

Meredith K. Rhodes Carson

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EDUCATION

- Ph.D. (Geology), 2002, University of Wisconsin – Madison
Lacustrine stratigraphy & Sr isotope geochemistry of the Laney Member, Green River Formation, WY
Advisor: Dr. Alan Carroll
- M.S. (Geology), 1998, University of Wisconsin – Madison
Tectonic Controls on Lake Type Evolution, Ridge Basin, southern California
Advisor: Dr. Alan Carroll
- B.A. (Geology), 1996, SUNY College at Geneseo, Geneseo, New York
Honors Thesis, Biostratigraphy across the Frasnian/Famennian boundary (Upper Devonian) within the Upper Olentangy Shale, Delaware, Ohio
Advisor: Dr. D. Jeff Over

EXPERIENCE

Professional

- 2008-present: Geofuels, LLC – Co-founder & Geologic Consultant
Regional subsurface Gulf Coast interpretation, oil shale variability study, lake-type evolution in Gulf of Thailand rift basins, Lacustrine Basin Exploration - AAPG Field Seminar
- 2006-2008: BP, Team Leader: Eric Dixon
Western Gulf of Mexico Exploration
Paleogene & Pliocene prospect generation, subregional depositional environment interpretation, deepwater drilling operations
- 2005-2006: BP, Team Leader: Ed Bryant
North American Gas
Nonmarine Cretaceous Ericson-Almond Fm interpretation/characterization, Operations Geology
- 2004: BP, Team Leader: David Pocknall
Exploration & Production Technology Group
Geo-technical services: Wamsutter, Angola Reservoir Presence Project, Sed/Strat Network involvement
- 2002: BP, Team Leader: Mark Golborne
Mississippi Canyon Exploration
Responsible for seismic interpretation, seismic facies analysis, construction of depositional environment maps, well log correlation, integrating data to create a depositional model, volumetrics, & risk analysis.
- 2001: BP, Supervisor: Greg Arnold
Deepwater Gulf of Mexico Production
Interpreted reservoir on a new seismic data volume, converted horizons to depth (SeisWorks, TDQ), constructed a bulk rock volume and completed volumetric calculations (ZMap & EarthVision)
- 1998: Amoco, Supervisor: Thomas Mason
New Ventures: Angola Team
Developed a regional depositional framework for the Northern Lower Congo Basin by integrating seismic facies interpretations in the “ultra deep” with paleoenvironmental data of near shore wells; graphic correlation to date surfaces.
- 1997: Exxon Exploration Company, Supervisor: Cliff Ando
Integrated Structural Interpretation Core Group, Critical Technology
3D seismic interpretation to evaluate remaining potential of an onshore Texas field.

Professional Training

- 2008: Salt Tectonics (BP)
- 2007: Fault Interpretation Fundamentals (BP)
- 2006: Subsalt Imaging & Interpretation, Gulf of Mexico Sed/Strat Workshop (BP)
- 2005: Image Log Analysis, ArcGIS, Wilderness First Aid, Petroleum Business & Economics, Managing Uncertainty for Value, Wamsutter Field Safety Orientation (BP)
- 2004: Carbonate Core workshop, Reservoir Modeling for Sedimentologists, Petroleum Systems, RAD 1, Well Log Interpretation (BP)
- 2003: Structure, Geophysics, Field seminar to Co. Clare, Ireland, Ross Formation
Deepwater Core Description Workshop, Caspian Peer Assist, Challenge Induction (BP)
- 2002: Reservoirs & Stratigraphy class (BP)
- 2001: EarthVision Course, DGI, 3D visualization software, builds 3D property models, Houston, TX (BP)

1997: StratWorks Course, Landmark, well log correlation software, Houston, TX (Exxon)
1997: IESX 2D/3D Seismic Interpretation Course, GeoQuest, 3D seismic data interpretation, Houston, TX
1995-1996: SUNY College at Geneseo, Anthropology/Geology Field Study, Great Divide Basin, WY

Field Experience

2010: Co-lead AAPG Field Seminar "Lacustrine Basin Exploration"
2009: Lacustrine Basin Exploration Field Seminar Prep: UT & WY
2006: Almond Sandstone: Modern Analogues and Almond Outcrops, SC & WY
Nabors Crew Engagement, Rock Springs, WY
Wamsutter operations tour, visited Nabors 413, H&P 154, Echo Springs Pad well
2003: Field seminar, Deepwater deposition, Ross Fm, Co. Clare, Ireland (BP)
2002: Co-lead for GSA field trip to Green River Basin
2001: Spanish Pyrenees – Structure and synsedimentary tectonics (Wisconsin)
1999-2000: Green River Basin, SW Wyoming – Detailed strat and correlation of the Laney Member (WI)
2000: Ouachita Mountains, Oklahoma - Geology of the Arkoma Basin and the Arbuckle, Wichita, Ouachita Mountains (Wisconsin)
1997-1998: Ridge Basin, southern California – Lake-type study within a transtensional basin (Wisconsin)
1997: Guadalupe & Sacramento Mountains, W. TX & NM – Permian Reef and deep water turbidites (WI)
1995-1996: Appalachian Foreland Basin – Catskill delta, Devonian black shale (Geneseo)
1994: Hawaii – Volcanology, structure, and geomorphology of Hawaii (Geneseo)

Graduate Training

Micropaleontology (Prof. Clark), Stable & Radiogenic Isotopes (Profs. Valley and Johnson), Sedimentary Basins (Prof. Carroll), Paleobiology (Prof. Geary), Invertebrate Paleontology (Prof. Clark), Physical Sedimentology (Prof. Carroll), Carbonate Sedimentology (Prof. Simo), Limnology

Research

1997-2002: University of Wisconsin – Madison, Research Assistant, for conducting thesis work
1994: State University of New York, College at Geneseo, micropaleontology processing

Teaching

2010: Prepared and co-lead AAPG Field Seminar: Lacustrine Basin Exploration, UT & WY
2003 - 2008: Nonmarine lecture for 21st Century Reservoirs & Stratigraphy Class (BP)
2006: Co-lead a BP Sed/Strat Network Field School in Wyoming and Colorado, focusing on basic field techniques for non US & UK geoscience staff
2003: Invited to contribute to a Caspian Core Workshop, Baku, Azerbaijan
2002: Co-lead a nonmarine Green River Formation Fieldtrip (GSA)
1996-1998, 2000: Teaching Assistant, University of Wisconsin – Madison; Introductory Geology for non-majors (Geol 100), Evolution and Extinction (Geol 110), Geologic Evolution of the Earth (Geol 201)
1994-1996: Teaching Assistant, State University of New York, College at Geneseo, Physical Geology (Geo 111), Historical Geology (Geo 112), & Introductory Geology for non-majors (Geo 100)

Service

2010: AAPG Session Chair: Lacustrine Depositional Settings, Modern & Ancient, New Orleans, LA
2009: AAPG Session Chair: Continental and Lacustrine Basin Systems I, Denver, CO
2007: Represented the Westlake Sustainability Team (BP)
2006: Challenge Green Team Co-lead (BP), Geoscience Recruiting (BP), Challenge Buddy for 2 new hires
2005: Challenge Green Team Lead, Challenge Buddy for 2 interns, 1 new hire, Communications Committee (BP), Geoscience Recruiting (BP)
2003: Challenge Buddy for summer intern (BP), Challenge Green Team (BP), Geoscience Recruiting (BP)
2001: University of Wisconsin – Madison, Student Job Coordinator, facilitate geoscience recruiting
1998-2001: TRIO Student Support Services, tutor undergraduates in geological sciences
1997: University of Wisconsin – Madison, Vice-President, GeoClub

AWARDS & HONORS

Research Grants

- 2001-2002: Morgridge Distinguished Graduate Fellowship, \$19,400 for RA stipend and research funding for Ph.D. research, University of Wisconsin – Madison
- 2000: AAPG Grants-in-Aid, \$2000, for summer field work expenses
- 2000: J. David Love Wyoming Field Geology Fellowship, \$400, for summer field work expenses
- 2000: Weeks Field Support, \$1100, department support for summer field work expenses
- 1999: AAPG Grants-in-Aid, \$1000, for summer field work expenses
- 1999: Weeks Field Support, \$1400, department support for summer field work expenses
- 1995: SUNY College at Geneseo, Geneseo Foundation Undergraduate Research Grants, \$2500

Academic Awards

- 2000: University of Wisconsin – Madison, Thomas E. Berg Award for excellence in teaching, \$1000
- 1999: University of Wisconsin – Madison, Amoco Fellowship, \$6000
- 1996: SUNY College at Geneseo, Geneseo Alumni Scholarship for Geology, \$500
- 1996: SUNY College at Geneseo, Gerrard R. Megathlin Award, for outstanding senior, geological sciences
- 1995: SUNY College at Geneseo, Undergraduate Science Symposium Award for outstanding presentation

Professional Recognition

- 2008: For my technical work in preparation for the 2008 Central Gulf of Mexico Lease Sale
- 2006: For my contribution to and Field Trip HSSE leadership for the Sed/Strat Network MoW Field Class
- 2006: For my contribution to and Field Trip HSSE leadership for the Wamsutter Field Trip
- 2003: For organizing a successful Commuting Alternatives Lunch N Learn for the BP campus, Green Team
- 2003: For my time and effort mapping, calculating, and presenting the volumetrics for a GoM prospect

PUBLICATIONS

- Rhodes, Meredith K., and Carroll, A.R., in prep, Lacustrine sequence stratigraphy of the Laney Member, Eocene Green River Formation.
- Carroll, Alan R., Doebbert, A.C., Booth, A.L., Chamberlain, C.P., Rhodes-Carson, M.K., Smith, M.E., Johnson, C.M., and Beard, B.L., 2008, Capture of high-altitude precipitation by a low-altitude Eocene lake, western U.S., *Geology*, vol. 36, p. 791-794.
- Rhodes, Meredith K., Malone, D.H., Carroll, A.R., and Smith, M.E., 2007, Sudden Desiccation of Lake Gosiute at ~ 49 Ma: A Downstream Record of Heart Mountain Faulting?, *The Mountain Geologist*, vol 44., p. 1-10.
- Pietras, Jeffrey T., Carroll, Alan R., and Rhodes, Meredith K., 2003, Lake basin response to tectonic drainage diversion: Eocene Green River Formation, Wyoming, *Journal of Paleolimnology*, vol., 30, p. 115-125.
- Rhodes, Meredith K., Carroll, Alan R., Pietras, Jeffrey T., Beard, Brian L., and Johnson, Clark M., 2002, Strontium isotope record of continental weathering within a complex orogenic zone: Eocene Green River Formation, Wyoming, *Geology*, vol. 30, p. 167-170.
- Over, D.J. and Rhodes, M.K., 2000, Conodonts from the upper Olentangy Shale (upper Devonian, Central Ohio) and stratigraphy across the Frasnian-Famennian Boundary, *Journal of Paleontology*, Vol. 74, No. 1, p. 101-112.

ABSTRACTS

- Horn, B.W., Shanley, K.W., Hanson, W.B., Rhodes Carson, M.K., Hornbeck, J.A., 2007, Lower Almond Formation Outcrops in Pine Canyon: Understanding and Predicting Reservoir Distribution and Geometry to Guide Infill and Exploitation Strategies in the Greater Green River Basin, AAPG Annual Meeting, vol. 15, p 65.
- McClain, T., Hornbeck, J.A., Norris, G.E., Riggert, V.L., Solano, R., Piekenbrock, E.J., Rhodes Carson, M., Muller, D.S., Horn, B.W., Phillips, D.H., and Glørstad-Clark, E., 2006, Wamsutter Development Area, Wyoming: A Case Study in Developing a Giant Tight Gas Field, AAPG Annual Meeting, vol. 15, p 70.

- Doebbert, A. C., Booth, A.L., Carroll, A.R., Chamberlain, C., Rhodes, M., 2005, Geomorphic Drainage Capture Recorded by Oxygen Isotopes of Green River Formation Lacustrine Mudstone, Eocene, Wyoming, *Eos, Transactions, American Geophysical Union*, vol. 86, no. 52, H31A-1281.
- Carroll, Alan, R., Pietras, Jeffrey, T., Rhodes, Meredith, K., Hubbard, L. Ashley, and Bohacs, Kevin M., 2005, Temporal self-organization of lacustrine sedimentary facies, Eocene Green River Formation, Wyoming, *AAPG Annual Meeting*, vol. 14, p. A24.
- Rhodes, Meredith, K., Pietras, Jeffrey T., Carroll, Alan R., Beard, Brian L., and Johnson, Clark M., 2003, Sr isotope composition of the lacustrine Laney Member, Green River Formation, Third International Limnogeology Congress, Abstract Volume, p. 228.
- Pietras, Jeffrey, T., Carroll, Alan R., Rhodes, Meredith K, Johnson, Clark M., and Beard, Brian L., 2003, Stratigraphic and strontium geochemical evidence of lacustrine basin evolution: Example from the Green River Formation, Wyoming, Third International Limnogeology Congress, Abstract Volume, p. 214.
- Bohacs, Kevin M., Carroll, Alan R., Pietras, Jeffrey T., Rhodes, Meredith K., and Smith, Mike, 2002, Evolution of the Great Lakes System of the Green River Formation: Tectonically and topographically conditioned records of climate change, *Geological Society of America, Abstracts with Programs*, vol. 34, p. A478.
- Malone, David H., Rhodes, Meredith K., and Carroll, Alan R., 2002, Sudden desiccation of Lake Gosiute at ~49 Ma: A downstream record of Heart Mountain faulting?, *Geological Society of America, Abstracts with Programs*, vol. 34, p. 369.
- Carroll, Alan R., Smith M. Elliot, Pietras, Jeffrey T., Rhodes, Meredith K., and Singer, Brad, 2002, Accumulation rates in ancient lakes: Relationship to lake type evolution of the Green River Formation, Wyoming, *Geological Society of America, Abstracts with Programs*, v.34, p. A479.
- Rhodes, Meredith K., and Carroll, Alan R., 2002, Lacustrine sequence stratigraphic expression within the balanced fill to overfilled Laney Member of the Green River Formation, *Geological Society of America, Abstracts with Programs*, vol. 34, p. 558.
- Pietras, Jeffrey T., Rhodes, Meredith K., and Carroll, Alan R., Controls on Lacustrine Reservoir Development: Examples from the Eocene Green River Formation, Wyoming, *AAPG Annual Meeting expanded abstracts*, v. 11, p. A139.
- Rhodes, Meredith K. and Carroll, Alan R., 2001, Nonmarine sequence stratigraphic interpretation of the Laney Member, Eocene Green River Formation, Washakie Basin, Wyoming, *AAPG Annual Meeting*, Vol. 10, p. A167.
- Carroll, Alan R., Pietras, Jeffrey T., Rhodes, Meredith K., Johnson, Clark M., and Beard, Brian L., 2001, Application of advanced provenance tools to lacustrine stratigraphy: Strontium isotopes in the Green River Formation, Wyoming, *AAPG Annual Meeting*, Vol. 10, p. A33.
- Rhodes, Meredith K., Beard, Brian L., Carroll, Alan R., Johnson, Clark M., 2000, Radiogenic isotopic provenance evolution of cyclic lacustrine carbonates, Eocene Green River Formation, Wyoming, *Geological Society of America, Abstracts with Programs*, Vol. 32, No. 7, p. A389.
- Rhodes, Meredith K., 2000, Lacustrine stratigraphy, clastic provenance, and radiogenic isotopic paleohydrology of the Laney Member, Green River Formation, *AAPG Grants-in-Aid, American Association of Petroleum Geologists Bulletin*, Vol. 84, No. 11, p. 1872.
- Pietras, Jeffrey T., Carroll, Alan R., and Rhodes, Meredith K., 2000, Lacustrine sequence stratigraphy: example from the Green River Formation of southwestern Wyoming, *AAPG Annual Meeting*, Vol. 9, p. A116.
- Rhodes, Meredith K., Beard, Brian L., Carroll, Alan R., Pietras, Jeffrey T., Johnson, C., 1999, Strontium Isotopic Composition and Paleohydrology of the Eocene Green River Formation, Wyoming, *Geological Society of America, Abstracts with Programs*, Vol. 31, No. 7, p. A375.
- Rhodes, Meredith K., 1999, Radiogenic Isotope Chemostratigraphy and stratal geometries of the lacustrine Laney Member, Green River Formation, southwestern Wyoming, *AAPG Grants-in-Aid, American Association of Petroleum Geologists Bulletin*, Vol. 83, No. 11, p. 1895.
- Pietras, Jeff T., Rhodes, Meredith K., Wartes, Marwan A., Carroll, Alan, R., Beard, Brian L., and Johnson, Clark M., 1999, Strontium isotopes in provenance studies of large ancient lacustrine basins; an example from the

- Junggar-Turpan-Hami basins, NW China, Geological Society of America, Abstracts with Programs, Vol. 31, No 7, p. A298.
- Rhodes, Meredith K. and Carroll, Alan R., 1998, Tectonic controls on lake type evolution, Peace Valley Formation, Ridge Basin, southern California, Geological Society of America, Abstracts with Programs, Vol. 30, No. 7, p. A192.
- Rhodes, Meredith K. and Over, D.J., 1998, Conodonts from the Upper Olentangy Shale (Upper Devonian, Central Ohio) and Stratigraphy across the Frasnian-Famennian boundary, Geological Society of America, Abstracts with Programs, Vol. 30, No. 2, p. A68.
- Over, D.J., Reynolds, S.A., Rhodes, M.K., and Wichtowski, J.L., 1998, Conodonts, Ash Horizons, Kellwasser intervals, High-Energy events, and the Frasnian-Famennian boundary in the Deep Shelf and Basin Facies of the Appalachian Basin, Geological Society of America, Abstracts with Programs, Vol. 30, No. 2, p. 68.
- Rhodes, M.K. and Over, D.J., 1996, Biostratigraphy across the Frasnian/Famennian boundary (Upper Devonian) within the Upper Olentangy Shale, Delaware, Ohio: Geological Society of America, Abstracts with Programs, Vol. 28, No. 3, p. 94.
- Over, D.J., Kanhalangsy, K., King, D., Matzek, C., and Rhodes, M., 1996, Conodonts in the Frasnian black shales of the northern Appalachian and Michigan basins: Geological Society of America, Abstracts with Programs, Vol. 28, No. 3, p. 88.