
EDUCATION

- University of Wyoming**, Laramie, WY GPA: 4.0/4.0
M.S. Geology May 2023
Thesis: [Deep seawater incursion and high-temperature amphibole growth along cross-cutting detachment faults at the Southwest Indian Ridge](#)
- University of North Carolina at Chapel Hill**, Chapel Hill, NC GPA: 3.7/4.0
B.S. Geological Sciences, Distinction and Highest Honors May 2019
Thesis: [3D-Modeling and Magnetic \(AMS\) Analysis of Mesozoic Diabase Dikes in North Carolina](#)
- University of St Andrews**, St Andrews, UK: *Geology Field Camp in Scotland* Summer 2018

SUMMARY OF FIELD AND LAB SKILLS

- **Geologic mapping** • Classifying materials in outcrop • **Optical mineralogy** • Outcrop and mine sampling
- Collecting, managing, and interpreting geologic sample data • Scanning and transmission electron microscopy (SEM & TEM) • X-ray diffraction • Photogrammetric drone surveys • Anisotropy of magnetic susceptibility
- Geologic sample preparation • Heavy liquid separation • Mechanical and chemical polishing **thin sections**

ADDITIONAL RESEARCH SKILLS

- ESRI **ArcGIS Pro**, ArcMap, and ArcScene • USGS-GeMS compliance • Pix4D • Python • R • Adobe Illustrator
- Statistical analysis • **Proposal and report writing** • Program and project management • Oral presentations

PROFESSIONAL EXPERIENCE

Physical Scientist GS-1301-09 August 2024–Present
United States Geological Survey (USGS), Cortland, NY
National Cooperative Geologic Mapping Program

- **Analyzing all new mapping products submitted to the National Geologic Map Database** for compliance with USGS Geologic Map Schema (GeMS) and award program requirements.
- Coordinating **project proposal and review panels**, tracking active and past mapping projects, updating program documents, and communicating with stakeholders **for the EDMAP and FEDMAP programs**.
- Updating program databases and developing a new web app for querying historic project information.

Field Technician September 2023–January 2024
BU Public Archaeology Facility, Binghamton, NY

- Classified and documented soil samples and artifacts dug from potential archaeological sites

Master's Thesis Research August 2019–May 2023
University of Wyoming, Laramie, WY

- **Collected geochemical data indicating hydrothermal seawater reactions >20 km below the seafloor.**
- Conducted microstructural SEM analysis of 14 fault rock samples to model deformation conditions.
- **Created 12 balanced cross-sections** showing the step-by-step formation of cross-cutting fault systems by identifying fault surfaces and measuring their slip from 60-m resolution seafloor bathymetry.

Graduate Teaching Assistant Fall 2019 & 2022; Spring 2023
University of Wyoming, Laramie, WY

- Created and presented weekly lectures to 24 upper-level students for the *Structural Geology Lab*.
- Taught field skills: data collection, structural and petrologic interpretation, and geologic mapping.
- Individually tutored senior-level students in scientific writing for *Capstone in Earth Science*.

PROFESSIONAL EXPERIENCE (CONTINUED)

Contract Mapping Geologist

June 2021–June 2022

Wyoming State Geological Survey, Laramie, WY

- **Co-led field mapping** and geochemical sampling for **USGS STATEMAP and Critical Minerals programs**.
- Compiled and interpreted new field data with existing geodatabases in ArcGIS Pro to create the [Geologic Map of the Phantom Lake Quadrangle, WY](#) using **USGS Geologic Map Schema (GeMS)**.
- **Led petrographic study**, describing 46 new thin sections and writing the Description of Map Units.
- Analyzed and plotted major and trace element geochemical data for publication using Python.

Geologist GS-1350-05 — Geology Summer Fellows Program

June–August 2019

United States Geological Survey (USGS), Menlo Park, CA

- **Conducted geophysical surveys** using Scintrex CG5 gravimeters and Geometrics magnetometers.
- Developed joint gravity and magnetic models with Geosoft Oasis Montaj software to interpret structural settings in the Great Basin and Geysers Geothermal Field.

Senior Honors Thesis Research

August 2018–May 2019

UNC Department of Earth, Marine, and Environmental Sciences, Chapel Hill, NC

- **3D-modeled four excavated diabase dikes** using ESRI ArcScene and Pix4D. Flew five drone surveys at NC rock quarries, and compiled dike location and orientation data to determine original position.
- Magnetically and structurally analyzed 16 dike samples to determine that magma flowed horizontally.

Laboratory Research Assistant

April 2017–May 2019

*UNC Department of Earth, Marine, and Environmental Sciences, Chapel Hill, NC***Manager of NCDOT Pea Island National Wildlife Refuge Shoreline Monitoring Project**

- Cleaned, sieved, and counted the light and dark minerals in 255 sand samples per semester.
- **Performed heavy liquid separation** on 24 sand samples and identified heavy minerals using an **SEM**.
- Trained six students in lab equipment operation; managed tasks and standard operating procedures.

SELECTED COURSEWORK

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| ● Foundations of GIS (ArcGIS Pro and R) | ● Creating Python Scripts for ArcGIS |
| ● Environmental Data Analysis (Python) | ● Geochronology and ThermoChronology |

PROFESSIONAL ASSOCIATIONS

Central New York Association of Professional Geologists	2023–Present
Geological Society of America	2018–Present

AWARDS AND HONORS

GSA Graduate Student Research Grant (\$1500) and Outstanding Student Award (\$500)	May 2020
Wyoming NASA Space Grant Graduate Research Fellowship (\$20,000 + tuition & fees)	April 2020
Second Place Undergraduate Poster at the UNC Anadarko Student Research Symposium	April 2019
Daniel Craig Pignatiello Fund for Undergraduate Research in Geological Sciences (\$4,116)	April 2018
Walter H. Wheeler Teaching Fellowship and Award Fund (\$1,000)	April 2018
Achieved the rank of Eagle Scout, BSA Troop 444	July 2012

COMMUNITY ACTIVITIES

Binghamton University Masters Swimming	2023–Present
Skiers Nordic of Wyoming (UW Nordic Ski Team)	2021–2023
University of Wyoming Club Swimming, Founder and President (2019–2021)	Active Member 2019–2023