DEXTER PERKINS

A. Title and Address

Professor of Geology
The Harold Hamm School of Geology and Geological Engineering
University of North Dakota
Grand Forks, North Dakota 58202

B. Personal

- Born - January 27, 1952, Boston, Massachusetts
- Family - Wife (Elizabeth Mary); Sons (George Bradford, Douglas Paul)

C. Education

- Ph.D., Geology, University of Michigan, 1979
- M.S., Geology, University of Michigan, 1977
- B.S., Geology, University of Rochester, 1973

D. Academic Positions/Recognitons/Appointments

- Associate Director, Harold Hamm School of Geology and Geological Engineering, 2013-2015
- North Dakota Professor of the Year, 2010
- Associate Editor, In the Trenches, 2011 - present
- Bush Teaching Scholar, University of North Dakota, 2003-2004
- Associate Editor, Journal of Geoscience Education, 2001 - 2009
- Professor of Geology, University of North Dakota, 1993 - present
- Associate Editor, The American Mineralogist, 1991 - 1999
- Professeur Associée at Université Blaise Pascal, Clermont-Ferrand, France, 1990 (Sabbatical from University of North Dakota)
- Associate Professor of Geology, University of North Dakota, 1986 - 1993
- Assistant Professor of Geology, University of North Dakota, 1981 - 1986
- Post-Doctoral Research Fellow (with R.C. Newton), University of Chicago, 1979 - 1981
- Shell Fellow, University of Michigan, 1979
- Pre-Doctoral Research Fellow at the Institute für Kristallagraphie und Petrographie, ETH (with A.B. Thompson), Zurich, Switzerland, 1977

E. Professional Associations

- North Dakota Academy of Sciences
- American Geophysical Union
- Geological Society of America
- American Mineralogical Association
- National Association of Geoscience Teachers
- Sigma Xi

F. Teaching at the University of North Dakota

Courses taught every year

- Geol 101: Introduction to Geology
- Geol 103: Environmental Issues
- Geol 205: Surviving on Planet Earth
- Geol 318/318L: Mineralogy
- Geol 320/320L: Petrology

Other courses taught at the University of North Dakota

- •Geol 100: Earth Science
- •Geol 104: Geology of National Parks
- •Geol 105: Earthquakes and Volcanoes
- •Geol 105: Minerals, Gems and Gold
- •Geol 203: Geology for Engineers
- •Geol 303: Natural Resources
- •Geol 303: Philosophy & Geology
- •Geol 319: Optical Mineralogy
- •Geol 321: Geochemistry
- •Geol 406: Ore Deposits
- •Geol 502: Metamorphic Petrology
- •Geol 505: Geochemistry
- •Geol 509: Adv. Mineralogy
- •Geol 517: SEM/Microprobe Analysis
- •Geol 599: World Geology/Tectonics
- •Geol 599: Analytical Methods
- •Hon 299: Honors Seminars

G. Research Interests

- Mineral equilibria and the formation of high-grade metamorphic rocks
- Mineral thermodynamics
- Geoscience education

H. Publications-Books

•Brady, J.B., Mogk, D.W., and Perkins, D., eds. (1997) Teaching Mineralogy. The Mineralogical Society of America. 406 p.
•Perkins, D. (1st ed. 1998, 2nd ed 2002, 3rd ed 2010) Mineralogy. Prentice Hall.
•Perkins, D. (1998) Instructor's Notes to Accompany Mineralogy. Prentice Hall. 60p.
•Perkins, D., and Henke, K. (1st ed. 1999, 2nd ed. 2004) Minerals in Thin Section. Prentice Hall. 216p.
•Perkins, D., Henke, K., Simon, A.C., and Yarbrough, L. (2019) Earth Materials: Components of a Diverse Planet. CRC Press.

I. Publications - Articles and Technical Reports. More than 40 including:

•Perkins, D., III, Westrum, E.F., Jr., and Essene, E.J. (1980) The thermodynamic properties and phase relations of some minerals in system CaO-Al_2O_3-SiO_2-H_2O. Geochim. Cosmochim., Acta. 44, 61-84.
•Perkins, D., III, and Newton, R.C. (1980) The compositions of coexisting pyroxenes and garnet in the system CaO-MgO-Al_2O_3-SiO_2 at 900° - 1000° and high pressure. Contrib. Mineral. Petrol., v75, 291-300.
•Perkins, D., III, and Newton, R.C. (1981) Charnockite geobarometers based upon coexisting garnet-pyroxene-plagioclase-quartz. Nature, v292, 144-46.
•Newton, R. C. and Perkins, D., III (1982) Thermodynamic calibrations of geobarometers for charnockites and basic granulites based on the assemblages garnet-plagioclase-orthopyroxene (clinopyroxene)-quartz, with applications to high grade metamorphism. Am. Mineral., v67, 203-221.
•Perkins, D., III, Essene, E.J., and Marcotty, L.A. (1982) Thermometry and barometry of some amphibolite-granulite facies rocks from Otter Lake area, Quebec. Can. J. Earth Sci., v19, 1759-74.

•Perkins, D., III, Brekke, D.W., and Karner, F. R. (1983) Analysis of Atmospheric Fluidized Bed Combustion Agglomerates. United States Department of Energy Report DOE/FC/10120-1608, 44 pp.
•Perkins, D., III and Chipera, S.J. (1985) Garnet-orthopyroxene barometry applied to the English River Subprovince, the Minnesota River Valley and other high-grade terranes. Contrib. Mineral. Petrol., v89, 69-80.
•Perkins, D., III, Essene, E.J., and Wall, V.J. (1987) THERMO: A computer program for calculation of mixed-volatile equilibria. Am. Mineral., v72, 446-447.
•Giddings, S.D., and Perkins, D. (1987) Gold and telluride mineralization at the Goldlund Mine, northwestern Ontario. Can. Mineral., v25, 659-666.
•Chipera, S.J., and Perkins, D. (1988) Evaluation of biotite-garnet geothermometers: application to the English River Subprovince, Ontario. Contrib. Mineral. Petrol. 98, 40-48.
•Perkins, D. (1990) Thermometry and barometry of mafic granulites based on garnet-clinopyroxene-plagioclase-quartz assemblages. NATO Adv. Stud. Pub. Series, v311, 435-450.
•Perkins, D. (1991) Metamorphism of the Kisseynew Gneisses, Trans-Hudson Orogen, northern Saskatchewan. Can. J. Earth Sci., v28, 1664-1676.
•Perkins, D. and Vielzeuf, D. (1992) Reinvestigation of fayalite+anorthite=garnet. Contrib. Mineral. Petrol., v111, 260-263.
•Perkins, D., and Vielzeuf, D. (1992) Experimental investigation of Fe-Mg exchange between olivine and clinopyroxene. Am. Mineral., v77, 774-783.
•Essene, E.J., Anovitz, L.M., and Perkins, D. (1994) Mineral metastability in the system Al_2O_3-SiO_2-H_2O. Clays Clay Min., v42:102-106.
•Perkins, D. and Hartman, J. (2001) Another node on the interNet. Comput. and Geosci., v27, 1257-1259.
•Perkins, D. (2005) The case for a cooperative studio classroom: teaching petrology in a different way. J. Geosci. Ed., v53, 101-109.
•Perkins, D. (2007) What should our students learn? Elements, March- April, v3, 101-108.
•Perkins, D. and Anthony, E. (2011) The evolution of spinel lherzolite xenoliths and the nature of the mantle at Kilbourne Hole, New Mexico. Contrib. Mineral. Petrol., v162, 1139-1157.
•Knight, C.C., Perkins, D., Stempien, J., McConnell, D., and Kuleck, W. (2011) Student-centered instruction and student affect. Acad. Res. Quart., http://222.rapidintellect.com/AEQweb/; v15, No. 3, Art. 9.
•Gilbert, L.A., Stempien, J., McConnell, D.A., Budd, D.A., van der Hoeven Kraft, K.J., Jones, M.H., Knight, C.C., Matheney, R.K., Perkins, D., Wirth, K. (2012) Not Just "Rocks for Jocks": Who are introductory geology students and why are they here? J. Geosci. Ed., v60, 360-317.