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Indiana Licensed Professional Geologist (# LPG 2139)

Summary of Qualifications

- Versatile geologist with experience in Appalachian bedrock and glacial geology and ground water contaminant transport.
- Energetic, passionate and effective communicator skilled at conveying complicated ideas to others, be they students or clients.
- Broadly-trained in many geologic subdisciplines by extensive formal and continuing education and abundant real-world experience.
- Possesses a unique combination of expertise in sedimentology, hydrogeology, mineralogy and environmental geochemistry.
- Competent with computer programs, analytical and field instruments and interpersonal relationships.

Employment History

2001 - Present Department of Geosciences, Earlham College, Richmond, Indiana.
Assistant Professor of Geology, Convener, Science Division (‘06-‘07), Convener, Geosciences Department (‘04–‘07)

- Taught courses at the introductory and advanced undergraduate level at a small liberal arts college in the Midwest.
- Modernized the department to make it more environmentally literate; doubled the number of departmental majors over 6 years
- Updated computing and instrumentation to enable curriculum development with GIS, XRD, SEM, and ICP-AES.
- Taught Environmental Geoscience (GEOS 111), Physical Geology (GEOS 211) Environmental Science and Sustainability (ENPR 111) Historical Geology (GEOS 314) Mineralogy (GEOS 350), Hydrogeology (GEOS 362), Sedimentology and Stratigraphy (GEOS 355) Environmental Geochemistry (GEOS 352) and seminar courses.
- Participated in outreach activities such as teaching in elementary schools and serving on the Wellhead Protection committee.

1995-2001 Texas A & M University, College of Geosciences, Department of Geology and Geophysics, College Station, Texas
Graduate Teaching Assistant / Graduate Research Assistant.

- Doctoral studies in hydrogeology (Domenico), soil mineralogy (Dixon) and environmental geochemistry (Herbert and Morse).
- Conducted research on molybdate and PAH sorption onto mineral surfaces in controlled aqueous environments.
- Studied the landscape geochemistry of redox sensitive trace elements (As, Mo, Se, V and U) near South Texas uranium mines.
- Taught undergraduate labs in Mineralogy (‘95,97,98,99), Historical Geology (‘96, 97), Physical Geology (‘98) and Petrology (‘ 99).

1994-1995 Lone Rock Geoscience, Burlington, Vermont
Owner and Principal Geologist.

- Initiated a sole proprietorship hydrogeological and environmental consulting firm.
- Specialized in environmental site assessments, UST closures, and ground water characterization and contamination remediation.

1993-1994 Ground Water of Vermont, Burlington, Vermont (now ECS Marin)
Hydrogeologist II / Regional Manager.

- Started a satellite office for Ground Water, Inc., a Connecticut-based environmental consulting firm.
- Set up office, equipment, vendors, hired employees, marketed and established clients, wrote proposals and conducted work.
- Specialized in technical and administrative oversight of projects with contaminated soil, sediment, air, ground and surface water.

1991-1993 Wagner, Heindel and Noyes, Inc., Burlington, Vermont: (now Heindel and Noyes, Inc.)
Hydrogeologist.

- Multi-faceted geologic consulting specializing in the delineation and cleanup of contaminated soil, surface and ground water.

1990-1991 Groundwater Technology, Inc., Williston, Vermont: (now Fluor-Daniel GTI)
Senior Geologist.

- Technical and administrative oversight of multiple ground water contaminant investigations and remedial operations.
- Project work concentrated on remediation of uncontrolled petroleum hydrocarbon releases.

1988-1990 Thermo Water Management, TWM Northeast, Inc., Williston, Vermont
Project Geologist.

- Hydrogeologic consulting that specialized on wastewater disposal capacity demonstration.
- Conducted detailed hydrogeological studies of proposed in-ground, mound and spray irrigation wastewater disposal sites.

1986-1988 Vermont Department of Health, Division of Environmental Health, Drinking Water Section, Burlington, Vermont.
Hydrogeologist.

- Technical oversight to protect public community water supply sources from adverse quality and quantity impacts.
- Extensive work with Act 250, Vermont’s Land Use and Development Law.
- Assisted with the development of the Wellhead Protection Area program.

Education

1995-present Texas A & M University, College of Geosciences, Department of Geology and Geophysics.
Ph.D. Student Geology

- Continuing work in pursuit of a doctoral degree in Environmental Geochemistry.
- Dissertation research: applying GIS to model spatial and temporal variability of geochemical data with special reference to the mobility, bioavailability and toxicity of As, Mo, Se, V and U associated with South Texas uranium mines.
- Dissertation completion on-going. G.P.A. of 3.903.
- Winner of the Texaco Fellowship for 1997; inducted into Phi Kappa Phi and Sigma Gamma Epsilon honor societies.

1982-1986 University of Vermont, Department of Geology, Burlington, Vermont.
Master of Science in Geology

- Studies in Lower-Middle Ordovician sedimentology of the Appalachian foreland basin in New England and Quebec.
- Thesis: Lithofacies, Paleoenvironments and Tectonic History of the Deschambault Limestone, Southeastern, Quebec,175 pp.

1978-1982 Colgate University, Geology Department, Hamilton, N. Y.
Bachelor of Arts in Geology

- Thesis: The Ogdensburg Dolostone of the Ottawa-St. Lawrence Lowlands: Reconstruction of Paleoenvironments from Sedimentologic Evidence, 44 pp.
- Wrestling Scholarship.

Short Courses and Additional Training

2007 The Birthplace and Early History of the Atomic Bomb, Chautauqua Short Course, Albuquerque, Los Alamos and Trinity Site, NM
2002 Introducing GIS Across the Curriculum, Center for Educational Technology, Middlebury College, Middlebury, Vermont.
2000 Hands-On Geographic Information Systems Workshop - Intermediate to Advanced ArcView GIS Using Spatial, 3-D and Image Extensions, and an Introductory Demo of ArcInfo 8, Geological Society of America Meeting, Reno, NV.
1999 Uranium: Mineralogy, Geochemistry and the Environment, Mineralogical Society of America workshop, Golden, Colorado.
1996 Reactive Transport in Porous Media: General Principals and Application to Geochemical Processes, Mineralogical Society of America workshop, Golden, Colorado.
1995 System Dynamics Workshop: Modeling with STELLA, Vermont Geological Society Fall-Winter Meeting, Winooksi, Vermont.
1994 Alpine Continental Glaciation of Mt. Katahdin, Central Maine, NEIGC, Millinocket, ME.
1994 Glacial Geology of the Penobscot River Basin between Millinocket and Medway, NEIGC, Millinocket, ME.
1992 Groundwater and Soil Vapor Investigation and Remediation Techniques, Eastern and Central Massachusetts, NEIGC, Amherst, MA.
1992 Hydrogeology and Hydrogeochemistry of the Connecticut Valley and Quabbin Reservoir Areas, NEIGC, Amherst, MA.
1991 Asbestos Inspector Certification 24-Hour Course, Burlington, Vermont.
1990 OSHA 8-Hour Hazardous Waste Activities Supervisors Course, Albany, New York.
1989 NWWA Introduction to Groundwater Geochemistry, Burlington, VT.
1989 NWWA OSHA 40-Hour “Safety at Hazardous Materials Sites (HAZWOPER)” Training, Valhalla, New York.
1988 Hydrogeochemistry Short Course, Geological Society of America Northeastern Section Meeting, Portland, Maine.
1988 Concepts of Hydrogeology as Illustrated by Case Histories, University of Vermont, Burlington, Vermont.
1988 National Pesticide Survey Team Training, Vermont Department of Health, Burlington, Vermont.
1987 Glacial Lake Hitchcock in the Valleys of the White and Ottauquechee Rivers, East-Central Vermont, NEIGC, Montpelier, Vermont.
1987 EPA Assessment and Management of Drinking Water Contamination, Colonie, New York.
1987 USGS MODFLOW; A Modular 3-D Finite Difference Groundwater Flow Model, Plattsburgh, New York.

Publications

Parker, Ronald L. (2007) Editable PowerPoint lecture slides to accompany “Essentials of Geology - 2nd Edition” published by W. W. Norton, Inc. Provided on a CD by W. W. Norton to textbook adopters as an ancillary teaching aid. 19 chapters; 1278 slides.

Parker, Ronald L. (2007) Editable PowerPoint lecture slides to accompany “Earth: Portrait of a Planet, 3rd Edition” published by W. W. Norton, Inc. Provided on a CD by W. W. Norton to textbook adopters as an ancillary teaching aid. 23 chapters; 1479 slides.

Parker, Ronald L. (2006) Fieldtrip Guidebook for Lower Paleozoic and Pleistocene Excursions in the Vicinity of Richmond, Indiana. Professional Geologists of Indiana Fall 2006 Fieldtrip, Earlham College, Richmond, Indiana November 4th, 2006.

Parker, Ronald L. (2006) Editable PowerPoint lecture slides to accompany “Earth: Portrait of a Planet, 2nd Edition” published by W. W. Norton, Inc. Provided on a CD by W. W. Norton to textbook adopters as an ancillary teaching aid. 23 chapters; 1280 slides.

Graves, Tim and **Ronald L Parker** (2004) Bedrock and Potentiometric Surface Mapping by GIS Analysis of Digital Well Records, Wayne County, Indiana, Geological Society of America Abstracts with Programs, vol. 36(5), p. 562.

Fuson, Gabriel and **Ronald L. Parker** (2004) Petrographic Study of Sedgwick Rock Tufa Deposit, Wayne County, Indiana, Geological Society of America Abstracts with Programs, vol. 36(5), p. 367.

Graham, Andrew and **Ronald L. Parker** (2003) Vertical Distribution of Heavy Metals in Springwood Lake Sediments, Richmond, Indiana, Geological Society of America Abstracts with Programs, vol. 35(7), p. 144.

Chusuei, C.C., **R. L. Parker**, and B.E. Herbert (2003) Molybdate Sorption to the Goethite Surface: Evidence for Inner-sphere Complexation. Colloids and Interfaces in the Environment, 34th ACS Central Regional Meeting.

Mutti, Jeffrey G. and **Ronald L. Parker** (2002) Investigation of Nitrate Concentrations Within the Middlefork Reservoir Watershed, Wayne County, Indiana, Geological Society of America Abstracts with Programs, vol. 34(6), p. 257.

Smith, Crystal M., Philippe E. Tissot, Mark Beaman, **Ronald L. Parker**, Jill Brandenberger, Martha Williams, Patrick Louchouarn, Bruce Herbert and Patrick Michaud (2002) Historical Environmental Impact of Uranium Mining Through the Gamma Ray Analysis of Livestock Pond Sediments, Geological Society of America Abstracts with Programs, vol. 34(6), p. 416.

Smith, Crystal M., Philippe E. Tissot, Patrick Louchouarn, Mark Beaman, **Ronald L. Parker**, Martha Williams, Jill Brandenberger, Bruce E. Herbert and Patrick R. Michaud (2002) Have Radionuclides Released from the South Texas Uranium Mines Affected Lake Corpus Christi? Sigma Xi Student Research Conference, Galveston, Texas, November 16, 2002, p. 31.

Parker, Ronald L., Bruce E. Herbert, Jill Brandenberger and Patrick Louchouarn (2001) Ground Water Discharge from Mid-Tertiary Rhyolitic Ash-Rich Sediments as the Source of Elevated Arsenic in South Texas Surface Waters, Geological Society of America Abstracts with Programs, vol. 33, p. A53

Brandenberger, Jill M., Patrick Louchouarn, Bruce E. Herbert, Philippe E. Tissot, Patrick R. Michaud, **Ronald L. Parker**, Martha Williams, James Bonner and Mark Beaman (2001) Behavior of Trace Metal Concentrations in Water Profiles from Lake Corpus Christi Subsequent to an Overturn Event. National Oceanic and Atmospheric Administration Student Conference: Expanding Opportunities in Oceanic and Atmospheric Sciences. April 1-3, 2001, Jackson, Mississippi.

Herbert, Bruce E. and **Ronald L. Parker** (2000) Arsenic and Other Uranium Associated Contaminants from South Texas Uranium Mines: Environmental Fate from Molecular to Watershed Scales, Symposium on Arsenic Chemistry and Biology and the Management of Arsenic Contaminated Soil and Water, Annual Meeting of the Soil Science Society of America and American Society of Agronomy, Minneapolis, Minnesota, November 6-7, 2000.

Parker, Ronald L. and Bruce E. Herbert (2000) Using GIS and Uranium Mining History to Identify Trace Element "Hotspots" within a South Texas Watershed, Geological Society of America Abstracts with Programs, vol. 32, p. A125.

Parker, Ronald L. and Bruce E. Herbert (2000) History, Geochemistry and Environmental Impacts of Contaminants Released by Uranium Mining in South Texas, Proceedings of the 8th Annual South Texas Environmental Conference, 10/18-20, 2000, Corpus Christi, Texas, 15 pp.

Brandenberger, Jill, Patrick Louchouarn, Bruce Herbert, Philippe Tissot, Patrick Michaud, **Ronald Parker**, Jim Bonner, and Mark Beaman (2000) Behavior of Trace Metal Concentrations in Water Profiles from Lake Corpus Christi Subsequent to an Overturn Event, Proceedings of the 8th Annual South Texas Environmental Conference, October 18-20, 2000, Corpus Christi, Texas, 7 pp.

Herbert, Bruce E. Jae-young Choi, **Ronald L. Parker** and Dongqiang Zhu (2000) Contaminant Sorption to Mineral Surfaces: Linking Molecular Sorption Mechanisms to Complexity of Field-Scale Bioavailability. Gordon Research Conference Environmental Sciences 2000: Water - Environmental Pressures and Chemical Pathways from Molecular to Ecosystem Scale, June 27-30, 2000, The Holderness School, NH.

Parker, Ronald L., Bruce E. Herbert, Philippe E. Tissot and Geoffrey F. Ussery (1999) Contaminants from South Texas Uranium Mines: Livestock Pond Sediments from the Falls City, Texas UMTRA Site - Scrutiny of Contaminant Classification, Geological Society of America Abstracts with Programs, vol. 31, no. 7, p. A340.

Parker, Ronald L. (1998) Rare Earth Element Variation in Guadalupe Delta Soils, Texas Gulf Coast: Potential Tracer for Holocene Climate Change, Proceedings Spring 1998 Texas A & M University Student Research Week, p. 58-59.

Hoffer, Jefferson P., Kent S. Koptiuch and **Ronald L. Parker** (1994) Field and Bench-Scale Comparison of Photoionization Detectors, Proceedings of the 1994 National Ground Water Association FOCUS Conference on Eastern Regional Ground Water Issues, Burlington, Vermont, October 3-5, 1994, pp. 679-692.

Parker, Ronald L. and Michael K. Sparks (1993) Background Soil Concentrations of Polycyclic Aromatic Hydrocarbons from Burlington, Vermont, Geological Society of America Abstracts with Programs, vol. 25, p. 43.

Parker, Ronald (1992) Editorial: Educational Opportunities for Hydrogeology in Vermont, The Green Mountain Geologist, v. 19(2): 3-5.

Parker, Ronald (1992) Humic Substances in the Aqueous Environment: Implications for the Environmental Chemistry of Trace Metals, The Green Mountain Geologist, vol. 19, no. 2, pp. 25-33.

Parker, Ronald (1992) Polycyclic Aromatic Hydrocarbons as Environmental Contaminants, Green Mountain Geologist, v. 19(2): 18-24.

Mehrtens, Charlotte J., **Ronald L. Parker** and Robert G. Butler (1987) The Cambrian Platform in Northwestern Vermont, New England Intercollegiate Geologic Conference Fieldtrip Guidebook, 79th annual meeting, Montpelier, Vermont pp. 254-270.

Parker, Ronald L., Eve Witten and Bruce W. Selleck (1988) Geologic Controls of the Distribution of Uranium and Radon in the Clarendon Springs Dolomite (U. Cambrian - L. Ordovician), Milton, VT, Northeastern Environmental Science, vol. 7, no. 1, p. 8.

Parker, Ronald L. and Charlotte J. Mehrtens (1986) Paleoenvironments of a Middle Ordovician Carbonate Ramp: Deschambault Formation of Southeastern Quebec, Geological Society of America Abstracts with Programs, vol. 18, no. 1, p. 60.

Parker, Ronald L. (1986) Lithofacies, Paleoenvironments and Tectonic History of the Deschambault Limestone, Southeastern Quebec, Unpublished M.S. Thesis, University of Vermont, Burlington, Vermont, 174 pp.

Mehrtens, Charlotte J. and **Ronald L. Parker** (1984) Comparison of Foreland Basin Sequences: Trenton Group in Southern Quebec and Central New York, American Association of Petroleum Geologists Bulletin, vol. 68, no. 12, p. 1924.

Thomas, Peter A. and **Ronald L. Parker** (1983) A Preliminary Model of Changing Riverine Landforms in One Segment of the Lower Missisquoi River Valley, Green Mountain Geologist, vol. 9, no. 3, pp. 9-10.

Morgan, Carol M. and **Ronald L. Parker** (1981) Paleoenvironmental Reconstruction of the Ogdensburg Dolostone (Beekmantown Group: L. Ordovician); St. Lawrence Lowlands, Geological Society of America Abstracts with Programs, vol. 13, no. 3, p. 167.

Morgan, Carol M. and **Ronald L. Parker** (1981) The Ogdensburg Dolostone of the Ottawa - St. Lawrence Lowlands (Lower Ordovician): Reconstruction of Paleoenvironments from Sedimentologic Evidence, Colgate Journal of the Sciences, vol. 13, pp. 33-42.

References

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