Zoey Catherine Carey

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EDUCATION

Master of Science, Geoscience **August 2020 – December 2022**
University of Nevada, Las Vegas, NV
Thesis & Publication in JSAES: *Along Strike Tectonic Evolution of the Neogene Bermejo Foreland Basin and Eastern Precordillera Thrust Front, Argentina (30-32°S)*

- Studied the along-strike evolution of the Bermejo foreland basin in the Pampean flat slab region of Argentina utilizing stratigraphy, detailed sedimentology and facies analyses, geochronology, and low-temperature thermochronology to reconstruct the ~20 m.y. evolution of the basin.

Bachelor of Science, Earth and Environmental Sciences **September 2016 – December 2019**
University of Michigan, Ann Arbor, MI

RELEVANT EXPERIENCE

Research Scientist, Arizona Geological Survey, Tucson, AZ **September 2024 – Present**

- Projects include a detailed study of an oxidized porphyry copper deposit in the Bradshaw Mountains, a statewide geochronology compilation, and a mineral resource report for Cochise County, Arizona.
- Awarded $24,000 from the University of Arizona's School of Mining Engineering and Mineral Resources for a proposal entitled, "Rates and Dates for Exhumation and Supergene Processes in Arizona's Porphyry Systems."

Exploration Geologist, Freeport-McMoRan, Tucson, AZ **April 2024 – September 2024**

- Logged >11,000 ft of porphyry copper-style drill core paying close attention to lithology, structural deformation, alteration styles, paragenesis of vein types, degree of mineralization, and ore-type from the Safford, Arizona mineral district.

Growth Geologist, Nevada Gold Mines, Elko, NV **February 2023 – March 2024**

- Progressed ore body knowledge for an intrusion-related gold system (IRGS) in Lander County, NV. Primary duties included managing drill programs, logging core, field mapping and sampling, preparing reports, updating geologic models, and managing contract geologists.

Nevada Mining Association Intern, Nevada **May 2022 – August 2022**

- Completed a two-part internship through the Nevada Mining Association with (1) the Bureau of Land Management (Caliente Field Office) and (2) Kinross Gold Corp's Round Mountain Mine in Nevada.
- As a geology intern with the Bureau of Land Management, I updated, curated, and monitored active case files for mineral exploration, reclamation, and historic mining legacies in Lincoln County, NV. As an environmental intern with Kinross, I conducted water sampling, site inspections, environmental permitting, and updated environmental models using AutoCAD.

Graduate Teaching and Research Assistant, UNLV, Las Vegas, NV **August 2020 – May 2022**

- Taught applied sections of sedimentology, GIS, and basic field mapping courses.
- Earned $2,500 Geological Society of America grant to help fund my thesis research.

Research Assistant, University of Michigan, Ann Arbor, MI **September 2018 – December 2019**

PUBLICATIONS & CONFERENCES

- Plonka, Z.C., and Richardson, C.A., 2025, FY2024 Directory of Active Mines in Arizona: Arizona Geological Survey Open-File Report OFR-25-05, 4 p. text, 1 table, 3 plates, 1 KMZ file and 1 web link.
- Plonka, Z.C., Capaldi, T.N., Odlum, M.L., Mackaman-Lofland, C., Ortiz, G., and Alvarado, P., 2023, Along-strike tectonic evolution of the Neogene Bermejo foreland basin and Eastern Precordillera thrust front, Argentina (30-32°S): Journal of South American Earth Sciences, v. 129, p. 104521, at https://doi.org/10.1016/j.jsames.2023.104521.
- GSA 2022 Oral Presentation: Tracking the Neogene tectonic evolution of the active Andean thrust front using the foreland basin record and detrital geo-/thermochronology, western Argentina (31-32°S).
- GSA 2021 Poster: Resolving along-strike Andean thrust front evolution using the foreland basin record in the flat slab region of Argentina.

Organizations and Leadership

Society of Economic Geologists **2025-2026**

- Member of the organizing committee for the 2026 SEG conference in Salt Lake City, Utah. Coordinating a core shack display as well as a silent auction which will contribute to the SEG student scholarship program.

Arizona Geological Society **2026-2027**

- Will be the secretary of the Arizona Geological Society in 2026.

Association of Women Geoscientists, UNLV Student Chapter **2021-2022**

- President of the Association of Women Geoscientists UNLV student chapter. Organized a women in geoscience careers seminar, hosted resume and internship application workshops for undergraduate students, and hosted social events for graduate students.

Association of American Petroleum Geologists, UNLV Student Chapter **2020-2021**

- Secretary of the AAPG UNLV student chapter. Helped organize a river clean-up at a local recreation site in Las Vegas.

SKILLS

- Experienced field geologist with international and domestic experience in mapping, measuring section, and collecting diverse samples over extended campaigns in remote and rugged terrain.
- Geologic strengths in geo-thermochronology, economic geology, geologic modeling, and sedimentology/stratigraphy.
- Excellent applied research skills (literature reviews, historic data compilations) and ability to interpret and manage diverse composite datasets, including geospatial data.
- Adaptable in team-based work environments, strong computer literacy (ArcGIS/Pro, acQuire, Leapfrog, WellCAD and other standard software suites) and ability to learn new programs. Self-motivated and eager to continue learning new skills.