

Curriculum Vitae

STEPHAN CHARLES OBORNY, PHD

Kansas Geological Survey
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EDUCATION AND PROFESSIONAL HISTORY

Higher Education

2015 – 2019	Ph.D.	Geological Sciences	University of Iowa
2013 – 2015	M.S.	Geological Sciences	University of Iowa
2009 – 2012	B.S.	Geological Sciences	University of Kansas
2006 – 2007	A.S.	Electrical Technology	Johnson County Community College

Professional and Academic Positions

2022 – Present	Courtesy Faculty Research Affiliate	University of Kansas
2020 – Present	Assistant Research Professor (Stratigraphic Research Section)	Kansas Geological Survey
2019 – 2020	Postdoctoral Researcher (Energy Research Section)	Kansas Geological Survey
2019 – 2019	Lecturer (Intro. to Earth Science)	University of Iowa
2013 – 2019	Graduate Teaching and Research Assistant	University of Iowa
2012 – 2013	Field and Research Assistant, Kansas Geological Survey	University of Kansas
2012 – 2013	Athletics Department Geosciences Tutor	University of Kansas
2007 – 2009	Residential Installation and Alteration Electrician	Ashburton, New Zealand
2005 – 2007	Journeyman Electrician	Topeka, Kansas
2002 – 2006	Restaurant Manager, Rudys Pizzeria	Lawrence, Kansas

Teaching Assistantships (Field Courses < 15 weeks > / Lecture Courses at the University of Iowa)

2018	Geology of U.S. National Parks (States Visited: NE, WY, UT, NV, CA ; 21 students)	Field
2017/2018/2019	Sophomore, Junior, and Senior Class Trips (States Visited: MO, AR, SD ; 18/15/10 students)	Field
2015/2017/2018	Guadalupe Mountains and Big Bend National Park (Capitan Reef Complex ; 17/18/16 students)	Field
2017/2019	Geology of San Salvador Island, Bahamas (Carbonate Sedimentology ; 15/14 students)	Field
2015/2016	Geological Field Methods; Dillon, Montana (Geology Field Camp ; 23/22 students)	Field
2018	The History and Science of Oil (74 students)	Lecture
2017	Natural Disasters (50 students)	Lecture
2015	Evolution and the History of Life (49 students)	Lecture
2014	Introduction to Earth Science (51 students)	Lecture

Academic Advising

<i>Objective</i>	<i>Name</i>	<i>Years</i>	<i>Outcome</i>	<i>Next Step/Current</i>
M.S.	Riley Biel	2021-present	in progress	Industry
	Zach Grosch	2021-2023	Industry	Industry
	Teddy Lowe	2022-present	in progress	Undecided

WORKS IN REVIEW

- 1) **Oborny, S.C.**, Hasiuk, F., Layzell, A.L., and Smith, J.J., *in review*. Outcrop-to-subsurface stratigraphic correlations of the Upper Desmoinesian and Lower Missourian stages (Pennsylvanian) in eastern Kansas: regional assessment of group boundaries from type, principal, and neostatotype sections. *Submitted to*: Kansas Geological Survey Bulletin.
- 2) Hasiuk, F., **Oborny, S.**, Ridley, C., and Raney, J., *in review*. Critical Minerals in Kansas. *Submitted to*: Kansas Geological Survey, Public Information Circular.
- 3) Hasiuk, F., Smith, J., and **Oborny, S.**, *in review*. Kansas Basement Rocks: The Foundation of Kansas Geology. *Submitted to*: Kansas Geological Survey, Public Information Circular.

PEER REVIEWED JOURNAL ARTICLES

- 1) Stolfus, B.M., Allman, L., Young, S.A., Calner, M., Hartke, E.R., **Oborny, S.C.**, Bancroft, A.M., and Cramer, B.D., 2023. Expansion of Reducing Marine Environments during the Ireviken Biogeochemical Event: Evidence from the Altajme Core, Gotland, Sweden. **Paleoceanography and Paleoclimatology**, v. 38, e2022PA004484. <https://doi.org/10.1029/2022PA004484>
- 2) **Oborny, S.C.**, Cramer, B.D., Brett, C.E., and Bancroft, A.M., 2022 (Dissertation Chapter). Chronostratigraphic correlation of the Upper Silurian Salina Group for the Michigan and Appalachian Basins through coupled ($\delta^{13}\text{C}_{\text{carb}}$) chemostratigraphy and subsurface geophysical analyses. **Geosphere**. <https://doi.org/10.1130/GES02515.1>
- 3) **Oborny, S. C.**, Smith, J. J., Layzell, T., Ludvigson, G., and Hasiuk, F., 2022. Revision to Nomenclature of the Zarah Subgroup of the Kansas City Group (Pennsylvanian) in Kansas. **Midcontinent Geoscience**, v. 3, p. 27-34. <https://doi.org/10.17161/mg.v3i.18249>
- 4) Hartke, E.R., Cramer, B.D., Calner, M., Melchin, M.J., Barnett, B.A., **Oborny, S.C.**, and Bancroft, A.M., 2021. Decoupling $\delta^{13}\text{C}_{\text{carb}}$ and $\delta^{13}\text{C}_{\text{org}}$ at the onset of the Ireviken Excursion: $\Delta^{13}\text{C}$ and f_{org} during a Silurian oceanic anoxic event. **Journal of Global and Planetary Change**, v. 196, p. 103-373. <https://doi.org/10.1016/j.gloplacha.2020.103373>
Nominated as one of the year's top contributions to Global and Planetary Change.
- 5) Rinderknecht, C., Hasiuk, F.J., and **Oborny, S.C.**, 2021. Mg Zonation and Heterogeneity in Low-Mg Calcite Microcrystals of a Depositional Chalk. **Journal of Sedimentary Research**, v. 91, n. 8, p. 795-811. <https://doi.org/10.2110/jsr.2020.173>
- 6) Biebesheimer, E.J., Cramer, B.D., Calner, M., Barnett, B.A., **Oborny, S.C.**, and Bancroft, A.M., 2021. Asynchronous $\delta^{13}\text{C}_{\text{carb}}$ and $\delta^{13}\text{C}_{\text{org}}$ records during the onset of the Mulde (Silurian) positive carbon isotope excursion from the Altajme core, Gotland, Sweden. **Chemical Geology**, v. 576, p. 120256. <https://doi.org/10.1016/j.chemgeo.2021.120256>
- 7) **Oborny, S.C.**, Cramer, B.D., Brett, C.E., and Bancroft, A.M., 2020 (Dissertation Chapter). Integrated Silurian conodont and carbonate carbon isotope ($\delta^{13}\text{C}_{\text{carb}}$) bio-chemostratigraphy of the East-Central Appalachian Basin. **Palaeogeography, Palaeoclimatology, Palaeoecology**, v. 554, p. 1-16. <https://doi.org/10.1016/j.palaeo.2020.109815>
- 8) **Oborny, S.C.**, Cramer, B.D., and Brett, C.E., 2020 (Dissertation Chapter). High-Resolution Event Stratigraphy (HiRES) of the Silurian across the Cincinnati Arch (USA) through integrating conodont and carbon isotope biochemostratigraphy, with gamma-ray and sequence stratigraphy. **Geologiska föreningen (GFF)**, v. 142, n. 4, p. 309-324. <https://doi.org/10.1080/11035897.2020.1819407>
- 9) **Oborny, S.C.**, Cramer, B.D., Heckel, P.H., Ludvigson, G.A., and Henthorne, R.W., 2017 (M.S. Thesis). Development of Phylloid-algal carbonate mounds during regression: Expanding the build-and-fill model. **Journal of Sedimentary Research**, v. 87, p. 688-706. <https://doi.org/10.2110/jsr.2017.38>

MAPS / OPEN-FILE REPORTS / PUBLIC INFORMATION CIRCULARS

- 1) **Oborny, S.C.**, Hasiuk, F., Potter, N., Louis D., 2023. Bedrock Drill Core and Cuttings, Kansas Geological Survey, Public Information Circular 39. <https://www.kgs.ku.edu/Publications/PIC/PIC39.pdf>
 - 2) **Oborny, S.C.**, 2022. Recalibration of the Zarah Subgroup (upper Pennsylvanian, Missourian Stage) of Eastern Kansas and its impact on Regional Stratigraphic Nomenclature. Kansas Geological Survey, Open-File Report 2022-9, 50 pp. <https://www.kgs.ku.edu/Publications/OFR/2022/OFR2022-9.pdf>
 - 3) **Oborny, S.C.**, Hasiuk, F., Layzell, A.L., and Smith, J.J., 2022. Nomenclatural history of Upper Desmoinesian through Lower Virgilian (Pennsylvanian) strata in Kansas. Kansas Geological Survey, Open-File Report 2022-5, 1 plate. <https://www.kgs.ku.edu/Publications/OFR/2022/OFR2022-5.pdf>
 - 4) Layzell, A.L., Newell, K.D., **Oborny, S.C.**, Mandel, R.D., and Dunham, J.W., 2022. Surficial Geology of Miami County, Kansas: Kansas Geological Survey, Map M-126, scale 1:50,000. **Received ICA and IMIA Recognition of Excellence in Cartography award from the 2022 Esri User Conference Map Gallery.** https://www.kgs.ku.edu/General/Geology/County/klm/M-126_Miami_2022.pdf
 - 5) **Oborny, S.C.**, Layzell, A.L., Newell, K.D., Mandel, R.D., and Smith, J.J., 2022. Geological Details for 2021 Geological Mapping of Miami County, Kansas. Kansas Geological Survey, Open-File Report 2022-3, 5 p. <https://www.kgs.ku.edu/Publications/OFR/2022/OFR2022-3/index.html>
 - 6) **Oborny, S.C.**, and Hasiuk, F., 2022. Lithostratigraphic Correlations of the Upper Desmoinesian and Missourian Stages (Pennsylvanian) in Eastern Kansas, Kansas Geological Survey, Open-File Report 2022-2, 9 p., 10 plates. <https://www.kgs.ku.edu/Publications/OFR/2022/OFR2022-2/index.html>
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IN PREPARATION

- 1) **Oborny, S.C.**, Hasiuk, F., Bode-Omoleye, I., Biel, R.J., Grosch, Z., Suriamin, F., Symcox, C., Hayman, N., Joeckel, M.R., Lynn, W., Bancroft, A.M., Ganz, K., Clark, R.J., Cramer, B.D., Seeger, C., Steele, A., Ridley, C., Glose, T., and Raney, J., *in prep.* Subsurface Geophysical Transverse Section of Paleozoic Strata in the Cherokee-Forest City Basin; a Preliminary Stratigraphic and Structural Analysis of the Basins Southern Margin (A-A', A'-A"). **Target:** Kansas Geological Survey Open-File Report.
 - 2) **Oborny, S.C.**, Layzell, T.L., Hasiuk, F., Smith, J.J., Mulvany, D., Bridges, D.L., Joeckel, M.R., Stanley, T., Eichler, C.M., Bancroft, A.M., and Clark, R.J., *in prep.* Subsurface Geophysical Transverse Sections of Paleozoic Strata in the Cherokee-Forest City Basin and analysis of important type sections in Oklahoma (B-B', C-C', D-D'). **Target:** Kansas Geological Survey Open-File Report.
 - 3) **Oborny, S.C.**, Layzell, A.L., and Smith, J.J., *in prep.* Basin analysis of eastern Kansas and newly identified forebulge—backbulge setting associated with the Ouachita Orogeny. **Target Journal:** Tectonophysics.
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PRESENTATIONS - FIRST AUTHORSHIPS (ORAL & POSTER)

- 1) **Oborny, S.C.**, 2023. (**Invited KGS Representative; POSTER**) C_MC_SC_FC_B—Critical Minerals in Coaly Strata of the Cherokee-Forest City Basin. *Critical Minerals Crossroads Summit*, University of Missouri Kansas City, December 2023.
- 2) **Oborny, S.C.**, 2023. (**Invited Lecturer**) Evaluating the Stratigraphic and Structural Framework of the Cherokee-Forest City Basin and Nomenclatural Reconciliation within the Pennsylvanian. *Kansas Geological Society Tech Talk*.
- 3) **Oborny, S.C.**, Layzell, A.L., Smith, J.J., Hasiuk, F., Mulvany, P., Bridges, D., Joeckel, R.M., Stanley, T., Eichler, C.M., Bancroft, A.M., and Clark, R., 2022. (**POSTER**) Reconciliation of Pennsylvanian stratigraphic nomenclature in the Midcontinent, USA. *GSA Abstracts and Programs*, v. 54 (5).
- 4) **Oborny, S.C.**, 2022. (**Invited Lecturer**) Interstate Stratigraphic Research in the Midcontinent. *Wichita State University Lecture Series*, March 2022.
- 5) **Oborny, S.C.**, 2022. (**ORAL**) Pennsylvanian Stratigraphic Nomenclatural Reconciliation in the Midcontinent. *KGS On the Rocks Series*
- 6) **Oborny, S.C.**, and Layzell, T., 2021. (**ORAL**) Pennsylvanian Stratigraphic Nomenclatural Reconciliation in the Midcontinent. *USGS Digital Mapping Techniques- DMT'21 Lite Annual Meeting*
- 7) **Oborny, S.C.** 2021. (**Invited Lecturer**) Applying recent advancements in chronostratigraphic methodologies towards basin modeling, and new findings in the Basins and Arches region of eastern Kansas and surrounding area. *University of Kansas Geology Seminar Series*, October 2021.
- 8) **Oborny, S.C.** 2021. (**Invited Lecturer**) A modern stratigraphic analysis of the basins and arches region of eastern Kansas. *Kansas Geological Society Tech Talk*.
- 9) **Oborny, S.C.**, and Hasiuk, F.J., 2020. (**ORAL**) New Evidence for substantial shear in eastern Kansas; providing relative age constraint for the onset of the Ouachita Orogeny. *GSA Abstracts with Programs*, v. 52 (6).
- 10) **Oborny, S.C.**, and Hasiuk, F.J., 2020. (**ORAL**) Assessing the internal depositional motif of Pennsylvanian aged strata (upper Cherokee through Shawnee groups) in eastern Kansas. *Kansas Interdisciplinary Carbonates Consortium (KICC) Virtual Meeting 2020*.
- 11) **Oborny, S.C.**, 2020. (**Invited Lecturer**) Recent Advancement in Chronostratigraphic Methodologies and the Present—Future Trajectory of Midcontinent Stratigraphic Research. *Wichita State University Lecture Series*.
- 12) **Oborny, S.C.**, 2020. (**ORAL**) KDOT Research in Aggregate Stratigraphy. *Iowa DOT kickoff meeting for Phase III Iowa Pore Index: Morphometric Properties of Aggregates, Project (SPR357)*.
- 13) **Oborny, S.C.**, Cramer, B.D., Brett, C.E., and Bancroft, A.M., 2019. (**ORAL**) Providing HiRES Chronostratigraphic constraint to the upper Silurian Salina Group within the Appalachian and Michigan basins. *GSA, Abstracts with Programs*, v. 51 (5).
- 14) **Oborny, S.C.**, Bancroft, A.M., Brett, C.E., and Cramer, B.D., 2018a. (**POSTER**) Improving chronostratigraphic correlation of Wenlock-Pridoli (Silurian) strata of the Appalachian Foreland Basin (Virginia, West Virginia, Ohio) through the use of high-resolution event stratigraphy (HIRES). *GSA Abstracts with Programs*, v. 50 (4).
- 15) **Oborny, S.C.**, Bancroft, A.M., Brett, C.E., and Cramer, B.D., 2018b. (**POSTER**) Revisions to the chronostratigraphic correlation of Wenlock—Pridoli (Silurian) strata of the south-central and western margins of the Appalachian Basin. *GSA Abstracts with Programs*, v. 50 (6).

- 16) **Oborny, S.C.**, Bancroft, A.M., Brett, C.E., and Cramer, B.D., 2017a. **(POSTER)** Using high-resolution event stratigraphy (HIRES) to revise the chronostratigraphic correlation of Wenlock-Pridoli (Silurian) strata of the central and western Appalachian Foreland Basin (Ohio, West Virginia, Virginia). *GSA Abstracts with Programs*, v. 49 (6).
- 17) **Oborny, S.C.**, Cramer, B.D., Heckel, P.H., Ludvigson, G.A., and Henthorne, R.W., 2017b. **(POSTER)** Expanding the Build-and-Fill Model: ‘Phylloid-Algal’ carbonate mound development. *AAPG Mid-Continent Section Meeting*.
- 18) **Oborny, S.C.**, 2016. **(Invited Lecturer)** Recalibration of the Zarah Subgroup (upper Pennsylvanian, Missourian Stage) of Eastern Kansas and its Impact on Regional Stratigraphic Nomenclature. *48th Annual Geotechnical Engineering Conference*, Lawrence, Kansas.
- 19) **Oborny, S.C.**, and Cramer, B.D., 2016. **(ORAL)** Catch-down cyclothems from the Pennsylvanian of Kansas. *GSA Abstracts with Programs*, v. 48 (7).
- 20) **Oborny, S.C.**, Ludvigson, G.A., Henthorne, R.W., Heckel, P.H., and Cramer, B.D., 2015a. **(ORAL)** Depositional Build-and-Fill within the Zarah Subgroup (upper Pennsylvanian, Missourian Stage) of Miami County, Kansas: Integrated Lithostratigraphy, Biostratigraphy, $\delta^{13}\text{C}_{\text{carb}}$ Chemostratigraphy, and geophysical well-log data. *GSA Abstracts with Programs*, v. 47 (7).
- 21) **Oborny, S.C.**, Ludvigson, G.A., Henthorne, R.W., Heckel, P.H., and Cramer, B.D., 2015b. **(POSTER)** High-resolution Stratigraphy of Miami County, Kansas: Integrated Lithostratigraphy, Biostratigraphy, and $\delta^{13}\text{C}_{\text{carb}}$ Chemostratigraphy within the upper Pennsylvanian, Missourian Stage. *University of Iowa Hawkeye Homecoming Poster Symposium Abstract*.
- 22) **Oborny, S.C.**, Ludvigson, G.A., Sawin, R.S., Henthorne, R.W., Heckel, P.H., and Cramer, B.D., 2014. **(ORAL)** High-resolution Missourian (upper Pennsylvanian) Stratigraphy of Miami County, Kansas: Integrated Lithostratigraphy, Biostratigraphy, and $\delta^{13}\text{C}_{\text{carb}}$ Chemostratigraphy. *GSA Abstracts with Programs*, v. 46 (6).
- 23) **Oborny, S.C.**, Cramer, B.D., Ludvigson, G.A., and Henthorne, R.W., 2012a. **(POSTER)** Limestone aggregate resources in Northeast Kansas: Integrated lithostratigraphy, stable isotope chemostratigraphy, and cathodoluminescence as a tool to evaluate current and potential aggregate resources in Miami County, Kansas. *GSA Abstracts with Programs*, v. 44 (7).
- 24) **Oborny, S.C.**, Cramer, B.D., Ludvigson, G.A., Sawin, R.S., and Henthorne, R.W., 2012b. **(POSTER)** Limestone aggregate resources in Kansas: Lithostratigraphy as a tool to evaluate current and potential aggregate resources in Miami County, NE Kansas. *G-Hawk Symposium Abstract*, Lawrence, Kansas.

PRESENTATIONS - NON-FIRST AUTHORSHIPS (ORAL & POSTER)

- 1) Khameiss, B., **Oborny, S.C.**, Ishman, S., and Grosch, Z., 2023. Biostratigraphic Evaluation of Benthic Foraminifera Across the Marmaton-Pleasanton Group Boundary in Kansas. *GSA Abstracts and Programs*.
- 2) Mohammadi, S.D., Bancroft, A.M., Eble, C.R., Ganz, K., Mastalerz, M., McDonald, J., McLaughlin P., **Oborny, S.C.**, 2022. A Multistate assessment of critical minerals in Pennsylvanian black shales of the US Midcontinent. *GSA Abstracts and Programs*, v. 54 (5).
- 3) Grosch, Z., Hasiuk, F., **Oborny, S.C.**, 2022. Using Gadolinium and Titanium Well Logs to Prospect for Critical Mineral Enrichment in the Black Shales of the Cherokee Forest City Basin. *Image 2022—International Meeting for Applied Geoscience and Energy Abstract*.
- 4) Hasiuk, F., Meng, J., **Oborny, S.C.**, Holubnyak, E., and Raney, J., 2022. H-2-SALT: Geological characterization of potential hydrogen storage sites in Permian bedded salt deposits, central Kansas. *Spring 2022 Solution Mining Technical Conference Abstract*.
- 5) Stolfus, B., Allman, L., Young, S., Calner, M., Hartke, E.R., **Oborny, S.C.**, Bancroft, A.M., and Cramer, B.D., 2022. The expansion of reducing environments during the Ireviken Biogeochemical Event: New $\Delta^{34}\text{S}$ data across the Llandovery-Wenlock Boundary of Gotland, Sweden. *GSA Abstracts and Programs*.
- 6) Arts, M.C.M., Cramer, B., Calner, M., Rasmussen C.M.Ø, Bancroft, A.M., **Oborny, S.C.**, Hartke, E., Biebesheimer, E., and Da Silva, A.C, 2021. A sequence of temporally separated element peaks; the fingerprint of a biogeochemical event initiated by sedimentary exhalative (SEDEX) brine expulsion. *23rd EGU General Assembly Abstract*.
- 7) Stolfus, B., Allman, L., Cramer, B.D., Young, S., Calner, M., Hartke, E.R., **Oborny, S.C.**, and Bancroft, A.M., 2021. Expansion of reducing marine environments during the early Silurian Ireviken Biogeochemical Event. *GSA Abstracts and Programs*.
- 8) Arts, M.C.M., Cramer, B., Calner, M., Rasmussen C.M.Ø, Bancroft, A.M., **Oborny, S.C.**, Hartke, E., Biebesheimer, E., and Da Silva, A.C, 2020. Cyclo and chemostratigraphic characteristics of the Middle Silurian in Gotland, Sweden. *22nd EGU General Assembly Abstract*.

- 9) Barnes, G.L., Trayler, R.B., Cramer, B.D., Calner, M., Bancroft, A.M., and **Oborny, S.C.**, 2019. A Bayesian age-depth model for the Silurian Altajme Core, Gotland, Sweden. *GSA Abstracts and Programs*, v.51 (5).
- 10) Biebesheimer, E.J., Cramer, B.D., Calner, M., **Oborny, S.C.**, and Bancroft, A.M., 2019. Paired organic and carbonate carbon isotope chemostratigraphy of the Mulde excursion from the Altajme Core, Gotland, Sweden. *GSA Abstracts and Programs*, v.51 (5).
- 11) Biebesheimer, E.J., Cramer, B.D., **Oborny, S.C.**, and Bancroft, A.M., 2019. Paired organic and carbonate carbon isotope chemostratigraphy of the Mulde Excursion from the Altajme Core, Gotland, Sweden. *GSA, South-Central/North-Central/Rocky Mountain Joint Section Meeting*, v. 51 (2).
- 12) Hartke, E.R., Cramer, B.D., Calner, M., **Oborny, S.C.**, and Bancroft, A.M., 2019. High-Resolution Paired Organic and Carbonate Carbon Isotope Chemostratigraphy of the Ireviken Excursion (Silurian) from the Altajme Core, Gotland, Sweden. *GSA Abstracts and Programs*, v.51 (5).
- 13) Hartke, E.R., Cramer, B.D., **Oborny, S.C.**, and Bancroft, A.M., 2019. Examining the coincidence of organic and carbonate carbon isotope perturbations during the Ireviken extinction event (Wenlock, Silurian). *GSA, South-Central/North-Central/Rocky Mountain Joint Section Meeting*, v. 51 (2).
- 14) Bancroft, A.M., Cramer, B.D., and **Oborny, S.C.**, 2018. Silurian conodont biostratigraphy of the Appalachian Basin: A reexamination of C.T. Helfrich's collection. *GSA Abstracts with Programs*, v. 50 (6).
- 15) Anthony, L., Newell, D., **Oborny, S.C.**, Ludvigson, G.A., and Dunham, J., 2018. Geologic mapping in Miami County, Kansas. *Geological Mapping Forum, Abstracts*. Minnesota Geological Survey Open File Report OFR-18-1

PROFESSIONAL SERVICE

Peer Reviewer (3 manuscripts) Midcontinent Geoscience, Stratigraphy

Hosted Field Trips

Pennsylvanian Nomenclatural Reconciliation in Eastern Kansas, December 2022.

Meeting Service (topical session co-chair)

GSA joint North-Central/South-central section Meeting, Springfield, MO, 2021. Session cancelled due to low enrollment.

Description: This session seeks new research that utilizes multi-proxy datasets (e.g., well logs, bio-, sequence-, chemo-, or lithostratigraphic techniques) to enhance chronostratigraphic constraint in Late Paleozoic (Devonian, Mississippian, Pennsylvanian, Permian) strata within the Midcontinent of North America.

FUNDING—PROPOSALS

Funded

Primary Investigator

- 1) **Oborny, S. (PI)**, Co-PIs: Fowle, D., Andrzejewski, K., Louis, D., Schneider, B., Bream, K., Bream, B., Bode-Omoleye, I., Clark, R., Bancroft, A., Cramer, B., Hayman, N., Suriamin, F., Ganz, K., Seeger, C., Steele, A., Joeckel, M., and Lynn, W., 2021. $C_M C_S C_F C_B$ —Critical Minerals in Coaly Strata of the Cherokee-Forest City Basin. U.S. Department of Energy (DOE) Carbon Ore, Rare Earth and Critical Minerals (**CORE-CM**) Initiative for U.S. Basins (9/15/21-9/14/24). Total Federal: \$ 2,085,000; State match: \$ 521,250.
- 2) Cramer B. (PI), Co-PIs: **Oborny, S. (KU Subaward PI)**, Meyer J., Suarez M., Collaborators: Schilling K., Bode-Omoleye I., Franseen E., Mohammadi S., Ortega-Ariza D., 2021. Critical Resource Availability for the Future of the Renewable Energy Industry: Critical Minerals and Ground Water Resources in Iowa and Kansas. National Science Foundation **EPSCoR** Research Infrastructure Improvement Program: Track-2 (RII Track-2 FEC; NSF 21-518). Total Federal to University of Iowa: \$3,982,500 (**KU Subaward: \$1,670,320**).

Co-Investigator

- 1) Potter, N. (PI), Co-PIs: Stewart, D., Louis, D., **Oborny, S.**, and Andrzejewski, K., 2022. Preserving Kansas Geologic Data, Documents, Samples, and Aerial Photographs; and Surveying Drill Hole/Core Holdings Related to Critical Mineral Resources, FY 2023-2026. U.S. Geological Survey, National Geological and Geophysical Data Preservation Program (**NGGDPP**). Total Combined Federal and State: \$1,565,938.
- 2) Smith, J.J. (PI), Co-PIs: Layzell, A., Ortega-Ariza, D., **Oborny, S.**, Andrzejewski, K., Franseen, E., Dunham, J.W., Bode-Omoleye, I., and Mohammadi, S., 2022. Geologic Mapping in Kansas for FY23. U.S. Geological Survey **STATEMAP** Program. Requested agency total: \$1,211,632; State match: \$605,816.

- 3) Mohammadi, S. (PI), Co-PIs: **Oborny, S.**, Bode-Omoleye, I., Smith, J.J., Ishman, S., Bancroft, A., Eble, C., Ganz, K., Mastalerz, M., McDonald, J., McLaughlin, P., 2023-2026. Critical minerals in Pennsylvanian black shales of the Midcontinent. **USGS Earth MRI** Cooperative Agreement for Geochemical Reconnaissance, Federal total for participating States: \$975,000, Kansas total: \$325,000.
- 4) Smith, J.J. (PI), Co-PIs: Layzell, A., Hasiuk, F., Andrzejewski, K., **Oborny, S.**, Mandel, R.D., Ishman, S., Dunham, J.W., Franseen, E., Ortega-Ariza, D., Bode-Omoleye, I., and Mohammadi, S., 2021. Geologic Mapping in Kansas for FY22. U.S. Geological Survey **STATEMAP** Program. Total Federal: \$599,195 / Total State: \$599,195.
- 5) Potter, N. (PI), Co-PIs: **Oborny, S.**, Stewart, D., and Louis, D., 2021. Preserving Kansas Geologic Data, Documents, Samples, and Aerial Photographs; and Surveying Drill Hole/Core Holdings Related to Critical Mineral Resources, FY 2022. U.S. Geological Survey, National Geological and Geophysical Data Preservation Program (**NGGDPP**). Total Federal: \$160,374.
- 6) Layzell, T. (PI), Co-PI: **Oborny, S.**, Hasiuk, F., Smith, J.J.; Contractors: Clark, R., Heckel, P., Joeckel, M., Mulvany, P., Bridges, D., Stanley, T.M., 2021. Pennsylvanian stratigraphic nomenclatural reconciliation in the midcontinent. U.S. Geological Survey, National Geologic Map Database (**NGMDB**). Total Federal: \$101,782, Kansas total: \$20,000.
- 7) Smith, J.J. (PI), Co-PIs: Layzell, A., Hasiuk, F., Ludvigson, G.A., Mandel, R.D., Ishman, S., **Oborny, S.**, Dunham, J.W., Franseen, E., Ortega-Ariza, D., Bode-Omoleye, I., and Mohammadi, S., 2020. Geological Mapping in Kansas for FY21. U.S. Geological Survey **STATEMAP** Program. Federal Total: \$517,951.
- 8) Stewart, D., **Oborny, S.**, Potter, N., Hasiuk, F., and Louis, D., 2020. Preserving Kansas Geologic Data, Documents, Samples, and Aerial Photographs; and Surveying Critical Mineral Resources, FY 2021. U.S. Geological Survey, National Geological and Geophysical Data Preservation Program (**NGGDPP**). Federal Total: \$109,590.
- 9) Smith, J.J. (PI), Co-PIs: Layzell, A., Hasiuk, F., **Oborny, S.**, Ludvigson, G.A., Mandel, Bode-Omoleye, I., Mohammadi, S., J.R., and Dunham, J.W., 2019. Geological Mapping in Kansas for FY20. U.S. Geological Survey **STATEMAP** Program. Federal Total: \$427,965.
- 10) Hasiuk, F. (PI), Co-PIs: Holubnyak, E., Hollenbach, J., Meng, J., Byron, M., Krishnamurthy, D., Wilkus, D., Greene, G., and (collaborator) **Oborny, S.**, 2020. H-2-Salt: Storing Fossil Energy as **Hydrogen in Salt** Caverns. U.S. Department of Energy (DOE) Energy Storage for Fossil Power Generation. Award/RFP# DE-FOA-0002332. Award amount: \$250,000.

Unfunded Pre-Proposals

- 1) **Oborny, S.** (PI), Co-PIs: Hasiuk, F., Smith, J.J., Mastalerz, M., McLaughlin, P., Clark, R., Pierce, L., Devera, J., Elrick, S., Andrews, W., McDonald, J., McCafferty, A., and Emsbo, P., 2020. Critical minerals in Pennsylvanian black shales of the U.S. Midcontinent. U.S. Geological Survey **Earth MRI** Critical Minerals Initiative. Not Selected for Funding
- 2) Hasiuk, F. (PI), Co-PIs: **Oborny, S.C.**, and Smith, J.J., 2020. Helium in Kansas. U.S. Geological Survey **Earth MRI** Critical Minerals Initiative. Not Selected for Funding

ACADEMIC HONORS AND AWARDS

- 2018: North Central GSA Graduate Student Poster Runner Up (out of 64), Ames, Iowa
- 2015: A.C. Trowbridge Award for most outstanding M.S. Student: U of I Department of Earth and Environmental Sciences
- 2014: Max and Lorraine Littlefield Scholarship; for Academic Merit
- 2011-2012: Ray P Walters Geology Scholarship; for Academic Merit
- 2011-2012: Dean A. McGee Geology Scholarship; for Academic Merit
- 2011-2012: H.A. & Elsie Ireland Scholarship; for Academic Merit

WORKSHOPS AND SHORTCOURSES

- Strategies to Address Implicit Biases in STEM Workshop, January 2023
- Berexco-Paragon-KGS Exploration Trip, 3D Seismic Shoot and Drill Rig Visit, January 2023
- ADVANCEGeo Bystander Intervention Workshop/Training, April 2022
- Intro to USGS GeMS Database Workshop, 2021
- The rise of [Silurian] pinnacle reefs: Islands of diversity in seas of despair, National GSA 2018
- Petrophysics of Unconventional Reservoirs, AAPG Mid-Continent Section Meeting 2017
- ExxonMobile: Sequence Stratigraphy Workshop, University of Iowa, Spring 2014/Fall 2016
- Aspects of the Paleozoic History of Epeiric Seas of the Iowa Basin, SEPM, Fall 2013
- Berexco: Oil Rig Operations and Functionality Short Course, AAPG/University of Kansas, Spring 2013
- Chesapeake: Core Analyses and Interpretation Workshop, Fall 2012

PROFESSIONAL AFFILIATIONS

- American Association of Petroleum Geologist (AAPG)—*Member* (2011–Present)
- Geological Society of America (GSA)—*Member* (2011–Present)
- Society of Sedimentary Geology (SEPM)—*Member* (2011–Present)

PUBLIC OUTREACH / SERVICE

- 2023 Attended the invitational Critical Minerals Crossroads Summit in Kansas City, Missouri, on behalf of the KGS and presented a **poster**.
- 2023 Generated **poster** for the Osage Indian Nation’s Oil and Gas Summit, Pawhuska, Oklahoma.
- 2023 Consulted Martin Marietta Aggregates division at the Randolph Mine in Kansas City, Missouri.
- 2023 Consulted Iowa DOT about recent changes to Kansas Stratigraphic Nomenclature
- 2023 Developed presentation materials for the Osage Indian Nation’s Minerals Council
- 2023 Assisted researchers at Wright State University, Ohio, in identifying field localities for their research in Kansas.
- 2023 Assisted researchers at University of Iowa in identification of drill cores for their research in Kansas.
- 2023 Generated **poster** and helped operate informational booth for Kansas Geological Survey at the Kansas Independent Oil and Gas Association Midyear Meeting, McPherson, Kansas.
- 2023 Secured renewable right-of-way drilling access from the Oklahoma DOT for KGS research efforts in Oklahoma.
- 2022-present Assisted in constructing a Tribal Nations Advisory Board for DOE-CoreCM. Work is on-going (33 nations contacted).
- 2022 Generated **poster** and helped operate informational booth for Kansas Geological Survey at the Eastern Kansas Oil and Gas Association Annual Meeting, Prairie Band Casino, Kansas.
- 2022 Generated **poster** and helped operate informational booth for Kansas Geological Survey at the Kansas Independent Oil and Gas Association Annual Meeting, Wichita, Kansas.
- 2022 Secured renewable right-of-way drilling access from the Iowa, Missouri, and Kansas DOTs for KGS research efforts in those states.
- 2021-present Assisted in constructing a Techno-Advisory Board for DOE-CoreCM. This board includes over two dozen representatives from industry, government, and leading academic authorities.
- 2021 Assisted British Broadcasting Company’s (BBC) Studio Science Unit in finding outcroppings of cyclothem in Kansas for a History of Life on Earth TV production.
- 2021 Assisted general public with geological questions in Miami County, Kansas.
- 2021 Assisted Hamm Industries in the identification of strata in southeastern Kansas quarries.
- 2020 Assisted the Kansas Department of Transportation in the identification of strata in Kansas quarries.
- 2020 Kansas Geological Survey—Osage Indian Nation (Building relations between the KGS and Indian Nations)
- 2020 2020 Kaw Valley Eagles Day (contributor), Lawrence, Kansas
- 2019 “Discovery Days” at the KU Natural History Museum (contributor), Lawrence, Kansas
- 2014/2016 Devonian Fossil Gorge Paleontological Field Guide, Iowa City, Iowa
- 2015 Iowa Hawkeye Caucus; University of Iowa, CLAS Representative, Des Moines, Iowa
- 2012 Guest Instructor, “*The Geology Around Us*”, Windom Elementary School, Windom, Kansas

PROFESSIONAL SKILLS

- Basin Modeling (2D-3D)
- Core Analyses
- Outcrop Analyses
- Chronostratigraphy
- Sequence Stratigraphy
- Subsurface Stratigraphic Modeling
- Geophysical Well-Log Analyses
- Biostratigraphy
- Chemostratigraphy
- Aggregate Stratigraphy
- Petrophysical & grainsize-density analyses of aggregates

LAB & HANDS-ON SKILLS

- Conodont Extraction
- Stable Isotope Sampling, Preparation, and Processing
- Heavy Liquids Separation
- Magnetic Separation (B.F.)
- Thin Section Preparation
- Stack-shot Photography
- Camsizer Analysis
- Cathodoluminescence
- Heavy Machinery Operation
- Former Electrician
- Surveying

COMPUTATIONAL

- Petra
- Petrel (in training)
- Microsoft Office Software Suite
- Adobe Software Suite (e.g. Illustrator, Photoshop, etc.)
- ESRI Software Suite (ArcGIS)
- AutoCAD Software
- ERDAS IMAGINE II experience