Hamilton, V.J., Coyle, W.G., III, Wade, A., Macpherson, G.L., and Black, R.D., 1990, Plates accompanying the Dakota Aquifer Program annual report, FY89: Open-File Rept. 1990-27a, Kansas Geol. Survey, Lawrence, Kansas, 11 maps, scale 1:1,000,000.

Macpherson, G.L., **McElwee**, **C.D.**, Butler, J.J., Jr., and **Bohling**, **G.C.**, 1996, Water chemistry variations in an alluvial aquifer: Multi-level samplers reveal more than screened wells [Abs]: *in* Proc. Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, p. A-460.

Martinez, A., Hopkins, J.F., Feldman, H.R., Carr, T.R., Feltz, A.J., **Doveton**, **J.H.**, **Collins**, **D.R.**, Black, R.A., and Anderson, N.L., 1994, Use of computer workstations in the study of environmental geology, integration of shallow reflection seismic, V.S.P., and well data [Abs.]: Am. Assoc. Petroleum Geologists/ SEPM, Annual Meeting, Abstracts, v. 4, p. 61.

Martinez, A., Hopkins, J.F., Feldman, H.R., Carr, T.R., Feltz, A.J., **Doveton, J.H.**, **Collins, D.R.**, Black, R.A., and Anderson, N.L., 1995, The use of computer workstations in the study of environmental geology, integration of geophysical and geologic data [Abs.]: Soc. Exploration Geophysicists Annual Meeting, Expanded Abstracts, v. 65, p. 862-864.

Martín-Fernández, J.A., **Olea-Meneses, R.A.**, and ***Pawlowsky-Glahn, V.***, 2001, Criteria to compare estimation methods of regionalized compositions: *Math. Geology*, v. 33, no. 8, p. 889-909.

Martini, I.P., Sagri, M., and **Doveton, J.H.**, 1978, Lithologic transition and bed thickness periodicities in turbidite successions of the Antola Formation, Northern Apennines, Italy: *Sedimentology*, v. 25, p. 605-623.

Mayer, H., 1993, An integrated approach to forward modeling carbonate platform development, *in* **J.C. Davis** and ***U.C. Herzfeld, U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 169-180.

McClain, T.J., ***Cao, T.T.***, and **Ross, C.G.**, 1979, Geologic map, Lawrence West, scale 1:24,000: Map Series M-14, Kansas Geol. Survey, Lawrence, Kansas.

McCullagh, M.J., 1972, Optical data processing: A new geographical tool: *in* Proc. Inst. British Geographers Ann. Meeting, MONTH, WHERE, Abstracts vol., p. 00.

McCullagh, M.J., 1973, KARP: Kansas Automated Retrieval Project: Open-File Rept. 1973-8, Kansas Geol. Survey, Lawrence, Kansas, 101 p.

McCullagh, M.J., 1977, A data mapping and analysis system for mini-computers, Part I—Mapping: Published by the author, 115 p. [Available in 1977-78 through the Kansas Geol. Survey, Lawrence, Kansas and Dept. Geology, Univ. Nottingham, U.K.]

McCullagh, M.J., 1978, The development of a mini-computer graphics system: *Computer Applications*, v. 5, nos. 1, 2, p. 831-838.

McCullagh, M.J., 1978, The potential of minicomputer systems for mapping resources: *in* **J.C. Davis** and S. Levi de Lopez (Eds.), *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis, Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, p. 26-38.

McCullagh, M.J., 1979, Creation and application of variable density grids to oil exploration data [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 63, no. 3, p. 494.

McCullagh, M.J., and ***Campbell, J.B.***, 1978, Frequency analysis of landforms [Abs.]: *in* Proc. Assoc. American Geographers 74th Ann. Meeting, New Orleans, Louisiana, 10 p.

McCullagh, M.J., and **Davis, J.C.**, 1972, Optical analysis of two-dimensional patterns: Annals Assoc. American Geographers, v. 62, no. 4, p. 561-577.

McCullagh, M.J., and King, C.A.M., 1970, SPITSYM, a FORTRAN IV computer program for spit simulation: Computer Contribution 50, Kansas Geol. Survey, Lawrence, Kansas, 20 p.

McCullagh, M.J., and King, C.A.M., 1971, A simulation model of a complex recurved spit: *Jour. Geology*, v. 79, no. 1, p. 22-37.

McCullagh, M.J., and **Ross, C.G.**, 1980, The Delauney triangulation of a random data set for isarithmic mapping: *Cartographic Jour.*, v. 17, no. 2, p. 93-99.

McCullagh, M.J., and **Sampson, R.J.**, 1972 [Abs.], User desires and graphics capability in the academic environment: *in* Proc. Institute of British Geographers, January, London.

McCullagh, M.J., Hardy, N.E., and Lockman, W.O., 1972, Formation and migration of sand dunes: A simulation of their effect in the sedimentary environment, *in* D.F. Merriam (Ed.), *Mathematical Models of Sedimentary Processes*: Plenum Press, New York, p. 00.

McElwee, C.D., 1986, Subsurface movement of radionuclides: *in* Proc. 6th Ann. Conf. on International Affairs, Assessing Chernobyl: Implications for the Future: Open-File Rept. 1986-19, Kansas Geol. Survey, Lawrence, Kansas, 9 p.

McElwee, C.D., 1987, Sensitivity analysis of ground-water models, *in* Jacob Bear and M. Yavuz Corapcioglu (Eds.): *Proceedings of the 1985 NATO Advanced Study Institute on Fundamentals of Transport Phenomena in Porous Media*: Martinus Nijhoff Publishers, Dordrecht, The Netherlands, p. 751-817.

McElwee, C.D., 1987, The use of sensitivity analysis to design an effective monitoring network and estimate parameters for a two-dimensional solute transport model: Open-File Rept. 1987-11, Kansas Geol. Survey, Lawrence, Kansas, 45 p.

McElwee, C.D., 1987, The use of sensitivity analysis to design an effective monitoring network and estimate parameters for a two-dimensional solute transport model [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 68, no. 16, p. 313.

McElwee, C.D., 1989-1991, Grant. Hydrogeologic Characterization of Hazardous Waste Sites: Kansas Water Resources Research Institute, $30,115, co-principal investigator.

McElwee, C.D., 1990, Capture zones for simple aquifers: Computer Program Series 90-5, Kansas Geol. Survey, Lawrence, Kansas, 41 p.

McElwee, C.D., 1990, Grant. Slug Testing at the N&M Arco Mini-Market Site: California Environmental Consultants, $4,900, principal investigator.

McElwee, C.D., 1991, Capture zones for simple aquifers: *Ground Water*, v. 29, no. 4, p. 587-590.

McElwee, C.D., 1991-1994, Grant. Characterization of Heterogeneities Controlling Transport and Fate of Pollutants in Unconsolidated Sand and Gravel Aquifers: U.S. Dept. of Defense [C.D. McElwee, PI] $314,984.

McElwee, C.D., 1991-1994, Grant. Well-Testing Methodologies for Characterizing Heterogeneities in Alluvial-Aquifer Systems: U.S. Dept. of Interior, Geol. Survey [C.D. McElwee, Co-PI] $101,300.

McElwee, C.D., 1992-1994, Grant. Slug Tests in Unconfined Aquifers: Kansas Water Resources Research Institute [C.D. McElwee, Co-PI] $25,632..

McElwee, C.D., 1993, A study of heterogeneity in alluvial aquifers [Abs.]: Research Seminar Proc., Dept. Civil Engineering, Univ. Birmingham, Birmingham, U.K.

McElwee, C.D., 1993, Heterogeneities of an alluvial aquifer [Abs.]: Field experiments and modeling: Research Seminar Proc., Dept. Geology, Univ. Birmingham, Birmingham, U.K.

McElwee, C.D., 1994, Unified analysis of slug tests including nonlinearities, inertial effects, and turbulence [Abs.]: T. Mylan Stout Lecture Series, Dept. Geology , Univ. Nebraska, MONTH, Lincoln, Nebraska.

McElwee, C.D., 1998, Multilevel nonlinear slug tests to characterize high conductivity aquifers: Open-File Rept. 1998-62, Kansas Geol. Survey, Lawrence, Kansas, 45 p.

McElwee, C.D., 1998, Slug tests in extremely permeable aquifers [Abs.]: Midwest Groundwater Conference 43rd Annual Meeting, *Program and Abstracts*, p. 21.

McElwee, C.D., 1998, Slug tests in extremely permeable aquifers: Open-File Rept. 1998-66, Kansas Geol. Survey, Lawrence, Kansas, 34 p.

McElwee, C.D., and **Bohling, G.C.**, 1986, Thermal basin modeling including compaction and fluid flow [Abs.], *in* Am. Geophysical Union, 1986 Fall meeting, San Francisco: *Eos, Transactions Amer. Geophys. Union*, v. 67, no. 44, p. 959.

McElwee, C.D., and **Bohling, G.C.**, 1986, Thermal basin modeling including compaction and fluid flow: Open-File Rept. 1986-21, Kansas Geol. Survey, Lawrence, Kansas, 17 p.

McElwee, C.D., and **Bohling, G.C.**, 1989, Automated pumping test analysis on a personal computer [Abs.]: *in* Proc. 3rd Scientific Assembly, International Assoc. Hydrological Sciences, May, Baltimore, Maryland.

McElwee, C.D., and **Bohling, G.C.**, 1999, Uncertainty Propagation in Groundwater Models, *Eos, Transactions Amer. Geophys. Union*, v. 80, no. 17, p. S136.

McElwee, C.D., and Butler, J.J., Jr., 1989, Slug testing in highly permeable aquifers: Open-File Rept. 1989-28, Kansas Geol. Survey, Lawrence, Kansas, 28 p.

McElwee, C.D., and Butler, J.J., Jr., 1989, Slug tests in highly permeable aquifers [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 21, no. 6, p. 193.

McElwee, C.D., and Butler, J.J., Jr., 1990, Slug testing at the N & M Arco Mini-Market site: Final Rept., California Environmental Consultants, 50 p.

McElwee, C.D., and Butler, J.J., Jr., 1992, Effective transmissivities from slug tests in wells with a skin: Open-File Rept. 1992-12, Kansas Geol. Survey, Lawrence, Kansas, 31 p.

McElwee, C.D., and Butler, J.J., Jr., 1993, Characterization of heterogeneities controlling transport and fate of pollutants in unconsolidated sand and gravel aquiters: 2nd Year Project Rept., Air Force Office of Scientific Research, University Research Initiative Research Initiation Program, U.S. Dept.Defense, 221 p.

McElwee, C.D., and Butler, J.J., Jr., 1996, Experimental verification of a general model for slug tests: Open-File Rept. 1996-47, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

McElwee, C.D., and Butt, Munir, 1981, A study of the salt water intrusion problem between Salina, Kansas, and Solomon, Kansas, in the Smoky Hill River valley, final report, addendum: Open-File Rept. 1981-7, Kansas Geol. Survey, Lawrence, Kansas, 25 p.

McElwee, C.D., and Kemblowski, M.W., 1989, Theory and application of an approximate model of salt-water upconing in aquifers: Open-File Rept. 1989-17, Kansas Geol. Survey, Lawrence, Kansas, 52 p.

McElwee, C.D., and Kemblowski, M.W., 1990, Theory and application of an approximate model of salt-water upconing in aquifers: *Jour. Hydrology*, v. 115, no. 1/4, p. 139-163.

McElwee, C.D., and ***Zenner, M.A.***, 1993, Unified analysis of slug tests including nonlinearities, inertial effects, and turbulence: Open-File Rept. 1993-45, Kansas Geol. Survey, Lawrence, Kansas, 23 p.

McElwee, C.D., and ***Zenner, M.A.***, 1998, A nonlinear model for analysis of slug-test data: *Water Resources Research*, v. 34, no. 1, p. 55-66.

McElwee, C.D., **Bohling, G.C.**, and Butler, J.J., Jr., 1989, Sensitivity analysis of slug test: Open-File Rept. 1989-33, Kansas Geol. Survey, Lawrence, Kansas, 29 p.

McElwee, C.D., **Bohling, G.C.**, and Butler, J.J., Jr., 1989, Sensitivity analysis of slug tests [Abs.]: Am. Geophysical Union, 1989 Fall meeting, San Francisco: *Eos, Transactions Amer. Geophys. Union*, v. 70, no. 43, p. 1078.

McElwee, C.D., **Bohling, G.C.**, and Butler, J.J., Jr., 1994, Sensitivity analysis of slug tests I: The slugged well: *Jour. Hydrology*, v. 164, no. 1/4, p. 53-67.

McElwee, C.D., Butler, J.J., Jr., and **Bohling, G.C.**, 1992, Nonlinear analysis of slug tests in highly-permeable aquifers using a Hvorslev-type approach [Abs.], *in* Am. Geophysical Union, 1992 Fall Meeting Supplement: *Eos, Transactions Amer. Geophys. Union*, v. 73, no. 0, p. 164.

McElwee, C.D., Butler, J.J., Jr., and **Bohling, G.C.**, 1992, Nonlinear analysis of slug tests in highly-permeable aquifers using a Hvorslev-type approach: Open-File Rept. 1992-39, Kansas Geol. Survey, Lawrence, Kansas, 22 p.

McElwee, C.D., Butler, J.J., Jr., and Healey, J.M., 1990, A new sampling system for obtaining relatively undisturbed samples of coarse unconsolidated sand and gravel: Open-File Rept. 1990-44, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

McElwee, C.D., Butler, J.J., Jr., and Healey, J.M., 1990, A new sampling system for obtaining relatively undisturbed samples of coarse unconsolidated sand and gravel [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 71, no. 43, p. 1304.

McElwee, C.D., Butler, J.J., Jr., and Healey, J.M., 1991, A new sampling system for obtaining relatively undisturbed samples of unconsolidated coarse sand and gravel: *Ground Water Monitoring Review*, v. 11, no. 3, p. 182-191.

McElwee, C.D., Butler, J.J., Jr., **Bohling, G.C.**, and Liu, W.Z., 1991, The use of observation wells with slug tests: Open-File Rept. 1991-63, Kansas Geol. Survey, Lawrence, Kansas, 32 p.

McElwee, C.D., Butler, J.J., Jr., **Bohling, G.C.**, and Liu, W.Z., 1991, The use of observation wells with slug tests [Abs.], *in* Am. Geophysical Union 1991 Fall Meeting Supplement: *Eos, Transactions Amer. Geophys. Union*, v. 72, no. 0, p. 220.

McElwee, C.D., Butler, J.J., Jr., **Bohling, G.C.**, and Liu, W.Z., 1994, Sensitivity analysis of slug tests II: Observation wells: *Jour. Hydrology*, v. 164, no. 1/4, p. 69-87.

McElwee, C.D., Butler, J.J., Jr., Liu, W.Z., and **Bohling, G.C.**, 1990, Effects of partial penetration, anisotropy, boundaries, and well skin on slug tests: Open-File Rept. 1990-13, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

McElwee, C.D., Butler, J.J., Jr., Macpherson, G.L., **Bohling, G.C.**, Miller, R.D., ***Mennicke, C.M.***, Huettle, T., ***Zenner, M.A.***, ***Hyder, Z.***, Liu, W., and Orcutt, M., 1993, Characterization of heterogeneities controlling transport and fate of pollutants in unconsolidated sand and gravel aquifers, 2nd year report: Open-File Rept. 1993-21, Kansas Geol. Survey, Lawrence, Kansas, 224 p.

McElwee, C.D., Butler, J.J., Jr., Macpherson, G.L., **Bohling, G.C.**, Miller, R.D., ***Mennicke, C.M.***, Huettl, T., ***Zenner, M.A.***, ***Hyder, Z.***, Liu, W., Orcutt, M., Beilfuss, M.L., and Gonuguntla, S., 1995, Characterization of heterogeneities controlling transport and fate of pollutants in unconsolidated sand and gravel aquifers: Final report: Open-File Rept. 1995-16, Kansas Geol. Survey, Lawrence, Kansas, 559 p.

McElwee, C.D., Butler, J.J., Jr., Macpherson, G.L., **Bohling, G.C.**, ***Mennicke, C.M.***, Huettl, T., ***Zenner, M.A.***, ***Hyder, Z.***, Liu, W., and Orcutt, M., 1994, Characterization of heterogeneities controlling transport and fate of pollutants in unconsolidated sand and gravel aquifers, 3rd year report: Open-File Rept. 1994-32, Kansas Geol. Survey, Lawrence, Kansas, 237 p.

McElwee, C.D., Butler, J.J., Jr., Macpherson, G.L., **Bohling, G.C.**, Miller, R.D., Liu, W.Z., *Mennicke, C.M.*, and ***Hyder, Z.***, 1992, Characterization of heterogeneities controlling transport and fate of pollutants in unconsolidated sand and gravel aquifers—First year report: Open-File Rept. 1992-20, Kansas Geol. Survey, Lawrence, Kansas.

McElwee, C.D., Butler, J.J., Jr., W. Liu, and **Bohling, G.C.**, 1990, Effects of partial penetration, anisotropy, boundaries and well skin on slug tests [Abs.]: Am. Geophysical Union, 1990 Spring Meeting: *Eos, Transactions Amer. Geophys. Union*, v. 71, no. 17, p. 505.

McElwee, C.D., ***Zenner, M.A.***, Butler, J.J., Jr., and **Bohling, G.C.**, 1993, Unified analysis of slug tests including nonlinearities, inertial effects and turbulence [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 74, no. 43, p. 235.

McElwee, C.D., ***Zenner, M.A.***, Butler, J.J., Jr., and **Bohling, G.C.**, 1993, Unified analysis of slug tests including nonlinearities, inertial effects and turbulence: Open-File Report 93-45, Kansas Geol. Survey, Lawrence, Kansas, 23 p.

Merchant, J.W., Whittemore, D.O., Whistler, J.L., **McElwee, C.D.**, and Woods, J.J., 1987, Groundwater pollution hazard assessment, a GIS approach: *KARS Newsletter*, v. 15, no. 1, p. 8-9.

Merchant, J.W., Whittemore, D.O., Whistler, J.L., **McElwee, C.D.**, and Woods, J.J., 1988, Groundwater pollution hazard assessment, a GIS approach, *in* R.T. Aangeenberg and Y.M. Schiffman (Eds.), Proc. International Geographic Information Systems (IGIS) Symposium: U.S. National Aeronautics and Space Administration, Arlington, Virginia, p. 15-18.

Merriam, D.F. (Ed.), 1964, Symposium on Cyclic Sedimentation: Kansas Geol. Survey Bull. 169, Lawrence, Kansas, 636 p. (2 vols.).

Merriam, D.F. (Ed.), 1966, Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, 79 p.

Merriam, D.F. (Ed.), 1967, Computer applications in the earth sciences: Colloquium on Time Series Analysis: Computer Contribution 18, Kansas Geol. Survey, Lawrence, Kansas, 77 p.

Merriam, D.F. (Ed.), 1968, Computer programs for multivariate analysis in geology: Computer Contribution 20, Kansas Geol. Survey, Lawrence, Kansas, 58 p.

Merriam, D.F. (Ed.), 1969, *Computer Applications in the Earth Sciences*: Plenum Press, New York, 281 p.

Merriam, D.F. (Ed.), 1969, Symposium on Computer Applications in Petroleum Exploration: Computer Contribution 40, Kansas Geol. Survey, Lawrence, Kansas, 41 p.

Merriam, D.F. (Ed.), 1970, *Geostatistics, A Colloquium*: Plenum Press, New York, 174 p.

Merriam, D.F., 1962, History of Precambrian studies in Kansas: *Transactions*, Kansas Acad. Sci. 94th Ann. Meeting, v. 65, no. 4, p. 433-447.

Merriam, D.F., 1962, Late Paleozoic limestone "buildups" in Kansas: Kansas Geol. Soc., 27th field Conf. Guidebook, p. 73-81.

Merriam, D.F., 1963, Geologic history of Kansas: Kansas Geol. Survey Bull. 162, Lawrence, Kansas, 317 p.

Merriam, D.F., 1963, Triassic rocks of Kansas: *Compass*, v. 40, no. 2, p. 122-127.

Merriam, D.F., 1964, Annotated bibliography of the Kansas Precambrian: Special Dist. Pub. 8, Kansas Geol. Survey, Lawrence, Kansas, p. 1-18.

Merriam, D.F., 1964, Use of trend-surface residuals in interpreting geologic structures, *in* Computer Applications in the Mineral Industries: *Pub. Geol. Sci.*, v. 9, no. 2, p. 686-692.

Merriam, D.F., 1965, Geology and the computer: *New Scientist*, v. 26, no. 444, p. 513-516.

Merriam, D.F., 1966, Geologic use of the computer: *in* Proc. Wyoming Geol. Assoc. 20th Ann. Field Conference, WHERE, p. 109-112.

Merriam, D.F., 1967, Computer aids exploration geologist: *Oil and Gas Jour.*, v. 65, no. 4, p. 118-121.

Merriam, D.F., 1967, Computer use in Europe: *Geotimes*, v. 12, no. 9, p. 14-16.

Merriam, D.F., 1967, Geology of Saline County: Open-File Rept. 1967-4, Kansas Geol. Survey, Lawrence, Kansas, 16 p.

Merriam, D.F., 1967, Leicester [U.K.] & Kansas exchange: *Geotimes*, v. 12, no. 2, p. 19-20.

Merriam, D.F., 1968, Visual display of computer output aids geological interpretations (in Russian): *in* Academy Nauk SSSR, Investigations in Mathematical Gedology, Leningrad, p. 273-283.

Merriam, D.F., 1969, Computer utilization by geologists, *in* Symposium on Computer Applictions in Petroleum Exploration: Computer Contribution 40, Kansas Geol. Survey, p. 1-4.

Merriam, D.F., 1970, Comparison of British and American carboniferous cyclic rock sequences: *Jour. Intl. Assoc. Math. Geology*, v. 2, no. 3, p. 241-262.

Merriam, D.F., 1970, Comparison of British and American Carboniferous cyclic rock sequences [Abs.]: *in* Proc. 6th International Congress Carbonif. Strat. and Geology, v. 3, p. 1181-1182.

Merriam, D.F., 1970, Computer applications in stratigraphic problem solving: *in* Proc. 9th Intl. Symposium on Techniques for Decision Making in the Mineral Industry, Montreal, Abstracts vol., p. 00. [in press]

Merriam, D.F., 1971, Computer applications in stratigraphic problem solving: *Canadian Inst. Min. Metall. Spec. Vol.*, no. 12, p. 139-147.

Merriam, D.F., and **Cocke, N.C.** (Eds.), 1967, Computer applications in the earth sciences: Colloquium on Trend Analysis: Computer Contribution 12, Kansas Geol. Survey, Lawrence, Kansas, 62 p.

Merriam, D.F., and **Cocke, N.C.** (Eds.), 1968, Computer applications in the earth sciences: Colloquium on Simulation: Computer Contribution 22, Kansas Geol. Survey, Lawrence, Kansas, 58 p.

Merriam, D.F., and Cole, V.B., 1962, Progress Report of the Kansas Basement Rocks Committee and Additional Precambrian Wells: Kansas Geol. Survey Bull. 157, pt. 2, p. 1-11.

Merriam, D.F., and **Crouse, E.C.**, 1999, Bedrock geology of Woodson County, Kansas [Abs.]: *in* Proc. Am. Assoc.Petroleum Geologists Midcontinent Regional Meeting, Wichita, Kansas, Abstracts vol., p. 153.

Merriam, D.F., and **Crouse, E.C.**, 1999, Surface geology of Woodson County, Kansas [Abs.]: *Transactions*, Kansas Acad. Sci. 131st Ann. Meeting, April, Kansas State Univ., Manhattan, Kansas, Programs & Abstracts, v. 18, p. 10.

Merriam, D.F., and ***Cubitt, J.M.***, 1979, Distribution of chemical elements in the Pennsylvaniabn cyclic sediments in the Mid-Continent [Abs.]: *in* Proc. 9th International Carbonif. Congress, v. 00, p. 00.

Merriam, D.F., and **Davis, J.C.** (Eds.), 2001, *Geologic Modeling and Simulation: Sedimentary Systems*: Series on Computer Applications in the Earth Sciences, Kluwer Academic/Plenum Publishers, New York, 352 p.

Merriam, D.F., and ***Doria-Medina, J.H.***, 1968, Analisis de tendencias polinomias y de Fourier aplicados a la informacion estratigrafica: *Boletin del Inst. Boliviano del Petroleo*, v. 8, no. 1, p. 59-74.

Merriam, D.F., and **Doveton, J.H.**, 2000, Multidimensional scaling facies mapping of poorly tractable data: A Morrison Formation case study [Abs.]: Proc. 31st International Geol. Congress, Rio de Janeiro [on CD-ROM].

Merriam, D.F., and ***Förster, A.***, 1995, Subsurface temperature anomalies as a key to petroleum-producing areas in the Cherokee and Forest City basins, eastern Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 79, no. 9, p. 1404-1405.

Merriam, D.F., and ***Förster, A.***, 1995, Timing of development of "plains-type folds" utilizing a structural gradient concept [Abs.]: Kansas Acad. Sci. 127th Ann. Meeting, April, Pittsburg State Univ., Pittsburg, Kansas, Abstracts, v. 14, p. 31.

Merriam, D.F., and ***Förster, A.***, 1996, Late Paleozoic recurrent structural movement in the midcontinent (USA) as recorded by "plains-type folds" [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 28, no. 7, p. 446, [reprinted in Oklahoma Geology Notes, v. 57, no. 4, p. 148-149].

Merriam, D.F., and ***Förster, A.***, 1996, Precambrian basement control on "plains-type folds" (compactional features) in the Midcontinent region, USA, *in* O. Oncken and C. Janssen (Eds.), *Basement Tectonics*, v. 11: Kluwer Acad. Publ., Dordrecht, The Netherlands, p. 149-166.

Merriam, D.F., and ***Förster, A.***, 1996, Structural interval gradient to determine adjustment time of "plains-type folds" to differential movement of Precambrian basement fault blocks, eastern Kansas Midcontinent (USA) [Abs.]: Kansas Acad. Sci. 128th Ann. Meeting, March, Emporia State Univ., Emporia, Kansas, Abstracts, v. 15, p. 36.

Merriam, D.F., and ***Förster, A.***, 1997, Origin, development, and distribution of "plains-type folds" (compactional features) in the Cherokee basin of the American Midcontinent [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 81, no. 8, p. 1352-1353.

Merriam, D.F., and ***Förster, A.***, 1997, Origin, development, and distribution of "plains-type folds" (compactional features) in the Cherokee basin of the American midcontinent, *in* G. McMahan (Ed.), Trans. Am. Assoc. Petroleum Geologists Mid-continent Section Meeting, "New technologies for an old frontier": Oklahoma Geol. Soc., Oklahoma City, Oklahoma, p. 52-56.

Merriam, D.F., and ***Förster, A.***, 1998, Comparison and integration of geophysical and sedimentological data for basin modeling [Abs.]: *Annales Geophysicae* (1988), v. 16, suppl. 1, p. 60.

Merriam, D.F., and ***Förster, A.***, 1998, Paleoearthquakes and late Paleozoic structural movement in the Midcontinent (USA): Stratigraphic and sedimentological evidence [Abs.]: *in* Proc. Geol. Soc. America Meeting, Toronto, Canada, Abstracts vol., p. A400.

Merriam, D.F., and ***Förster, A.***, 1999, Subtle and not so subtle anticlinal structures in the Salina basin, north-central Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1202.

Merriam, D.F., and ***Förster, A.***, 1999, Subtle and not-so-subtle anticlinal structures and their geothermal overprint in the Salina basin, north-central Kansas, *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geologists, Midcontinent Section Meeting, "Geoscience for the 21st Century": Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 15-21.

Merriam, D.F., and ***Förster, A.***, 2000, The origin and development of plains-type folds during the Cretaceous central and western Kansas: *Compass*, v. 75, nos. 2-3, p. 45-56.

Merriam, D.F., and ***Förster, A.***, 2001, Determining sedimentary basin depth of burial and overburden removal from geological factors [Abs.]: Kansas Acad. Sci. 133rd Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 20, p. 42-43.

Merriam, D.F., and ***Förster, A.***, 2002, Paleoearthquakes and Late Paleozoic recurrent structural movement in the Midcontinent (USA) as revealed by stratigraphic and sedimentological evidence, *in* F.R. Ettensohn, N. Rast, and C.E. Breet (Eds.), *Ancient Seismites*: Geol. Soc. America, Spec. Paper 359, in press.

Merriam, D.F., and ***Förster, A.***, with statistical analysis by **Davis, J.C.**, 1997, Comparison and integration of geophysical and sedimentological data for basin analysis [Abs.], *in* CSPG/SEPM Symposium "Geothermics: Application of Temperature and Pressure Data for Basin Analysis": Canadian Soc. Petroleum Geologists/SEPM, Calgary, Canada, Abstracts vol., p. 00.

Merriam, D.F., and Gantz, M.M., 1965, Graduate degrees in geology conferred by the University of Kansas from 1895-1965: Rept. Dept. Geology, Univ. Kansas, Lawrence, Kansas, 14 p.

Merriam, D.F., and Goebel, E.D., 1965, The Asmussen Oil Field, Butler County, in southeastern Kansas, *in* Symposium on the Arbuckle: *Tulsa Geol. Soc. Digest*, v. 32, p. 91-97.

Merriam, D.F., and Goebel, E.D., 1968, Natural gas in Kansas, Part A: Occurrence of natural gas in Kansas in rocks of Paleozoic age, *in* B.W. Beebe and B.F. Curtis (Eds.), *Natural Gases of North America*, Part 3: Am. Assoc. Petroleum Geologists, Memoir no. 9, v. 2, p. 1548-1557.

Merriam, D.F., and ***Harbaugh, J.W.***, 1963, Computer helps map oil structures: *Oil and Gas Jour.*, v. 61, no. 47, p. 158-159, 161-163.

Merriam, D.F., and ***Harbaugh, J.W.***, 1964, Trend-surface analysis of regional and residual components of geologic structure in Kansas: Special Dist. Pub. 11, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Merriam, D.F., and ***Harbaugh, J.W.***, 1966, Process-response model for marine-organism communities [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 50, no. 3, pt. 1, p. 627.

Merriam, D.F., and ***Herzfeld, U.C.***, 1991, Methods of map integration and comparison [Abs.], *in* Proc. GeoTech/GeoChautauqua '91, September, Lakewood, Colorado.

Merriam, D.F., and Lippert, R.H., 1964, Pattern recognition studies of geologic structure using trend-surface analysis: *Colorado Sch. Mines Quart.*, v. 59, no. 4, p. 237-246.

Merriam, D.F., and Lippert, R.H., 1966, Geologic model studies using trend-surface analysis: *Jour. Geology*, v. 74, no. 3, p. 344-357.

Merriam, D.F., and ***Robinson, J.E.***, 1970, Trend analysis in geologic geophysical exploration, *in* Proc. Symp. Mathematical Methods in Geology and Geophysics: *Hornicka Pribram ve Vede a Technice*, Pribram, Czechoslovakia, 41 p.

Merriam, D.F., and ***Robinson, J.E.***, 1997, Harmonic analysis of sedimentary cyclic sequences in Kansas, Midcontinent, USA: *Math. Geology*, v. 29, no. 8, p. 953-962.

Merriam, D.F., and ***Scherer, Wolfgang***, 1996, Comparison and integration of spatial data using covariance matrices: *Math. Geology*, v. 28, no. 5, p. 657-671.

Merriam, D.F., and Smith, Polly, 1962, Look in the deeper basinal areas for more Kansas Arbuckle oil: *Oil and Gas Jour.*, v. 60, no. 11, p. 142-144.

Merriam, D.F., and ***Sneath, P.H.A.***, 1966, Quantitative comparison of contour maps: *Jour. Geophys. Research*, v. 71, no. 4, p. 1105-1115.

Merriam, D.F., and ***Sneath, P.H.A.***, 1967, Comparison of cyclic rock sequences using cross-association, *in* Curt Teichert and E.L. Yochelson (Eds.), *Essays in Paleontology and Stratigraphy, R.C. Moore Commemorative Volume*: Univ. Kansas, Dept. Geology, Special Pub. no. 2, p. 523-538.

Merriam, D.F., ***Förster, A.***, and **Sampson, R.J.**, 1993, Mineral springs and well waters of eastern Kansas and their relation to the geothermal field [Abs.]: *in* Proc. Kansas Acad. Sci./Missouri Acad. Sci. Joint, Abstracts, v. 13, p. 55.

Merriam, D.F., Fuhr, B.A., and ***Herzfeld, U.C.***, 1990, An integrated approach to basin analysis and mineral exploration [Abs.]: *in* Proc. Symposium "Computerized Basin Analysis for Prognosis of Energy and Mineral Resources," June, Güstow, Germany: GDR Acad. Sci., Potsdam, GDR, p. 24.

Merriam, D.F., Fuhr, B.A., and ***Herzfeld, U.C.***, 1993, An integrated approach to basin analysis and mineral exploration, *in* ***J. Harff*** and D.F. Merriam (Eds.), *Computerized Basin Analysis, The Prognosis of Energy and Mineral Resources*: Series on Computer Applications in the Earth Sciences: Plenum Press, New York, p. 197-214.

Merriam, D.F., Hambleton, W.W., and Cole, V.B., 1962, Precambrian basement rock types in Mid-continent region [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 46, no. 2, p. 272.

Merriam, D.F., ***Herzfeld, U.C.***, and ***Förster, A.***, 1993, Integration of geophysical data for basin analysis: *in* Proc. 3rd. International Brasilian Geophys. Soc. Congress, Rio de Janeiro, v. 2, p. 1025-1030.

Merriam, D.F., ***Herzfeld, U.C.***, and ***Förster, A.***, 1993, Pairwise comparison of spatial data [Abs.]: Program and abstracts of the Silver Anniversary Meeting, International Assoc. Math. Geology, Prague, p. 37.

Merriam, D.F., ***Herzfeld, U.C.***, and ***Förster, A.***, 1996, Pairwise comparison of spatial map data, *in* ***A. Förster*** and D.F. Merriam (Eds.), *Geologic Modeling and Mapping*: Series on Computer Applications in the Earth Sciences, Plenum Press, New York, p. 215-228.

Merriam, D.F., ***Herzfeld, U.C.***, and Fuhr, B.A., 1999, An integrated mapping approach to petroleum exploration in the Pratt anticline, Pratt County, Kansas: *Natural Resources Research*, v. 8, no. 1, p. 69-86.

Miller, R.D., and **Davis, J.C.**, 1999, Annual water level raw data report for Kansas: Open-File Rept. 1999-5, Kansas Geol. Survey, Lawrence, Kansas, 266 p. on CD-ROM.

Miller, R.D., Anderson, T.A., **Davis, J.C.**, Steeples, D.W., and Moran, M.L., 2001, 3-D characterization of seismic properties at the Smart Weapons Test Range, YPG: Proc. Military Sensing Symposium: Johns Hopkins Univ., Laurel, MD, 18 p. [on CD-ROM].

Miller, R.D., Clough, J.G., and **Davis, J.C.**, 2001, High-resolution seismic reflection to delineate a 1200 ft deep potential coalbed methane layer under Fort Yukon, Alaska [Abs.]: *in* Proc. Joint Meeting of the Pacific Section of the Am. Assoc. Petroleum Geologists and Soc. Petroleum Engineers, Anchorage, Alaska.

Miller, R.D., Clough, J.G., Barker, C.E., and **Davis, J.C.**, 2001, Overview: Delineation of coal bed methane prospects using high-resolution seismic reflections at Ft. Yukon, Alaska: Open-File Rept. 2001-13, Kansas Geol. Survey, Lawrence, Kansas, 13 p.

Miller, R.D., **Davis, J.C.**, and Laflen, D.R., 2000, Annual water level raw data report for Kansas: Open-File Rept. 2000-10, Kansas Geol. Survey, Lawrence, Kansas, 19 p., CD-ROM.

Miller, R.D., **Davis, J.C.**, and Laflen, D.R., 2001, Annual water level raw data report for Kansas: Open-File Rept. 2001-1, Kansas Geol. Survey, Lawrence, Kansas, 473 p. on CD-ROM.

Miller, R.D., **Davis, J.C.**, and **Olea, R.A.**, 1997, Acquisition activity, statistical quality control, and spatial quality control for 1997 annual water level data acquired by the Kansas Geol. Survey: Open-File Rept. 1997-33, Kansas Geol. Survey, Lawrence, Kansas, 46 p.

Miller, R.D., **Davis, J.C.**, and **Olea, R.A.**, 1998, Annual water level raw data report for Kansas: Open-File Rept. 1998-7, Kansas Geol. Survey, Lawrence, Kansas, 275 p., 6 plates, 1 CD-ROM.

Miller, R.D., **Davis, J.C.**, and Steeples, D.W., 2001, 3-D geophysical characterization of seismic properties at Yuma Proving Ground, Smart Weapons Test Range [Abs.]: Military Sensing Symposium on Battlefield Seismic and Acoustic Sensing, September, San Diego, California.

Miller, R.D., **Davis, J.C.**, Laflen, D., **Siceloff, J.**, Bennett, B., Brohammer, M., and Acker, P., 1997, Acquisition activity and raw data report on 1997 annual water measurements, Kansas' portion: Open-File Rept. 1997-11, Kansas Geol. Survey, Lawrence, Kansas, 98 p.

Miller, R.D., **Davis, J.C.**, **Olea, R.A.**,Tapie, C., Laflen, D., and Fiedler, M., 2002, Delineation of coalbed methane prospects using high-resolution seismic reflections at Fort Yukon, Alaska: Open-File Rept. 2002-16, Kansas Geol. Survey, Lawrence, Kansas, 50 p., 80 illustrations [in review].

Miller, R.D., Xia, J., Park, C.B., **Davis, J.C.**, Shefchik, W.T., and Moore, L., 1999, Seismic techniques to delineate dissolution features in the upper 1000 ft at a power plant site: Soc. Exploration Geophysicists, Technical Program Vol. I, Paper NSG 3.5, Houston, Texas, p. 492-495.

Minoura, N., and **Conley, C.D.**, 1971, Techniques for impregnating porous rock samples with low-viscosity epoxy resin: *Jour. Sed. Petrology*, v. 41, no. 3, p. 858-861.

Moore, R.C., and **Merriam**, **D.F.**, 1965, Cyclothems in Kansas, *in* Program and Field Trip Guidebook, Golden Anniversary Convention of Sigma Gamma Epsilon: Sigma Gamma Epsilon, Alpha Chapter, Univ. Kansas, Lawrence, Kansas. [Reprinted from Assoc. American State Geologists Ann. Meeting Guidebook: Kansas Geol. Survey, Lawrence, Kansas, p. 10-26a.]

Moore, R.C., and **Merriam**, **D.F.**, 1965, Upper Pennsylvanian cyclothems in the Kansas River Valley: Geol. Society America Ann. Meeting, Kansas City, Missouri, Field Conference Guidebook, p. 1-22.

Moore, R.C., Jewett, J.M., and O'Connor, H.G., [1951] 1998, Geologic map of Chase County, Kansas, revised by **Collins**, **D.R.**, **Crouse**, **E.C.**, and **Ross**, **J.A.**, 1998: Kansas Geol. Survey, Map Series M-55, database scale 1:24,000, published scale 1:50,000 and 1:100,000 (revised from Kansas Geol. Survey Vol. 11, part 1, plate 1, and other sources), Kansas Geol. Survey, Lawrence, Kansas.

Nemec, ***V.***, 1970, The law of regular structural pattern—Its applications with special regard to mathematical geology, *in* **D.F. Merriam** (Ed.), *Geostatistics*, *A Colloquium*: Plenum Press, New York, p. 63-87.

Newell, K.D., and **Doveton**, **J.H.**, 1999, Facies and petrophysical characteristics of the Chattanooga Shale and Misener Sandstone in the McPherson Paleovalley in central Kansas [Abs.]: *in* Workshop on Silurian, Devonian, and Mississippian Geology and Petroleum in the Southern Midcontinent, Oklahoma Geol. Survey, Norman, Oklahoma, Abstracts vol., p. 9.

Newell, K.D., Berendsen, P., **Doveton**, **J.H.**, and Watney, W.L., 1989, Correlation and implications of results from recent wildcat wells in Mid-Continent Rift in northeastern Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 73, no. 8, p. 1049.

Newell, K.D., Berendsen, P., Watney, W.L., **Doveton**, **J.H.**, and Steeples, D.W., 1989, Stratigraphy of Mid-Continent Rift system in Kansas as revealed by recent exploration wells [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 73, no. 3, p. 395.

Newell, K.D., Cheng, S.W.L., Watney, W.L., and **Brownrigg**, **R.**, 1990, Preparing regional oil and gas maps by computer: *Geobyte*, v. 5, no. 1, p. 50-55.

Newell, K.D., **Doveton**, **J.H.**, and Lambert, M.W., 2001, Facies and petrophysical characteristics of the Chattanooga Shale and Misener Sandstone in the McPherson paleovalley in central Kansas, *in* K.S. Johnson (Ed.), "Silurian, Devonian, and Mississippian geology and petroleum in the southern Midcontinent": Oklahoma Geol. Survey Circ. 105, p. 57-70.

Newell, K.D., Watney, W.L., Cheng, S.W.L., and **Brownrigg**, **R.**, 1987, Stratigraphic and spatial distribution of oil and gas production in Kansas: Kansas Geol. Survey, Lawrence, Kansas, Subsurface Geology Series no. 9, 86 p.

Ohlmacher, G.C., and **Davis**, **J.C.**, 2002, Landslide-Hazard Map of the Atchison West and East 7.5-Minute Quadrangles, Atchison County, Kansas: Map M-89B, Kansas Geol. Survey, Lawrence, Kansas [in revision].

Ohlmacher, G.C., and **Davis, J.C.**, 2002, Using multiple logistic regression and GIS technology to predict landslide hazard in northeast Kansas, USA: *Geological Engineering* [in review].

Ohlmacher, G.C., **Collins, D.R.**, **Ross, J.A.**, and Adkins-Heljeson, D.M., 1999, Development of a slope stability hazard web site for the Missouri River Corridor, Atchison, Kansas [Abs.]: Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 31, no. 7, p. 248.

Olea, R.A. (Ed.), 1991, *Geostatistical Glossary and Multilingual Dictionary*: Studies in Math. Geology no. 6, Oxford Univ. Press, New York, 177 p.

Olea, R.A., 1971, Trend surface analysis in Calafate, Magallanes Basin: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 6 p., 4 plates.

Olea, R.A., 1972, Application of regionalized variable theory to automatic contouring—Special Rept. to the American Petroleum Institute, Research Project no. 131: KU Center for Research, Inc./Kansas Geol. Survey, Lawrence, Kansas, 191 p., 2 plates.

Olea, R.A., 1972, Application of regionalized variable theory to automatic contouring: Unpub. M.S. Thesis, Computer Science Dept., Univ. Kansas, Lawrence, Kansas, 191 p.

Olea, R.A., 1974, Optimal contour mapping using kriging: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 7 p.

Olea, R.A., 1974, Optimal contour mapping using universal kriging: *Jour. Geophys. Research*, v. 79, no. 5, p. 695-702.

Olea, R.A., 1975, Optimum mapping techniques using regionalized variable theory: Series on Spatial Analysis no. 2, Kansas Geol. Survey, Lawrence, Kansas, 137 p.

Olea, R.A., 1975, Reply to Comments on "Optimal contour mapping using universal kriging": *Jour. Geophys. Research*, v. 80, no. 5, p. 835-836.

Olea, R.A., 1977, Measuring spatial dependence with semivariograms: Series on Spatial Analysis no. 3, Kansas Geol. Survey, Lawrence, Kansas, 29 p.

Olea, R.A., 1978, Graphical display using plotters (in Spanish): *Minerales, Revista del Instituto de Ingenieros de Minas de Chile*, v. XXXIII, no. 144, p. 60-61.

Olea, R.A., 1980, Design of an observation well network, with an application to Kansas Groundwater Management District #2: Kansas Geol. Survey, Lawrence, Kansas, 32 p.

Olea, R.A., 1981, LOG II, A general purpose automated well log evaluation system: Petrophysical Series no. 1, Kansas Geol. Survey, Lawrence, Kansas, 103 p.

Olea, R.A., 1981, Voronoi division and porous media: Dept. Chemical and Petroleum Engineering 30-day Problem, Univ. Kansas, Lawrence, Kansas, 65 p.

Olea, R.A., 1982, Geostatistics and regionalized variables, *in* **J.A. DeGraffenreid** (Ed.), Time-and Space-Dependent Data in the Earth Sciences: Series on Spatial Analysis no. 6, Kansas Geol. Survey, Lawrence, Kansas, p. 30-34.

Olea, R.A., 1982, Optimization of the High Plains aquifer observation network, Kansas: Groundwater Series no. 7, Kansas Geol. Survey, Lawrence, Kansas, 73 p.

Olea, R.A., 1982, Systematic approach to sampling of spatial functions: Unpub. Ph.D. dissertation, Dept. Chemical and Petroleum Engineering, University of Kansas, Lawrence, Kansas, vol. 1, 277 p., vol 2, 5 p., 5 plates.

Olea, R.A., 1983, Systematic approach to sampling of spatial functions [Abs.]: Dissertation Abstracts International, Section B, v. 43, no. 12, p. 4115B.

Olea, R.A., 1984, Sampling design optimization for spatial functions: *Math. Geology*, v. 16, no. 4, p. 369-392.

Olea, R.A., 1984, Systematic sampling of spatial functions: Series on Spatial Analysis no. 7, Kansas Geol. Survey, Lawrence, Kansas, 57 p.

Olea, R.A., 1986, Radon sampling: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 2 p.

Olea, R.A., 1988, An expert system to assist in stratigraphic interpretation: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 16 p.

Olea, R.A., 1988, CORRELATOR—An interactive computer system for lithostratigraphic correlation of wireline logs: Petrophysical Series no. 4, Kansas Geol. Survey, Lawrence, Kansas, 85 p.

Olea, R.A., 1988, Geostatistical semantics: North Am. Council on Geostatistics, *Geostatistics*, v. 2, no. 2, p. 4-7.

Olea, R.A., 1988, Lithostratigraphic correlation of geophysical well logs from the North Sea using the CORRELATOR program: Report prepared for Unocal Corp., Kansas Geol. Survey, Lawrence, Kansas, 115 p., 13 plates.

Olea, R.A., 1988, Lithostratigraphy of the Loreto Formation in the area Cruceros-Punta del Cerro, Chile, using CORRELATOR (in Spanish): Report prepared for Empresa Nacional del Petróleo, Chile, Kansas Geol. Survey, Lawrence, Kansas, 126 p., 7 plates.

Olea, R.A., 1988, Review. *A Handbook of Introductory Statistical Methods*, by C.P. Cox: *Math. Geology*, v. 20, no. 2, p. 143-144.

Olea, R.A., 1989, Fault detection and display using the CORRELATOR computer system: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Olea, R.A., 1989, Lithostratigraphic correlation of wireline logs from the Seminole field, West Texas, using CORRELATOR computer system: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 205 p., 6 plates.

Olea, R.A., 1989, Lithostratigraphic correlation of wireline logs from the MacArthur River field, Alaska, using CORRELATOR: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 88 p., 5 plates.

Olea, R.A., 1989, Review. *Geostatistics, Sensitivity, and Uncertainty Methods for Ground-water Flow and Radionuclide Transport Model*, by B.E. Buxton (Ed.): *Water International*, v. 14, no. 3, p. 159-160.

Olea, R.A., 1990, Computer-Assisted Fault Modeling with an Application to the Dolly Sector of the MacArthur River field, Alaska: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 61 p.

Olea, R.A., 1990, Lithostratigraphic correlations of wireline logs from Cold Turkey Creek, North Dakota, using the CORRELATOR Program: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas 134 p., 3 plates.

Olea, R.A., 1990, Review. *An Introduction to Applied Geostatistics*, by R. Mohan Srivastava and E.H. Isaaks: *Math. Geology*, v. 22, no. 5 p. 625-627.

Olea, R.A., 1990, Review. *Geostatistics in Five Lessons*, by A.G. Journel: *Computers and Geosciences*, v. 16, no. 8, p. 1242.

Olea, R.A., 1991, Comparison of automatic contouring of reservoir thickness in the Lyons Field, Kansas [Abs.], *in* Proc. Univ. Polytècnica de Catalunya Prof. Seminar, Barcelona, Spain: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 9 p., 4 maps.

Olea, R.A., 1991, Lithostratigraphic Correlation in the Lawrence Field, Illinois, using the CORRELATOR computer system: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 576 p., 39 plates.

Olea, R.A., 1991, Reply to comments on "Book review: *An Introduction to Applied Geostatistics*": *Math. Geology*, v. 23, no. 4, p. 683-685.

Olea, R.A., 1992, Experts systems in the computer program CORRELATOR [Abs.]: 29th Intl. Geol. Congress, Kyoto, Abstracts, v. 1, p. 230.

Olea, R.A., 1992, Kriging—Understanding allays intimidation: *Geobyte*, v. 7, no. 5, p. 12-17.

Olea, R.A., 1993, Application of the program CORRELATOR to the geological modeling of the West Delta 79 field, offshore Louisiana: Report prepared for Marathon Oil Company, 20 p., 10 plates.

Olea, R.A., 1993, Interpretation of wireline logs from Cold Turkey Creek, North Dakota, using the program CORRELATOR: Open-File Rept. 1993-6, Kansas Geol. Survey, Lawrence, Kansas, 11 p., 14 plates.

Olea, R.A., 1994, Expert systems for automated correlation and interpretation of wireline logs: *Math. Geology*, v. 26, no. 8, p. 879-897.

Olea, R.A., 1994, Fundamentals of semivariogram estimation, modeling and usage, *in* J.M. Yarus and R. L. Chambers (Eds.), *Stochastic Modeling and Geostatistics—Principles, Methods, and Case Studies:* Am. Assoc. Petroleum Geologists, Computer Applications in Geology no. 3, p. 27-45.

Olea, R.A., 1994, Geological modeling of the Eugene Island Block 57 field, offshore Louisiana, with the aid of the program CORRELATOR: Report prepared for Marathon Oil Company, 19 p., 10 plates.

Olea, R.A., 1994, Geostatistical evaluation of a reduction in number of observation wells in the groundwater level data network, High Plains aquifer, Kansas: Open-File Rept. 1994-55, Kansas Geol. Survey, Lawrence, Kansas, 16 p.

Olea, R.A., 1996, Use of wireline logs for the quantitative characterization of the Dakota aquifer, Hodgeman County, Kansas [Abs.]: 30th Intl. Geol. Congress, Beijing, Abstracts, v. 3, p. 495. [poster]

Olea, R.A., 1996, XVAN: A computer program for the analysis of spatial estimation errors: *Computers & Geosciences*, v. 22, no. 4, p. 445-448.

Olea, R.A., 1997, Contribution to the sequence stratigraphy of the Upper Pennsylvanian in central Kansas: Open-File Rept. 1997-87, Kansas Geol. Survey, Lawrence, Kansas, 3 plates.

Olea, R.A., 1997, Sampling analysis of the annual observation water wells in Kansas: Open-File Rept. 1997-73, Kansas Geol. Survey, Lawrence, Kansas, 44 p., 10 plates.

Olea, R.A., 1998, Proposed expansion of the High Plains aquifer observation network for reliability enhancement: Open-File Rept. 1998-39, Kansas Geol. Survey, Lawrence, Kansas, 2 p., 3 plates.

Olea, R.A., 1999, *Geostatistics for Engineers and Earth Scientists*: Kluwer Academic Publishers, Boston, 303 p.

Olea, R.A., 1999, Review. *Geostatistics for Natural Resources Evaluation*, by P. Goovaerts: *Math. Geology*, v. 31, no. 3, p. 349-350.

Olea, R.A., and **Bohling, G.C.**, 1996, Regionalized classification and its application to the Dakota aquifer, Hodgeman County, Kansas—Report to the Dakota aquifer program: Open-File Rept. 1996-22, Kansas Geol. Survey, Lawrence, Kansas, 30 p.

Olea, R.A., and **Brentano, J.E.**, 1981, Aquifer boundaries of Kansas: Kansas Geol. Survey, Lawrence, Kansas (map).

Olea, R.A., and **Brentano, J.E.**, 1982, Design of an observation well network, with an application to Kansas Groundwater Management District no. 2: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Olea, R.A., and Concha, R., 1977, Simulation models and their application to oil prospecting in Chile (in Spanish): *Minerales, Revista del Instituto de Ingenieros de Minas de Chile*, v. XXXII, no. 140, p. 13-23.

Olea, R.A., and **Davis, J.C.**, 1977, Regionalized variables for evaluation of petroleum accumulation in Magellan Basin, South America: *Bull. Am. Assoc. Petroleum Geologists*, v. 61, no. 4, p. 558-571.

Olea, R.A., and **Davis, J.C.**, 1985, Effect of correlation length on weighted correlations between wells: Unpub. Rept., Kansas Geol. Survey/Texaco Corp. Coop. Project, Lawrence, Kansas, 8 p.

Olea, R.A., and **Davis, J.C.**, 1985, Effect of search interval on weighted correlations using well logs: Unpub. Rept., Kansas Geol. Survey/Texaco Corp. Coop. Project, Lawrence, Kansas, 6 p.

Olea, R.A., and **Davis, J.C.**, 1985, Spatial dependence of stratigraphic correlations:Unpub. Rept., Kansas Geol. Survey/Texaco Corp. Coop. Project, Lawrence, Kansas, 7 p., Appdx.

Olea, R.A., and **Davis, J.C.**, 1986, An artificial intelligence approach to lithostratigraphic correlation using geophysical well logs: SPE Preprint 15603, 61st Ann. Tech. Conf., Soc. Petroleum Engineers, New Orleans, Louisiana, 12 p.

Olea, R.A., and **Davis, J.C.**, 1986, Computer correlations for the Mississippian System in southeastern Kansas: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 45 p., Appdx.

Olea, R.A., and **Davis, J.C.**, 1986, Interactive well log correlation and mapping, with an application to the Grand Bayou Field, Lousiana: Unpub. Rept., Kansas Geol. Survey/Texaco Corp. Coop. Project, Lawrence, Kansas, 154 p.

Olea, R.A., and **Davis, J.C.**, 1989, An expert system for the correlation of geophysical well logs, *in* M. Simaan and F. Aminzadeh (Eds.), *Advances in Geophysical Data Processing*, vol. 3, *Artificial Intelligence and Expert Systems in Petroleum Exploration*: Jai Press Inc., Greenwich, Connecticut, p. 279-307.

Olea, R.A., and **Davis, J.C.**, 1999, Optimizing the High Plains aquifer water level observation network: Open-File Rept. 1999-15, Kansas Geol. Survey, Lawrence, Kansas, 8 p., 3 plates.

Olea, R.A., and **Davis, J.C.**, 1999, Sampling analysis and mapping of water levels in the High Plains aquifer of Kansas: Open-File Rept. 1999-11, Kansas Geol. Survey, Lawrence, Kansas, 35 p., 9 plates.

Olea, R.A., and **Davis, J.C.**, 2000, Year 2000 proposed additions to the High Plains aquifer water-level observation network: Open-File Rept. 2000-17, Kansas Geol. Survey, Lawrence, Kansas, 6 p., 1 plate.

Olea, R.A., and **Davis, J.C.**, 2000, Year 2000 sampling analysis and mapping of water levels in the High Plains aquifer of Kansas: Open-File Rept. 2000-13, Kansas Geol. Survey, Lawrence, Kansas, 33 p., 5 plates.

Olea, R.A., and **Davis, J.C.**, 2001, Year 2001 mapping of water levels in the High Plains aquifer of Kansas and analysis of the monitoring network: Open-File Rept. 2001-6, Kansas Geol. Survey, Lawrence, Kansas, 49 p., 8 plates.

Olea, R.A., and **Davis, J.C.**, 2002, Geostatistical analysis and mapping for year 2002 water levels in the High Plains aquifer of Kansas: Open-File Rept. 2002-14, Kansas Geol. Survey, Lawrence, Kansas, 34 p., 17 plates.

Olea, R.A., and Guy, W.J., 2000, Subsurface geology of the Schaben field, Ness County, Kansas: Open-File Rept. 2000-52, Kansas Geol. Survey, Lawrence, Kansas, 8 p., 8 plates.

Olea, R.A., and ***Pawlowsky-Glahn, V.***, 1994, Conditionally de-smoothed kriging [Abs.]: *in* Papers and Extended Abstracts for Technical Program, International Assoc. Math. Geology Ann. Meeting, October, Mont Tremblant, Quebec, Canada, p. 273-281.

Olea, R.A., and ***Pawlowsky-Glahn, V.***, 1996, Compensating for estimation smoothing in kriging: *Math. Geology*, v. 28, no. 4, p. 407-417

Olea, R.A., and ***Pawlowsky-Glahn, V.***, 1999, Compositional analysis and character-ization of compositional data from an oil field in Kansas, USA, *in* A.J.S. Lippard, A. Næss, and ***R. Sinding-Larsen*** (Eds.), *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*: Tapir Printers, Trondheim, Norway, p. 499-504.

Olea, R.A., and **Sampson, R.J.**, 1991, Three-dimensional modeling of the Lawrence Field, Illinois: Report prepared for Marathon Oil Company, Kansas Geol. Survey, Lawrence, Kansas, 11 p.

Olea, R.A., and **Sampson, R.J.**, 1993, Inverse modeling using the program STRATIGRAPHER: Program and abstracts of the Silver Anniversary Meeting, International Assoc. Math. Geology, Prague, p. 42. [poster]

Olea, R.A., **Davis, J.C.**, and Merriam, D.F., 1997, Automatic regional wireline log lithostratigraphic correlation in Kansas using CORRELATOR, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 343-348.

Olea, R.A., **Davis, J.C.**, and Merriam, D.F., 1997, Modification to the High Plains aquifer observation network expansion in Kansas Geol. Survey Open-File Report 1997-73: Open-File Rept. 1997-84, Kansas Geol. Survey, Lawrence, Kansas, 3 p.

Olea, R.A., **Davis, J.C.**, and Merriam, D.F., 1997, Stratigraphic framework of Kansas—Part I: East west-central Kansas: Open-File Rept. 1997-81, Kansas Geol. Survey, Lawrence, Kansas, 8 p., 3 plates.

Olea, R.A., **Davis, J.C.**, and **Sampson, R.J.**, 1985, Interactive system for litho-stratigraphic correlation using well logs, with an application to the Lake des Allemands Field, Louisiana: Unpub. Rept., Kansas Geol. Survey/Texaco Corp. Coop. Project, Lawrence, Kansas, 99 p., 5 plates.

Olea, R.A., Grundy, D., Patil, G., and Ross, P., 1988: Peer review report for monitoring statistics projects: *in* Report submitted by Acurex Corporation to U.S. Environ-mental Protection Agency, 15 p.

Olea, R.A., Newell, K.D., and ***Harff, J.***, 1991, Geologic modelling of the Zenith field, Kansas, using CORRELATOR: Open-File Rept. 1991-39, Kansas Geol. Survey, Lawrence, Kansas, 339 p. (2 vol.), 36 plates.

Olea, R.A., ***Pawlowsky-Glahn, V.***, and **Davis, J.C.**, 1993, Volumetric calculations in an oil field—The basis method: *Computers & Geosciences*, v. 19, no. 10, p. 1517-1527.

Olea, R.A., **Ross, J.A.**, **Davis, J.C.**, **Collins, D.R.**, Merriam, D.F., and Watney, W.L., "Wireline Logs for High-Resolution Subsurface Stratigraphy", *in* International Association for Mathematical Geology, Proceedings: IAMG 2001 Conference, CD-ROM. [poster]

Olea, R.A., Sophocleous, M., and Woods, J.J., 2002, Expansion for the High Plains aquifer observation network of water wells in southwest Kansas: Open-File Rept. 2002-35, Kansas Geol. Survey, Lawrence, Kansas, 2 p., 1 plate.

Olea, R.A., Watney, W.L., and **Davis, J.C.**, 1998, High resolution wireline correlation for sequence stratigraphic analysis in southwest Kansas, *in* A. Buccianti, G. Nardi, and R. Potenza (Eds.), *Proceedings of the Fourth Annual Conference of the International Association for Mathematical Geology*, Part 2: De Frede Editore, Naples, Italy, p. 639-644.

Olea, R.A., Watney, W.L., and **Davis, J.C.**, 2002, Subsurface geology of the Nemaha Anticline and the Humboldt Fault in an area around Wamego, Kansas: Open-File Rept. 2002-21, Kansas Geol. Survey, Lawrence, Kansas, 15 p., 14 plates.

Ondrick, C.W., and ***Griffiths, J.C.***, 1969, FORTRAN IV computer program for fitting observed count data to discrete distribution models of binomial, Poisson and negative binomial: Computer Contribution 35, Kansas Geol. Survey, Lawrence, Kansas, 20 p.

Ondrick, C.W., and ***Griffiths, J.C.***, 1969, Trend surface analysis applied to the Rensselaer Graywacke and its implications to the Taconics: *Jour. Sed. Petrology*, v. 39, no. 1, p. 176-186.

Ondrick, C.W., and ***Srivastava, G.S.***, 1970, CORFAN-FORTRAN IV computer program for correlation, factor analysis (R- and Q-mode) and varimax rotation: Computer Contribution 42, Kansas Geol. Survey, Lawrence, Kansas, 92 p.

Parsley, A.J., and **Doveton, J.H.**, 1969, Discussion: The role of some statistical and mathematical methods in the interpretation of regional geochemical data: *Econ. Geol.*, v. 64, no. 7, p. 830.

Pawlowsky-Glahn, V., 1991, Concepts of null correlation for regionalized compositions: *in* Proc. 30th Symp., "The Mining Pribram in Science and Technology," International Section on Mathematical Methods in Geology, Pribram, Czechoslovakia, Abstracts vol., p. 327-342.

Pawlowsky-Glahn, V., and **Olea, R.A.**, *n.d.*, *Geostatistical Analysis of Compositional Data*: Studies in Math. Geology no. 7, Oxford Univ. Press, New York [in final prep.].

Pawlowsky-Glahn, ***V.***, **Davis**, **J.C.**, and **Olea**, **R.A.**, 1992, Indikator-Kriging zur Festlegung von Grenzen geologischer Körper (Eine Fallstudie) [Indicator kriging for determining the boundaries of geologic bodies—A case study], *in* G.J. Peschel (Ed.), *Beiträge zur Mathematischen Geologie und Geoinformatik*: *Anwendung geostatistischer Verfahren*: Verlag Sven von Loga, Köln, Germany, v. 3, p. 55-60.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and Barceló, C., 1996, Estimation of regionalized compositions using different backtransformations [Abs.]: 30th Intl. Geol. Congress, Beijing, Abstracts, v. 3, p. 498.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1991, Automatic determination of boundaries of geological bodies—Measuring the uncertainty (in Spanish): *Proceeding of the XII Congreso de Ecuaciones Diferenciales (CEDYA) and II Congreso de Matemática Aplicada*, Univ. Oviedo, Spain, p. 555-560.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1991, Cokriging of compositional data for volumetric calculations in an oil field [Abs.]: *in* Proc. III Geostatistical Conference, Troia, Portugal.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1992, Volumetric calculations in an oil field: the basis method [Abs.]: 29th Intl. Geol. Congress, Kyoto, Abstracts, v. 3, p. 960.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1993, Additive logratio estimation of regionalized compositional data: An application to calculation of oil reserves [Abs.], *in* Proc. "Forum on Geostatistics for the Next Century," An International Forum in Honour of Michel David's Contribution to Geostatistics, June, Montreal, Canada, Abstracts vol., p. 323–337.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1993, Boundary assessment under uncertainty—A case study: *Math. Geology*, v. 25, no. 2, p. 125-144.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1994, Additive logratio estimation of regionalized compositional data: An application to calculations of oil reserves, *in* R. Dimitrakopoulos (Ed.), *Geostatistics for the Next Century*: Kluwer Academic Publ., Dordrecht, The Netherlands, p. 371-382.

Pawlowsky-Glahn, ***V.***, **Olea**, **R.A.**, and **Davis**, **J.C.**, 1995, Estimation of regionalized compositions: A comparison of three methods: *Math. Geology*, v. 27, no. 1, p. 105-127.

Payne, ***D.J.***, 1973, A critical look at stepwise regression: (Proc. of Budapest Symposium in 1972): *Econometrica*, v. 00, no. 00, p. 00.

Payne, ***D.J.***, 1974, A look at some objective criteria for the construction of choroplethic maps: Unpub. Tech Rept., Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 21 p. PUBLISHED??

Payne, ***D.J.***, 1974, A statistical view of stepwise regression: *Jour. Am. Statistical Assoc.*, v. 00, no. 00, p. 00.

Payne*, *D.J., 1974, Some comments on the construction of surface shape parameters—Discussion of points in "Mathematical Procedures and FORTRAN IV Program for Description of Three-Dimensional Surface Configurations, by ***F. Demirmen***: Unpub. Tech Rept., Geologic Research Section, Kansas Geol. Survey, Lawrence, Kansas, 5 p.

Payne*, *D.J., 1974, Stepwise regression: Its scope and limitations: *Technometrics*??

Pilz*, *Jürgen, 1992, Improved kriging using prior knowledge via Bayes and minimax linear smoothing tedchniques [Abs.]: *in* Proc. IV Geostatistical Conference, September, Troia, Portugal.

Pilz*, *Jürgen, 1992, Zur Verwendung von *a-priori*-Kentnissen in geostatistischen Modellen, *in* G. Peschel (Ed.), *Beiträge zur Mathematischen Geologie und Geoinformatik*: Verlag Sven von Loga, Köln , v. 3, p. 00.

Poelchau*, *H.S., 2001, Determining depth of burial and overburden erosion from compaction patterns in sonic logs [Abs.]: Kansas Acad. Sci. 133rd Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 20, p. 49.

***Poelchau*, *H.S.*, Doveton, J.H.**, and Merriam, D.F., 2001, Estimating maximum burial and erosion for basin modeling in western Kansas [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 10, p. 159-60.

Prelat*, *A., 1974, Statistical estimation of wildcat well outcome probabilities by visual analysis of structure contour maps of Stafford County, Kansas: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 103 p.

Preston*, *D.A., 1970, FORTRAN IV program for sample normality tests: Computer Contribution 41, Kansas Geol. Survey, Lawrence, Kansas, 28 p.

Preston, F.W., and **Davis, J.C.**, 1969, Numerical characterization of porous media: in Proc. 7th Colloquium on Computer Applications in the Earth Sciences, December, Univ. Kansas, Lawrence, Kansas.

Preston, F.W., and **Davis, J.C.**, 1972, Analysis and synthesis of pore structure [Abs.]: *in* Proc. Joint Symposium on Fundamentals of Transport Phenomena in Porous Media: Intl. Assoc. Hydraulic Research/Univ. Guelph, Canada, Abstracts vol., p. 00.

Preston, F.W., and **Davis, J.C.**, 1972, Application of optical processors to geological images [Abs.], *in* proc. "Conference on Machine Perception of Patterns and Pictures": National Physical Laboratory, April, Teddington, U.K.

Preston, F.W., and **Davis, J.C.**, 1972, Application of optical processors to geological images: Machine perception of patterns and pictures: *The Institute of Physics Conf. Series* no. 13, p. 223-232.

Preston, F.W., and **Davis, J.C.**, 1972, Porous materials as a realization of a stochastic process [Abs.]: 24th Intl. Geol. Congress, Montreal, Canada, Abstracts vol., p. 00.

Preston, F.W., and **Davis, J.C.**, 1976, Sedimentary porous materials as a realization of a stochastic process, *in* D.F. Merriam (Ed.), *Random Processes in Geology*: Springer-Verlag, New York, p. 63-86.

Preston, F.W., and ***Harbaugh, J.W.***, 1965, BALGOL programs and geologic applications for single and double Fourier series using IBM 7090/7094 computers: Special Dist. Pub. 24, Kansas Geol. Survey, Lawrence, Kansas, 72 p.

Preston, F.W., **Conley, C.D.**, and Watson, G.S., 1976, Spatial variation in porosity, a new concept [Abs.]: *in* Proc. 61st Ann. Meeting, Am. Assoc. Petroleum Geologists, New Orleans, Louisiana, Abstracts vol., p. 00.

Preston, F.W., **Conley, C.D.**, and Watson, G.S., 1976, Spatial variation in porosity—A new concept: *Bull. Am. Assoc. Petroleum Geologists*, v. 60, no. 4, p. 709.

Preston, F.W., Green, D.W., and **Davis, J.C.**, 1969, Numerical characterization of reservoir rock pore structure: 2nd Ann. Rept. to Americal Petroleum Institute Research Project 103, Univ. Kansas, Lawrence, Kansas, 84 p.

Preston, F.W., Green, D.W., and **Davis, J.C.**, 1970, Numerical characterization of reservoir rock pore structure: Final Rept. to American Petroleum Institute Research Project 103, Univ. Kansas, Lawrence, Kansas, 98 p.

Preston, F.W., Green, D.W., **Davis, J.C.**, and Scheve, D., 1968, Numerical characterization of reservoir rock pore structure: Semi-Ann. Rept. to American Petroleum Institute Research Project 103, Univ. Kansas, Lawrence, Kansas, 28 p.

Prohic, E., and **Davis, J.C.**, 1994, Grant. U.S.-Croatian Science/Technology Program, U.S. State Dept., US $23,700. [E. Prohic, Univ. Zagreb, Croatian PI; J.C. Davis, U.S. Counterpart Scientist]

Prohic, E., Hausberger, G., and **Davis, J.C.**, 1997, Geochemical patterns in soils of the karst region, Croatia: *Jour. Geochemical Exploration*, v. 60, p. 139-155.

Raje, M., **Collins, D.R.**, and **Ross, J.A.**, 1995, KOGVIEW: Kansas Oil and Gas data VIEWs—Project documentation for a Geographic Information System (GIS) application: Open-File Rept. 1995-78, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Rao, S.V.L.N., and ***Srivastava, G.S.***, 1969, Comparison of regression surfaces in geologic studies: *Transactions*, Kansas Acad. Sci., v. 72, no. 1, p. 88-90.

Read, W.A., 1969, Analysis and simulation of Namurian sediments in central Scotland using a Markov-process model: *Jour. Intl. Assoc. Math. Geology*, v. 1, no. 2, p. 199-219.

Read, W.A., 1976, An assessment of some quantitative methods of comparing lithological succession data, *in* D.F. Merriam (Ed.), *Quantitative Techniques for the Analysis of Sediments*: Pergamon, Oxford, U.K., p. 33-51.

Read, W.A., and Dean, J.M., 1972, Principal component analysis of lithological variables from some Namurian (E2) paralic sediments in Central Scotland: *Bull. Geol. Survey Great Britain*, no. 40, p. 83-99.

Read, W.A., and **Merriam, D.F.**, 1966, Trend-surface analysis of stratigraphic thickness data from some Namurian rocks east of Sterling, Scotland: *Scottish Jour. Geology*, v. 2, pt. 1, p. 96-100.

Read, W.A., and Merriam, D.F., 1972, A simple quantitative technique for comparing cyclically deposited successions, *in* D.F. Merriam (Ed.), *Mathematical Models of Sedimentary Processes*: Plenum Press, New York, p. 203-231.

Read, W.A., and ***Sackin, M.J.***, 1971, A quantitative comparison, using cross-association, of vertical successions of Namurian (E1) paralic sediments in the Kincardine Basin, Scotland: Inst. Geol. Sciences, Rept. no. 71/74, London, p. 00.

Reyment, R.A., 1966, Homogeneity of covariance matrices in relation to generalized distances and discriminant functions, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, p. 5-9.

Reyment, R.A., 1967, Paleoethology and fossil drilling gastropods: *Transactions*, Kansas Acad Sci., v. 70, no. 1, p. 33-50.

Reyment, R.A., 1971, *Introduction to Quantitative Paleoecology*: Elsevier Publ. Co., Amsterdam, 226 p.

Reyment, R.A., 1974, The age of zap, in D.F. Merriam (Ed.), The impact of quantification on geology: Geol. Contribution 2, Syracuse Univ., Syracuse, New York, p. 19-26.

Reyment, R.A., and McKenzie, K.G., 1993, Quantitative genetics in paleontology: Evolution in tertiary Ostracoda, *in* **Davis, J.C.**, and ***Herzfeld, U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 155-168.

Reyment, R.A., and Ramden, H.-A., 1970, FORTRAN IV program for canonical variates analysis for the CDC 3600 computer: Computer Contribution 47, Kansas Geol. Survey, Lawrence, Kansas, 40 p.

Reyment, R.A., Ramden, H.-A., and **Wahlstedt, W.J.**, 1969, FORTRAN IV program for the generalized statistical distance and analysis of covariance matrices for the CDC 3600 computer: Computer Contribution 39, Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Robinson, J.E., 1970, Spatial filtering of geological data: *Rev. Intl. Stat. Inst.*, v. 38, no. 1, p. 21-34.

Robinson, J.E., 1975, Frequency analysis, sampling, and errors in spatial data, in J.C. Davis and M.J. McCullagh, *Display and Analysis of Spatial Data*: Wiley-Interscience, John Wiley & Sons, Ltd., London, p. 78-95.

Robinson, J.E., 1983, Computer exploration in Graham County, Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 67, no. 8, p. 1326-1327.

Robinson*, *J.E., and Charlesworth, H.A.K., 1969, Spatial filtering illustrates relationship between tectonic structure and oil occurrence in southern and central Alberta, *in* **D.F. Merriam** (Ed.), Symposium on Computer Applications in Petroleum Exploration: Computer Contribution 40, Kansas Geol. Survey, Lawrence, Kansas, p. 13-18.

Robinson*, *J.E., and Ellis, M.J., 1971, Spatial filters and FORTRAN IV program for filtering geologic maps: *Geocom Programs No. 1*, London, 21 p.

Robinson*, *J.E., and Merriam, D.F., 1971, Z-trend maps for quick recognition of geologic patterns [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 3, no. 1, p. 50-51.

Robinson*, *J.E., and Merriam, D.F., 1971, Z-Trend maps for quick recognition of geologic patterns: *Jour. Intl. Assoc. Math. Geology*, v. 3, no. 2, p. 171-181.

Robinson*, *J.E., and Merriam, D.F., 1972, Enhancement of patterns in geologic data by spatial filtering: *Jour. Geology*, v. 80, no. 3, p. 333-345.

Robinson*, *J.E., and Merriam, D.F., 1984, Computer evaluation of prospective petroleum areas: *Oil and Gas Jour.*, v. 82, no. 34, p. 135-138

Robinson, J.E., Merriam, D.F., and Burroughs, W., 1978, A quantitative technique to determine relation of oil production to geologic structure in Graham County, Kansas, *in* **J.C. Davis** and S. Levi de Lopez (Eds.), *Mapas por Computadora para el Analisis de los Recursos Naturales, Memorias de la Reunion Internacional* [Computer mapping for natural resources analysis, Proceedings of an international conference]: Universidad Nacional Autonoma de Mexico, Instituto de Geografia, Mexico City, Mexico, p. 256-264.

Roche, C., Acker, P., and **Collins, D.R.**, 1988, Kansas Geological Survey map products and capabilities in the area of automated cartography [Abs.]: *in* Proc. Assoc. Engineering Geologists 31st Ann. Meeting, MONTH, Kansas City, Missouri.

Roche, C., and **Ross, C.G.**, 1988, Automated cartography at the Kansas Geological Survey [Abs.]: Kansas Acad. Sci. 120th Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 7, p. 50.

Roche, C., Ross, J.A., and **Collins, D.R.**, 1987, Kansas Geological Survey products and capabilities in the area of automated cartography [Abs.]: *in* Proc. Geographic Information Systems Conference, MONTH, Univ. Kansas, Lawrence, Kansas.

Roche, C., Ross, J.A., Ross, C.G., Brownrigg, R., and others, 1986, Index to KDB—A brochure showing status of the Kansas Cartographic Database and samples of Kansas Geological Survey cartographic products: Kansas Geol. Survey, Lawrence, Kansas.

Rock*, *Nicholas, 1991, Better reports with less effort: Power word processing with the Macintosh: *Geobyte*, v. 00, April, p. 19-30.**??Davis, J.C.**, 1991, Review. "Better reports with less effort: Power word processing on the Macintosh," by Nicholas Rock: *Geobyte*, v. 00 (April), p. 19-30.

Rock*, *Nicholas, 1991, Software Review: Statistics on the Apple Macintosh—I. Principles, problems and progress, II. Seventeen packages compared: *Computers & Geosciences*, v. 17, no. 2, p. 315-320, 321-328.

Ross, C.G., 1979, GIMMAP: A (mini) computer-assisted cartography system [Abs.]: *in* Proc. 4th International Symposium on Computer-Assisted Cartography—AUTO-CARTO IV, November, Reston, Virginia.

Ross, C.G., 1981, GIMMAP: Geodata Interactive Management Map Analysis and Production: Unpub. M.S. thesis, Dept. Computer Science, Univ. Kansas, Lawrence, Kansas, 227 p.

Ross, C.G., 1981, Pawnee Valley recharge area demonstration map for Groundwater Management District No. 5: Unpub. Rept. (map), Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1981, Proposed new structures for the Border File, associated changes in the Zone File, and a generating algorithm: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1982, An interactive computer cartography system [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Research Conf., "Interactive Computer Application in Petroleum Exploration," May, Keystone, Colorado.

Ross, C.G., 1982, Bangladesh LANDSAT interpretations—Demonstration for USAID: Unpub Rept., Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, C.G., 1982, New GIMMAP data structures for 32-bit (FORTRAN 77) system: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas, 11 p.

Ross, C.G., 1983, HEXY: A FORTRAN program to produce a grid of user-specified, fixed-size hexagons for computer plotting (prepared for U.S. Geol. Survey, Lawrence, KS): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, An algorithm for producing double-dashed lines in cartographic products: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, CHENG: A FORTRAN program to produce color displays of selected subsets of oil and gas well locations, properly projected, with county-boundary background: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, GIMMAP: A system of FORTRAN programs and related databases to provide "Geo-data Interactive Management Map Analysis and Production," and the Kansas Database, both second generation in function and in form: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, KONTIKI and KONTIKIBOX: FORTRAN programs to produce color displays of subsets (selected by field types) of oil and gas fields for all or part (selected by latitude/longitude rectangle) of the State of Kansas with county boundaries displayed beneath fields: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, LOGDIG: A FORTRAN program for IBM PC supporting interactive digitization, color display and editing of well log data: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, MAPREQUEST: A FORTRAN program and associated database for automated collection, modification, and dissemination of information to define and control production of maps via GIMMAP system: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, Operator's manual for the MAPREQUEST program: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, TICTOC: A FORTRAN program to produce latitude and longitude lines or tick marks at selected intervals within working area of maps, with lines produced in digitized-data format or as plotter commands: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1984, VIRGIL: A FORTRAN program to convert digitized nonstandard-control data ("Virgil Cole data") to correct projected locations based on standard projection for the State of Kansas: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1985, "LEO": FORTRAN software and spatially structured database of township/section corner locations for rapid, accurate conversion between legal and geographic systems in the State of Kansas: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1985, Four maps covering the State of Kansas containing county outlines and cultural information sufficient to locate pipelines [data source for revised Pipeline Map of Kansas]: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986 , "COLORZ," a revised FORTRAN 77 program for production of color maps using color dictionaries, selections by color and zooming: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, "SHADEZ"—A revised FORTRAN 77 program for production of "shaded" maps using hatching techniques, modified for very large data sets and near-solid area fill: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, A survey of cartographic database storage requirements and computing system characteristics associated with GIMMAP and the Kansas Cartographic Database: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, Digital cartographic data for a 15-quadrangle area around Harvey County in Kansas (produced for Kansas Applied Remote Sensing Program, Univ. Kansas): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, Digital cartographic data for Finney, Ford, and Haskell counties in Kansas (produced for Kansas Dept. Transportation, Topeka, Kansas): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, Digital cartographic data of the transportation net of Gray County, Kansas (produced for Kansas Dept. Transportation, Topeka, Kansas): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, Extended data structure modifications for the Zone, Border, Label, Symbol, and Calligraphy files in GIMMAP: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, FORTRAN software for the production of special line types (hashed, dashed, etc.) in plot files of cartographic data (produced for Kansas Dept. Transportation, Topeka, Kansas): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., 1986, Water quality and basin areas in Kansas, a series of color maps (produced for KGS Geochemistry Section): Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas (maps).

Ross, C.G., 1994, LEO II: Automated conversion between legal and geographic reference for locations in Kansas: Open-File Rept. 1993-53, Kansas Geol. Survey, Lawrence, Kansas, 93 p.

Ross, C.G., and **Brentano, J.E.**, 1980, Groundwater Management District No. 4: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, C.G., and **Brentano, J.E.**, 1980-[ongoing], The Kansas Database: A cartographic database for statewide automated cartography projects at the Kansas Geological Survey: Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and **Brentano, J.E.**, 1982, Groundwater Management District No. 4 map series [southwest, southeast, northeast, northwest], scale 1:125,000: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas (4 maps).

Ross, C.G., and **Brentano, J.E.**, 1982, High Plains aquifer, Kansas (series of maps): *in* R.A. Olea, "Optimization of the High Plains Aquifer Observation Network, Kansas": Groundwater Series no. 7, Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and **Brentano, J.E.**, 1982, Sherman County, Kansas, demonstration map based on data from the Kansas Database (prepared for Kansas Dept. Transportation, Topeka, Kansas): Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, C.G., and **Brentano, J.E.**, 1983, SHADEZ: A FORTRAN 77 program to create plot commands to produce variable shading patterns for areas in geologic and other areal mapping applications: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and **Brownrigg, R.**, 1985, "Oil and gas fields update maps"—A series of maps combining data from the Kansas Cartographic Database, the Oil and Gas Fields Database, and well location information from the Petroleum Information Inc. database: Kansas Geol. Survey, Lawrence, Kansas (maps).

Ross, C.G., and **Brownrigg, R.**, 1986, LEOBASE II—A portable, ASCII digital database of longitude/latitude locations for all township and section corners in Kansas, ordered spatially for construction of townships and sections: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and **Collins, D.R.**, 1988, Computer-aided mapping at the Kansas Geological Survey [Abs.]: *in* Proc. Assoc. Engineering Geologists 31st Ann. Meeting, MONTH, Kansas City, Missouri.

Ross, C.G., and **Collins, D.R.**, 1990, Automated use of information referenced to the Public Land Survey [Abs.]: Kansas Acad. Sci. 122nd Ann. Meeting, March, Kansas State Univ., Manhattan, Kansas, Abstracts, v. 9, p. 52.

Ross, C.G., and **Collins, D.R.**, 1990, Geographic Information Systems—An Introduction [Abs.]: Presentation to Committee on Energy and Natural Resources, February, Topeka, Kansas.

Ross, C.G., and **Collins, D.R.**, 1990, Rectification of map data with GIMMAP [Abs.]: *in* Proc. Mid-America GIS Symposium, April 30-May 3, Overland Park, Kansas.

Ross, C.G., and **Collins, D.R.**, 1991, DLGIN: Software and procedures for digitizing PLSS data for DLG output to the U.S. Geol. Survey: Tech. Rept. 91-2, Technical Information Services, Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and **Collins, D.R.**, 1991, DLGOUT: Creating standard format Digital Line Graph output from GIMMAP cartographic databases: Tech. Rept. 91-1, Technical Information Services, Kansas Geol. Survey, Lawrence, Kansas.

Ross, C.G., and Mullin, P., 1980, GIMMAP digitizing manual for the CEC Digitizing Program: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Ross, C.G., and **Ross, J.A.**, 1988, Digitizing operations with GIMMAP: Open-File Rept. 1988-45d, Kansas Geol. Survey, Lawrence, Kansas, 97p.

Ross, C.G., **Brentano, J.E.**, and Domermuth, R., 1982, GRFMAN Routines: The graphics management library for the GIMMAP system: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas, 24 p.

Ross, C.G., **Ross, J.A.**, *et al.*, 1984-1986, The Kansas Cartographic Database (KCD), with several layers of statewide data: Digital Data, Kansas Geol. Survey, Lawrence, Kansas [in progress].

Ross, J.A., 1996, Compilation of digital geologic map data at the Kansas Geological Survey: Open-File Rept. 1996-58, Kansas Geol. Survey, Lawrence, Kansas, 29 p.

Ross, J.A., 1996, Digital geologic map data capture: A summary of the October 1996 meeting of the Digital Geologic Map Standards Committee, Working Group on Data Capture, Am. Assoc. State Geologists/U.S. Geol. Survey: Open-File Rept. 1996-45, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Ross, J.A., 1996, Images of digital county geologic maps published by the Kansas Geological Survey on the World Wide Wed: Available at http://www.kgs.ukans.edu/General/Geology/index.html and http://www.kgs.ukans.edu/General/Geology/geoMapIndex.html.

Ross, J.A., 1996, Kansas Cartographic Database core metadata: Open-File Rept. 1996-57, Kansas Geol. Survey, Lawrence, Kansas, 3 p.

Ross, J.A., 1996, The Butler County geologic map: A case study of the map production process at the Kansas Geological Survey: *in* Proc. Kansas Acad. Sci. 128th Ann. Meeting, Emporia State Univ., Emporia, Kansas. [poster]

Ross, J.A., 1997, Digital geologic map production and publication at the Kansas Geological Survey: Geol. Soc. America, 1997 Ann. Meeting, *Abstracts with Programs*, v. 29, no. 6, p. A-293.

Ross, J.A., 1997, Digital geologic map production and publication at the Kansas Geological Survey: *in* Proc. Geol. Soc. America, 1997 Ann. Meeting, Salt Lake City, Utah. [poster]

Ross, J.A., 1997, Grant. Stream Layer Data Conversion for the Riparian Inventory Program for the State of Kansas: Geographic Information Systems Policy Board, $15,000.

Ross, J.A., 1997, The Butler County geologic map: A case study of the map production process at the Kansas Geological Survey: *Transactions*, Kansas Acad. Sci. 129th Ann. Meeting, v. 100, no. 1-2, p. 34-46.

Ross, J.A., 1998, Grant. Stream Layer Data Conversion for the Riparian Inventory Program for the State of Kansas: Geographic Information Systems Policy Board, $21,000.

Ross, J.A., 1998, Product development and distribution from the Kansas Digital Geologic Map Database, *in* D.R. Soller (Ed.), "Digital Mapping Techniques '98—Workshop Proceedings": U.S. Geol. Survey Open-File Rept. 1998-487, p. 107-108.

Ross, J.A., 1998, Product development and distribution from the Kansas Digital Geologic Map Database: Workshop on digital mapping techniques—DMT'98: Am. Assoc. State Geologists/U.S. Geol. Survey, Champaign, Illinois. [poster]

Ross, J.A., 1998, Providing spatial data and GIS applications via the Internet, *in* D.R. Soller (Ed.), "Digital Mapping Techniques '98—Workshop Proceedings: U.S. Geol. Survey Open-File Rept. 1998-487, p. 85-90. [Online at http://www.kgs.ukans.edu/General/Geology/dmt/spatial.html.]

Ross, J.A., 1999, Development and distribution from the Kansas Digital Geologic Map Database: Workshop on digital mapping techniques—DMT'99: Am. Assoc. State Geologists/U.S. Geol. Survey, Madison, Wisconsin. [poster]

Ross, J.A., and **Collins, D.R.**, 1995, Completion and format conversion of Public Land Survey System databases (submitted to the Kansas GIS Policy Board): Kansas Geol. Survey, Lawrence, Kansas.

Ross, J.A., and **Collins, D.R.**, 1996, Grant. KWO contract for $20,400+ for database development projects related to the Kansas GIS Policy Board.

Ross, J.A., and **Collins, D.R.**, 1996, Information capture from previously published maps for the Kansas and National Digital Geologic Database projects [Abs.]: Kansas Acad. Sci. 128th Ann. Meeting, Emporia State Univ., Emporia, Kansas, Abstracts, p. 00.

Ross, J.A., and **Collins, D.R.**, 1997, Evaluating alternative data simplification techniques for maintenance of map topology and information content, *in* ***V. Pawlowsky-Glahn*** (Ed.), *Proceedings of the Third Annual Conference of the International Association for Mathematical Geology*: International Center for Numerical Methods in Engineering (CIMNE), Barcelona, Spain, 2 vols., p. 464-469.

Ross, J.A., and **Collins, D.R.**, 1997, Information capture from previously published maps, *in* D.R. Soller (Ed.), "Proceedings of a workshop on digital mapping techniques: Methods for geologic map data capture, management, and publication": U.S. Geol. Survey Open-File Rept. 1997-269, p. 51-56.

Ross, J.A., and **Collins, D.R.**, 1997, Information capture from previously published maps for the Kansas and National Digital Geologic Database Projects [Abs.]: Kansas Acad. Sci. 129th Ann. Meeting, Fort Hays State Univ., Hays, Kansas, Abstracts, v. 16, p. 37.

Ross, J.A., and **Collins, D.R.**, 1998, Developing digital geologic map data from accreting out-of-print publications—Rescuing geologic terrains from the effects of cartographic generalization and analog subduction zones [Abs.]: Geol. Soc. America, Ann. Meeting, *Abstracts with Programs*, v. 30, no. 7, p. 89. [poster]

Ross, J.A., and **Collins, D.R.**, 2000, Grant. Database Development of Large Scale (24K) Surface Geology for the State of Kansas: Geographic Information Systems Policy Board, for Kansas FY 2001, Contract no. 2001-2081, $38,000 project budget, $19,000 funding from Policy Board, principal investigator, J.A. Ross; Co-principal investigator, D.R. Collins.

Ross, J.A., and **Collins, D.R.**, 2001, Grant. Database Development of Large Scale (24K) Surface Geology for the State of Kansas: Geographic Information Systems Policy Board, for Kansas FY 2002, Contract no. 2002-2081, $45,000 project budget, $22,500 funding from Policy Board; Kansas Geol. Survey/AC cost share, $22,500.

Ross, J.A., and **Collins, D.R.**, 2002, Grant. Database Development of Large Scale (24K) Surface Geology: State of Kansas Geographic Information Systems Policy Board for Kansas FY 2003. Proposed project budget, $55,000.00; proposed Policy Board funding, $27,500 [approved].

Ross, J.A., and **Crouse, E.C.**, 1997, Chautauqua County, Kansas, geologic map, scale 1:50,000: *in* Proc. Kansas Acad. Sci. 129th Ann. Meeting, Fort Hays State Univ., Hays, Kansas. [poster]

Ross, J.A., and **Crouse, E.C.**, 1997, Development of digital geologic map databases from published geologic maps: Historic preservation or information collection? [Abs.]: *Bull. Am. Assoc. of Petroleum Geologists*, v. 80, no. 8, p. 1354.

Ross, J.A., and **Crouse, E.C.**, 1997, Development of digital geologic map databases from published geologic maps: Historic preservation or information collection?: Am. Assoc. of Petroleum Geologists Ann. Mid-Continent Section Meeting, Oklahoma City, Oklahoma. [poster]

Ross, J.A., and **Crouse, E.C.**, 1997, Digital geological map preparation by the Kansas Geological Survey [Abs]: Kansas Acad. Sci. 129th Ann. Meeting, April, Fort Hays State Univ., Hays, Kansas, Abstracts, v. 16, p. 37.

Ross, J.A., and **Crouse, E.C.**, 1998, Digital geologic map preparation of Greenwood County, Kansas, map: *in* Proc. Kansas Acad. Sci. 130th Ann. Meeting, Wichita State Univ., Wichita, Kansas. [poster]

Ross, J.A., and **Merriam, D.F.**, 2001, Construction of the geologic map of Coffey County, east-central Kansas [Abs.]: Kansas Acad. Sci. 133rd Ann. Meeting, April, Univ. Kansas, Lawrence, Kansas, Abstracts, v. 20, p. 50-51.

Ross, J.A., and **Ross, C.G.**, Rectification of distorted map data with GIMMAP [Abs.]: Kansas Acad. Sci. 122nd Ann. Meeting, March, Kansas State Univ., Manhattan, Kansas, Abstracts, v. 9, p. 52.

Ross, J.A., **Collins, D.R.**, and **Brownrigg, R.**, 1995, GIS management of petroleum production data for estimation and mapping of regional reserves, future production rates, and discovery potential, *in* Proc. 9th Ann. Symposium on Geographic Information Systems in Natural Resources Management, Vancouver, BC, Canada: *GIS World*, v. 1, p. 244-250.

Ross, J.A., **Collins, D.R.**, and **Crouse, E.C.**, 1999, Progress in development of digital geologic maps databases in Kansas [Abs.], *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geologists, Midcontinent Section Meeting, "Geoscience for the 21st Century": Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 154.

Ross, J.A., **Collins, D.R.**, and Look, K.K., 1999, The Montgomery County, Kansas, geologic map: An example of the Kansas Geologic Map Data Model Database: DMT'99 Workshop on Digital Mapping Techniques: DMT'99: Am. Assoc. State Geologists/U.S. Geol. Survey, Madison, Wisconsin. [poster]

Ross, J.A., **Collins, D.R.**, and Look, K.K., 1999, Weaving history into the Web: Geologic maps, words, and images [Abs.]: Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 31, no. 7, p. 38.

Ross, J.A., **Collins, D.R.**, and Look, K.K., 1999, Weaving history into the Web: Geologic maps, words, and images: Geol. Soc. America Ann. Meeting, Denver, Colorado. [poster]

Ross, J.A., **Crouse, E.C.**, **Olea, R.A.**, and **Park, C.**, 1997, Bouger gravity map, Elk County, Kansas, 1 plate.

Ross, J.A., *et al.*, 1986-[ongoing], The Kansas Cartographic Database (KCD), with several layers of statewide data: Kansas Geol. Survey, Lawrence, Kansas (digital data).

Ross, J.A., *et al.*, 1989, Oil and gas cumulative production in the Hugoton Gas Area: Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, J.A., *et al.*, 1989, Oil and gas fields in Kansas (Goodland, Beloit, Manhattan, Kansas City, Lawrence, Hutchinson, Great Bend, Scott City, Dodge City, Pratt, Wichita, and Joplin quadrangles): Map Series M-18: 1 through 12, Kansas Geol. Survey, Lawrence, Kansas (12 color, 1 x 2 degree maps).

Ross, J.A., *et al.*, 1989, Oil and gas producing horizons in the Hugoton Gas Area: Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, J.A., *et al.*, 1989, Oil and gas wells in the Hugoton Gas Area: Kansas Geol. Survey, Lawrence, Kansas (map).

Ross, J.A., *et al.*, 1990, The Geologic Map of the United Arab Emirates, scale 0:00,000: Kansas Geol. Survey, Lawrence, Kansas.

Ross, J.A., *et al.*, 1991, Geologic map of Kansas: Map Series M-23, scale 1:500,000, Kansas Geol. Survey, Lawrence, Kansas.

Ross, J.A., *et al.*, 1991, Oil and gas fields in Kansas: Map Series M-22, scale 1:500,000, Kansas Geol. Survey, Lawrence, Kansas.

Ross, J.A., *et al.*, 1992 [1991, revised], Oil and gas fields, (Goodland, Beloit, Manhattan, Kansas City, Lawrence, Hutchinson, Great Bend, Scott City, Dodge City, Pratt, Wichita, and Joplin quadrangle in Kansas): Maps M-22: 1 through 12, Kansas Geol. Survey, Lawrence, Kansas.

Ross, J.A., *et al.*, 1993, Oil and gas fields in Kansas (Goodland, Beloit, Manhattan, Kansas City, Lawrence, Hutchinson, Great Bend, Scott City, Dodge City, Pratt, Wichita, and Joplin): Maps M-34: 1 through 12, Kansas Geol. Survey, Lawrence, Kansas (12 maps).

Sackin, M.J., and **Merriam, D.F.**, 1969, Autoassociation. A new geological tool: *Jour. Intl. Assoc. for Math. Geology*, v. 1, no. 1, p. 7-16.

Sackin, M.J., Sneath, P.H.A., and **Merriam, D.F.**, 1965, ALGOL program for cross-association of nonnumeric sequences using a medium-size computer: Special Dist. Pub. 23, Kansas Geol. Survey, Lawrence, Kansas, 37 p.

Sadeghipour, J., Macfarlane, P.A., **McElwee, C.D.**, and Kemblowski, M.W., 1987, Saltwater intrusion into alluvial aquifers: An evaluation of field methods and ground-water modeling techniques. Final report for U.S. Geol. Survey Grant #14-08-0001-G-1066: Open-File Rept. 1987-6, Kansas Geol. Survey, Lawrence, Kansas, 208 p.

Sadler, H.E., and **Merriam, D.F.**, 1967, Re-interpretation of the *Cyrtina septosa* band data, Lower Carboniferous of Derbyshire, England, by computer analysis: *Sedimentology*, v. 8, no. 1, p. 55-61.

Sampson, **R.J.**, 1968, R-mode factor analysis program in FORTRAN II for the IBM 1620 computer, *in* D.F. **Merriam** (Ed.), 1968, Computer programs for multivariate analysis in geology: Computer Contribution 20, Kansas Geol. Survey, Lawrence, Kansas, p. 13-38.

Sampson, **R.J.**, 1973, User's manual for the SURFACE II Graphics System: Kansas Oil Exploration (KOX) Project, Kansas Geol. Survey, Lawrence, Kansas, 144 p. [Software distributed by Kansas Geol. Survey, Lawrence, Kansas.]

Sampson, **R.J.**, 1975 [revised and reissued 1978], SURFACE II Graphics System: Series on Spatial Analysis no. 1, Kansas Geol. Survey, Lawrence, Kansas, 240 p.

Sampson, **R.J.**, 1975, SURFACE II graphics system: Kansas Geol. Survey, Lawrence, Kansas, Series on Spatial Analysis no. 1, 240 p. [reprinted in 1978, 1984].

Sampson, **R.J.**, 1975, The SURFACE II graphics system, *in* **J.C. Davis** and ***M.J. McCullagh*** (Eds.), *Display and Analysis of Spatial Data*: Wiley-Interscience, John Wiley & Sons, Ltd., London, p. 244-266,

Sampson, **R.J.**, 1976, Installation manual for the SURFACE II Graphics System: Series on Spatial Analysis no. 1-A, Kansas Geol. Survey, Lawrence, Kansas, 00 p.

Sampson, **R.J.**, 1986, VAX to Data General conversion of computer program by ***M. Moser*** and H. Majer *in* **DeGraffenreid**, **J.A.** (transl.), 1986, *User Documentation—MINICAD/VA*, Voest-Alpine AG, Leoben, Austria, 34 p.

Sampson, **R.J.**, 1987, VAX to Data General conversion of computer program by J. Gumpinger, ***M. Moser***, ande H. Majer in **DeGraffenreid**, **J.A.** (transl.), 1987, *Minigraph User Documentation*, *Version 2.0*, Voest-Alpine AG, Leoben, Austria, 78 p.

Sampson, **R.J.**, 1988, *A user's guide to SURFACE III*: Interactive Concepts Inc., Lawrence, Kansas, 277 p. [Software distributed by Interactive Concepts Inc., Lawrence, Kansas, and Kansas Geol. Survey, Lawrence, Kansas.]

Sampson, **R.J.**, and **Davis**, **J.C.**, 1966, FORTRAN II trend-surface program with unrestricted input for the IBM 1620 computer: Special Dist. Pub. 26, Kansas Geol. Survey, Lawrence, Kansas, 12 p.

Sampson, **R.J.**, and **Davis**, **J.C.**, 1967, Three-dimensional response surface program in FORTRAN II for the IBM 1620 computer: Computer Contribution 10, Kansas Geol. Survey, Lawrence, Kansas, 20 p.

Sampson, **R.J.**, and **DeGraffenreid**, **J.A.** [session leader], 1988, Using SURFACE III as a research tool for spatial analysis: *in* Proc. Colloquium on Statistical Applications in the Earth Sciences, Geol. Survey Canada, November, Ottawa, Canada. [poster session]

Sampson, **R.J.**, **DeGraffenreid**, **J.A.** [session leader], and ***Moser***, ***M.***, 1990, Surface modeling using a general-purpose contouring program—SURFACE III: *in* Proc. Colloquium on 3-D Computer Graphics in Modeling: Univ. Freiburg Geol. Institute, October, Freiburg, Germany. [poster session]

Sampson, R.J., DeGraffenreid, J.A., and ***Moser, M.***, 1990, Using SURFACE III for 3-D modeling, *in* R. Pflug and K. Bitzer (Eds.), *3-D Computer Graphics in Modeling Geologic Structures and Simulating Geologic Processes*: Freiburger geowiss. Beitr., Band 2, Freiburg, Germany, p. 86-88.

Schaeben, Helmut, 1989, Geometric modeling of geologic surfaces and bodies: Invited paper [open to KGS, Univ. community, and public], APROS Section, Kansas Geol. Survey, July, Lawrence, Kansas.

Schaeben, Helmut, 1989, The benefits of the use of explicit mathematical models: I. Methodology of entropy optimization in texture goniometry: *in* Proc. 28th Intl. Geol. Congress, July, Washington, D.C.

Schaeben, Helmut, and Auerbach, A., 1989, Computer aided geometric design in geosciences, I. Methodology: Polynomial splines on triangles, II. Practical application to digital elevation models and topographic maps, III. Practical application to three dimensional geologic modeling and digital geological maps: *in* Proc. 28th Intl. Geol. Congress, July, Washington, D.C.

Schaeben, Helmut, and Siemes, H., 1989, The benefits of the use of explicit mathematicdal models: II. Practical applications of entropy optimization in texture goniometry: *in* Proc. 28th Intl. Geol. Congress, July, Washington, D.C.

Scherer, Wolfgang, and **Merriam, D.F.**, 1994, Vitrinite reflectance of Pennsylvanian coals in southeastern Kansas as a measure of depth to burial: *Transactions*, Kansas Acad. Sci. 126th Ann. Meeting, v. 97, no. 3-4, p. 127-135.

Scherer, Wolfgang, and **Merriam, D.F.**, 1995, Organic petrography of the Nodaway coal (Upper Pennsylvanian) in eastern Kansas: *Transactions*, Kansas Acad. Sci. 127th Ann. Meeting, v. 98, no. 3-4, p. 130-143.

Schneider, O., and **Olea, R.A.**, 1976, Use of Prima Cord in seismic reflection prospecting (in Spanish): Proc. XXV Reunión de Expertos de ARPEL, *Boletín Técnico de Arpel*, v. 5, no. 3, Montevideo, Uruguay, p. 217-226.

Schwarzacher, W., 1967, Some experiments to simulate the Pennsylvanian rock sequence of Kansas: *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Time Series Analysis: Computer Contribution 18, Kansas Geol. Survey, Lawrence, Kansas, p. 5-14.

Schwarzacher, W., 1968, Experiments with variable sedimentation rates, *in* **Merriam, D.F.**, and **Cocke, N.C.** (Eds.), Computer applications in the earth sciences: Colloquium on Simulation: Computer Contribution 22, Kansas Geol. Survey, Lawrence, Kansas, p. 19-21.

Schwarzacher, W., 1969, The use of Markov chains in the study of sedimentary cycles: *Jour. Intl. Assoc. Math. Geology*, v. 1, no. 1, p. 17-39.

Schwarzacher, W., 1972, The semi-Markov process as a general sedimentation model, in D.F. Merriam (Ed.), *Mathematical Models of Sedimentary Processes*: Plenum Press, New York, p. 247-267.

Schwarzacher, W., 1993, Can the Ginsburg Model generate cycles?, *in* **Davis, J.C.**, and ***Herzfeld, U.C.*** (Eds.), *Computers in Geology—25 Years of Progress*: Studies in Math. Geology no. 5, Oxford Univ. Press, New York, p. 145-153.

Schwarzacher, W., and **Olea, R.A.**, 2000, Time and stratigraphic correlation: *in* Proc. 31st Intl. Geol. Congress, Special Symposium H, Basin Analysis, Rio de Janeiro, 4 p. [on CD-ROM].

Serre, M.L., and ***Christakos, G.***, 1999, Modern geostatistics: Computational BME analysis in the light of uncertain physical knowledge—the Equus Beds study: *Stochastic Environ. Research and Risk Assessment*, vol. 13, no. 1-2, p. 1-26.

Slocum, Terry A., **Davis, J.C.**, and Egbert, Stephen L., 1993, Developing software for exploring temporal spatial data: *GIS/LIS '93 Proceedings*, v. 2, Minneapolis, Minnesota, p. 642-653.

Sneath, P.H.A., 1967, Quality and quantity of available geologic information for studies in time, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Time Series Analysis: Computer Contribution 18, Kansas Geol. Survey, Lawrence, Kansas, p. 57-61.

Sneath, P.H.A., 1967, Trend-surface analysis of transformation grids: *London Jour. Zoology*, v. 151, p. 65-122.

Sneath, P.H.A., and **Merriam, D.F.**, 1967, Comparison of cyclic rock sequences using cross-association, *in* R.C. Moore Memorial Volume: Special Pub. 2, Dept. Geology, Univ. Kansas, Lawrence, Kansas, p. 521-538.

Sophocleous, M., Paschetto, J., and **Olea, R.A.**, 1981, Groundwater network design for Groundwater Management District #4, northwest Kansas, using the theory of regionalized variables: Open-File Rept. 1981-5, Kansas Geol. Survey, Lawrence, Kansas, 14 p., Appdx., 9 plates.

Sophocleous, M., Paschetto, J.E., and **Olea, R.A.**, 1982, Groundwater network design for northwest Kansas using the theory of regionalized variables: *Ground Water*, v. 20, no. 1, p. 48-58.

Sophocleous, M., Wen, L., Paschetto, J., and **Olea, R.A.**, 1982, Ground-water observation network design for Kansas: Open-File Rept. 1982-1, Kansas Geol. Survey, Lawrence, Kansas, 60 p., Appdx.

Sophocleous, M.A., Heidari, M., and **McElwee, C.D.**, 1982, Water quality modeling of the Equus beds aquifer in south central Kansas: Kansas Water Resources Research Institute, Contribution, no. 231, 68 p. (NTIS no. PB83-208 272).

Spitz, O.T., and **Merriam, D.F.**, 1966, Classification of contour maps, *in* **D.F. Merriam** (Ed.), Computer applications in the earth sciences: Colloquium on Classification Procedures: Computer Contribution 7, Kansas Geol. Survey, Lawrence, Kansas, p. 79.

Springer, J., Lewerenz, B., and ***Harff, J.***, 1990, BASIN—Modeling of sedimentary basins: User's Guide, Zentralinstitut für Physik der Erde (ZIPE), Potsdam, Germany, 17 p.

Springer, J., Lewerenz, B., and ***Harff, J.***, 1991, Map integration for geologic structural analysis using multivariate geostatistics [Abs.], *in* Proc. Denver Geotech/Geo-chautauqua, September, Mapping Algorithms and Applications Session 3, Denver, Colorado.

Srivastava, G.S., 1977, Optical processing of structural contour maps: *Math. Geology*, v. 9, no. 1, p. 3-38.

Srivastava, G.S., and Merriam, 1974, Quantitative comparison of maps using optically derived parameters [Abs.]: Geol. Soc. America, *Abstracts with Programs*, v. 6, no. 7, p. 947-947.

St. Clair, P.N., 1985, Core studies of the Viola Limestone in Barber and Pratt counties, south-central Kansas, *in* W.L. Watney, A.W. Walton, and J.H. **Doveton** (Eds.), Core studies in Kansas, Sedimentology and diagenesis of economically important rock strata in Kansas: Subsurface Geology Series no. 6, Kansas Geol. Survey, Lawrence, Kansas, p. 8-16.

Stanford, K.L., Butler, J.J., Jr., **McElwee, C.D.**, and Healey, J.M., 1996, A field study of slug tests in wells screened across the water table [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 77, no. 46, p. F221.

Stanford, K.L., Butler, J.J., Jr., **McElwee, C.D.**, and Healey, J.M., 1996, A field study of slug tests in wells screened across the water table: Open-File Rept. 1996-46, Kansas Geol. Survey, Lawrence, Kansas, 26 p.

Steeples, D.W., and **Ross, C.G.**, 1981, Microearthquakes and faults in Kansas: Internal Rept., Kansas Geol. Survey, Lawrence, Kansas (map).

Steeples, D.W., Berendsen, P., **Doveton, J.H.**, Gerhard, L.C., Newell, K.D., and Watney, W.L., 1988, Geology of the Midcontinent Rift, Texaco #1 Poersch: *Bull. Interstate Oil and Gas Compact Committee*, v. 2, no. 2, p. 86-94.

Steeples, D.W., Knapp, R.W., and **McElwee, C.D.**, 1983, Seismic reflection surveys of a catqastrophically collapsed sinkhole, Ellis County, Kansas [Abs.]: *in* Soc. Exploration Geophysicists 53 Ann. Meeting, Abstracts vol., p. 296-298

Steeples, D.W., Knapp, R.W., and **McElwee, C.D.**, 1985, Seismic reflection surveys of a catastrophically collapsed sinkhole, Ellis County, Kansas [Abs.]: Geophysics, v. 49, no. 5, p. 629.

Steeples, D.W., Knapp, R.W., and **McElwee, C.D.**, 1986, Seismic reflection investigations of sinkholes beneath Interstate Highway 70 in Kansas: *Geophysics*, v. 51, p. 295-301.

Steeples, D.W., Knapp, R.W., and **McElwee, C.D.**, 1986, Seismic reflection investigations of sinkholes beneath Interstate Highway 70 in Kansas: Geophysics, v. 51, no. 2, p. 295-301.

Steeples, D.W., **Ross, C.G., Brentano, J.E.**, *et al.*, 1982, Historic earthquakes, microearthquakes, and faults in the Kansas–Nebraska–Iowa–Missouri region: *in* NRC Quarterly Reports and U.S. Earthquakes (map).

Steeples, D.W., **Ross, C.G.**, **Brentano, J.E.**, *et al.*, 1982, Microearthquakes and faults in Kansas: *in* NRC Quarterly Reports and U.S. Earthquakes (map).

Sylvester-Bradley, P.C., **Merriam, D.F.**, and Aslin, C.J., 1965, Mid-Jurassic rhythms in the Uppingham District (England): Geologists' Association Guidebook, Dept. Geology, Univ. Leicester, U.K., p. 1-34.

Tien, Pei-lin, 1965, Distribution and character of water-insoluble residues in Hutchinson salt (Wellington Formation), Sedgwick County, Kansas: Unpub. M.S. thesis, Dept. Geology, Univ. Kansas, Lawrence, Kansas, 64 p.

Tien, Pei-lin, 1967, An occurrence of rozenite in Kansas: *Transactions*, Kansas Acad. Sci., v. 70, no. 2, p. 219-222.

Tien, Pei-lin, 1968, Differentiation of Pleistocene deposits in northeastern Kansas by clay minerals: *Clays and Clay Minerals*, v. 16, no. 1, p. 99-107.

Tien, Pei-lin, 1968, Hydrobasaluminite and basaluminite in Cabiniss Formation (Middle Pennsylvanian), southeastern Kansas: *Am. Mineralogist*, v. 53, no. 5/6, p. 722-732.

Tien, Pei-lin, 1969, A purple colored 1M mica clay from Silverton, Colorado: *Clays and Clay Minerals*, v. 17, no. 00, p. 245-249.

Tien, Pei-lin, 1969, Additional information on clays in Pleistocene deposits of northeastern Kansas: *Transactions*, Kansas Acad. Sci., v. 72, no. 3, p. 337-341.

Tien, Pei-lin, 1970, Clay mineralogy of underclays in Cherokee Group (Middle Pennsylvanian), Kansas [Abs.]: *in* Proc. 19th Ann. Clay Minerals Conference/7th Ann. Meeting of the Clay Minerals Society, *Program and Abstracts*, p. 36.

Tien, Pei-lin, 1970, Nomenclature and chemical composition of vivianite, a research proposal: Open-File Rept. 1970-1, Kansas Geol. Survey, Lawrence, Kansas, 9 p.

Tien, Pei-lin, 1970, Origin of the cherts in limestones of the Chase Group (Lower Permian), Kansas: Open-File Rept. 1970-2, Kansas Geol. Survey, Lawrence, Kansas 8 p.

Tien, Pei-lin, 1971, Ubiquity of hexahydrite in Kansas, *in* **J.A. Crossfield** (Ed.), Short papers on research in 1970: Kansas Geol. Survey Bull. 202, pt. 1, Lawrence, Kansas, p. 3-4.

Tien, Pei-lin, 1973, Petrology and mineralogy of underclays in Cherokee Group (Middle Pennsylvanian), Kansas: Unpub. Ph.D. dissertation, Dept. Geology, Univ. Kansas, Lawrence, Kansas, 117 p.

Tien, Pei-lin, 1973, Petrology and mineralogy of underclays in Cherokee Group (Middle Pennsylvanian), Kansas [Abs.]: Dissertation Abstracts International, Section B, v. 34, no. 6, p. 2719B-2720B

Tien, Pei-lin, and Waugh, T.C., 1969, Thermal and X-ray studies on earthy vivianite in Graneros Shale (Upper Cretaceous), Kansas: *Am. Mineralogist*, v. 54, no. 9/10, p. 1355-1362.

Tien, Pei-lin, and Waugh, T.C., 1970, Epsomite and hexahydrite from an underground storage area, Atchison, Kansas, *in* D.E. Zeller (Ed.), Short Papers on Research in 1969: Kansas Geological Survey Bull. 199, pt. 1, p. 3-7.

Tien, Pei-lin, Waugh, T.C., and Dilts, R.L., 1969, Vivianite in Graneros Shale (Upper Cretaceous), central Kansas, *in* D.E. Zeller (Ed.), Short Papers on Research in 1968: Kansas Geol. Survey Bull. 194, pt. 1, p. 21-24.

Tipper, J.C., 1975, Lower Silurian animal communities—Three case histories: *Lethaia*, v. 8, no. 4, p. 287-299.

Tipper, J.C., 1975, The North Esk inlier, *in* G.Y. Craig and P. McL. Duff (Eds.), *The Geology of the Lothians and southeast Scotland*: Scottish Academic Press, Edinburgh, p. 177-187.

Tipper, J.C., 1975, Trophic structure and organization of three lower Silurian marine animal communities [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, *Abstracts with Programs*, v. 7, no. 7, p. 1301.

Tipper, J.C., 1976, A computerized modelling approach to shape analysis in palaentology [Abs.]: *in* Proc. Palaeontological Assoc. Ann. Symposium, December, Liverpool, U.K.

Tipper, J.C., 1976, A method and FORTRAN program for quantitative sampling in paleontology: *Computers & Geosciences*, v. 1, no. 00, p. 195-201.

Tipper, J.C., 1976, A method for the quantitative estimation of the faunal content of well-cemented fossiliferous rocks: *Jour. Paleontology*, v. 50, no.1, p. 175-179.

Tipper, J.C., 1976, Computerized modeling in reconstruction of objects from serial sections [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, Abstracts, v. 3, p. 121.

Tipper, J.C., 1976, Dissimilarity analysis [Abs.]: *in* Proc. 10th Intl. Conference on Numerical Taxonomy, October, Univ. Kansas, Lawrence, Kansas.

Tipper, J.C., 1976, The stratigraphy of the North Esk inlier, Midlothian, Scotland: *Scottish Jour. Geology*, v. 12, no. 1, p. 15-22.

Tipper, J.C., 1976, The study of geological objects in three dimensions by the computerized reconstruction of serial sections: *Jour. Geology*, v. 84, no. 4, p. 476-484.

Tipper, J.C., 1976, Three-dimensional analysis of geological forms [Abs.]: *in* Proc. 25th Intl. Geol. Congress, Sydney, Australia, Abstracts, v. 2, p. 639.

Tipper, J.C., 1977, A method and FORTRAN program for the computerized reconstruction of three-dimensional objects from serial sections: *Computers & Geosciences*, v. 3, no. 4, p. 579-599.

Tipper, J.C., 1977, Computerized modelling for shape analysis in geology, *in* D.F. Merriam (Ed.), *Recent Advances in Geomathematics*, Plenum Press, Oxford, U.K., p. 157-170.

Tipper, J.C., 1977, Some distributional models for fossil marine animals [Abs.]: *in* Proc. Geol. Soc. America Ann. Meeting, Seattle, *Abstracts with Programs*, v. 9, no. 7, p. 1202.

Tipper, J.C., 1977, Three-dimensional analysis of geological forms: *Jour. Geology*, v. 85, no. 5, p. 591-611.

Tipper, J.C., 1977, Three-dimensional analysis of geological forms: *Jour. Geology*, v. 85, no. 5, p. 591-611.

Tipper, J.C., 1978, Computerized modeling for shape analysis in geology, *in* D.F. Merriam (Ed.), *Recent Advances in Geomathematics*: Pergamon Press, Oxford, U.K., p. 157-179

Tipper, J.C., 1979, An ALGOL program for dissimilarity analysis: A divisive-omnithetic clustering technique: Computers & Geosciences, v. 5, no. 00, p. 1-13.

Tipper, J.C., 1979, Rarefaction and rarefiction—The use and abuse of a method in paleoecology: *Paleobiology*, v. 5, p. 423-434.

Tipper, J.C., 1979, Surface modeling techniques: Series on Spatial Analysis no. 4, Kansas Geol. Survey, Lawrence, Kansas, 108 p.

Tipper, J.C., 1982, Modeling methods for spatial data, *in* **J.A. DeGraffenreid** (Ed.), Time- and space-dependent data in the Earth sciences: Series on Spatial Analysis no. 6, Kansas Geol. Survey, Lawrence, Kansas, p. 35-36.

U.S. Geodynamics Task Group on Digitizing Geological Data and Information (**D.R. Collins**, Contributor), 1988, Digitizing, archiving and disseminating data obtained in Global Geoscience Transects, discussion and recommendations (rev. Oct. 25, 1988): U.S. Geodynamics Committee, National Acad. Sci., 00 p.

Vuchev, V., 1980, Review. Petroleum formation and occurrence. A new approach to oil and gas exploration, by B.P. Tissot and D.H. Welte, 1978: *Geologica Balcanica*, v. 10, no. 2, p. 122-124.

Vuchev, V., 1980, The stage of development of mathematical geology: *Geologica Balcanica*, v. 10, no. 2, p. 127-128.

Vuchev, V., 1982, Attempted heuristic approach to total potential estimation of a petroleum basin [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 65, no. 5, p. 639.

Vuchev, V., 1982, Numerical classification procedures in pattern recognition: Sci. de la Terre Informatique, v. 00, no. 00, p. 00 [submitted]

Vuchev, V., 1982, Quantitative analysis of tectonic jointing in sediments: Computers & Geoscience, v. 00, no. 00, p. 00. [submitted]

Vuchev, V., and Merriam, D.F., 1982, Joint morphology and tectonics of Mikhailovgrad anticline, northwest Bulgaria: Math. Geology, v. 00, no. 00, p. 00. [submitted]

Vuchev, V., and Merriam, D.F., 1988, Fracture morphology and tectonics of Mikhailovgrad Anticline, northwest Bulgaria: *Geologica Balcanica*, v. 18, no. 3, p. 31-42.

Wahlstedt, W.J., and **Davis, J.C.**, 1968, FORTRAN IV program for computation and display of principal components: Computer Contribution 21, Kansas Geol. Survey, Lawrence, Kansas, 27 p.

Walden, Alice R., 1972, Technical Report of Module SURFACE: Quantitative comparison of automatic contouring algorithms: Kansas Oil Exploration (KOX) Project Rept., Kansas Geol. Survey, Lawrence, Kansas, 115 p. [Unpub. M.S. thesis, Alice R. Walden, Dept. Computer Science, Univ. Kansas, Lawrence, Kansas].

Wang, Jia-Hua, and **Doveton, J.H.**, 1983, Estimation of core-equivalent porosities from the homomorphic deconvolution of logs: *Trans. Soc. Prof. Well Log Analysts*, 24th Ann. Logging Symposium, Paper A, 11 p.

Watney, W.L., and **Collins, D.R.**, 1984, Oil and gas: The search for new frontiers: *Kansas Business News*, September, p.60-65.

Watney, W.L., and **Collins, D.R.**, 1986, Nature of Kansas geology and production, *in* Proc. Special Energy Loan Conference, Wichita, Kansas: Open-File Rept. 1986-10, Kansas Geol. Survey, Lawrence, Kansas, 9 p.

Watney, W.L., and **Collins, D.R.**, 1986, Nature of Kansas geology and production [Abs.]: *in* Proc. Kansas Geol. Survey Advisory Council [GSAC], October, Lawrence, Kansas.

Watney, W.L., Baars, D.L., Stevenson, G. ,French, J.A., Wong, J.-C., Lambert, L., and ***Harff, J.***, 1991, Regional structure and stratigraphic framework in Kansas and relationship to oil and gas accumulation [Abs.]: *Bull. Am. Assoc. of Petroleum Geologists*, v. 75, no. 8, p. 1400.

Watney, W.L., **Bohling, G.C.**, and **Doveton, J.H.**, 1994, Systematic wireline log prediction of sequence stratigraphic units, a case-study from the Upper Pennsylvanian of Kansas [Abs.]: *in* Proc. American Association of Petroleum Geologists/SEPM Annual Meeting, Abstracts, v. 3, p. 279.

Watney, W.L., **Bohling, G.C.**, Battacharya, S., Look, K., **Doveton, J.H.**, Carr, T.R., and Gerlach, P., 2000, Grant. Geo-Engineering Modeling Through Internet Informatics (GEMINI): Dept. of Energy, $754,000.

Watney, W.L., Collins, D.R., and Newell, D., 1989, Strategies for prospect and lease evaluation in an uncertain economic climate [Abs.]: Kansas Geol. Society, January 27, Wichita, Kansas.

Watney, W.L., **Davis, J.C.**, Kruger, J.M., and ***Harff, J.***, 1997, Sediment accommodation regions: Fragmentation of a subsiding shelf [Abs.]: *in* Proc. Am. Assoc. Petroleum Geologists Ann. Meeting, Dallas, Texas, Abstracts vol., p. 00.

Watney, W.L., **Davis, J.C.**, **Olea, R.A.**, ***Harff, J.***, and **Bohling, G.C.**, 1995, Modeling of sediment accommodation realms using regionalized classification of Upper Pennsylvanian genetic stratigraphic units and genetic sets in Kansas: Open-File Rept. 1995-32, Kansas Geol. Survey, Lawrence, Kansas, 37 p.

Watney, W.L., **Davis, J.C.**, **Olea, R.A.**, ***Harff, J.***, and **Bohling, G.C.**, 1990, Modeling of sediment accommodation realms using regionalized classification of late Carboniferous genetic stratigraphic units and genetic sets in Kansas, Midcontinent, USA [Abs.], *in* Proc. IUGS/DDR Acad. Sci./IAMG Symposium, "Computerized Basin Analysis for Prognosis of Energy and Mineral Resources," June, Güstrow, DDR, Abstract vol., p. 00.

Watney, W.L., **Davis, J.C.**, **Olea, R.A.**, ***Harff, J.***, and **Bohling, G.C.**, 1997, Modeling of sediment accommodation realms by regionalized classification: *Die Geowissen-schaften*, v. 15, no. 1, p. 28-33.

Watney, W.L., **Doveton, J.H.**, French, J.A., and **Collins, D.R.**, 1990, Petrophysical characterization of Upper Pennsylvanian depositional sequences in western Kansas [Abs.]: Geol. Soc. America, South-Central Section, *Abstracts with Programs*, v. 22, no. 1, p. 35.

Watney, W.L., **Doveton, J.H.**, Guy, W.J., **Bohling, G.C.**, Bhattacharya, S., 1998, PfEFFER Workshop Notes and Examples from East Vacuum Field, N.M.: Phillips Petroleum Company, March 3-4, Odessa, Texas, 110 p.

Watney, W.L., **Doveton, J.H.**, Victorine, J.R., **Bohling, G.C.**, Bhattacharya, S., Byrnes, A.P., Carr, T.R., Dubois, M.K., Gagnon, G., Guy, W.J., Look, K., Magnuson, M., Moore, M., and **Collins, D.R.**, 2002, Geo-Engineering Modeling through INternet Informatics (GEMINI)[Abs]: Am. Assoc. Petroleum Geologists Ann. Convention, Abstracts vol., p. A217.

Watney, W.L., French, J.A., **Doveton, J.H.**, Youle, J.C., and Guy, W.J., 1995, Cycle hierarchy and genetic stratigraphy of Middle and Upper Pennysylvanian strata in the upper Mid-Continent, *in* N.J. Hyne (Ed.), *Sequence Stratigraphy of the Mid-Continent*: Tulsa Geol. Society, Special Publication no. 4, p. 141-192.

Watney, W.L., French, J.A., Guy,W.J., and **Doveton, J.H.**, 1993, Modeling petroleum reservoirs in the Pennsylvanian of Midcontinent, U.S.A. [Abs.]: Program and abstracts of the Silver Anniversary Meeting, International Assoc. Math. Geology, Prague.

Watney, W.L., Gerhard, L.C., **Collins, D.R.**, **Olea, R.A.**, **Doveton, J.H.**, Guy, W.J., and **Bohling, G.C.**, 1999, Virtual subsurface geology: Fueling exploration in mature petroleum provinces [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Annual Meeting, Abstracts, v. 8, p. 146.

Watney, W.L., Gerhard, L.C., Collins, D.R., **Olea, R.A.**, **Doveton, J.H.**, Guy, W.J., and **Bohling, G.C.**, 1999, Virtual subsurface geology—Fueling exploration in mature petroleum provinces: *in* Proc. Ann. Convention of the Am. Assoc. Petroleum Geologists, San Antonio: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, p. 541. [Poster]

Watney, W.L., Guy, W.J., **Doveton, J.H.**, Bhattacharya, S., Gerlach, P., **Bohling, G.C.**, and Carr, T.R., 1999, Petrofacies analysis: A petrophysical tool for geologic/engineering reservoir characterization, *in* R. Schatzinger and J. Jordan (Eds.), *Reservoir Characterization—Recent Advances*: Am. Assoc. Petroleum Geologists, Memoir 71, p. 73-90.

Watney, W.L., ***Harff, J.***, **Davis, J.C.**, **Bohling, G.C.**, and Wong, J.C., 1993, Controls on petroleum accumulation in Upper Pennsylvanian cyclic shelf carbonates in western Kansas, USA, interpreted by space modeling and multivariate techniques, *in* ***J. Harff*** and D.F. Merriam (Eds.), *Computerized Basin Analysis, The Prognosis of Energy and Mineral Resources*: Computer Applications in the Earth Sciences series: Plenum Press, New York, p. 215-237.

Watney, W.L., ***Harff, J.***, **Davis, J.C.**, Newell, D., and Wong, J.C., 1991, Three-dimensional reservoir modeling in Zenith field, Kansas, using SGM [Abs.]: *in* "Stratamodel"—First Ann. Tech. Symposium, July, Houston, Texas, Abstracts vol., p. 22-24.

Watney, W.L., Harff, J., Davis, J.C., Wong, J.C., and Bohling, G.C., 1990, Controls on petroleum accumulation in Upper Pennsylvanian cyclic shelf carbonates in western Kansas, U.S.A., as interpreted from space modeling and multivariate techniques [Abs.]: *in* Proc. IUGS/DDR Acad. Sci./IAMG Symposium, "Computerized Basin Analysis for Prognosis of Energy and Mineral Resources," June, Güstrow, DDR, Abstract vol., p. 00.

Watney, W.L., Knapp, R.W., French, J.A., and **Doveton, J.H.**, 1988, Application of sequence stratigraphic analysis to thin cratonic carbonate dominated shelf cycles (Upper Pennsylvanian) in the Mid-Continent [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 72, no. 2, p. 257. Reprinted in *Oklahoma Geology Notes*, 1988, v. 48, no. 5, p. 227.

Watney, W.L., Kruger, J., **Davis, J.C.**, ***Harff, J.***, **Olea, R.A.**, and **Bohling, G.C.**, 1999, Validation of sediment accumulation regions in Kansas, U.S.A., *in* ***J. Harff***, W. Lemke, and K. Stattegger (Eds.), *Computerized Modeling in Sedimentary Systems*: Springer-Verlag, Berlin, p. 341-360.

Watney, W.L., Newell, K.D., **Collins, D.R.**, and Skelton, L.H., 1989, Petroleum exploration in Kansas—Past trends and future opportunities, *in* Proc. 8th Tertiary Oil Recovery Conference, March, Wichita, Kansas, Contribution no. 10, p. 4-35.

Watney, W.L., **Olea, R.A.**, and **Davis, J.C.**, 1998, Comparative analysis of statistical regionalization and computer correlation in southwest Kansas: Open-File Rept. 1998-30, Kansas Geol. Survey, Lawrence, Kansas, 18 p., 4 plates

Watney, W.L., **Olea, R.A.**, and **Davis, J.C.**, 1999, Regional stratigraphic analysis of a Pennsylvanian carbonate shelf and margin in Kansas [Abs.]: *Bull. Am. Assoc. Petroleum Geologists*, v. 83, no. 7, p. 1205-1206.

Watney, W.L., **Olea, R.A.**, and **Davis, J.C.**, 1999, Regional stratigraphic analysis of a Pennsylvanian carbonate shelf and margin in Kansas, *in* D.F. Merriam (Ed.), Trans. Am. Assoc. Petroleum Geologists Midcontinent Section Meeting, "Geoscience for the 21st Century": Open-File Rept. 1999-28, Kansas Geol. Survey, Lawrence, Kansas, p. 52-62.

Watney, W.L., Rankey, E.C., French, J.A., Youle, J.C., **Doveton, J.H., Bohling, G.C.**, and Guy, W.J., 1995, Cycle hierarchy in Middle and Upper Pennsylvanian strata of the Mid-continent [Abs.], *in* D.S. Swindle and C.P. Williams (Eds.), Trans. Am. Assoc. Petroleum Geologists Mid-continent Section Meeting, "Technology transfer, crossroads to the future": Tulsa Geol. Soc., Tulsa, Oklahoma, p. 351.

Watney, W.L., Walton, A.W., and **Doveton, J.H.**, (Eds.), 1985, Core studies in Kansas: Sedimentology and diagenesis of economically important rock strata in Kansas: Subsurface Geol. Series no. 6, Kansas Geol. Survey, Lawrence, Kansas, 176 p.

Watney, W.L., Wong, J.-C., Cunningham, K.J., Newell, K.D., **Davis, J.C., Bohling, G.C.**, and ***Harff, J.***, 1991, Reservoir characterizations in the Midcontinent: *Bull. Interstate Oil and Gas Compact Committee*, v. 5, no. 2, p. 62-68.

Watney, W.L., Youle, J.C., French, J.A., **Doveton, J.H.**, and Guy, W.J., 1994, Architecture of Pennsylvanian carbonate shelf, Midcontinent, USA: Cycle hierarchy and reservoir development [Abs.]: Am. Assoc. Petroleum Geologists/SEPM Ann. Meeting, *Abstracts with Programs*, v. 3, p. 279. [Reprinted in *Oklahoma Geology Notes*, v. 54, no. 5, p. 216-217.]

Weber, L., and **Davis, J.C.**, 1990, Multivariate statistical analysis of stream sediment geochemistry in the Grazer Paläozoikum, Austria: *Mineralium Deposita*, v. 25, Springer-Verlag, Berlin, Germany, p. 213-220.

Weber, L., Ebner, F., ***Hausberger, G.***, and **Davis, J.C.**, 2001, The Austrian computer based metllogenetic information system IRIS: Proc. International Assoc. Math. Geology Ann. Meeting, Cancún, Mexico, 10 p. [on CD-ROM].

Whittemore, D., **Collins, D.R.**, and Shamsnia, S., 1990, Display of water types based on color information theory [Abs.]: Geol. Soc. America Meeting, Dallas, Texas, *Abstracts with Programs*, v. 22, no. 7, p. 294.

Whittemore, D.O., Macfarlane, P.A., **Doveton, J.H.**, Butler, J.J., Jr., Chu, T.-Y., Bassler, R., Smith, M., Mitchell, J., and Wade, A., 1993, The Dakota Aquifer Program, Annual Report, FY92: Open-File Rept. 1993-1, Kansas Geol. Survey, Lawrence, Kansas, 170 p.

Whittemore, D.O., Merchant, J.W., Whistler, J., **McElwee, C.D.**, and Woods, J.J., 1987, Groundwater protection planning using the ERDAS geographic information system: Automation of DRASTIC and time-related capture zones, *in* Proc. FOCUS Conference on Midwestern Groundwater Issues: National Water Well Assoc., April, Dublin, Ohio.

Whittemore, D.O., Merchant, J.W., Whistler, Jerry, **McElwee, C.D.**, and Woods, J.J., 1987, Ground water protection planning using the ERDAS geographic information system: Automation of DRASTIC and time-related capture zones, *in* M.E. Renz, B.J. Graves, and K. Butcher (Eds.), *in* Proc. NWWA FOCUS—Conference on Midwestern ground water issues: National Water Well Assoc., Dublin, OH, p. 359-374.

Wilson, A.O., and **Heckel, P.H.**, 1971, Quantitative comparison of carbonate members of Shawnee Group megacyclothems (Upper Pennsylvanian), eastern Kansas: *in* Proc. 8th Intl. Sedimentol. Congress, August, Heidelberg, Germany, Abstracts vol., p. 00.

Winslow, J. D., [1972] 1998, Geologic map of Jefferson County, Kansas, revised by **Crouse, E.C.,, Collins, D.R.**, and **Ross, J.A.**: Map Series M-55, database scale 1:24,000, published scale 1:50,000 and 1:100,000 (revised from Kansas Geol. Survey Bull. 202, part 4, plate 1, and other sources), Kansas Geol. Survey, Lawrence, Kansas.

Woods, J.J., **Bohling, G.C., McElwee, C.D.**, and Newell, K.D., 1988, Thermal basin modeling and analysis using the time-temperature index, an improved general basin model incorporating compaction, fluid flow and heat flow: Open-File Rept. 1988-28, Kansas Geol. Survey, Lawrence, Kansas, 153 p.

Woods, J.J., **Bohling, G.C., McElwee, C.D.**, and Newell, K.D., 1988, Thermal basin modeling and analysis using the time-temperature index: An improved general basin model incorporating compaction, fluid flow and heat flow: Open-File Rept. 1988-28, Kansas Geol. Survey, Lawrence, Kansas, 153 p.

Woods, J.J., **McElwee, C.D.**, and Whittemore, D.O., 1987, Computation of time-related capture zones of wells for use with the ERDAS geographic information system: Open-File Rept. 1987-14, Kansas Geol. Survey, Lawrence, Kansas, 59 p.

Yamamoto, S., ***Honjo, S.***, and Merriam, D.F., 1978, Quantitative chemical stratigraphy of the Niobrara Chalk (Cretaceous) in western Kansas [Abs.]: International Congress on Sedimentol., no. 10, v. 2, p. 756.

Yamamoto, S., ***Honjo, S.***, and Merriam, D.F., 1979, Quantitative chemical stratigraphy of the Niobrara Chalk (Cretaceous) in western Kansas, *in* ***D. Gill*** and D.F. Merriam (Eds.), *Geomathematical and Petrophysical Studies in Sedimentology*: Computers and Geology no. 3, Pergamon Press, Oxford, U.K., p. 235-244.

Zarley, C., and **Collins, D.R.**, 1978, Kansas mineral industry report, 1975-1977: Mineral Resources Series no. 6, Kansas Geol. Survey, Lawrence, Kansas, 42 p.

Zarley, C., **Collins, D.R.**, and Brady, L.L., 1980, Preliminary estimate: 1979 Kansas mineral production and value: *The Journal*, Kansas Geol. Survey, Lawrence, Kansas, v. 2, no. 1, p. 1-4..

Zarley, C., **Collins, D.R.**, and Brady, L.L., 1981, Preliminary estimate: 1980 Kansas mineral production and value: *The Journal*, Kansas Geol. Survey, Lawrence, Kansas, v. 3, no. 1, p. 1-6.

Zarley, C., **Collins**, **D.R.**, and Brady, L.L., 1982, Preliminary estimate: 1981 Kansas mineral production and value: *The Journal*, Kansas Geol. Survey, Lawrence, Kansas, v. 4, no. 1, p. 1-7.

Zarley, C., **Collins**, **D.R.**, Paul, S., and Brady, L.L., 1979, Preliminary estimate: 1978 Kansas mineral production and value: *The Journal*, Kansas Geol. Survey, Lawrence, Kansas, v. 1, no. 1, p. 1-4.

Zhan, X., **Bohling**, **G.C.**, Zheng, L., and Butler, J.J., Jr., 2000, Detailed site characterization with hydraulic tomography: A numerical investigation [Abs.]: *Eos, Transactions Amer. Geophys. Union*, v. 81, no. 19, p. S212.

Zhou, ***D.***, 1981, FORTRAN IV program RQFAC for simultaneous R- and Q-mode factor analysis: Unpub. Rept., Kansas Geol. Survey, Lawrence, Kansas, 10 p.

Zhou, ***D.***, 1984, Adjustment of geochemical background by multivariate statistics: Unpub. Ph.D. dissertation: Dept. Geology, Univ. Kansas, Lawrence, Kansas, 347 p.

Zhou, ***D.***, ***Chang***, ***T.***, and **Davis**, **J.C.**, 1983, Dual extraction of R-mode and Q-mode factor solutions: *Math. Geology*, v. 15, no. 5, p. 581-606.