RICHARD A. HEIMLICH

Education

1954 - B.S., Rutgers University

1955 - M.S., Yale University

1959 - Ph.D., Yale University

Teaching and Administrative Experience (KSU)

1961 - 1963 - Instructor

1963 - 1966 - Assistant Professor

1966 - 1970 - Associate Professor

1970 - 2009 - Professor

1976 - 1992 - Professor and Chairman, Department of Geology

2009 - 2014 - Volunteer Teacher, Baldwin Wallace University Institute for Learning in Retirement - Geology of Selected National Parks

Courses Taught: Petrology, Petrography, Advanced igneous and metamorphic petrology, Introductory geology, Geology of the National Parks

Industrial Experience

- 1952 sum Newfoundland Geological Survey detailed and reconnaissance geologic mapping; examination of fluorite mineral properties.
- 1954 sum Newfoundland Geological Survey structural and stratigraphic mapping.
- 1955 sum Newfoundland Geological Survey detailed surface and underground mapping; study of active fluorite
- 1956 sum Ontario Department of Mines regional geologic mapping; detailed mapping and examination of copper-nickel mineral properties and active mine.
- 1957 sum Ontario Department of Mines regional geologic mapping; detailed mapping and study of several granite bodies.
- 1963 sum Gulf Research & Development Co. reconnaissance mapping of igneous and metamorphic rocks (Bighorn Mts., Wyoming).
- 1964 sum Gulf Research & Development Co. same as above.
- 1975-76 Los Alamos Scientific Laboratory microscopic analysis of core from geothermal test well drilled as part of the dry hot-rock" geothermal energy research program.

Society Memberships and Activity

Geological Society of America (Fellow; Field trip co-chairman for North-Central Section meeting, 1974; Organizer and co-leader of field trip for National meeting, 1981; Organizer/coordinator for DNAG Centennial Field Guide Ohio manuscripts, 1983-84; President, North-Central Section, 1985-86; Chairman, North-Central Section Meeting, 1986)

Northern Ohio Geological Society (past president) American Institute of Professional Geologists

Sigma Xi

Published Papers

- Heimlich, R.A., 1963, Geochronology of some granitic plutons, Lake of the Woods region, Ontario: Ann. Rept. Geochron. Lab, Mass. Inst. Tech., p. 113-116.
- Heimlich, R.A., 1965, Petrology of the Flora Lake stock, Lake of the Woods region, Ontario, Canada: Geol. Soc. America Bull., v. 76, p. 1-26.
- Heimlich, R.A., 1966, The Hope Lake stock, Lake of the Woods region, Ontario: Canadian Mineralogist, v. 8, p. 620-637.
- Hodgson, R.A., and Heimlich, R.A., 1966, Regional structure of the Northern Bighorn Mountains, Wyoming: Gulf Res. & Devel. Co., Expl. Div., Res. Rept. No. 9, 107p.
- Heimlich, R.A., and Banks, P.O., 1968, Radiometric age determinations, Bighorn Mountains, Wyoming: American Jour. Sci., v. 266, p. 180-192.
- Heimlich, R.A., 1968, Petrology of the Flora Lake stock, Lake of the Woods region, Ontario, Canada: Reply: Geol. Soc. America Bull., v. 79, p. 1251-1258.
- Heimlich, R.A., 1969, Reconnaissance petrology of Precambrian rocks in the Bighorn Mountains: Contrib. Geol., v. 8, p.

47-61.

- Heimlich, R.A., 1969, Cylindrical columnar joints in Precambrian mafic dikes, Bighorn Mountains, Wyoming: Jour. Geol., v. 77, p. 371-374.
- Condie, K.C., and Heimlich, R.A., 1969, Interpretation of Precambrian K-Ar biotite dates in the Bighorn Mountains, Wyoming: Earth Planet. Sci. Letters, v. 6, p. 209-212.
- Heimlich, R.A., Mrakovich, J.V., and Frank, G.W., 1970, The Sharon Conglomerate in Banks, P.O., and Feldmann, R.M., eds., Guide to the Geology of Northeastern Ohio: North. Ohio Geol. Soc., p. 125-133.
- Heimlich, R.A., 1971, Greenstone assimilation by tonalite magma, Atikwa Lake area, Ontario: Geol. Mag., v. 108, p. 1-12.
- Manzer, G.K., Jr., Heimlich, R.A., and Ross, M.E., 1971, Mineralogic variations across Precambrian mafic dikes in the southern Bighorn Mountains, Wyoming: Compass, v. 48, p. 75-83.
- Heimlich, R.A., 1971, Chemical data for major Precambrian rock types, Bighorn Mountains, Wyoming: Contrib. Geol., v. 10, p. 131-140.
- Heimlich, R.A., and Armstrong, R.L., 1972, Variance of Precambrian K-Ar biotite dates, Bighorn Mountains, Wyoming: Earth Planet. Sci. Let., v. 14, p. 75-78.
- Ross, M.E., and Heimlich, R.A., 1972, Petrology of Precambrian mafic dikes from the Bald Mountain area, Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 83, p. 1117-1124.
- Heimlich, R.A., Nelson, G.C., and Malcuit, R.J., 1972, Mineralogy of Precambrian gneiss from the Bighorn Mountains, Wyoming: Geol. Mag., v. 109. p. 215-230.
- Malcuit, R.J., and Heimlich, R.A., 1972, Zircons from Precambrian gneiss, southern Bighorn Mountains, Wyoming: Am. Mineralogist, v. 57, p. 1190-1209.
- Heimlich, R.A., Nelson, G.C., and Gallagher, G.L., 1973, Metamorphosed mafic dikes from the southern Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 84, p. 1439-1450.
- Heimlich, R.A., and Manzer, G.K., Jr., 1973, Flow differentiation within leopard rock dikes, Bighorn Mountains, Wyoming: Earth Planet. Sci. Let., v. 17, p. 350-356.
- Heimlich, R.A., Manus, R.W., and Jacoby, C.H., 1974, General geology of the International Salt Company Cleveland Mine, Cleveland, Ohio in Heimlich, R.A., and Feldmann, R.M., eds., Selected field trips in northeastern Ohio: Ohio Geol. Survey Guidebook No. 2, p. 3-17.
- Heimlich, R.A., and Feldmann, R.M., eds., 1974, Selected field trips in northeastern Ohio: Ohio Geol. Survey Guidebook No. 2, 59 p.
- Heimlich, R.A., Gallagher, G.L., and Shotwell, L.B., 1974, Quantitative petrography of mafic dikes from the central Bighorn Mountains, Wyoming: Geol. Mag., v. 111, p. 97-106.
- Manzer, G.K., Jr., and Heimlich, R.A., 1974, Petrology and geochemistry of mafic and ultramafic rocks from the northern Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 85, p. 703-708.
- Heimlich, R.A., 1974, Retrograde metamophism of amphibolite, Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 85, p. 1449-1454.
- Heimlich, R.A., and Skotte, L.A., 1974, Granitization of amphibolite northeast of Tweed, Ontario: Compass, v. 52, p. 9-14.
- Heimlich, R.A., Shotwell, L.B., Cookro, T., and Gawell, M.J., 1975, Variability of zircons from the Sharon Conglomerate of northeastern Ohio: Jour. Sed. Pet., v. 45, p. 629-635.
- Heimlich, R.A., and Uthe, R.E., 1976, Mineralogic variations across a thick amphibolite, Bighorn Mountains, Wyoming: Lithos, v. 9, p. 55-63.
- Stueber, A.M., Heimlich, R.A., and Ikramuddin M., 1976, Rb-Sr ages of Precambian mafic dikes from the Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 87, p. 909-914.
- Stueber, A.M., and Heimlich, R.A., 1976, Rb-Sr isochron age of the Precambrian basement complex, Bighorn Mountains, Wyoming: Geol. Soc. America Bull., v. 88, p. 441-444.
- Heimlich, R.A., 1976, Morphology of zircons from Precambrian rocks penetrated by Geothermal Test Hole No. 2 near Los Alamos, New Mexico: Los Alamos Scien. Lab., Inf. Rept., LA-6433-MS, 10p.
- Feldmann, R.M., Coogan, A.H., and Heimlich, R.A., 1977, Field guide: Southern Great Lakes: Kendall/Hunt Pub. Co., Dubuque, Iowa, 241p.
- Heimlich, R.A., and Shotwell, L.B., 1977, Variability of zircons from the Sharon Conglomerate of northeastern Ohio: Reply: Jour. Sed. Pet., v. 47, p. 1396-1397.
- Hahn, K.R., and Heimlich, R.A, 1977, Petrology of the dunite exposed at the Mincey Mine, Macon County, North Carolina: Southeastern Geol., v. 19, p. 39-53.
- Kingsbury, R.H., and Heimlich, R.A., 1978, Petrology of an ultramafic body near Micaville, Yancey County, North Carolina: Southeastern Geol., v. 20, p. 33-46.
- Honeycutt, F.M., and Heimlich, R.A., 1980, Petrology of the Balsam Gap dunite, Jackson County, North Carolina: Southeastern Geol., v. 21, p. 251-260.
- Feldmann, R.M., and Heimlich, R.A., 1980, Field guide: The Black Hills: Kendall/Hunt Pub. Co., Dubuque, Iowa. 190 p.
- Coogan, A.H., Heimlich, R.A., Malcuit, R.J., Bork, K.B., and Lewis, T.L., 1981, Early Mississippian deltaic sedimentation in central and northeastern Ohio in Roberts, T.G., ed., GSA Cincinnati '81 Field Trip Guidebooks, Vol. 1: Stratigraphy, sedimentology: Amer. Geol. Inst., p. 113-152.
- Honeycutt, F.M., Heimlich, R.A., and Palmer, D.F., 1981, Magnetic survey of the Balsam Gap dunite, Jackson County, North Carolina: Southeastern Geol., v. 22, p. 223-231.

- Dribus, J.R., Heimlich, R.A., and Palmer, D.F., 1982, The "Deposit No. 9" dunite, Macon County, North Carolina: Southeastern Geol., v. 23, p. 51-67.
- Schiering, M.H., Heimlich, R.A., and Palmer, D.F., 1982, Radiometric and magnetic surveys of the Dark Ridge dunite, Jackson County, North Carolina: Southeastern Geol., v. 23, p. 89-98.
- Eckstein, Y., Heimlich, R.A., Palmer, D.F., and Shannon, S.S., Jr., 1982, Geothermal investigations in Ohio and Pennsylvania: Los Alamos National Laboratory Rept. LA-9223-HDR, 89p.
- Hirt, S.M., Heimlich, R.A., and Palmer, D.F., 1987, Geophysical study of a small ultramafic body in the Newfound Gaparea, Buncombe County, North Carolina: Southeastern Geol., v. 27, p. 229-243.
- Freeman, Mimi J., Palmer, D.F., and Heimlich, R.A., 1988, Magnetic survey of the western serpentinite belt, northern Harford County, Maryland: Southeastern Geol., v. 29, p. 103-128.
- Feldmann, R.M., and Heimlich, R.A., 1990, The Department of Geology and Sigma Gamma Epsilon at Kent State University: Compass, v. 68, p. 1-3.
- Feldmann, R.M., and Heimlich, R.A., 2004, The Department of Geology and Sigma Gamma Epsilon at Kent State University: Compass, v. 78, p. 18-20.

Papers Delivered

- Heimlich, R.A., 1959, Structure and petrology of salic plutons in the Deer Lake area, northern Ontario, Canada (Abs.): Geol. Soc. America Bull., v. 70, p. 1616-1617.
- Heimlich, R.A., 1962, Petrology of the Flora Lake stock, Lake of the Woods region, Ontario (Abs.): American Asso. Ad. Sci. Ann. Meet. Prog., Sec. E, p. 16-17.
- Heimlich, R.A., 1965, Reconnaissance of the Precambrian core of the Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America Spec. Paper 82, p. 89-90.
- Heimlich, R.A., 1966, Geochronologic investigation of the Precambrian rocks, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America Spec. Paper 101, p. 91-92.
- Uthe, R.E., and Heimlich, R.A., 1969, Geochemistry of the Hazelton Peak ortho-amphibolite, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 1, p. 288.
- Heimlich, R.A., and Nelson, G.C., 1972, Mafic dikes from the southern Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 4, p. 380-381.
- Ross, M.E., and Heimlich, R.A., 1973, Contact metamorphism of Precambrian quartz monzonite from the Bald Mountain area, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 5, p. 98.
- Heimlich, R.A., and Uthe, R.E., 1973, Retrograde metamorphism of amphibolite, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 5, p. 176.
- Shotwell, L.B., and Heimlich, R.A., 1973, Petrogenic significance of zircons from gneiss in the Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 5, p. 220.
- Heimlich, R.A., and Manzer, G.K., Jr., 1973, Flow differentiation during intrusion of feldspar porphyry magma, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 5, p. 261-262.
- Shotwell, L.B., Heimlich, R.A., Cookro, T., Vinopal, R.J., and Gawell, M.J., 1974, Zircons from the Sharon Conglomerate, northeastern Ohio (Abs.): Geol. Soc. America, Abstracts with Programs, v. 6, p. 545-546.
- Stueber, A.M., Heimlich, R.A., and Ikramuddin, M., 1974, Rb-Sr ages of Precambrian mafic dikes from the Bighorn Mountains, Wyoming (Abs.): Amer. Geophys. Union Trans., v. 56, p. 1198-1199.
- Laughlin, A.W., and Heimlich, R.A., 1976, Mafic inclusions and host basalt, Apache County, Arizona (Abs.): Geol. Soc. America, Abstracts with Programs, v. 8, p. 598-599.
- Heimlich, R.A., and Stueber, A.M., 1976, Rb-Sr isochron age of the Precambrian basement complex, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 8, p. 591.
- Banks, P.O., and Heimlich, R.A., 1976, U-Pb ages of the Precambrian basement complex, Bighorn Mountains, Wyoming (Abs.): Geol. Soc. America, Abstracts with Programs, v. 8, p. 462.
- Dribus, J.R., Heimlich, R.A., and Palmer, D.F., 1977, Petrology and petrofabric analysis of the Deposit No. 9 dunite, Macon County, North Carolina (Abs.): Geol. Soc. America, Abstracts with Programs, v. 9, p. 135.
- Kingsbury, R.H., and Heimlich, R.A., 1977, Petrology of a dunite pluton near Micaville, North Carolina (Abs.): Geol. Soc, America, Abstracts with Programs, v. 9, p. 154-155.
- Palmer, D.F., Heimlich, R.A., and Kolb, R.J., 1977, Petrofabric analysis of the Newfound Gap dunite, Haywood and Buncombe Counties, North Carolina (Abs.): Geol. Soc. America, Abstracts with Programs, v. 9, p. 640.
- Honeycutt, F.M., Heimlich, R.A., and Palmer, D.F., 1978, Petrologic and magnetic study of the Balsam Gap dunite body, Jackson County, North Carolina (Abs.): Geol. Soc. America, Abstracts with Programs, v. 10, p. 171.
- Eckstein, Y., Heimlich, R.A., and Palmer, D.F., 1980, Geothermal (?) anomaly in western Ohio (Abs.): Geol. Soc., America, Abstracts with Programs, v. 12, p. 224.
- Heimlich, R.A., Palmer, D.F., Schiering, M.H., and Honeycutt, F.M., 1980, Geophysical expression of two ultramafic bodies in Jackson County, North Carolina (Abs.): Geol. Soc. America, Abstracts with Programs, v. 12, p. 445.
- Penso, S.M., Heimlich, R.A., and Palmer, D.F., 1981, Geophysical investigation of a small dunite body near Newfound Gap, Buncombe County, North Carolina (Abs.): Geol. Soc. America, Abstracts with Programs, v. 13, p. 312.

Freeman, M.J., Heimlich, R.A., and Palmer, D.F., 1983, Magnetic survey of several ultramafic bodies in northwestern Harford County, Maryland (Abs.): Geol. Soc. America, Abstracts with Programs, v. 15, p. 258.

Grants

- 1967-69 National Science Foundation Petrogenesis of the Precambrian basement, Bighorn Mountains, Wyoming.
- 1969-71 National Science Foundation Petrogenesis of Precambrian gneiss and amphibolite, Bighorn Mountains, Wyoming.
- 1978-79 Ohio Inter-University Energy Research Council Energy workshop.
- 1978-79 Los Alamos Scientific Laboratory Evaluation of the potential for hot dry rock geothermal energy in Ohio and Pennsylvania with Eckstein and Palmer.
- 1979-80 U.S. Department of Education Graduate and Professional Opportunities Fellowship Program with Chemistry, Physics and Speech Pathology Departments.
- 1980-81 Los Alamos Scientific Laboratory Evaluation of the potential for hot dry rock geothermal energy in Ohio and Pennsylvania with Eckstein and Palmer.
- 1980-81 U.S. Department of Education Graduate and Professional Opportunities Fellowship Program with Chemistry, Physics, Speech Pathology, and History Departments.
- 1980-82 U.S. Department of Education Domestic Mining & Mineral and Mineral Fuel Conservation Fellowships.
- 1980-81 Hanna Mining Company Acquisition of a gold-film mercury detector.
- 1981-82 U.S. Department of Education Graduate and Professional Opportunities Fellowship Program with Chemistry, Physics, Speech Pathology, and History Departments.
- 1981-82 Hess Foundation Improvement of the petroleum exploration program.
- 1982-83 Amoco Foundation Improvement of the petroleum exploration program.
- 1982-83 U.S. Department of Education Graduate and Professional Opportunities Fellowship Program with Chemistry, Physics, Speech Pathology, History, and Computer Science Departments.
- 1983-84 Amoco Foundation Graduate research assistantship in petroleum geology.
- 1983-84 Amoco Foundation Unrestricted support for development of the geology program.
- 1983-84 U.S. Department of Education Graduate and Professional Study Fellowships Grant Program with Chemistry, Physics, and Computer Science Departments.
- 1984-85 Amoco Foundation Graduate research assistantship in petroleum geology.
- 1984-85 U.S. Department of Education Graduate and Professional Study Fellowships Grant Program with Chemistry, Physics, Speech, Computer Science, Biology Departments.
- 1984-85 Amoco Foundation Unrestricted support for development of the geology program.
- 1984-85 Amoco Foundation Acquisition of a Hewlett Packard 9000 Model 20 Color Mini Computer.
- 1985-86 U.S. Department of Education Graduate and Professional Study Fellowships Grant Program with Chemistry, Physics, Speech and Computer Science Departments.
- 1985-86 Amoco Foundation Expansion of Geology Computer Facilities.
- 1985-86 Amoco Foundation Graduate Research Assistantship.
- 1985-86 U.S. Department of Education Graduate and Professional Study Fellowships Grant Program with Chemistry, Physics, Speech and Computer Science Departments.
- 1985-86 Ohio Board of Regents Research Challenge Water Resources Program.
- 1985-86 Companies (16) in northeastern Ohio Geological Society of America North-Central Section Meeting support.
- 1986-87 Amoco Foundation Graduate Research Assistantship.
- 1986-87 Amoco Foundation Expansion of Geology Computer Facilities.
- 1987-88 U.S. Department of Education, Patricia Roberts Harris Graduate Study Fellowships with Chemistry, Physics, Speech Pathology, and Math Depts.
- 1987-88 Amoco Foundation Graduate Research Assistantship.
- 1988-89 Ohio Board of Regents, Academic Challenge Water Resources Research Institute with Palmer and Ewing.
- 1988-89 Ohio Board of Regents, Research Challenge Graduate Program in Petroleum Geology with Feldmann.
- 1988-89 Ohio Board of Regents, Program Excellence Bachelor of Science in Geology with Palmer.
- 1988-89 U.S. Department of Education, Patricia Roberts Harris Graduate Study Fellowships with Chemistry, Physics, Speech Pathology, and Math Depts.
- 1988-89 Amoco Foundation Graduate Research Assistantship.
- 1989-90 U.S. Department of Education, Patricia Roberts Harris Graduate Study Fellowships with Chemistry, Physics, Speech Pathology, and Math Depts.
- 1989-90 Amoco Foundation Graduate Research Assistantship.
- 1990-91 U.S. Department of Education, Patricia Roberts Harris Graduate Study Fellowships with Chemistry, Physics, Speech Pathology, and Math Depts.
- 1991-92 U.S. Department of Education, Patricia Roberts Harris Fellowship Program Doctoral Level Graduate Support with Physics, Speech Pathology, Psychology, and Math Depts.
- 1991-92 U.S. Department of Education, Patricia Roberts Harris Fellowship Program Master's Level Graduate Support with Speech Pathology, Journalism, and Math Depts.

- 1992-93 U.S. Department of Education, Patricia Roberts Harris Fellowship Program Doctoral Level Graduate Support - with Physics, Speech Pathology, and Psychology
- 1992-93 U.S. Department of Education, Patricia Roberts Harris Fellowship Program Master's Level Graduate Support - with Speech Pathology, Psychology, Journalism, Math, and Nursing Depts.

Teaching Honors

- Received the College of Arts and Sciences "Outstanding Teaching Award" 1969-70
- 1991-92 Received the Department of Geology "Glenn Frank Distinguished Teaching Award".
- 1993-94 Received the Department of Geology "Glenn Frank Distinguished Teaching Award".
- 1994-95 Received the College of Arts and Sciences "Outstanding Teaching Award".
- 1995-96 Received the Department of Geology "Glenn Frank Distinguished Teaching Award". 1996-97 Received the Department of Geology "Glenn Frank Distinguished Teaching Award".
- 1998-99 Received the Kent State University Alumni Association "Distinguished Teaching Award".
- 1999-00 Received the Department of Geology "Glenn Frank Distinguished Teaching Award".
- 2000-01 Received the College of Arts and Sciences "Outstanding Teaching Award".
- 2004-05 Received the KSU Mortar Board Chapter "Faculty Recognition Award".
- 2007-08 Received KSU Leadership Excellence Outstanding Advisor Award

University and Public Service

- 1963-67 Member, College Curriculum Committee
- 1964-65 Member, Departmental Review Committee (Biology)
- 1966-67 Member, Departmental Review Committee (English)
- 1966-69 Member, Sigma Xi Committee on Admissions
- 1967-70 Member, Research Council
- 1969-72 Member, Faculty Senate (Executive Committee, 1970-71)
- 1971-72 Member, Educational Policy Council
- 1971-72 Member, May 4th Communications Task Force
- 1972-73 Secretary, Sigma Xi Chapter
- 1972-73 Member, Research Council Screening Committee
- 1972-76 Member, Franklin Township Zoning Appeals Board
- 1972-75 Member, University Patent Board
- 1974-75 Member, Research Council Screening Committee
- 1975-76 Member, University Promotions Advisory Board
- 1977-78 Member, Graduate College Assistant Dean Search Committee
- 1978-79 Director, Workshop on Petroleum and Natural Gas in Ohio
- 1979-80 Member, Graduate College Dean Search Committee
- 1986-87 Member, Graduate College Dean Review Committee
- 1987-89 Member, Graduate College Dean's Chairmen Advisory Committee
- 1990-93 Member, Sigma Xi Chapter Awards Committee

Theses Directed

- Nelson, G.C., 1970, Petrology and structure of Precambrian rocks in the Hesse Mountain area, Bighorn Mountains, Wyoming, 100p.
- Ross, M.E., 1970, Quantitative petrography of Precambrian mafic dikes in the Bald Mountain area, Bighorn Mountains, Wyoming, 96p.
- Uthe, R.E., 1970, Geochemistry of amphibolites from the southern Bighorn Mountains, Wyoming, 79p.
- Malcuit, R.J., 1970. Petrogenesis of gneiss and associated rocks in the southern Bighorn Mountains. Wyoming, 167p.
- Manzer, G.K., Jr., 1972. Petrology of mafic and ultramafic rocks in the Burgess Junction-Tongue River area. Bighorn Mountains, Wyoming, 97p.
- Shotwell, L.B., 1973. Morphology of zircons from Precambrian gneiss in the southern Bighorn Mountains, Wyoming, 71p. Hahn, K.R., 1976, Petrology and geochemistry of the Mincey Mine dunite, Macon County, North Carolina, 49p.
- Dribus, J.R., 1977, The petrology and geochemistry of the Deposit No. 9 Dunite, Macon County, North Carolina, 85p.
- Kingsbury, R.H., 1977, Petrology and geochemistry of an ultramafic pluton north of Micaville, Yancy County, North Carolina, 39p.
- Honeycutt, F.M., 1978, Petrology of the Balsam Gap ultramafic body, Jackson County, North Carolina, 46p.
- Schiering, M.H., 1979, Petrology and geophysics of the Dark Ridge ultramafic body, Jackson County, North Carolina, 42p.
- Penso, S.M., 1981, Geophysical surveys of several selected ultramafic bodies in western North Carolina, 73p.
- Freeman, M.J., 1983, Magnetic survey of several ultramafic bodies in northern Harford County, Maryland, 59p.

Other Professional Activity

Reviewer of research proposals for the Research Corporation and for the National Science Foundation.

Reviewer of manuscripts for Journal of Geology, Southeastern Geology, Geochimica et Cosmochimica Acta, Geological Society of America, etc.

Reviewer for the Igneous and Metamorphic Petrology section of the American Geological Institute "Glossary of Geology" (1980, 1987, 1996).

Geological Society of America North-Central Section, Undergraduate Research Program, Reviewer of Research Proposals (2009-2014)