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To the Members of the Search Committee,

I am excited to apply for the position of Herbert Reich Chair of Natural Science. I am currently an NSF Office of Polar Programs Postdoctoral Fellow working with Prof. Benjamin Gaglioti at the University of Alaska Fairbanks and Prof. Elizabeth Thomas at the University at Buffalo. I completed my Ph.D in June of 2023 at the University of Pittsburgh, working under the supervision of Prof. Mark Abbott. I believe my teaching and mentoring experience, research capabilities, and commitment to transdisciplinary scientific inquiry will make me a valuable member of the Deep Springs community.

I am committed to the principles of a liberal arts education, and have been increasingly distressed at the apparent willingness to abandon these principles elsewhere in academia. In the eight years since I began my graduate education, the institutions I've worked for have used threats of federal funding cuts to sacrifice programs which don't bring in enough money; pitted departments against one another in a battle for ostensibly vanishing resources while investing hundreds of millions in construction projects of dubious value; and charged students increasingly exorbitant tuition fees while outsourcing teaching duties onto poorly paid part-time adjunct faculty. My interest in Deep Springs stems from a desire to see different ideals acted out in higher education. I hope to teach in a place which exists for the benefit of students, who learn in dialogue with their peers as well as faculty. As other universities seem eager to transform themselves into expensive amusement parks which grant degrees, I seek to work in a place where the student body contributes to the day-to-day functioning of the institution. This, it seems to me, seems a far better way to prepare young people for adulthood.

**As a scientist, I focus on understanding connections between climate, ecology, and landscape**. To this end, I use a combination of paleoclimate records, time series analysis and modeling experiments. These approaches enable me to pose questions such as: how and why have the strength and frequency of different oscillating climate systems changed in the past? How has the global carbon cycle both driven and responded to past abrupt climate changes? What long-term ecosystem trajectories are likely to emerge from future megadroughts, wildfires, and catastrophic floods, based on the geologic record? I generally seek to address questions with direct relevance to human socio-ecological systems. I am excited to explore research opportunities rooted in Deep Springs's unique geographic context with interested students.

**As an educator and a mentor, I seek to foster inclusive learning environments where students are empowered to ask questions.** I have served as a lecturer and teaching assistant for an introductory class on the climate system at the University of Pittsburgh, run coding workshops in R and MATLAB, and led field trips for undergraduates and junior graduate students. Perhaps most impactfully, I have mentored ten undergraduates, four of whom completed senior theses; two of whom are co-authors on manuscripts which are currently published on in preparation; and four of whom come from traditionally underrepresented groups in the geosciences. In each of these experiences, I strive to give students the structure and background necessary for them to pursue their own interests, ask their own questions, and produce new knowledge. Continuing to work with undergraduates and colleagues at undergraduate institutions has given me the necessary perspective to emulate the best aspects of my own education while involving students in impactful research, whether preparing them for future careers in the Earth sciences or simply helping foster critical learning and thinking skills.

Thank you for your time and consideration, and please contact me with any additional questions.
Sincerely,

Sam Mark