

## STACY C. ATCHLEY CURRICULUM VITAE

### CONTACT INFORMATION

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### EDUCATIONAL BACKGROUND

1979-1984                      Baylor University, B.S. Geology  
1984-1986                      Baylor University, M.S. Geology  
1988-1990                      University of Nebraska-Lincoln, Ph.D. Geology

### PROFESSIONAL AFFILIATIONS

American Association of Petroleum Geologists (AAPG)  
Geological Society of America (GSA)  
Society of Sedimentary Geology (SEPM)  
State of Texas, Professional Geoscientist #2924

### PROFESSIONAL EXPERIENCE

**Professor and Summer 2020 Interim Chair, Baylor University Department of Geosciences.** Director of the Applied Petroleum Studies Program and collaborator within the Terrestrial Paleoclimate Research Group. August 2019 to present.

**Professor and Chair, Baylor University Department of Geosciences.** Coordinator for the Applied Petroleum Studies program and collaborator within the Terrestrial Paleoclimate Research Group, Fall 2013 to August, 2019.

**Professor and Associate Chair, Baylor University Department of Geology.** Coordinator for the Applied Petroleum Studies program and collaborator within the Terrestrial Paleoclimate Research Group, 2008 to 2011.

**Associate Professor and Graduate Program Director, Baylor University Department of Geology.** Coordinator for the Applied Petroleum Studies program and collaborator within the Terrestrial Paleoclimate Research Group, 2001 to 2008.

**Assistant Professor, Baylor University Department of Geology.** Director of the Applied Petroleum Studies program, and collaborator within the Terrestrial Paleoclimate Research Group, 1996 to 2001.

**Sequence Stratigraphic Advisor, Advantage Energy Services, Ltd.** Part-time appointment in conjunction with Baylor's Applied Petroleum Studies program. 1996 to 2001.

**Group Leader and Research Project Leader, Exxon Production Research Company, Carbonate Reservoir Architecture Section.** Responsibilities included coordination of 10 Ph.D.-level research staff members, design and implementation of 1994 to 1996 research plans and research application projects, training of Exxon affiliate personnel, and coordination of the 1995 Exxon Corporation Carbonate Exploitation and Exploration Symposium. 1994 to 1995.

**Senior Research Geologist, Exxon Production Research Company, Carbonate Reservoir Architecture and Characterization Section.** Duties included design and completion of research application projects, and training of Exxon affiliate personnel. 1990 to 1994.

**Production Geologist, Exxon Company, U.S.A., Southwestern Division.** Responsible for reservoir surveillance, and development and outpost prospecting within Permian (Guadalupian) strata of the Exxon-operated Means San Andres and Queen Units. 1986 to 1988.

**Production Geology Intern, Mobil Producing Texas and New Mexico.** Worked Miocene development potential within offshore Texas, Brazos block 386-S. Summer and Fall, 1985

**SPECIALIZATIONS**

- Carbonate and siliciclastic sequence stratigraphy.
- Applied petroleum geology with emphasis on reservoir characterization and production optimization, and regional exploration.
- Paleopedological applications to the reconstruction of ancient environments and climates.

**GEOLOGIC AND GEOGRAPHIC AREAS OF EXPERIENCE**

<b>Geologic Age</b>	<b>Geographic Locations of Current or Past Experience</b>
Quaternary	Exuma Islands of the Bahamas, Cozumel, Turks and Caicos
Tertiary (Paleocene)	Big Bend National Park, Texas; southern Alberta, Canada; San Juan Basin, New Mexico
Cretaceous	Western Canada Sedimentary Basin; Book Cliffs of central and southeastern Utah; Edwards Plateau of central Texas; Big Bend National Park, west Texas
Jurassic	Gulf Coast Basin, Alabama; Paris Basin, France; Western Canada Sedimentary Basin
Triassic	Paradox Basin, southeastern Utah; Chinle Basin of northern Arizona and New Mexico; Western Canada Sedimentary Basin
Permian	Permian Basin, west Texas
Pennsylvanian	Paradox Basin; southeastern Utah; Anadarko and Arkoma basins, Oklahoma; Permian Basin, west Texas
Mississippian	Western Canada Sedimentary Basin; midcontinent (Kansas), U.S.A.
Devonian	Western Canada Sedimentary Basin
Ordovician	Franklin Mountains, west Texas; Tarim Basin, Xinjiang Province, western China
Cambrian	Tarim Basin, Xinjiang Province, western China

## **PUBLICATIONS**

**Atchley, S.C.**, Crass, B.T., and Prince, K.C., 2021, The prediction of organic-rich reservoir facies within the Late Pennsylvanian Cline Shale (also known as Wolfcamp D), Midland Basin, Texas: *Bulletin of the American Association of Petroleum Geologists*, v. 105, p. 29-52.

Rau, E.G., Breen, K., Thorson, A.M., James, S.C. and **Atchley, S.C.**, 2019, Machine learning facies classification as applied to the Late Devonian Duvernay Formation, Western Canada Sedimentary Basin. GCAGS (Transactions of the GCAGS (Gulf Coast Association of Geological Societies), Annual conference of the GCAGS, Houston, Texas, p. TBD.

Thorson, A.M., **Atchley, S.C.**, Weissenberger, J.A.W., Yeates, D.W. and Rau, E.G., 2019, Stratigraphic partitioning and distribution of reservoir attributes within the Late Devonian Duvernay Formation, western Canada. URTeC (Unconventional Reservoir Technology Conference) Proceedings, Denver, CO, URTeC #953. Conference Proceeding.

Jin, C., Dworkin, S., **Atchley, S.** and Nordt, L., 2018, Eogenetic diagenesis of Chinle sandstones, Petrified Forest National Park (Arizona, USA): A record of Late Triassic climate change. *Sedimentology* 65: 1277-1300.

Leslie, C.E., Peppe, D.J., Williamson, T.E., Heizler, M., Jackson, M., **Atchley, S.C.**, Nordt, L., and Standhardt, B., 2018, Revised age constraints for Late Cretaceous to early Paleocene terrestrial strata from Dawson Creek Section, Big Bend National Park, west Texas: *Geological Society of America Bulletin*, v. 130, p. 1143-1163.

**Atchley, S.C.**, Harlow, H., Leslie, C., James, S., Jian, J., Carrelli, G., Bindon, W., and Beal, J., 2018, Geologic and resource assessment of the Late Devonian Grosmont and Upper Ireton Formations, central Grosmont Shelf complex, Alberta, Canada. *Bulletin of the American Association of Petroleum Geologists*, v. 102, p. 731-759.

Davis, A.J., Peppe, D.J., **Atchley, S.C.**, Williamson, T.E., and Flynn, A.G., 2016, Climate and landscape reconstruction of the Arroyo Chijjuillita Member of the Nacimiento Formation, San Juan Basin, New Mexico: Providing environmental context to early Paleocene mammal evolution: *Palaeogeogr. Palaeoclimatol. Palaeoecol.*, <http://dx.doe.org/10.1016/j.palaeo.2016.09.011>.

Nordt, L.C., **Atchley, S.**, and Dworkin, S., 2015, Collapse of the Late Triassic megamonsoon in western equatorial Pangea, present-day American Southwest. *Geological Society of America Bulletin*, doi: 10.1130/B31186.1.

**Atchley, S.C.**, Nordt, L.C., Dworkin, S.I., Ramezani, J., Parker, W.G., Ash, S.R., and Bowring, S.A., 2013, A linkage among Pangean tectonism, cyclic alluviation, climate change and biologic turnover in the Late Triassic: the record from the Chinle Formation, southwestern United States. *Journal of Sedimentary Research*, v. 83, p. 146-1161.

**Atchley, S.C.**, Nordt, L.C., Dworkin, S.I., Cleveland, D.M., Mintz, J.S., and Harlow, H., 2013, Alluvial stacking pattern analysis and sequence stratigraphy: concepts and case studies, *in*, Driese, S.G., and Nordt, L.I., eds., *New Frontiers in Paleopedology and Terrestrial Paleoclimatology: SEPM Special Publication no. 104*, p. 109-130.

Weissmann, G.S., Hartley, A.J., Scuderi, L.A., Nichols, G.J., Davidson, S.K., Owen, A., **Atchley, S.C.**, Bhattacharyya, T.C., Ghosh, P. Nordt, L.C., and Tabor, N.J., 2013, Prograding distributive fluvial systems – geomorphic models and ancient examples, *in*, Driese, S.G., and Nordt, L.I., eds., *New Frontiers in Paleopedology and Terrestrial Paleoclimatology: SEPM Special Publication no. 104*, p. 131-148.

Trendell, A.M., Nordt, L.C., and **Atchley, S.C.**, 2013, Determining floodplain plant distributions and populations using paleopedology and fossil root traces – Upper Triassic Sonsela Member of the Chinle Formation at Petrified Forest National Park, Arizona: *Palaios*, v. 28, p. 471-490.

Trendell, A.M., **Atchley, S.C.**, and Nordt, L.C., 2013, Facies analysis of a probably large fluvial fan depositional system: the Upper Triassic Chinle Formation at Petrified Forest National Park, Arizona: *Journal of Sedimentary Research*, v. 83, p. 873-895.

Nordt, L.C., Hallmark, C.T., Driese, S.G., Dworkin, S.I., and **Atchley, S.C.**, 2012, Biochemical characterization of a lithified paleosol: implications for the interpretation of ancient Critical Zones: *Geochimica et Cosmochimica Acta*, v. 87, p. 267-282.

Trendell, A.M., **Atchley, S.C.**, and Nordt, L.C., 2012, Depositional and diagenetic controls on reservoir attributes within a fluvial outcrop analog: Upper Triassic Sonsela Member of the Chinle Formation, Petrified Forest National Park, Arizona: *American Association of Petroleum Geologists Bulletin*, v. 96, p. 679-707.

Nordt, L.C., Dworkin, S.I., and **Atchley, S.C.**, 2011, Ecosystem response to soil biogeochemical behavior during the Late Cretaceous and early Paleocene within the western interior of North America: *Geological Society of America Bulletin*, v. 123, p. 1745-1762.

Ramezani, J., G.D. Hoke, D.E. Fastovsky, S.A. Bowring, F. Therien, S.I. Dworkin, **S.C. Atchley**, and L.C. Nordt, 2011, High-precision U-Pb geochronology of the Late Triassic Chinle Formation, Petrified Forest National Park (Arizona, USA): temporal constraints on the early evolution of dinosaurs: *Geological Society of America Bulletin*, v. 123, p. 2142 - 2159.

[Atchley, S.C., Nordt, L.C., Dworkin, S.I., Trendell, A.M., and Cleveland, D.M., 2010](#), Alluvial sequence stratigraphy of the late Triassic Chinle Formation at Petrified Forest National Park, Arizona, in Program Volume for SEPM-NSF Workshop “Paleosols and Soil Surface Analog Systems”, September 21-26, 2010, Petrified Forest National Park, AZ”, p. 31-43.

Driese, S.G., Nordt, L.C., and **Atchley, S.C.**, 2010, Stop Five: Micromorphology and paleoclimatologic significance of Mountain Lion Mesa “silcrete” and underlying paleosols, *in* Program Volume for SEPM-NSF Workshop “Paleosols and Soil Surface Analog Systems”, September 21-26, 2010, Petrified Forest National Park, AZ”, p. 111-122.

Nordt, L.C., **Atchley, S.C.**, and Dworkin, S.I., 2010, Paleosols of the Blue Mesa and Sonsela Members of the Chinle Formation in the Petrified Forest National Park, Arizona: Importance, methods and assumptions, *in* Program Volume for SEPM-NSF Workshop “Paleosols and Soil Surface Analog Systems”, September 21-26, 2010, Petrified Forest National Park, AZ”, p. 45-49.

Nordt, L.C., **Atchley, S.C.**, and Dworkin, S.I., 2010, Stops Six and Seven: Lions and Flats Paleoseries: Paleo-Vertisols, rhizohalos and carbonate rhizcretions, *in* Program Volume for SEPM-NSF Workshop “Paleosols and Soil Surface Analog Systems”, September 21-26, 2010, Petrified Forest National Park, AZ”, p. 123-130.

Nordt, L.C., Trendell, A., **Atchley, S.C.**, and Dworkin, S.I., 2010, Tepees and Metas Paleoseries – A well-grained/gleyed paleo-Vertisol sequence, *in* Program Volume for SEPM-NSF Workshop “Paleosols and Soil Surface Analog Systems”, September 21-26, 2010, Petrified Forest National Park, AZ”, p. 73-81.

Sankey, J.T., **S.C. Atchley**, L.C. Nordt, S.G. Driese, S.I. Dworkin, N. Longrich, H. Fricke, 2010, Paleosol evidence for Late Cretaceous paleoenvironments of west Texas: implications for terrestrial biogeography and biodiversity, in Titus, A., ed., *The Late Cretaceous of Southern Utah: Critical Window into End Mesozoic Ecosystems*, Cretaceous Field Conference, Indiana University Press, Bloomington, Indiana.

**Atchley, S.C.**, N.H. Ball and L.E. Hunt, 2010, Reservoir characterization and facies prediction within the Late Cretaceous Doe Creek Member, Valhalla Field, west-central Alberta, Canada: *Bulletin of the American Association of Petroleum Geologists*, v. 94, p. 1-25.

Cleveland, D. M., L. C. Nordt, S. I. Dworkin, and **S. C. Atchley**, 2008, Pedogenic carbonate isotopes as evidence for extreme climatic events preceding the Triassic-Jurassic boundary: implications for the biotic crisis: *Geological Society of America Bulletin*, v. 120, p. 1408-1415.

**Atchley, S. C.**, D. M. Cleveland, and L. W. West, 2008, A case for renewed development of a mature gas field: the Devonian Swan Hills Formation at Kaybob South Field, Alberta, Canada: *Bulletin of Canadian Petroleum Geology*, v. 56, p. 165-190.

Cleveland, D. M., L. C. Nordt, and **S. C. Atchley**, 2008, Paleosols, trace fossils, and precipitation estimates of the uppermost Triassic strata in northern New Mexico: *Palaeogeography, Palaeoclimatology, Palaeoecology*, 257(4), p. 421-444.

Cleveland, D. M., **S. C. Atchley**, L. C. Nordt, 2007, Allo- and Autocyclic origins of paleosol-bearing alluvial successions: the Triassic (Norian-Rhaetian) Chinle strata, northern New Mexico: *Journal of Sedimentary Research*, v. 77, p. 909-924.

**Atchley, S. C.**, L.W. West, J. R. Sluggett, 2006, Reserves growth in a mature oil field: the Devonian Leduc Formation at Innisfail field, south-central Alberta, Canada: *Bulletin of the American Association of Petroleum Geologists*, v. 90, p. 1153-1170.

Prochnow, S. J., **S. C. Atchley**, L. C. Nordt, M. Hudec, and T. Boucher, 2006, The influence of salt withdrawal subsidence on paleosol maturity and cyclic fluvial deposition in the Triassic Chinle Formation: Castle Valley, Utah: *Sedimentology*, v. 53, p. 1319-1345.

Prochnow, S.J., Nordt, L.C., **Atchley, S.C.**, and Hudec, M., 2005, Multi-proxy paleosol evidence for middle and late Triassic climates and atmospheres in eastern Utah: *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 232, p. 53-72.

Prochnow, S. J., L. C. Nordt, **S. C. Atchley**, M. Hudec, and T. Boucher, 2005, Triassic paleosol catenas associated with a salt-withdrawal minibasin in southeastern Utah, U.S.A.: *Rocky Mountain Geology*, v. 40, p. 35-59.

Dworkin, S. I., L. C. Nordt, and **S. C. Atchley**, 2005, Determining terrestrial paleotemperatures using the oxygen isotopic composition of pedogenic carbonate: *Earth and Planetary Science Letters*, v. 237, p. 56-68.

**Atchley, S. C.**, L. C. Nordt, and S. I. Dworkin, 2004, Eustatic control on alluvial sequence stratigraphy: a possible example from the K/T transition of the Tornillo Basin, Big Bend National Park, west Texas: *Journal of Sedimentary Research*, v. 74, p. 391-404

Nordt, L. C., **S. C. Atchley**, and S. I. Dworkin, 2003, Terrestrial evidence for two greenhouse events in the latest Cretaceous: *GSA Today*, v. 13, no. 12.

Nordt, L. C., **S. C. Atchley**, and S. I. Dworkin, 2002, Paleosol barometer indicates extreme fluctuations in atmospheric CO<sub>2</sub> across the Cretaceous-Tertiary boundary: *Geology*, v. 30, p. 703-706.

Sembritzky, C. L., and **S. C. Atchley**, 2002, Reservoir Characterization and Optimization of the Permian (Leonardian) Upper Clear Fork and Glorieta Formations, Stockyard Field, Gaines County, Texas, in T. Hund and P. H. Lufholm (eds.), *The Permian Basin: Preserving Our Past-Securing Our Present*: Transactions of the West Texas Geological no. 02-111, p. 91-106.

**Atchley, S. C.**, L. M. Zygo, and J. Wallgren, 2001, Incised valleys of the base Zuni supersequence boundary and their initial Cretaceous sediment fill, central Texas: GCAGS Transactions v. 51, p. 1-8.

**Atchley, S. C.**, and M. McMurray, 2000, Devonian (Frasnian) cyclostratigraphy at Grassi Lakes Trail: implications for subsurface reservoir prediction: Field Guide #G21 of the Canadian Society of Petroleum Geologists, Calgary, Alberta, Canada, 22 p., 2 appendices.

Talbert, S. J., and **S. C. Atchley**, 2000, Sequence stratigraphy of the Cretaceous (Albian) Fredericksburg Group in central and north Texas: GCAGS Transactions 2000, v. 50, p. 369-378.

**Atchley, S. C.**, M. G. Kozar, L. A. Yose, 1999, A predictive model for reservoir distribution in the Permian (Leonardian) Clearfork Formation, Robertson field area, west Texas: Bulletin of the American Association of Petroleum Geologists, v. 83, no. 7, p. 1031-1056.

**Atchley, S. C.**, R. F. Dill, and R. K. Goldhammer (1995) Ordovician sequence stratigraphy as guided by a modern Bahamian analog. Spec. Publ. Soc. Econ. Paleont. Mineral. (video).

**Atchley, S. C.**, and D. B. Loope (1993) Lowstand aeolian influence on stratigraphic completeness: upper member of the Hermosa Formation (Latest Carboniferous), southeast Utah, U.S.A. Spec. Publs. Int. Ass. Sediment., v. 16, p. 127 - 149.

#### **PROFESSIONAL MEETING ABSTRACTS**

Lesko, A., Dworkin, S.I., Nordt, L.C., Leslie, C.E., Peppe, D., **Atchley, S.**, and Stinchcomb, G., 2021, Hydrologic conditions across the K/PG boundary, Dawson Creek section, Big Bend National Park, Texas; GSA Convention, Portland, Oregon, October 10-13, 2021

Fulton, J., Dhar, S., Frucci, M.N., and **Atchley, S.C.**, 2021, Biogeochemical processes at the Devonian/Carboniferous boundary in the Western Canada Sedimentary Basin; GSA Convention, Portland, Oregon, October 10-13, 2021.

Dworkin, S.I., DiPietro, L.M., Nordt, L.C., **Atchley, S.C.**, and Ramezani, J., 2021, Differentiating between inherited and pedogenic minerals within paleosols: an example of reconstructing paleoclimate during Chinle Formation deposition; GSA Convention, Portland, Oregon, October 10-13, 2021.

Wisler, M. M., Dworkin, S. I., **Atchley, S. C.**, Thorson, A. M., and Yeates, D. W., 2020, Paleooceanographic evolution of the Late Devonian Durvernay Formation: insights from the geochemistry of the Western Canada Sedimentary Basin: ACE 2020, AAPG Annual Convention and Exhibition, September 29 – October 1, online and on-demand.

Cong, J., Dworkin, S.I., Hockaday, W.C., and **Atchley, S.C.**, 2020, Interpretation of paleoenvironmental proxies: diagnosing diagenesis and assessing proxy reliability, American Geophysical Union Fall Meeting 2020.

**Atchley, S.C.**, 2020, Do alluvial stacking patterns really stack up? or A marine carbonate sequence stratigrapher's foray into alluvial cyclicity. Shreveport Geological Society Invited Lecture, October 20, 2020.

**Atchley, S.C.**, 2020, Do alluvial stacking patterns really stack up? or A marine carbonate sequence stratigrapher's foray into alluvial cyclicity. DFW Geoscience Departments weekly Zoom seminar series, June 18, 2020.

Frucci, M., Fulton, J., and **Atchley, S.**, 2019, The end Devonian mass extinction across Alberta: elemental indicators of widespread marine anoxia, American Geophysical Union Fall Meeting 2019, December 9-13.

Jiang, J., James, S.C., and **Atchley, S.C.**, 2018, An innovative recurrent neural network for geologic facies prediction. In: CAPA Petroleum Technical Symposium, October 19, 2018, Houston, Texas.

DiPietro, L.M., Dworkin, S.I., Nordt, L.C., and **Atchley, S.**, 2018, The clay mineralogy of paleosols in the Chinle Formation at Petrified Forest National Park; GSA Annual Convention, Indianapolis, Indiana, (November 4-7, 2018).

Dworkin, S.I., DiPietro, L.M., Nordt, L.C., and **Atchley, S.**, 2018, Late Triassic climate reconstruction using paleosol mineral assemblages; GSA Annual Convention, Indianapolis, Indiana, (November 4-7, 2018).

Leslie, C., Secord, R., Peppe, D., Williamson, T.E., **Atchley, S.**, Brusatte, S., and Nordt, L., 2017, Terrestrial evidence for hyperthermals in the lower Paleocene upper Nacimiento Formation, San Juan Basin, New Mexico. Climate and Biotic Events of the Paleogene, CBEP Conference 2017, Salt Lake City.

Leslie, C., Peppe, D., Williamson, T.E., Heizler, M., Jackson, M., **Atchley, S.**, Nordt, L., and Standhart, B., 2017, Revised age constraints for the Late Cretaceous to early Paleocene strata from the Dawson Creek section, Big Bend National Park, west Texas. International Symposium on the Cretaceous, Vienna, Austria.

Davis, A., Peppe, D., Williamson, T., and **Atchley, S.**, 2016, Sedimentologic and stratigraphic reconstruction of Lower Paleocene environments in the San Juan Basin, New Mexico; GSA Annual Convention, Denver, Colorado (25-28 September, 2016).

Leslie, C., Secord, R., Peppe, D., **Atchley, S.**, Williamson, T., Nordt, L., and Brusatte, S., 2016, Climatic and depositional history of the Lower Paleocene Upper Nacimiento Formation, San Juan Basin, New Mexico, GSA Annual Convention, Denver, Colorado (25-28 September, 2016).

**Atchley, S.**, Harlow, H., Leslie, C., Carrelli, G., Bindon, W., and Beal, J., 2015, Stratigraphic and reservoir quality assessment of the Late Devonian Grosmont and Upper Ireton Formations, northeastern Alberta, Canada: CSPG/SEPM Mountjoy Conference: [http://www.cspg.org/cspg/documents/Conference%20Website/Carbonates/Abstract\\_BookV2.pdf](http://www.cspg.org/cspg/documents/Conference%20Website/Carbonates/Abstract_BookV2.pdf), Banff, Canada, August 23-28, 2015.

Davis, A., **Atchley, S.**, Peppe, D.J., Flynn, A., and Williamson, T.E., 2015, Giving context to Early Paleocene mammal evolution: climate and landscape reconstruction of the Arroyo Chijuililita Member of the Nacimiento Formation, San Juan Basin, New Mexico: GSA Annual Convention, Baltimore, Maryland (1-4 November, 2015).

Harlow, H., Teasdale, C., and **Atchley, S.**, 2015, Possible climatic influence on density of complex, large-diameter burrow networks in uppermost Late Triassic Chinle Formation strata from Ward's Terrace, Arizona: GSA Annual Convention, Baltimore, Maryland (1-4 November, 2015).

James, S. C., Jiang, J., **Atchley, S.**, Harlow, G., Leslie, C., Carrelli, G., and Bindon, W., 2015, Modeling oil recovery in the Late Devonian Grosmont and Upper Ireton Formations of Northeastern Alberta, Canada, *CSPG: Mountjoy Conference*: [http://www.cspg.org/cspg/documents/Conference%20Website/Carbonates/Abstract\\_BookV2.pdf](http://www.cspg.org/cspg/documents/Conference%20Website/Carbonates/Abstract_BookV2.pdf), Banff, Canada, August 23-28, 2015.

Jin, Cong, Dworkin, S.I., Nordt, L.C., and **Atchley, S.C.**, 2015, Meteoric diagenesis of Chinle sandstones, Petrified Forest National Park (Arizona, USA): a record of Late Triassic climate change: GSA Annual Convention, Baltimore, Maryland (1-4 November, 2015).

Kirby, J., Yelderman, J.C., Jr., and **Atchley, S.**, 2015, Applied forensic investigation of elevated arsenic levels in a deep confined aquifer: GSA Annual Convention, Baltimore, Maryland (1-4 November, 2015).

Leslie, C., **Atchley, S.**, Peppe, D.J., Nordt, L.C., Williamson, T.E., and Secord, R., 2015, Sedimentologic and stratigraphic indicators of regional paleogeography within the Lower Paleocene Nacimiento Formation, San Juan Basin, New Mexico, USA: 2015 GSA Annual Convention, Baltimore, Maryland (1-4 November, 2015).

Trendell-Barclay, A., **Atchley, S.**, and Nordt, L., 2014, Subsurface prediction of fluvial systems: are current models adequate? A case study of the Late Triassic Chinle Formation in Petrified Forest National Park (abstr.): Houston Geological Society Bulletin, v. 57, no. 3, p. 25-27.

Harlow, R.H., **Atchley, S.C.**, Nordt, L.C., Dworkin, S.I., and Driese, S.G., 2014, Depositional and climatic history of the Late Triassic Chinle Formation: a basin scale comparison, southwestern United States: 2014 GSA Annual Convention, Vancouver, British Columbia (19-22 October, 2014).

Leslie, C.E., Peppe, D.J., **Atchley, S.**, Williamson, T., Nordt, L., 2014, Magnetostratigraphy of upper Cretaceous through lower Paleocene strata from the Dawson Creek section, Big Bend National Park, west Texas, USA: 2014 GSA Annual Convention, Vancouver, British Columbia (19-22 October, 2014).

Davis, A.J., **Atchley, S.C.**, Peppe, D.J., and Williamson, T.E., 2013, Evaluation of changes in depositional environments and their impacts on the early Paleocene (Middle Puerca) mammalian fossil record in the Nacimiento Formation, San Juan Basin, New Mexico: 125<sup>th</sup> GSA Annual Meeting in Denver, CO (October 26-30). Geological Society of America Abstracts with Programs, v. 45, no. 7.

**Atchley, S.C.**, Nordt, L., Dworkin, S.I., Ash, S., Parker, W.G., Ramezani, J., and Bowring, S.A., 2012, Tectonic and climatic controls on cyclic alluviation and biologic turnover within the Late Triassic Chinle Formation, Petrified Forest National Park, Arizona, abstr. 2012 GSA Annual Convention, Charlotte, N.C.

Nordt, L., **Atchley, S.**, Dworkin, S.I., Ramezani, J., and Bowring, S.A., 2012, Characterization and interpretation of a well-dated succession of Late Triassic paleosols from Petrified Forest National Park, Arizona, abstr. 2012 GSA Annual Convention, Charlotte, N.C.

Barclay, C., **Atchley, S.C.**, and Jones, K., 2012, Regional reservoir characterization and exploration assessment of the Late Devonian Jean Marie Formation within the Bivouac/Ekwan Field Areas, northern British Columbia, abstr. 2012 AAPG Annual Meeting Abstracts with Programs, Long Beach, Ca.

Jones, K., **Atchley, S.C.**, and Barclay, C., 2012, Regional reservoir assessment of the Late Devonian Kakisa Formation, northeastern British Columbia, Canada. 2012 AAPG Annual Meeting Abstracts with Programs, Long Beach, Ca.

Dhillon, R.S., Mintz, J.S., and **Atchley, S.C.**, 2011, Influence of climate and the expansion of C4 grasses on sequence-scale cyclicity and landscape development during the Late Miocene to Pleistocene of west Texas. 2011 GSA Annual Meeting and Exposition (9-12 October 2011). Abstracts.



LeBlanc, S., Dworkin, S.I., **Atchley, S.**, and Nordt, L., 2011, Reconstructing Late Triassic environmental conditions using paleosol mineral assemblages from the Chinle Formation, Arizona, USA. 2011 GSA Annual Meeting and Exposition (9-12 October 2011). Abstracts.

Dworkin, S.I., Nordt, L., and **Atchley, S.**, 2011, Carbon isotope ratios in bulk organic matter from paleosols of the Late Triassic Chinle Formation, Petrified Forest National Park, Arizona, USA. 2011 GSA Annual Meeting and Exposition (9-12 October 2011). Abstracts.

Mintz, J.S., Driese, S.G., Harlow, R.H., and **Atchley, S.C.**, 2011, Middle Devonian landscapes, climates and the correlation of continental strata in the northern Appalachian Basin. Northeastern (46th Annual) and North-Central (45th Annual) Joint Meeting (20-22 March, 2011). Abstracts.

**Atchley, S.C.**, and McCarthy, P.J., 2010, Pedologic approaches to alluvial sequence stratigraphy: oral presentation at SEPM-NSF workshop "Paleosols and Soil Surface Analog Systems", Holbrook, AZ, September 25, 2010.

Hunt, L.E., **Atchley, S.C.**, and Ball, N.H., 2010, Sequence stratigraphic and depositional controls on reservoir continuity within the Cretaceous Doe Creek Member of the Kaskapau Formation, Valhalla Field, Alberta, Canada. 2010 CSPG Meeting Abstracts with Programs.

Ball, N.H., **Atchley, S.C.**, and Hunt, L.E., 2010, Depositional and diagenetic controls on reservoir quality and their petrophysical prediction within the Upper Cretaceous Doe Creek Member of the Kaskapau Formation at Valhalla Field, northwest Alberta, Canada. 2010 CSPG Meeting Abstracts with Programs.

Trendell, A.M., **Atchley, S.C.**, and Nordt, L.T., 2010, Channels, overbanks and paleosols: the relationship between climate, base level and lithofacies heterogeneity within the Triassic Sonsela Member, PFNP Arizona. 2010 AAPG Annual Meeting Abstracts with Programs. AAPG Search and Discovery #90104.

Nordt, L., Dworkin, S., and **Atchley, S.C.**, 2010, Characterization of paleosols across the K-T boundary using pedotransfer functions: a case study from Big Bend National Park, U.S.A., integrating biogeochemical and climate controls on evolving terrestrial ecosystems. 2010 GSA Annual Meeting Abstracts with Programs.

Dworkin, S., Nordt, L., and **Atchley, S.C.**, 2010, A 7 Ma record of atmospheric  $\delta^{13}\text{C}$  derived from organic matter in Late Cretaceous and Early Tertiary paleosols. 2010 GSA Annual Meeting Abstracts with Programs.

Hunt, L.E., **Atchley, S.C.**, and Ball, N.H., 2010, Sequence stratigraphic and depositional controls on reservoir continuity within the Cretaceous Doe Creek Member of the Kaskapau Formation, Valhalla Field, Alberta, Canada. 2010 CSPG Meeting Abstracts with Programs.

Ball, N.H., **Atchley, S.C.**, and Hunt, L.E., 2010, Depositional and diagenetic controls on reservoir quality and their petrophysical prediction within the Upper Cretaceous Doe Creek Member of the Kaskapau Formation at Valhalla Field, northwest Alberta, Canada. 2010 CSPG Meeting Abstracts with Programs.

Dworkin, S.I., Nordt, L.C., and **Atchley, S. C.**, 2009, A 7 Ma Record of Atmospheric  $\delta^{13}\text{C}$  derived from organic matter in Late Cretaceous and Early Tertiary paleosols: Geological Society of America, Abstracts with Programs, v. 41, no. 7, p. 514.

**Atchley, S. C.**, D. M. Cleveland, L. West, G. Carelli, and T. Knight, 2008, The Swan Hills Formation at Kaybob South Field, Alberta: an example of remaining reserves potential within mature fields. 2008 CSPG Annual Meeting Abstracts with Programs.

Cleveland, D. M., Nordt, L. C., and **S. C. Atchley**, 2007, Paleosols and pedogenic isotopes as evidence for extreme Late Triassic climatic events, Chinle Formation, northern New Mexico: 2007 GSA Annual Meeting Abstracts with Programs.

Gotcher, C., **S. C. Atchley**, and L. C. Nordt, 2007, The Mid-Norian paleolandscape of the Newspaper Interval within the Blue Mesa Member of the Chinle Formation in Petrified Forest National Park, Arizona: 2007 GSA Annual Meeting Abstracts with Programs.

Geary, J. R., and **S. C. Atchley**, 2007, Controls on hydrocarbon entrapment and reservoir distribution: the Pennsylvanian Oswego and Big Lime limestones in the Putnam Field area, Anadarko Basin, Oklahoma: Tulsa Geological Society, March 27<sup>th</sup> meeting.

Dworkin, S. I., L. C. Nordt, and **S. C. Atchley**, 2006, Sr isotope ratios and trace element concentrations of pedogenic calcite record environmental conditions in west Texas paleosols spanning the K-T boundary: 2006 GSA Annual Meeting Abstracts with Programs.

Josson, E. M., **S. C. Atchley**, and \*J. A. Kahmann, 2006, Reservoir quality and continuity, and secondary recovery potential of the Mississippian Pekisko Formation at Twining Field, south-central Alberta, Canada: American Association of Petroleum Geologists 2006 Abstracts.

**Atchley, S. C.**, L. C. Nordt, and S. I. Dworkin, 2005, Composite mechanisms for terrestrial environmental variability and their relationship to alluvial sequence stratigraphy: the K/T succession in west Texas, USA, and south-central Alberta, Canada: 2005 GSA Annual Meeting Abstracts with Programs.

**Atchley, S. C.**, L. W. West, and J. R. Sluggett, 2005, Rejuvenation of a mature oil field: the Devonian Leduc Formation at Innisfail Field, south-central Alberta, Canada: American Association of Petroleum Geologists 2005 Abstracts, v. 89, p. A7.

Geary, J. R., and **S. C. Atchley**, 2005, Controls on hydrocarbon entrapment and reservoir distribution: the Pennsylvanian Oswego Limestone and Big Lime Limestone in the Putnam Field Area, Anadarko Basin, Oklahoma: American Association of Petroleum Geologists 2005 Abstracts, v. 89, p. A50.

Koenig, J., J. \*Kahmann, **S. C. Atchley**, J. R. Sluggett, and L. West, 2005, Geological risk assessment of development opportunities within the Devonian Leduc Formation at Sturgeon Lake South Field, Alberta, Western Canada Sedimentary Basin: American Association of Petroleum Geologists 2005 Abstracts, v. 89, p. A75.

Prochnow, S. J., L. C. Nordt, **S. C. Atchley**, and M. Hudec, 2005, Multi-proxy paleosol evidence for Triassic climates in eastern Utah: 2005 GSA Annual Meeting Abstracts with Programs.

Davis, J. M., Ludvigson, G. A., Ufnar, D. F., **Atchley, S. C.**, Carpenter, S. J., Gonzalez, L. A., Dorale, J., Brenner, R. L., and Witzke, B. J., 2004, Diagenetic analysis of a subaerial exposure surface from the Cretaceous (Albian) Walnut Formation, Central Texas: 2004 GSA Annual Meeting Abstracts with Programs, v. 36, no. 5, p. 76.

**Atchley, S. C.**, L. C. Nordt, and S. I. Dworkin, 2003, Eustasy, climatic instability, and autocyclicity: mechanisms for a fluvial cyclic hierarchy preserved within the K/T transition of Big Bend National Park, Texas, USA: GSA Abstract with Programs, v. 34, no. 7, p. 176.

Dworkin, S. I., **S. C. Atchley**, and L. C. Nordt, 2003, Earth surface temperatures determined from the oxygen isotopic composition of pedogenic carbonates: application to west Texas Late Cretaceous paleosols: GSA Abstracts with Programs, v. 34, no. 7, p. 290-291.

Nordt, L. C., **S. C. Atchley**, and S. I. Dworkin, 2003, Terrestrial evidence for two intense greenhouse events near the Cretaceous-Tertiary boundary: GSA Abstracts with Programs, v. 34, no. 7, p. 290

Potma, K., J. Weissenberger, **S. Atchley**, and M. McMurray, 2003, The Devonian reef at Grassie Lakes, Canmore, Alberta: an overview of the Devonian (Leduc Formation) reef that crops out at Grassie Lakes above Canmore: Canadian Society of Petroleum Geologists, Special session in support of the Canmore Geoscience Museum: The Geology of the Bow River Corridor at Canmore, Alberta.

Sembritzky, C. L., and **S. C. Atchley**, 2002, Building a Deterministic Reservoir Model through Geologic Characterization to Optimize Production: A Case Study of the Permian (Leonardian) Upper Clear Fork and Glorieta Formations, Stockyard Field, Gaines County, Texas: Southwest Section of the American Association of Petroleum Geologists, Ruidoso, New Mexico, *abstr.*

**Atchley, S. C.**, and M. G. McMurray, 2002, Devonian (Frasnian) Leduc- and Nisku-equivalent outcrops near Canmore, Alberta: 1-D outcrops as a guide to subsurface stratal architecture: American Association of Petroleum Geologists annual convention, Houston, Texas, *abstr.*

**Atchley, S. C.**, L. M. Zygo, and \*J. Wallgren, 2001, Incised valleys of the base Zuni supersequence boundary and their initial Cretaceous sediment fill, central Texas, GCAGS 2001 meeting, Shreveport, Louisiana.

Talbert, S. J., and **S. C. Atchley**, 2000, Sequence stratigraphy of the Cretaceous (Albian) Fredericksburg Group in central and north Texas: GCAGS Transactions 2000 meeting, Houston, Texas.

Nordt, L., **S. C. Atchley**, and S. Dworkin, 2000, Atmospheric CO<sub>2</sub> levels across the K-T boundary based on a stable C isotope paleosol sequence from southern Alberta, Canada (*abstr.*): Symposium on "Paleosols, soils and the composition of ancient atmospheres," Geological Society of America national convention, Reno, Nevada, *abstr.*

Rains, D., and **S. C. Atchley**, 1999, Hydrocarbon play summary of the Central Basin Platform, Ozona Arch, and Midland Basin, Permian Basin region, west Texas: Bulletin of the American Association of Petroleum Geologists, v. 83, p. 390, *abstr.*

**Atchley, S. C.**, M. G. Kozar, D. L. Cantrell, A. J. Coker, M. G. Gorski, P. A. Larabee, M. W. Longtine, and P. A. Merkley, 1995, Reservoir characterization: a case study from the Clearfork Formation of the Central Basin Platform, west Texas: American Association of Petroleum Geologists 1995 Abstracts.

**Atchley, S. C.**, 1987, The PreCretaceous surface in central, north and west Texas: the study of an unconformity: Geological Society of America, South-Central Section, 21st annual meeting abstracts.

**Atchley, S. C.**, M. Hawthorne, and W. H. Jameson, 1985, Origin of sulfate minerals in San Andres and Grayburg formations, Crane and Upton counties, Texas: American Association of Petroleum Geologists 1985 Abstracts.

#### **APPLIED PETROLEUM PROJECTS (via Baylor University Applied Petroleum Studies)**

Dowdy, T., Hood, M., and **Atchley, S.C.**, in progress, Assessment of the geologic controls on reservoir potential within the Jurassic Gordondale Shale of southern Alberta, Canada. Sponsored by Advantage Energy Services Ltd., Calgary, Alberta, Canada.

Frucci, M., Visy, J., **Atchley, S.C.**, in progress, Stratigraphic and exploration-scale reservoir quality and thermal maturity assessment of the Late Devonian Exshaw Formation, Alberta. Sponsored by Pioneer Natural Resources and Anadarko.

Yeates, B., Rau, E., Thorson, A., **Atchley, S.C.**, in progress, Petrophysical and geochemical assessment of exploration and development potential within the Late Devonian Duvernay Formation, Western Canada Sedimentary Basin, Alberta. Sponsored by Pioneer Natural Resources and Anadarko.

Arndt, K., Johnson, A., and **Atchley, S.C.**, 2016, Controls on reservoir quality and distribution within the Lower Cretaceous Glauconite Member (Mannville Group) of southern Alberta, Canada. Sponsored by Imaginea Energy, Calgary.

Crass, B.T., Prince, K.C., and **Atchley, S.C.**, 2015, Petrophysical lithofacies modeling for regional exploration within the Upper Pennsylvanian Cline Shale, Midland Basin, Texas. Sponsored by Nadel and Gussman, Permian, Midland.

**Atchley, S.C.**, Harlow, H., Leslie, C., Carrelli, G., Binden, W., and Beal, J., 2014, Reservoir characterization and resource assessment of the Devonian Grosmont and Upper Ireton Formations, T91N, R1W5-20W4, Alberta. Sponsored by GLJ Petroleum Consultants, Calgary.

**Atchley, S.C.**, Kuijper, K., 2013, Stratigraphic controls on reservoir compartmentalization and potential enhanced oil recovery within Mississippian carbonates of central Alberta. Sponsored by Husky Energy.

**Atchley, S.C.**, Lane, E., 2012, Geologic risk assessment of the Mississippian Chat Formation within the Lost Springs field area of central Kansas: a model for step-out oil development. Sponsored by Short Oil & Gas.

**Atchley, S.C.**, Barclay, C., Jones, K., Mintz, J., and Aislyn Trendell, 2010-2011, Regional exploration assessment of the Late Devonian Jean Marie and Kakisa Formations within the Bivouac/Ekwan field areas, northern British Columbia. Sponsored by Husky Energy.

**Atchley, S. C.**, 2009, Kaybob South Triassic Montney "Coquinal Dolomite": depositional and stratigraphic controls on reservoir quality and continuity, Alberta Canada. Core workshop sponsored by Husky Energy.

**Atchley, S. C.**, N. Ball, and L. Hunt, 2008, Paleoenvironmental and sequence stratigraphic controls on enhanced oil recovery within the Cretaceous Doe Creek Member of the Kaskapau Formation, Valhalla Field, Alberta, Canada. Sponsored by Husky Energy.

**Atchley, S. C.**, and G. Carrelli, 2007, Stratigraphic controls on gas accumulation and production within the Bigstone region of central Alberta. Sponsored by Auriga Energy, Inc.

**Atchley, S. C.**, 2006, Jurassic Rock Creek and Lower Cretaceous "Ellerslie" gas development potential across the Carrot Creek region of southern Alberta. Sponsored by Auriga Energy, Inc.

**Atchley, S. C.**, and D. M. Cleveland, 2006, Reservoir characterization and development potential of a retrograde gas reservoir: the Devonian Swan Hills Formation at the Kaybob South BHL Gas Unit #1. Sponsored by Auriga Energy, Inc.

**Atchley, S. C.**, E. Johsson, and J. Kahmann, 2005, Production optimization of the Mississippian Pekisko Formation at Twining Field, Alberta, as guided by a detailed sequence stratigraphic framework. Sponsored by Pengrowth Corporation.

**Atchley, S. C.**, J. Kahmann, and J. Koenig, 2004, a sequence stratigraphic model for infill and step-out development of the Leduc Formation at Sturgeon Lake Field, central Alberta, Canada. Sponsored by Chariot Energy, Inc.

Geary, J., **S. C. Atchley**, 2004, Controls on hydrocarbon entrapment and reservoir distribution within the Pennsylvanian Oswego Limestone in the Putnam Field Area, Anadarko Basin, Oklahoma. Sponsored by Apache Energy Corporation.

**Atchley, S. C.**, 2003, A sequence stratigraphic model for infill development of the Leduc Formation at the Innisfail Leduc Unit, central Alberta, Canada. Sponsored by Chariot Energy, Inc.

**Atchley, S. C.** and A. Goettemoeller, 2003, Gas reserves assessment and recovery strategy for the Mississippian Pekisko Formation, Innisfail Field, central Alberta, Canada. Sponsored by Chariot Energy, Inc.

**Atchley, S. C.**, 2001, Assessment of Enhanced Oil Recovery potential of heavy-oil reserves at Liege Field (Grosmont Formation), Western Canada Sedimentary Basin. Sponsored by Suncor Energy, Inc.

**Atchley, S. C.**, T. Boucher, 2001, Development drilling potential within Mississippian limestone and Lower Cretaceous siliciclastic reservoirs of the Cow Lake, Willesden Green, and Gilby Field areas. Sponsored by Provident Energy Trust Co.

Sembritzky, C. L., **S. C. Atchley**, 2001, Reservoir characterization of the Permian (Leonardian) Clear Fork and Glorieta Formations, Stockyard Field, west Texas. Sponsored by Texland Petroleum.

**Atchley, S. C.**, D. Labelle, 2000, Stratigraphic controls on reservoir compartmentalization within the Lower Cretaceous Mannville Formation (Dina Member), Hayter field area, central Alberta, Canada. Sponsored by Union Pacific Resources/Anadarko Petroleum Corporation.

**Atchley, S. C.**, 2000, Risk assessment of hydrogen sulfide disposal within the Lower Cretaceous "Ostracode Zone", Acheson field area, north-central Alberta, Canada. Sponsored by Chevron, Canada.

**Atchley, S. C.**, 2000, Identification of Upper Paleozoic stratigraphic intervals for waste-water disposal, Olds field area, central Alberta. Sponsored by Canadian 88 Energy Corporation.

**Atchley, S. C.**, 1999, Production optimization at Homeglen-Rimbey field as guided by a refined facies and sequence stratigraphic framework, Western Canada Sedimentary Basin. Sponsored by Gulf Canada.

**Atchley, S. C.**, 1998, Sequence stratigraphic reservoir characterization of the Leduc Formation at Westrose North and South fields, Western Canada Sedimentary Basin, Phase II. Sponsored by Gulf Canada.

**Atchley, S. C.**, 1998, Depositional controls on reservoir continuity for primary and enhanced oil recovery, Keg River Formation at Kidney "BB" Pool, Western Canada Sedimentary Basin. Sponsored by Gulf Canada.

Rains, D. B., **S. C. Atchley**, 1998, Hydrocarbon play summary of the eastern Permian Basin, west Texas. Sponsored by Exxon Exploration Company.

**Atchley, S. C.**, J. J. Beall, 1997, Petroleum prospect assessment of the Swan Hills Formation at Fox Creek Field, Western Canada Sedimentary basin. Sponsored by Gulf Canada.

**Atchley, S. C.**, K. Brunette, and K. Pate, 1996, Judy Creek Exercise (Stratigraphic Correlation to Maximize Production Opportunities). Corporate Training Module. Sponsored by Advantage Energy.

**Atchley, S. C.**, K. Brunette, K. Pate, and M. G. McMurray, 1996, Prospect assessment of the Cardium Formation at Carrot Creek Field, Western Canada Sedimentary Basin, Alberta. Sponsored by Pennzoil Canada.

**Atchley, S. C.**, K. Brunette, K. Pate, and M. G. McMurray, 1996, Prospect assessment of the Swan Hills Formation in the vicinity of Virginia Hills Field, Western Canada Sedimentary Basin, Alberta. Sponsored by Pennzoil Canada.

**APPLIED PETROLEUM PROJECTS (prior to Baylor University)**

Controls on reservoir heterogeneity within the R5 sequence of the Devonian (Frasnian) Judy Creek buildup, Alberta, Canada.

Reservoir characterization of the Jurassic Dogger Limestone at Ittleville Field, Paris Basin, France.

Paleozoic Paleogeographic reconstruction for frontier play assessment within the Tarim Basin, Xinjiang Province, western China.

Stratigraphic and reservoir characteristics of the Permian Upper Clearfork and Glorieta Formations, Jenkins-Robertson-Eubanks Study Area, Gaines County, Texas.

Integrated sequence stratigraphic framework of the Upper Pennsylvanian Sharon Ridge Canyon Unit Reservoir, Horseshoe Atoll, west Texas.

Sequence stratigraphy of the Pennsylvanian Spiro Formation, Wilburton and South Wilburton fields, southeast Oklahoma.

Geologic reservoir characterization of the Jurassic Smackover Formation, Big Escambia Creek field, Escambia County, Alabama.

Controls on lateral reservoir distribution within the Jurassic Smackover Formation, Fanny Church Field, Escambia County, Alabama.

Evaluation of the development potential of lowstand, slope-onlapping basinal sandstones of the Permian Grayburg Formation at Means Field, Andrews County, Texas.

**SHORT-COURSES, WORKSHOPS, FIELDTRIPS**

(past participants include Advantage Energy Services, Ltd., ExxonMobil, Gulf Canada, Husky Energy, Shell Canada, EnCana, Petro-Canada, Pinnacle Resources, Nadel-Gussman and Associates, and Sonat Exploration):

Sequence stratigraphy of the Lower Cretaceous (Albian) Fredericksburg Group, central and north Texas. Field course.

Alluvial sequence stratigraphy of the Upper Triassic Chinle Formation, Petrified Forest National Park, Arizona. Field course.

Sequence stratigraphic controls on hydrocarbon entrapment and reservoir continuity: a the Pennsylvanian and Permian outcrops of the Guadalupe Mountains, west Texas and New Mexico. Field course.

Devonian (Frasnian) cyclostratigraphy along Grassi Lakes Trail near Canmore, Alberta: implications for subsurface reservoir prediction. Field course.

Sequence stratigraphic controls on facies (reservoir) partitions within the Lower Cretaceous of central and north Texas. Field course.

Applied Carbonate Sedimentology and Sequence Stratigraphy. Custom short-course for Husky Energy.

Retrograde carbonate sequence stratigraphy and the relationship to reservoir compartmentalization within the Leduc Formation at Westrose North and South fields. Custom short-course for Gulf Canada.

Strategies for production optimization within the Leduc Formation at Homeglen-Rimbey Field. Custom short-course for Gulf Canada.

### **STUDENT ADVISEMENT AT BAYLOR UNIVERSITY**

Dowdy, T., in progress (Ph.D.), Correlative unconventional and conventional reservoir development within the Jurassic Gordondale and Nordegg Members of the Alberta Basin, Canada.

White, S., in progress (Ph.D.), Paleocological response and reservoir genesis in response to extrinsic drivers during the Pennsylvanian-Permian Transition, Paradox Basin, Utah.

Visy, J., in progress (M.S.), Sequence stratigraphy and reservoir characterization of the Late Devonian Exshaw Formation, Alberta, Canada.

Rau, E., in progress (M.S.), Petrophysical predictors of rock attributes and production potential within the Late Devonian Duvernay Formation, Western Canada Sedimentary Basin, Alberta.

Yeates, B., in progress (Ph.D.) Chemostratigraphy of the Late Devonian Duvernay Formation and paleoceanographic reconstruction within the Western Canada Sedimentary Basin, Alberta.

Harlow, H., in progress (Ph.D.), Paleoclimatology and ichnology of the Late Triassic Chinle Formation, Ward's Terrace, Arizona, and Paria Canyon, Utah.

Hood, M., 2021 (M.S.), One-dimensional facies modeling, sequence stratigraphy and geochemical history of the Late Devonian Duvernay Formation at Wilcox Creek, Alberta, Canada.

Frucci, M. (M.S., co-advised with Dr. Jamey Fulton), 2021, Organic matter characterization and thermal maturity assessment of the Late Devonian Exshaw Formation, Alberta, Canada.

Thorson, A, 2019 (M.S.) Sequence stratigraphy and paleogeographic reconstruction of the Late Devonian Duvernay Formation within the East Shale Basin of central and southern Alberta, Canada.

Davis, A., 2019, (M.S., co-advised with Dan Peppe) Alluvial sequence stratigraphy and paleoclimatic reconstruction of the Paleocene Nacimiento Formation, San Juan Basin, New Mexico.

Arndt, K., 2017 (M.S.), Depositional controls on reservoir quality and their petrophysical predictors within the Lower Cretaceous Glauconite Member (Mannville Group) at Jenner Field, southern Alberta, Canada.

Johnson, A., 2017 (M.S.), Sequence Stratigraphy of the Lower Cretaceous Glauconite Member (Mannville Group) at Jenner Field, southern Alberta, Canada.

Leslie, C., 2017, (Ph.D., co-advised with Dan Peppe) Geochronology and climatic variance within the early Paleogene of the Tornillo Basin, Texas and San Juan Basin, New Mexico.

Prince, K., 2015, (M.S.), Petrophysical facies mapping of the Upper Pennsylvanian Cline Shale, Midland Basin, west Texas.

Crass, B., 2015, (M.S.), Petrophysical lithofacies modeling of the Upper Pennsylvanian Cline Shale in the Midland Basin, west Texas.

Teasdale, J., 2015 (B.S.), Compositional variability of Upper Triassic Chinle Formation sandstones: implications for deposition, provenance, and climate at Ward's Terrace, Arizona, USA.

Kuijper, K., 2014, (M.S.), Sequence stratigraphic controls on reservoir compartmentalization within the Mississippian Rundle Group, Caroline Field area, Alberta.

Trendell, A., 2013 (Ph.D., co-advised with Lee Nordt) An evaluation of the co-dependence between climate, tectonics and evolving alluvial depositional style as preserved within the Triassic Sonsela Member of the Chinle Formation at Petrified Forest National Park, Arizona.

Barclay, C., 2012 (M.S.), Sequence stratigraphy of the Late Devonian Jean Marie and Kakisa formations, northeastern British Columbia, Canada.

Jones, K., 2012 (M.S.), Geologic risk and reserves assessment for resource development within the Late Devonian Jean Marie and Kakisa formations, northeastern British Columbia, Canada.

Dhillon, R., 2011 (M.S.), Alluvial sequence stratigraphy of the Miocene Fort Hancock Formation, Hueco Bolson, west Texas: depositional response to the rise of extensive grasslands.

Hunt, L., 2009 (M.S.), Sequence stratigraphic and depositional controls on reservoir continuity within the Cretaceous Doe Creek Member of the Kaskapau Formation at Valhalla Field, Alberta, Canada.

Ball, N., 2009 (M.S.), Depositional controls on reservoir quality and their petrophysical predictors within the Cretaceous Doe Creek Member of the Kaskapau Formation at Valhalla Field, Alberta, Canada.

Cleveland, D., 2007 (Ph.D., co-advised with Dr. Lee Nordt), The interrelationship of sequence stratigraphy, paleoclimatology, and terrestrial ichnology in Triassic paleosol-bearing alluvial successions, Moenkopi and Chinle Formations, southwestern United States.

Johsson, E., 2006 (M.S.), Sequence stratigraphy as a guide for secondary and enhanced oil recovery, and infill development within the Mississippian Pekisko Formation, Twining Field, Alberta.

Kahmann, J., 2005 (M.S.), The Sequence Stratigraphic Evolution of the Sturgeon Lake Bank, Central Alberta Canada and its Regional Implications.

Koenig, J., 2005 (M.S.), Sequence stratigraphic controls on reservoir heterogeneity within the Devonian Leduc Formation at Sturgeon Lake Field, central Alberta, Western Canada Sedimentary Basin.

Prochnow, S., 2005 (Ph.D., co-advised with Dr. Lee Nordt), Paleosols as a tool for sequence stratigraphic, paleogeographic and paleoclimatic reconstruction: The Triassic Chinle Formation of Castle Valley, southeastern Utah.

Boucher, T., 2004 (M.S.), Stratigraphy of the Triassic Chinle Formation within Castle Valley, southeastern Utah: The history of fluvial fill within a rapidly-subsiding salt-withdrawal minibasin.

Geary, J., 2004 (M.S.) Controls on hydrocarbon entrapment and reservoir distribution: the Pennsylvanian Oswego Limestone in the Putnam Field Area, Anadarko Basin, Oklahoma.

Forkner, R., 2002 (M.S., co-advised with Dr. Lee Nordt), Paleoclimatic variability across the Cretaceous-Tertiary boundary as interpreted from paleosols, Red Deer River Valley, Alberta, Canada.

Sembritzky, C, 2001 (M.S.), Reservoir characterization of the Upper Clear Fork and Glorieta Formations, McElroy Field, Central Basin Platform, west Texas.



Walgren, J., 2000 (B.S.), Paleotopographic and base level controls on sediment grain size within the Lower Cretaceous Travis Peak Formation, central Texas.

Talbert, J., 2000 (M.S.), Sequence stratigraphy of the Fredericksburg Group, central and north Texas.

Rains, D., 1998 (B.S.), Hydrocarbon play summary of the Central Basin Platform-Ozona Arch, and Midland Basin of the Permian Basin region, west Texas.

### **COURSES OFFERED AT BAYLOR UNIVERSITY**

The Earth through Time, aka., "Historical Geology" (Geo 1306): every Fall and/or Spring semester.

Field Stratigraphy and Sedimentology (Geo 3342): offered every other year, Spring semester.

Petroleum Geology (Geo 5465): offered every other year.

Applied Petroleum Geoscience (Geo 4361): offered every other year.

Advanced Stratigraphic Concepts (Geo 5345): offered every other year.

Graduate Sequence Stratigraphy (Geo 5343): offered every other year.

Depositional Systems (Geo 5315): offered every other year.

Advanced Studies in Petroleum Geology (Geo 5369): offered as needed.

Advanced Studies in Sedimentary Geology (Geo 5368): offered as needed.

Earth Materials, Processes and History (Geo 5V90): offered as needed.

Geological Technical Sessions (Geo 5050): rotated between faculty.

### **PROFESSIONAL SERVICE**

DFW Geoscience Alliance virtual seminar, invited lecturer, 2020

Fort Worth Geological Society, invited lecturer, 2016

LeTourneau University, invited lecturer, 2013

Associate Editor, Journal of Sedimentary Research, 2008-2013.

Texas Energy Council, Baylor University Department of Geology representative, 2009-2013.

American Association of Petroleum Geologists Publications Committee, 2002-2009.

University of Oklahoma, invited lecturer, 2011

University of Texas, Austin, Bureau of Economic Geology invited lecturer, 2005

University of Texas, Austin, invited lecturer, 2002.

University of Iowa, Iowa City, invited lecturer, 2001.

University of Nebraska, Lincoln, Coffman Chair in Sedimentary Geology Selection Committee, 2000.

Graham Geological Society, invited lecturer, 2000.

Stout Chair Lecturer, University of Nebraska, Lincoln, 1999.

West Texas Geological Society, invited lecturer, 1998.

Southern Methodist University, invited lecturer, 1997.

University of Nebraska, Lincoln, invited lecturer, 1996.

Poster Chair, session no. 07 (Non-marine reservoirs and depositional systems), American Association of Petroleum Geologists Annual Convention, Dallas, Texas, 1997.

President, University of Lincoln, Geoscience Advisory Board, 2010.

University of Nebraska, Lincoln, Geoscience Advisory Board, 1994-2010.

### **UNIVERSITY SERVICE**

Baylor Distinguished Scholars Day Executive Committee: 2021-present

Baylor Invitation to Excellence invited lecturer: 2019-present

Lifelong Learning course instructor: Fall 2019.

Chair, Department of Geosciences, 2013-2019.

Interim Chair, Department of Geology, Fall 2010.

Department of Geology Associate Chair, 2008 to 2010.

Department of Geology Graduate Program Director, 2002-2007.

Baylor University Athletic Council, 2002-2007.

Compensation and Benefits committee, 2000-2003.

Baylor University exit interviewer for the graduating senior class of 1997, 1999, 2001.

Baylor Geological Society/AAPG student chapter advisor, 1996-present.

Baylor University undergraduate advisor, 1995-2001.

### **CUMULATIVE EXTERNAL FUNDING (since 1996)**

Industry (Pioneer Natural Resources, Anadarko Petroleum, Angel Resources, Husky Energy, GLJ Petroleum

Consultants, Imaginea Energy, Nadel Gussman Permian, Auriga Energy, Chariot Energy, Pengrowth Royalty Trust,

Apache Corporation, Advantage Energy Services, Texland Petroleum, Exxon Exploration Company) = \$1,016,000

Competitive (ACS/PRF) = \$80,000 (co-PI with Lee Nordt via Ph.D. student David Cleveland)

Competitive (NSF) = \$150,000 (co-PI with Dan Peppe)