

CURRICULUM VITAE OF SALLY L. POTTER-MCINTYRE

I. PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

A. Present University Program :

Geology

B. Office Address :

School of Earth Science and Sustainability

Parkinson Lab Mailcode 4324

Room 215D

Southern Illinois University

Carbondale, Il 62901

E-Mail:pottermcintyre@siu.edu

II. EDUCATION

Ph.D. in Geology, University of Utah, 2013, Dr. Marjorie A. Chan, advisor,
Dissertation: Biogeochemical Signatures in Iron (Oxyhydr)oxide Diagenetic Precipitates:
Chemical, Mineralogical and Textural Markers

M.S. in Geology, University of Utah, 2009, Dr. Marjorie A. Chan, advisor
Thesis: Characterization of Navajo Sandstone Hydrous Ferric Oxide Concretions

B.S. in Geology, Mesa State College, summa cum laude, 2006

A.S., Colorado Mountain College, 2004

III. PROFESSIONAL EXPERIENCE

Current

Associate Professor in Sedimentology, School of Earth Systems and Sustainability, Southern Illinois University, 7/2019 - present

Director, SIU Field Camp, 2020 - present

Undergraduate Advisor, Geology Program, 2021- present

Associate Editor, Journal of Sedimentary Research, 2021- present

Geologic Society of America Membership and Fellowship Committee, Member-At-Large,
January 2025 to present

Past

Contributor and editor, spheroids/ structural biosignatures, Life Detection Knowledge Base,
2022-2023.

Assistant Professor in Sedimentology, Department of Geology, Southern Illinois University,
8/2013 -7/2019

Lecturer, Colorado Mesa University, Department of Physical and Environmental Sciences, 2012/2013

Energy and Geoscience Institute at the University of Utah, summer 2011. Field Geologist.

Research Assistant (to B.J. McPherson), 2011-2013

Field Geologist, Energy and Geoscience Institute at the University of Utah, summer 2010: CO2 sequestration project; Atlas III project; Brian McPherson, supervisor

Teaching Assistant, University of Utah, Fall 2010, Spring 2011

Graduate Fellow, Fall 2009 – Spring, 2010

Research Assistant (to M. Chan), Fall 2006 – Spring 2008

IV. PUBLICATIONS AND CREATIVE WORKS

A. Articles in Professional Journals (student names in italics):

Cable, M.L., Kirby, E.J., Musto, I.A., Glein, C.R., Patthoff, D.A., **Potter-McIntyre, S.L.** and Craft, K.L., 2025, Cold-Water, CO2 Geysers as Ocean World Plume Analogues: Investigation of Habitability Indicators in Crystal and Champagne Geysers Pre- and Post-Eruption, *Astrobiology*, in review.

Haber, J.T., Horgan, B., Potter-McIntyre, S.L., Broz, A., and Kah, L., 2025, Understanding how Changes in Water Table Affect Mineralogy and Diagenesis: The Jurassic Carmel Formation as an Analog for Evaporitic Environments on Mars, *Journal of Geophysical Research: Planets*, in review.

Wolf, Z.U., Cloutis, E.A., Potter-McIntyre, S.L., Applin, D.M., Renaut, R., Turenne, N.N., Merzman, S., 2024, A Multi-Instrument Investigation of a Mars Relevant Low-Temperature, CO2-Rich Geysers: Crystal Geysers, Utah, USA, *Planetary and Space Science*, in review.

Lima-Zaloumis, J., Cady, S.L., Akudoro, V. Awrakik, S.M., Blank, J.G., Cavalazzi, B., Hickman-Lewis, K., Homann, M., Noffke, N., Perl, S.M., **Potter-McIntyre, S.L.**, Shkolyar, S. and Westall, F., 2025, Laminations as Structural Biosignatures in NASA's Life Detection Knowledge Base, *Astrobiology*, accepted.

Shkolyar, S., Bebout, L.E., ...**Potter-McIntyre, S.L.**, Rainwater, J.H., and Westall, F., 2024, Structural Biosignatures in the Life Detection Knowledge Base: Overview, challenges, and recommendations of content development, *Astrobiology*, accepted.

McCollom, T.M., **Potter-McIntyre, S.L.**, Donaldson, C., Reyes, A., Moskowitz, B., and Solheid, P., 2025, Rare Occurrence of Minerals from the Alunite-Jarosite Family with Intermediate Al-Fe Compositions in Sandstones of the Jurassic Aztec Sandstone, Nevada, USA, *American Mineralogist*, doi: <https://doi.org/10.2138/am-2024-9423>.

Ejembi, John I. Potter-McIntyre, Sally L., Paltseva, A. and Ferré, Eric C., 2023, New paleoclimatic constraints from paleosols on the Middle-Late Jurassic landscape, Western Colorado, U.S.A. International Geology Reviews, DOI:10.1080/00206814.2023.2199431.

Perl, S. M., Celestian, A. J., Cockell, C. S., Corsetti, F. A., Barge, L. M., Bottjer, D., Filiberto, J., Baxter, B. K., Kanik, I., and **Potter-McIntyre, S.**, 2021, A proposed geobiology-driven nomenclature for astrobiological in situ observations and sample analyses: *Astrobiology*, v. 21, no. 8, p. 954-967.

Crandall, J.R., Filiberto, J., Castle, N., Potter-McIntyre, S.L., Schwenzer, S.P., Olsson-Francis, K., Perl, S., 2021, Habitability of Martian Noachian Magma and Impact Induced Hydrothermal Systems as Constrained by a Terrestrial Analog on the Colorado Plateau. The Planetary Science Journal, DOI:10.3847/PSJ/ac053e.

Crandall, J.R., Filiberto, J. and Potter-McIntyre, S.L., 2021, Potential Impact-Related Mineral Resources on Mars. Terraforming Mars, pp.371-387.

*Ejembi, J. I., Potter-McIntyre, S. L., Sharman, G. R., Smith, T. M., Saylor, J. E., Hatfield, K., and Ferré, E. C., 2021, Detrital zircon geochronology and provenance of the Middle to Late Jurassic Paradox Basin and Central Colorado trough: Paleogeographic implications for southwestern Laurentia: *Geosphere*, v. 17, no. 5, p. 1494-1516.*

*Hasan, M. N., Potter-McIntyre, S., and Tedesco, S., 2021, Wrench Faulting and Trap Breaching: A Case Study of the Kizler North Field, Lyon County, Kansas, USA: *Midcontinent Geoscience*, v. 2, p. 1-14.*

*Knuth, Jordan, Potter-McIntyre, S.L., 2021, Chemical, Morphological, and Mineralogical Biosignature Preservation in a Cold Spring System, UT, USA: Insights for Sample Selection on Mars. *Astrobiology*, <https://doi.org/10.1089/ast.2019.2028>.*

Perl, S.,...**Potter-McIntyre, S.L.**, and others, 2020, Salty Environments: The importance of evaporites and brine environments as habitats, and preservers of biosignatures. *National Academy of Sciences Planetary Science and Astrobiology Decadal Survey 2023-2032*:

*Hasan, M. N., Yeasmin, R., Rahman, M., and Potter-McIntyre, S., 2020, Diagenetic Clay Minerals and Their Controls on Reservoir Properties of the Shahbazpur Gas Field (Bengal Basin, Bangladesh): *Geosciences*, v. 10, no. 7, p. 250.*

*Costello, L. J., Filiberto, J., Crandall, J. R., Potter-McIntyre, S. L., Schwenzer, S. P., Miller, M. A., Hummer, D. R., Olsson-Francis, K., and Perl, S., 2020, Habitability of hydrothermal systems at Jezero and Gusev Craters as constrained by hydrothermal alteration of a terrestrial mafic dike. *Geochemistry*, p. 125613.*

Potter-McIntyre, S.L., 2019, Crystal Geyser: An Unusual Cold Spring System, Utah Geological Association Publication 47. *Geosites*.

Chan, M. A., Hinman, N. W., **Potter-McIntyre, S. L.**, Schubert, K. E., Gillams, R. J., Awramik, S. M., Boston, P. J., Bower, D. M., Des Marais, D. J., and Farmer, J. D., 2019, Deciphering biosignatures in planetary contexts. *Astrobiology*, v. 19, no. 9, p. 1075-1102.

Potter-McIntyre, S.L., McCollom, T.M. (2018) Jarosite and alunite in ancient terrestrial sedimentary rocks: Reinterpreting martian depositional and diagenetic environmental conditions. *Life*

Potter-McIntyre, S.L., *Breeden, J.R.*, Malone, D. (2018) A Maastrichtian birth of the Mississippi River. *Cretaceous Research*, v. 91, p. 71-79.

Thomas, R.J., **Potter-McIntyre, S.L.**, Hynek, B.M. (2017) Large-scale fluid-deposited mineralization in Margaritifer Terra, Mars. *Geophysical Research Letters*, v. 122, p. 483-500.

Hays, L.E., Graham, H.V., Horgan, B. **Potter-McIntyre, S.L.**, Williams, A.J., Des Marais, D., Parenteau, M.N., Hausrath, E., McCollom, T.M., Lynch, K.L. (2017) Report from the Biosignature Preservation and Detection in Mars Analog Environments Workshop. *Astrobiology*, doi: 10.1089/ast.2016.1627.

Potter-McIntyre, S.L., *Williams, J.*, Phillips-Lander, C., *O'Connell, L.* (2016) Identification and Preservation Over Geologic Time of Biosignatures in Cold Spring Carbonates. *Astrobiology*, doi: 10.1089/ast.2016.1495.

Potter-McIntyre, S.L., *Boraas, M.*, *DePriest, K.*, Aslan, A. (2016) Middle Jurassic Landscape Evolution of Southwest Laurentia using Detrital Zircon Geochronology. *Lithosphere*. doi: 10.1130/L467.1.

Potter-McIntyre, S.L., Chan, M.A., and McPherson, B.J. (2014) Evaluating the Role of Organics, Mineralogy and Petrophysical Properties on Early Diagenesis and Concretion Formation in Volcaniclastic Host Rock Composition. *Journal of Sedimentary Research*, doi: <http://dx.doi.org/10.2110/jsr.2014.58>.

Potter-McIntyre, S.L., Chan, M.A. and McPherson, B.J. (2014) Textural and Mineralogical Characteristics of Microbial Fossils Associated with Modern and Ancient Iron (Oxyhydr)oxides. *Astrobiology*, v.14, no.1.

Diniega, S., Balcerski, J., Carande, B., Diaz-Silva, R.A., Fraeman, A.A., Guzewich, S.D., Hudson, J., Nahm, A.L., **Potter-McIntyre, S.L.**, Route, M., Sayanagi, K., Urban, K., Vasisht, S., Benneke, B., Gil, S., Livi, R., Williams, B., Budney, C.J., Lowes, L.L., January (2013) Mission to the Trojan Asteroids: lessons learned during a JPL Planetary Science Summer School mission design exercise. *Planetary and Space Science*, DOI:10.1016/j.pss.2012.11.011.

Potter-McIntyre, Sally L., Allen, J.L., Lee, S-Y., Chan M.A., McPherson, B.J. (2013) Iron Precipitation in a Natural CO₂ Reservoir: Jurassic Navajo Sandstone in the northern San Rafael Swell, UT, USA. *Geofluids*, doi: 10.1111/gfl.12014.

Allen, J.L., Lee, S-Y., **Potter, S.L.** (2013) Three Dimensional Geologic Model of the Eolian Jurassic Navajo Sandstone in Central Utah for the Evaluation of CO₂ Sequestration. *UGA Publication 42*.

Chan, M.A., Parry, W. T., Bowen, B.B., and **Potter, S.L.** (2011) Follow the water: Connecting a CO₂ reservoir and bleached sandstone to iron-rich concretions in the Navajo Sandstone of south-central Utah, USA – COMMENT. *Geology*.

Potter, Sally L., Chan, M., Petersen, E., Dyar, M.D., Sklute, E. (2011) Characterization of Navajo Sandstone Concretions: Mars comparison and criteria for distinguishing diagenetic origins. *Earth and Planetary Science Letters* 301, 444-456.

Potter, Sally L., Chan, M.A. (2011) Joint controlled fluid flow patterns and iron mass transfer in Jurassic Navajo Sandstone, Southern Utah, USA. *Geofluids* 11, 184-198.

Barge, L.M., Hammond, D.E., Chan, M.A., **Potter, S.L.**, Petruska, J., Nealson, K.H. (2011) Precipitation patterns formed by self-organizing processes in porous media. *Geofluids* 11, 124-133.

B. Chapters in Professional Books :

Crandall, J. R., Filiberto, J., and **Potter-McIntyre, S.L.**, (2021) Potential impact-related mineral resources on Mars, in: Gaci, S., Hachay, O., and Nicolis, O. (eds.), *Methods in petroleum and mineral exploration, and geological engineering, AGU Books*.

Potter-McIntyre, S.L. and Chan, M.A., 2020, Diagenetic complexities of iron oxide cements in Mesozoic sandstones of the Utah, U.S.A., in: Patrick Meister (ed.), *Nucleation and growth of sedimentary minerals, SEPM special publication*, in review.

Chan, M.A., **Potter, S.L.**, Bowen, B.B., Petersen, E.U., Parry, W. T., Bowman, J.R., Barge, L., and Seiler, W. (2011) Characteristics of terrestrial ferric oxide concretions and implications for Mars, in: Grotzinger, J. and Milliken, R. (eds.), *Sedimentary geology of Mars: SEPM Special Publication 102*.

V. RESEARCH AND CREATIVE ACTIVITY

A. Interests and Specialties :

Sedimentology, sedimentary diagenesis, basin analysis

Geochemistry of terrestrial environments, geobiology

Mars sedimentology, sedimentary/geochemical records of life, astrobiology

B. Current Projects :

Working towards a Universal Concretion Formation Model: Understanding the fluid/rock/biota interaction in subsurface habitats

Martian hematite spherules on Earth: Investigation of a newly discovered analog in the Aztec Sandstone, Nevada, USA.

The origin and persistence of diagenetic jarosite and alunite in Jurassic rocks on the Colorado Plateau

C. Grants Received :

Potter-McIntyre, Sally L. Principal Investigator, "Diagenetic Fluid Flow in an Ancient Petroleum Reservoir" Sponsored by Advanced Coal and Energy Research Center, Internal, \$25,000 (July 1, 2021 – June 30, 2022)

Potter-McIntyre, Sally (Institutional Principal), "Investigation of Jarosite- and Alunite-bearing Sandstones at Mollies Nipple, Utah as an Analog for Stratified Sulfate Deposits on Mars," Sponsored by NASA, Federal, \$102,038.00 (July 1, 2019 – June 30, 2024)

Potter-McIntyre, Sally (Institutional Principal), "Magmatic Intrusions into Sulfur-rich Sediments: An Exposed Potential Subsurface Habitable Environment as an Analog for the Martian Crust," Sponsored by NASA, Federal, \$176,853.00. (November 6, 2018 – November 5, 2023).

Ferre, Eric C (Principal), Ishman, Scott (Co-Principal), Filiberto, Justin (Co-Principal), Potter-McIntyre, Sally (Co-Principal), "Acquisition of a New Paleomagnetic Laboratory at Southern Illinois University," Sponsored by National Science Foundation, Federal, \$496,725.00. (2017 - 2018).

Potter-McIntyre, Sally, "NAI Early Career Collaboration Award," Sponsored by NASA Astrobiology Institute, Federal, \$4,324.00. (June 1, 2016 – May 31, 2017).

Potter-McIntyre, Sally (Co-Principal), Filiberto, Justin (Principal), "Magmatic Intrusions Into Sulfur-rich Sediments: Analogs for Martian Exploration and Potential Habitability," Sponsored by National Geographic Society Committee for Research and Exploration, Foundation, \$14,692.00. (May 1, 2016 - April 30, 2017).

Potter-McIntyre, Sally, "Middle to Late Jurassic Paleogeography, Western Colorado, USA," Sponsored by American Chemical Society Petroleum Research Fund, Foundation, \$110,000.00. (May 1, 2015 - April 30, 2017).

D. Honors and Awards :

Smithsonian Magazine, Sept. 2020: The 70 Million-Year-Old History of the Mississippi River by Dean Klinkenberg, article about my recent research.

SIU College of Science Early Career Excellence Award, 2018

2015 Editors' Citation for Excellence in Refereeing for JGR-Planets, AGU, 2015

Student awards:

Nahid Hasan, Porter-Jobling Research Grant, 2018

Jessica Whiteaker, Minority Student Scholarship Award, 2016

Jason William, LPI Early Career Development Award, 2016

Jason Williams, NASA Astrobiology Institute Scholarship to the International Astrobiology Summer School in Santander, Spain, (one of ten American graduate students and post docs), 2015

John Ejembi, Student Education Program Award, SEG/ ExxonMobil, 2016

John Ejembi, Applied Geoscience Conference Student Travel Grant, HGS, 2016
John Ejembi, Porter-Jobling Research Grant, 2016

E. Invited and Keynote Talks :

Earth and Space Exploration Program, Amity University's Centre of Excellence in Astrobiology, visiting scientist/ instructor, astrobiology field school, Ladakh, India, July 28-Aug, 13, 2022.

Potter-McIntyre, Sally, Surface Processes Workshop at the Ludwig-Maximilians University in Munich. (November, 2019).

Potter-McIntyre, Sally, Colloquium address, Lunar and Planetary Institute (February, 2019)

Potter-McIntyre, Sally, Cosmic Perspective of Earth: A Planet Permeated and Shaped by Life – Implications for Astrobiology, "Past and Present Potential Habitable Environments on Mars," ELSI EON, Tokyo, Japan. (September 2017).

Potter-McIntyre, Sally, "Habitable and Diagenetic Environments," University of Cincinnati. (September 22, 2017).

Potter-McIntyre, S., keynote address, "Past and Present Potential Habitable Environments on Mars", 4th International Geobiology Conference, Wuhan, Hubei, China. (June 2017)

Potter-McIntyre, Sally, Search for life: from Early Earth to Exoplanets, "Progressive Diagenetic Alteration of Macro- and Micro-Scopic Biosignatures in Ancient Springs and Spring-Fed Lacustrine Environments," Quy Nhon, Vietnam. (December 2016).

Potter-McIntyre, S., "Biosignatures and habitability in the rock record", Northern Illinois University. (January, 2017)

Potter-McIntyre, S., Chancellor's Scholar Weekend, "Mars Exploration," Southern Illinois University. (February, 2016)

Potter-McIntyre, S.L., Jurassic Fluvio-lacustrine Formations on the Colorado Plateau: Informing Astrobiological and Sedimentological Research at Gale, Crater, Mars, University of Wisconsin, Madison. (February, 2015)

Potter-McIntyre, S.L., The Jurassic Brushy Basin Member of the Morrison Formation, Colorado Plateau, western US: A lithological, diagenetic and astrobiological terrestrial analog for Gale Crater, Mars, Illinois State University. (October, 2013)

F. Papers and Presentations at Professional Meetings :

(Student authors are italicized. Authors are listed in order of contribution.)

*Perkins, K., **Potter-McIntyre, S.L.**, Pellegrino, C., Burrell, J., and McCollom, T.M., 2024, Mars' "Doublet Material" Observed in Jurassic Aztec Sandstone Near Valley of Fire State Park, Nevada, USA, GSA.*

Potter-McIntyre, S.L., McCollom, T.M., *Perkins, K., Pellegrino, C., and Burrell, J.,* 2024, Rare Solid Solution Alunite/Jarosite Minerals In Jurassic Aztec Sandstone; Implications For Subsurface Habitability, AbSciCon.

Binkley, A.P., Crane, K., Potter-McIntyre, S. L., and Conder, J., 2024, Complex Crater Morphology Reflects Tectonics at Oasis Crater, Libya: Exploring new ways to interpret tectonics on Mars, LPSC.

Pellegrino, C., Burrell, J., Potter-McIntyre, S.L., Perkins, K., McCollom, T.M., 2023, Jarosite Precipitation Along Laramide and Basin And Range Migration Pathways in Jurassic Aztec Sandstone, Valley Of Fire, NV, USA, GSA.

Potter-McIntyre, S.L., 2023, Iron (Oxyhydr)oxide Concretion Formation: New Insights from Southern Utah, USA, EGU.

Reiter, S., Cullen-Reavill, R., Potter-McIntyre, S.L., 2022, Spheroidal Iron (Oxyhydr)oxide Concretion Formation: New Insights from Field Study, GSA.

Potter-McIntyre, S.L., Chan, M.A., 2021, Diagenetic complexities of iron oxide cements in Mesozoic sandstones, Utah, U.S.A., EGU.

Walker, J., Potter-McIntyre, S.L., 2021, Revising the stratigraphy at Mollies Nipple, Kane County, Utah, USA to better understand the origin of jarosite and alunite cements, EGU.

Baker, D., Potter-McIntyre, S.L., 2021, Working towards a universal formation model for spheroidal iron (oxyhydr)oxide concretions, EGU.

Williams, J., Potter-McIntyre, S.L., Morrison, S., Hummer, D., Filiberto, J., 2021, Analyzing the occurrence of environmental indicator minerals using clustering techniques and mineral networks, EGU.

Potter-McIntyre, Sally L., Filiberto, Justin, Schwenzer, Susanne P., *Crandall, Jake,* 2019 Astrobiology Science Conference, Creation of a Hyper-Habitable Environment in a Sedimentary Reservoir: A Case Study of Mafic Intrusions into the Entrada Sandstone on the Colorado Plateau.

Filiberto, Justin, *Costello, Lacey, Crandall, Jake, Potter-McIntyre, Sally L.,* Schwenzer, Susanne P., Hummer, Daniel R Olsson-Francis, Karen and Perl, Scott M., 2019 Astrobiology Science Conference, Habitability During In Situ Alteration of a Mafic Dike as an Analog for Martian Hydrothermal Processes.

Hasan, Md Nahidul, Potter-McIntyre, Sally L., Geological Society of America Abstracts with Programs. Vol. 50, No. 6, Reservoir Characterization of the Kizler North Field, Lyon Co., Kansas, USA (November, 2018)

Ejembi, John Idoko, Satolli, Sara, Friedman, Sarah A., Potter-McIntyre, Sally L., Ferre, Eric C., Geological Society of America Abstracts with Programs. Vol. 50, No. 6, Fluid Flow through Jurassic Sandstones in the Paradox Basin, Colorado: Syndepositional, Diagenetic or Later? (November, 2018)

- Potter-McIntyre, Sally, Geological Society of America Abstracts with Programs. Vol. 50, No. 6, Using Traditional Tools to Shed New Understanding on Diagenetic and Depositional Processes: Extending the Legacy of Dr. Robert Dott, Jr. to a New Generation – and a New Planet! (November, 2018)
- Potter-McIntyre, Sally, McCollom, Thomas, Geophysical Research Abstracts Vol. 20, EGU2018-17976, EGU General Assembly, “Unusual Preservation of Diagenetic Jarosite and Alunite in Jurassic Sandstones at Mollies Nipple, Kane Country, Utah, USA.” (April, 2018)
- Costello, Lacey, Filiberto, Justin, Potter-McIntyre, Sally, Crandall, Jacob, Schwenzer, Susanne, Hummer, Daniel*, 49th Lunar and Planetary Science Conference (LPI Contrib. No. 2083) “Alteration and oxidation of an olivine lamprophyre dike from southern Utah, USA: An analog for Mars.” (March, 2018)
- Crandall, Jacob, Filiberto, Justin, Potter-McIntyre, Sally, Schwenzer, Susanne*, 49th Lunar and Planetary Science Conference (LPI Contrib. No. 2083), “Magmatic intrusions into the sulfur-rich Carmel Formation on the Colorado Plateau, USA: Implications for the Mars 2020 mission.” (March, 2018)
- Potter-McIntyre, Sally, Thomas, Rebecca, Osterloo, Mikki, Hynek, Brian, 49th Lunar and Planetary Science Conference (LPI Contrib. No. 2083), “Windows into the habitable subsurface: terrestrial examples of exposed subsurface mineralization as analogs for Mars.” (March, 2018)
- Knuth, Jordan, Potter-McIntyre, Sally*, 49th Lunar and Planetary Science Conference (LPI Contrib. No. 2083), “Preservation of biosignatures in the Ten Mile Graben cold springs, Utah.” (March, 2018)
- Ejembi, John, Ferre, Eric, Potter-McIntyre, Sally*, AGU Fall Meeting, “Paleocurrents of the Middle–Upper Jurassic strata in the Paradox Basin, Colorado, inferred from anisotropy of magnetic susceptibility (AMS).” (December 2017)
- Ejembi, John, Potter-McIntyre, Sally*, GSA Annual Meeting, “Detrital zircon U-PB geochronology of Middle to Upper Jurassic strata in the Paradox Basin: Insights into tectonic uplift of the Wet Mountains AND southern Front Range, Colorado, U.S.A.” (October, 2017)
- O’Connell, Laura, Potter-McIntyre, Sally, *Williams, Jason, Knuth, Jordan*, GSA Annual Meeting, “Facies analysis and comparison of Jurassic, Quaternary, And Modern carbonate lake and spring deposits of Ten Mile Graben, East Central Utah.” (October, 2017)
- McCollom, Thomas, Potter-McIntyre, Sally, 4th International Conference on Early Mars, “Jarosite and Alunite Cements in Jurassic Sandstones of Utah and Nevada, a Potential Analog for Stratified Sulfate Deposits on Early Mars.” (August 2017).
- Potter-McIntyre, Sally, *Ejembi, John, Goldschmidt*, "Differentiating Climatic from Tectonic Influences on Shifting Depositional Environments Using Detrital Zircon Geochronology." (August 2017).

- Potter-McIntyre, Sally, McCollom, Thomas, Astrobiology Science Conference, "Jarosite in Ancient Terrestrial Rocks: Implications for Understanding Mars Diagenesis and Habitability." (April 2017).
- Filiberto, Justin, *Crandall, Jake*, Potter-McIntyre, Sally, Schwenzer, Susanne, Olsson-Francis, Karen, Bridges, John, Astrobiology Science Conference, "Magmatic intrusions into Sulfur-rich Sediments: An Exposed Potential Subsurface Habitable Environment as an Analog for the Martian Crust." (April 2017).
- Crandall, Jake*, Potter-McIntyre, Sally, Schwenzer, Susanne, Filiberto, Justin, 48th Lunar and Planetary Science Conference, "Intrusions into Sulfur-rich Sediments on the Colorado Plateau: An Analog for Mars Exploration." (March 2017).
- Thomas, Rebecca, Potter-McIntyre, Sally, Hynek, Brian, 48th Lunar and Planetary Science Conference, "Fluid-Deposited Fracture-Margin Ridges in Margaritifer Terra, Mars." (March 2017).
- Potter-McIntyre, Sally, GSA Annual Meeting, Jarosite in ancient terrestrial sedimentary rocks: Implications for understanding Mars diagenesis and habitability. (October, 2016)
- Williams, Jason, Potter-McIntyre, Sally, O'Connell, Laura, GSA Annual Meeting, "Quaternary and Jurassic terrestrial spring deposits as analogs for ancient aqueous environments on Mars." (October, 2016)
- Potter-McIntyre, Sally, *Williams, Jason*, Phillips-Lander, Charity, O'Connell, Laura, Biosignature Preservation and Detection in Mars Analog Environments (LPI contribution 1912) Progressive Diagenetic Alteration of Macro- and Micro-Scopic Biosignatures in Ancient Springs and Spring-Fed Lacustrine Environments (May, 2016).
- Potter-McIntyre, Sally, *Williams, Jason*, Lander, Charity, Laura, O'Connell, 47th Lunar and Planetary Science Conference, "Diagenetic Alteration of Biosignatures Preserved in Spring Carbonates: Implications for Mars." (March 2016).
- Williams, Jason*, Potter-McIntyre, Sally, Phillips-Lander, Charity, O'Connell, Laura, GSA National Meeting, "A Jurassic Spring-Fed Lake System In The Brushy Basin Member Of The Morrison Formation, Ten Mile Graben, Utah, USA: Biosignature Preservation And Astrobiological Implications," GSA, Baltimore, MD. (October, 2015).
- Johnson, Matthew*, Potter-McIntyre, Sally, *Ejembi, John*, GSA National Meeting, "A Porosity and Permeability Comparison of the Mancos Shale and Wanakah Formation of Western Colorado," GSA. (2015).
- Ejembi, John*, *Johnson, Matthew*, Potter-McIntyre, Sally, GSA National Meeting, "Detrital Zircon Studies In Relation To Provenance Of The Jurassic Wanakah Formation And Adjacent Rock Units In Western Colorado." (October, 2015).

- Potter-McIntyre, Sally, *Williams, Jason*, Phillips-Lander, Charity, O'Connell, Laura, GSA National Meeting, "Identification and Preservation over Geologic Time of Biosignatures in Cold Spring Carbonates." (October, 2015).
- Craft, K.L., Potter-McIntyre, Sally, Lowell, R.P., 46th Lunar and Planetary Science Conference, "Aromatum Chaos: Heating Up, Melting Ice, and Letting It Flow - A Preliminary Analysis," LPI. (March, 2015).
- Potter-McIntyre, Sally, Conger, Robert, Astrobiology Science Conference, "The Astrobiology Project: A Scientific and Artistic Synthesis of Humankind's Most Profound Questions," Astrobiology Science Conference, Chicago, IL. (June 2015).
- Potter-McIntyre, Sally, Chan, Marjorie, McPherson, Brian, AGU Fall Meeting, "Diagenetic Iron Cycling in Ancient Alkaline Saline Lacustrine Sedimentary Rocks: A Case Study of the Jurassic Brushy Basin Member of the Morrison Formation, Colorado Plateau, USA," AGU. (2014).
- Potter-McIntyre, Sally, GSA National Meeting, "Diagenetic Alteration And Concretion Formation In The Jurassic Brushy Basin Member Of The Morrison Formation, Colorado Plateau, USA: An Analog Study For The Yellowknife Bay Formation At Gale Crater, Mars," GSA, Vancouver, Ontario. (2014).
- Potter-McIntyre, Sally, Nordic Astrobiology Conference, "The Fluvio-Lacustrine Yellowknife Bay Formation, Gale Crater, Mars: A Truly Habitable Volcaniclastic Environment?," Bergen, Norway. (May 2014).
- Potter-McIntyre, Sally, "Diagnostic Characteristics to Aid in the Search for Early life on Earth and Mars," Santiago, Chile. (December 2013).
- Potter-McIntyre, Sally, Chan, Marjorie, McPherson, Brian, AGU, "The Lacustrine Upper Brushy Basin Member of the Morrison Formation, Four Corners Region, Usa: a Lithological and Mineralogical Terrestrial Analog for Gale Crater, Mars." (2013).
- Potter-McIntyre, Sally, Marjorie, Chan, Brian, McPherson, GSA National Meeting, "Evaluating the role of organics, mineralogy and petrophysical properties on early diagenesis and concretion formation in volcaniclastic host rock composition," GSA. (2013).
- Boraas, Marisa*, Potter-McIntyre, Sally, *DePriest, Keegan*, Aslan, Andres, GSA National Meeting, "Initial Provenance Analysis of the Late Jurassic Lacustrine Wanakah Formation, Eastern Utah and Western Colorado," GSA. (2013).
- Potter-McIntyre, Sally, *Boraas, Marisa*, *DePriest, Keegan*, Aslan, Andres, GSA National Meeting, "Late Jurassic Rocks of the Colorado Plateau as Depositional and Diagenetic Analogs to Gale Crater, Mars," GSA. (2013).

DePriest, Keegan, Potter-McIntyre, Sally, Boraas, Marisa, Spain, Thomas, GSA Regional Meeting, "Petrophysical properties of the Wanakah Formation; evaluating seal efficacy of terrestrial versus marine shales," GSA. (2013).

Potter-McIntyre, Sally, Chan, Marjorie, McPherson, Brian, AGU Fall Meeting, "Textural and Mineralogical Characteristics of Microbial Fossils in Modern and Ancient Iron (oxyhydr) oxides," AGU. (2012).

Potter-McIntyre, Sally, Chan, Marjorie, McPherson, Brian, LPSC, "Iron (oxyhydr)oxide biosignatures in the Brushy Basin Member of the Jurassic Morrison Formation, Colorado Plateau, USA; analog for Martian diagenetic iron," LPI. (2012).

G. Hosted Meeting Technical Sessions :

Mineral archives – insights from modern and ancient marine, terrestrial, and man-made systems, EGU, 2021

Diagenesis on Mars and Clues from Terrestrial Systems, AGU, 2018

Deciphering Diagenesis: Understanding Fluid/Rock/Biota Interactions in the Rock Record, EGU, 2018.

Past and Present Biosignature Recognition on Earth and Mars, GSA Annual Meeting, Denver, 2016.

H. Software Donations :

"Interactive Petrophysics Software," Sponsored by Lloyd's Register, Private. (December 16, 2016 - present).

"BasinMod Software," Sponsored by Platte River Associates, Private. \$120,000. (January 2016 - present).

"Petrel Software," Sponsored by Schlumberger, Private, \$2,843,825.25. (January 1, 2015 - present).

"Petra Software," Sponsored by IHS Markit, Private. \$97,060. (August 2017 - August 2018).

"OpendTect," Sponsored by dGB, Private. (January 1, 2016 - December 31, 2017).

VI. TEACHING EXPERIENCE

A. Teaching Interests and Specialties :

Sedimentology and Stratigraphy (GEOL325), Petroleum Geology (GEOL420), Advanced Sedimentology (GEOL491/524), Field Camp (GEOL454), Fracking Seminar (GEOL524), Imperial Barrel Award (AAPG Petroleum Competition; GEOL 591)

B. Master's and Ph.D. Committees:

Current Masters

Shae Reiter

Kimberlin Perkins
Amanda Binkley
Celeste Saul

Completed PhD:
Jason Williams, Ph.D.

Completed Masters:
Jordan Walker, M.S.
Preston Price, M.S.
Dilini Walakulu Arachchige, M.S.
Loumeime Guyere, M.A.
Desireé Baker M.S.
Jeremy Breeden, M.S.
Joshua Groth, M.A.
Simao Guterres Pereira, M.A.
Jason Williams, M.S.
Jordan Knuth, M.S.
Keegan DePriest, M.S.
Nahid Hasan, M.S.

Committee member:
Uriah Wolf, M.S., University of Winnipeg
James Haber, Ph.D. candidate, Purdue University
Melissa Litschi, Ph.D. candidate, SIU
Chamila Ranaweera, M.S.
Caitlyn Korren, M.S.
Jacob Crandall, M.S.
Ruben Macuster, M.S.
Lacey Costello, M.S.
Christopher McCoy, M.S.
Jessica Whitaker, M.S.
Jacob Crandall, Ph.D.
John Ejembi, Ph.D.

D. Undergraduate researchers:
Elijah Wilson

E. Former Undergraduate researchers:
Dannie Seiben
Alexandra Banks
Colton Schuler
Dallas Cook
Elayna Northrup
Jessica Whiteaker
Victoria Hammond
Caleb Macer

James Burrell
Cameron Pelligrino
Shae Reiter
Rachelle Cullen-Reavill

VII. UNIVERSITY EXPERIENCE

A. Department Committees :

Faculty Senate, April 2025-April, 2027
Diversity and Inclusivity Commission, 2018-present
Curriculum committee: 2017-present
Doctoral Fellowship Committee, 2019 - present
Department Colloquium Speaker Organizer, Fall 2015, 2019-2020
Graduate Admissions Committee, Geology, August, 2013 to 2017
Department colloquium chair, August 2015 to May 2016
Regional Illinois Junior Academy of Science Fair, judge, March, 2015.
Open House Geology Department Representative, November 7, 2015
Commencement, Graduate Marshall, December 2015

VIII. PROFESSIONAL SERVICE

A. Membership in Professional Associations :

Geological Society of America, 2005-present
American Association of Petroleum Geologists, 2006-present
American Geophysical Union, 2013-present
Illinois Oil and Gas Association 2013-present

C. Editorial Service :

Associate Editor, Journal of Sedimentary Research, 2021-present
Content editor, Knowledge Base database, Structural biosignatures team lead, 2021 to present.
Academic Editor, PLOS One, 2019 – 2021

IX. COMMUNITY SERVICE

Southern Illinois Dance Company (SIU RSO) faculty advisor, 2019 to 2023
American Association of Petroleum Geologists (AAPG) Student Chapter Faculty Advisor,
August, 2014 – present
AAPG Imperial Barrel Award Faculty Advisor, spring semester 2015, 2016, 2017, 2018, 2020