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PERSONAL:

Contact Information: **Email:** jhickey@nwmissouri.edu

Current Position: Assistant Professor of Geology
 Department of Geology and Geography
 Northwest Missouri State University
 800 University Drive, GS-1355, Maryville, MO 64468
 660-562-1817 (tel.)

Date of Birth: August 20, 1955

EDUCATION:

1998-2007	Doctor of Philosophy, Earth Sciences	Dartmouth College, NH
1981-1986	Master of Science, Geochemistry	Colorado School of Mines, CO
1978-1981	Bachelor of Arts, Geology/Chemistry	Bridgewater State College, MA

AWARDS:

Fellowships and Grants

2005	NWMSU, ITLC Grant: "Art Meets Science"
2004	NWMSU, CITE Fellowship: Develop General Geology as an online course
2004	NWMSU, Faculty Research Grant: "Pilot study to facilitate moderate resolution 3-D mapping of the unconsolidated section of NW Missouri"

Scholarships and Fellowships

1998-2003	Dartmouth College and NH NASA Space Grant Fellowship
1981-1983	Colorado School of Mines, Dept. of Chemistry and Geochemistry, Teaching and Research Assistantship

Awards and Nominations

2002	Dartmouth College, Arts and Sciences Graduate Student Teaching Honoree
2002	Dartmouth College, Earth Science Department Nominee & Recipient: NH Space Grant Outstanding Student Award

PROFESSIONAL EXPERIENCE:

Work Experience

- Aug. 2003-Present** **Assistant Professor, Department of Geology and Geography, Northwest Missouri State University, Maryville, Missouri, USA**
- Courses Teaching/Taught:
General Earth Science w/ Lab General Geology w/ Lab
Environmental Geology w/ Lab Hydrogeology
Geomorphology Environmental Regulations
GIS in the Geosciences Global Environmental Change
- Sept. 1998-Aug. 2003** **Graduate Research and Teaching Assistant, Department of Earth Science, Dartmouth College, Hanover, New Hampshire, USA**
- Laboratory Instructor and Teaching Assistant:
Introduction to Earth Science
Elementary Meteorology
Remote Sensing (with Geospatial Data Analysis)
Geochemistry
-Conducted field and laboratory in support of Ph.D. thesis topic: "Effect of Anomalous Soil Gas CO₂ Concentration on Conifer Monoterpene Composition and Spectral Reflectance".
- 1996-1997** **Visiting Instructor, Department of Earth Science and Geography, Bridgewater State College, Bridgewater, Massachusetts, USA**
- Environmental Geology
Physical Geology
- 1991-1997** **Consulting Environmental Geologist, Multiple Companies, USA**
- Provided services as consulting geologist/geochemist to industrial and commercial clients and environmental consultants in the areas of environmental site assessment and remediation.
- 1983-1991** **Senior Scientist, NERI - PETREX Geoscience Services, Lakewood, Colorado and Farmington, Connecticut, USA**
- Responsible for oversight of technical services group of a geoscience consulting and service company that serviced the resource exploration and environmental remediation industries.
- 1981-1983** **Graduate Research and Teaching Assistant, Department of Chemistry and Geochemistry, Colorado School of Mines, Golden, Colorado, USA**
- Laboratory Instructor and Teaching Assistant:
Inorganic Chemistry w/Qualitative Analysis
Quantitative Inorganic Chemistry
-Conducted field and laboratory studies in support of M.S. thesis topic: "Preliminary Investigations into an Integrative Soil Gas Geochemical Technique for Petroleum Exploration".
- 1973-1981** **Retail Clerk/Buyer, Bra-Wey Sport Shop, Braintree, Massachusetts, USA**

Fieldwork Experience

- 1999-2001** Field spectroscopic and biogeochemical sampling, Mammoth Mountain, CA, Cape Cod, MA and Grafton County, NH
- 1983-1998** Numerous geologic/geochemical field surveys as part of resource exploration and environmental monitoring studies across Continental United States. Experience ranges from sample collection to field program supervision. Efforts included geologic mapping, soil, water, sediment, and soil vapor collection, boring/well installation, etc.

UNIVERSITY, COLLEGE AND DEPARTMENT SERVICE COMMITTEES:

- 2009-2011** University's Health and Safety Committee
- 2007-2009** University's Improvement of Teaching and Learning Committee (Chair)
- 2008-2009** University's Admissions and Advanced Standing Committee
- 2007-2009** University's Freshman Seminar Advisory Council
- 2006-2008** University's Assessment Committee
- 2004-2006** University's Educational Technologies Committee
- 2004-2008** College of Arts and Science's Honors Convocation Committee
- 2004-2009** Department's Geo Club and AAPG Student Chapter (Co-Advisor)
- 2003-2009** Department's Geology Scholarship and New Faculty Search Committees

PUBLICATIONS AND PRESENTATIONS:

Publications/Manuscripts

Hickey, J. C., Birnie, R. W., & Zhao, M., (2011), Covariance of monoterpenes and spectral reflectance of conifers at the Mammoth Mountain, California CO₂-induced tree kill areas, *International Journal of Remote Sensing*, Submitted – in revision after initial review.

Hickey, J.C. (2007), Effect of Anomalous Soil Gas CO₂ Concentrations on Conifer Monoterpene Composition and Spectral Reflectance. Dartmouth College, Unpublished Doctoral Dissertation

Hickey, J. C., Birnie, R. W., & Zhao, M., (2002), Oleoresin Chemistry and Spectral Reflectance in "Stressed" Lodgepole and White Bark Pine, Mammoth Mountain, California, **Summary of the Tenth Annual JPL Airborne Earth Science Workshop**, JPL Pub.

U. S. Patent No. 5,862,512, Method and apparatus for processing geochemical survey data, Co-Inventors: Voorhees, K. J. & Hickey, J. C., Assignee: Colorado School of Mines, January 19, 1999.

Einhorn, I.N., S.F. Sears, J.C. Hickey, J.H. Viellenave, & G.S. Moore G S., (1992). Characterization of petroleum contaminants in groundwater and soils. In: **Proceedings of the 5th Annual Mass Univ. Hydrocarbons Contaminated Soils Conference**, September 24-27, 1990, Amherst, MA. 2:89-143.

Viellenave, James H, & Hickey, James C., (1990). Use of high resolution passive soil gas analyses to characterize sites contaminated with unknowns, complex mixtures, and semi-volatile organic compounds, **Superfund '90, Proceedings of the National Superfund Conference**, 11, p. 340-347.

Voorhees, Kent J., Malley, Michael J., Hickey, James C., Klusman, Ronald W., & Bath, William W., (1988). Application of a new technique for the detection and analysis of low concentrations of contaminants in soil, Collins, A. G. (editor), & Johnson, A. I. (editor), **Ground-water contamination; field methods, American Society for Testing and Materials Special Technical Publication, 963**, 381-396.

Hickey, James C. (1986), Preliminary investigations of an integrative gas geochemical technique for petroleum exploration, Colorado School of Mines, Unpublished Master's Thesis, p. 72.

Klusman, Ronald W., Voorhees, Kent J., Hickey, James C., & Malley, Michael J. (1986), Application of the K-V fingerprint technique for petroleum exploration, Davidson, Martin J. (editor) (South. Methodist Univ., Dallas, TX, United States), **Unconventional methods in exploration for petroleum and natural gas IV**, p. 219-243.

Voorhees, Kent J., Hickey, James C., & Klusman, Ronald W. (1984), Analysis of groundwater contamination by a new surface static trapping/mass spectrometry technique, *Analytical Chemistry*, 56 (13), p. 2602-2604.

Presentations/Abstracts (* Presentations Involving UGR Projects)

Hickey, J.C., Ramsey, Molly J., and Swan, Erin M. (2010). Analyzing Environmental and Geomorphic Flood Impacts Using Annual Digital Aerial Imagery. *GSA Abstracts with Programs*, Vol. 42, No. 5. *

Ramsey, Molly J. and Hickey, J. C. (2010). Monitoring Annual Sedimentation Patterns and Associated Geomorphic Change on the One Hundred Two River Near Maryville, Missouri. *GSA Abstracts with Programs*, Vol. 42, No. 5. *

Hickey, J.C., Pope, D. L., Vossenkemper, J. P. and Nguyen, L. K. (2008). Geo-Mosaic: Integration of geospatial analysis in undergraduate geoscience research to enhance learning across the disciplines. *GSA Abstracts with Programs*, Vol. 41, No. 4. *

Vossenkemper, J., Nguyen, L. and Hickey, J. C. (2008). Geomorphic changes to the 102 River floodplain near Maryville, Missouri after the May 2007 flood. *GSA Abstracts with Programs*, Vol. 41, No. 4. *

Hickey, James. (March 2008). Spatial technologies in the Geoscience program at NWMSU. Presented to the participants attending the KC Area Arc Users Group Meeting at the NWMSU Liberty Center, March 11, 2008.

Hickey, James. (November 2007). An introduction to the shallow groundwater systems of northern Missouri. Presented to the participants attending the Northwest Missouri On-Site Wastewater Training Short Course at Northwest Missouri State University, November 29, 2007.

Hickey, J.C., Rohs, C. R. and Pope, J. P. (2004). Terra Firma: Methods of Field-Based Instruction to Solidify Geologic Concepts. *GSA Abstracts with Programs*, Vol. 37, No. 5.

Leipard, D. L., Hickey, J. C., and Pope, J. P. (2004). Undergraduate Research: A Student's Perspective on Learning Through Research. *GSA Abstracts with Programs*, Vol. 37, No. 5. *

Hickey, J.C., Birnie, R.W. and Zhao, M. (2004). Environmental Influences on Spectral Reflectance and Oleoresin Chemistry of Conifers, Mammoth Mountain Tree Kill Areas, California. *GSA Abstracts with Programs*, Vol. 36, No. 5.

Leipard, D. L. and Hickey, J. C. (2004). Using Remote Sensing to Determine the Environmental Impact of Volcanic Extrusive Products at Arenal Volcano and Poas Volcano, Costa Rica. GSA Abstracts with Programs, Vol. 36, No. 5. *

Hickey, J. C., & Birnie, R. W., (2002), Integration of GIS and Digital Image Processing to Map Aquatic Vegetation in a Shallow Freshwater Lake, **Abstracts of the 17th Annual NEARC Conference & Workshops, Bretton Woods, NH, November 3-6, 2002**

Hickey, J. C., Birnie, R. W., & Zhao. M., (2002), Environmental Influences on Spectral Reflectance and Oleoresin Chemistry of Conifers, Mammoth Mountain Tree Kill Areas, California, **GSA Abstracts with Programs Vol. 34, No. 6, September 2002**

Hickey, J. C., Birnie, R. W., & Zhao. M., (2001), Oleoresin Chemistry and Spectral Reflectance in “Stressed” Lodgepole and White Bark Pine, Mammoth Mountain, California, **Abstracts of the Tenth Annual JPL Airborne Earth Science Workshop**, JPL Publishing

Hickey, James C., Hathway, Mark H., & Tingley, Andrew C. (1996), Integration of various subsurface exploration techniques to solve problems at sites contaminated with petroleum hydrocarbons, American Association of Petroleum Geologists 1996, Annual Meeting Abstracts – AAPG Bulletin, 80(5), p. 65.

Viellenave, James H., & Hickey, James C. (1990), Application of high-resolution soil-gas geochemical data to solving organic contamination problems, AAPG Bulletin, 74 (5), p. 785.

Hickey, James C., & Durfee, S. L. (1987), Adapting desorption mass spectrometry and pattern recognition techniques to petroleum fluid correlation studies, AAPG Bulletin, 71 (5), p. 567.

Klusman, Ronald W, Voorhees, Kent J., Hickey, James C., & Bloom, Duane N. (1984), A new approach to multi-component gas geochemistry in metal exploration, SEG, **Exploration for ore deposits of the North American Cordillera; abstracts with program**, p. 41.

Hickey, J. C., Klusman, R. W., & Voorhees, K. J. (1983), Fault leakage characterization by integrative gas geochemistry/mass spectrometry/pattern recognition procedures, AAPG Bulletin, 67 (8), p. 1342.

Klusman, R. W., Voorhees, K. J., & Hickey, J. C. (1983), An integrative gas geochemical technique for surficial petroleum exploration, Geophysics, 48 (6), p. 806.

Hickey, J. C., Klusman, R. W., & Voorhees, K. J. (1983), An integrative gas geochemical technique for surficial petroleum exploration, AAPG Bulletin, 67 (3), p. 483.