Women of Mines: WISEM Oral History Project
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Narrator: Jennifer Nekuda Malik
Interviewer: Carmela Raygoza-Heredia
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RAYGOZA-HEREDIA: Hi, I'm Carmela Raygoza-Heredia. I'm currently here with Jen Nekuda Malik who is a current alumna who received her bachelor's, master's, and PhD here at the Colorado School of Mines. This recording is for the Women of Mines Oral History Project and today is April 26 2022. I am currently located in the WISEM House on the Colorado School of Mines campus. Ms. Nekuda Malik is in her home in Morrison, Colorado.

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RAYGOZA-HEREDIA: Jennifer Nekuda Malik is a materials scientist, with a background in renewable energy, science writing and energy policy. Jen is also a Mines alumna, having earned her BS, ME and PhD in the Metallurgy and Materials Engineering Department. During her time at Mines, Jen was active across campus and several clubs, societies and intramural sports. She served in various officer roles in the Society of Women Engineers [SWE], the Materials Science and Engineering Club, and acted as a student member of numerous interview committees within the MME Department [Metallurgical & Materials Engineering Department].

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RAYGOZA-HEREDIA: Jen's PhD research was a collaborative effort between Mines, the National Renewable Energy Laboratory [NREL], and a US based solar company. Her research focused on developing a new way of making thin film solar cells earned her both an R&D 100 Award and recognition for excellence in technology transfer. During her PhD, Jen began to explore science writing and quickly became involved in a project to highlight research at Mines. As the head writer and first editor of the inaugural issue of the Mines Research Magazine, Jen work alongside Mines administration to showcase the breadth and depth of Mines research and rebrand Mines with the tagline, “Earth, Energy and Environment.”

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RAYGOZA-HEREDIA: Following her thesis defense, Jen's interest in solar materials and energy technologies led her to a postdoc position at Imperial College London. During her time at Imperial College, she continued to research new methods of making solar cells from a range of materials, while also pursuing her passion for world travel. At the completion of her postdoc, Jen moved to Washington, DC to serve as a Science Fellow on the Energy and Natural Resources Committee in the US Senate. There she advised the Committee chairman, Senator Bingaman [Jeff Bingaman, US Senator, New Mexico, and Chair of the Energy and Natural Resources Committee] bring them in on a range of science and energy-related issues. Jen also served as one of Senator Bingaman’s speech writers, with expertise and translating science for policy.

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RAYGOZA-HEREDIA: Throughout her career Jen continued to work as a freelance science writer and has written articles for various journals and magazines, as well as content for topics and various websites. In 2013 with the retirement of Senator Bingaman, Jen established herself as an independent science writer and policy consultant. She relocated to Colorado where she continues to write and consult on energy and policy related issues.

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NEKUDA MALIK: Mel, thank you for that introduction. Let me just go ahead and tell you a little bit about my time at Mines. So, Mines for me was a really good experience. I really enjoyed my time there, not that it was ever going to be a cakewalk. Mines is a rough school and having done my bachelor's through my PhD there I’m well aware of how difficult that can be at times. But, Mines taught me a lot about resilience and about my ability to learn across a broad spectrum of life and, honestly, it prepared me well for everything that I've done since then.

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NEKUDA MALIK: It also gave me a lot of my friendships that have been lifelong since then; I met my husband there. So Mines, for me, was a really great place to go to college and a really great experience. Now, one of the things that I was probably the most involved with during my time at Mines was the Society of Women Engineers [SWE]. I got involved because my roommates actually dragged me to the first few meetings, and you know once I discovered there was food there that was, they had me [laughs].

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NEKUDA MALIK: I participated, you know, a little bit my first couple of years and then I actually ran to be an officer after that. I started out as a Secretary of SWE and I helped through that with the fundraising for the organization which was a really great opportunity to kind of learn how fundraising works on a broader scale because the Society of Women Engineers was the largest student-run organization on campus. We had lunches for every meeting and we put on all of these amazing events and that didn't happen from membership fees. All of the membership fees went to SWE International—SWE National and International. We had to fundraise to be able to afford the things that we're doing in our meetings and so, for me, that was a really great opportunity to get my feet wet in what it meant to do corporate fundraising, because that's where we got most of our funds from.

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NEKUDA MALIK: After my time as Secretary I ran to be President and I served as President for a year. It was really during my year as President that I really got to know some of the most amazing women at Mines. Deb Lasich was there as the Director of the WISEM [Women in Science, Engineering and Mathematics] Program when I was there, and she worked heavily with SWE. Then, of course, there is Candy Sulzbach and she was the faculty advisor for SWE. She really made SWE what it was during the time that I was there, she had a light touch. She had a soft hand in the sense of, she really expected the officers to work together to run the organization. She did everything she could to give us the resources that we needed and the guidance that we needed, but she didn't step in and do the job for us, she didn't step in and take control of it in any way. It was very, very much a student-led organization with her at the helm. It was a really amazing way to learn how to organize things like that, how to put together some of these programs; how to budget your time and budget your money and all of that, and how to work together as a team. That's one of those things that, literally every time that I have an interview now, like I frequently with my writing will interview people and sometimes I get interviewed for various things. SWE's always one of those things that has come up for me through my entire career, because I learned so much about how to be part of a team, how to lead a team.

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NEKUDA MALIK: I learned so much about what it takes to lead an organization and what it takes to put on various different events and things like that. All of those lessons are things that I really took with me on outside of my career at Mines. And it's one of those things I think about how lucky I was that my roommates dragged me to that first SWE meeting because I don't know that I would have necessarily gotten involved otherwise. But it really turned into something that, for me, has been very impactful through my entire life and my entire career afterwards. So, that was my experience with SWE.

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NEKUDA MALIK: The other big thing that I feel like is worth mentioning about my time at Mines is the Research Magazine, which is something that I got involved in when I was doing my PhD. So one of the things about doing a PhD at a school like Mines is it’s very, very challenging but you also have a lot of freedom in terms of your timing and things like that. I worked actually out at the National Renewable Energy Laboratory, that’s where my offices were during my PhD. I had an advisor at my end, it was Ryan O’Hayre [Ryan O’Hayre, Metallurgical and Materials Engineering Department]; and I had an advisor at NREL which was Dave Ginley [David Ginley, National Renewable Energy Laboratory, Golden CO]. And they really, and it’s possible this isn’t the experience for everyone who does a PhD but, for me, I had a lot of freedom to, you know, decide my own schedule and figure things out, but also a huge amount of responsibility, because your PhD is yours to do. And you’re to figure out and direct and all of that, and they were great about advising but also giving me the freedoms to kind of figure those things out.

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NEKUDA MALIK: But I remember getting partway into my PhD and starting to feel a little bit desperate, to be honest. I think a lot of people who are working on their PhDs feel like that at one point or another, because it’s challenging. It’s something that if it wasn’t challenging everyone’d have a PhD, right? So, it’s a difficult thing and I got to a point where I was feeling like I was getting really, really narrow into this one vein of science and I was just kind of missing the depth of science. I was missing being a little bit broader in my focus.

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NEKUDA MALIK: I was missing even just the everyday day-to-day seeing more people and being a part of the bigger world, if that makes sense. Because when you’re working on PhD research you spend a lot of time in the lab. You spend a lot of time designing and figuring out and doing your experiments that will get you the data that you need and then analyzing all of that, and so much of that work is solo work. I got to the point where I was feeling very narrow and I was missing just having a broader friendship base and broader interactions in my life. And so, I’d always been interested in writing, and actually through SWE we had a woman come in who talked about science writing because she had a science degree—it was actually a medical degree. She did science writing in the medical community, and she had come in and talked to the Mines Magazine and I actually did some writing for them to begin with.

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NEKUDA MALIK: I called her up and I said, “I’m really interested in doing something like that but more toward the type of science that I’m in. I’m in energy science and I’d be interested in doing something like that.” She advised me and she said, “The best place to start is where you know, the best place to start is local to you, so is there something on Mines campus that you can get involved in that would help you to start this type of career?” And so I went and I talked to the Mines Magazine and I actually did some writing for them to begin with.

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NEKUDA MALIK: And I talked to, I’m trying to remember who I talked to. I talked to someone in the President's Office at Mines. Because they were, it was just something that I wanted to find out if they had anything that I could help with, like the websites or anything like that, because I was looking for an opportunity. At that time it was right after John Trefny [President John Trefny] had retired and Dr. Bill Scoggins had just taken over as the President of Mines. His, I don’t remember what Marsha was; there was a woman named Marsha that I worked with—Marsha Williams. I think that she was Mines Publicity or something like that. She was an absolutely wonderful woman and she said, “Well, I’m going to keep your name in mind, because we have a potential project that I’ve been talking with President Scoggins about, and if we need some help I’ll contact you.”

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NEKUDA MALIK: And out of the blue, a couple months later she contacted me. She said, “So we’re thinking about putting together a magazine that showcases the research that’s happening at Mines.” The reason that they wanted to do that is because Mines, at the time, when people heard the name Colorado School of Mines, a lot of people
associated that with mining, maybe civil and civil engineering, maybe mechanical engineering a little bit. They 
really didn't, it really didn't bring to mind the full breadth of research that was happening at Mines; that kind of 
gave people a narrow view of what was happening at Mines. One of the things that Bill Scoggins wanted to do is, 
he wanted to really open it up and showcase just the breadth of different research that was happening at Mines. It 
wasn't related just to mining and a few of these small things but was related to a larger world, the larger world 
beyond that.

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NEKUDA MALIK: Anyway, we sat down and I had meetings with Marsha [and Karen Gilbert, Public Relations] and 
meetings with Bill Scoggins and we started to talk about okay, well, what would something like this look like. How 
could we do this, what would we focus on? We came up with looking at the fact that energy was one of the big 
focusses and that's also where my research was and where my knowledge base was. So, we did a lot of research on 
the, you know, what should we include in this, what makes sense to appear in this publication? What would give 
Mines, give people an idea of some of the other research so they don't necessarily know what Mines is doing.

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NEKUDA MALIK: So, it was a really great experience; we did, within it we did features on specific projects that were 
 happening, we did features on specific researchers that were leading some of that [research], and then we did just 
kind of an overview of the research that was going on at Mines. I acted as the lead writer for most of that; we had 
some contributing writers as well, and I acted as the head editor for it. It was just a truly amazing experience. Hand 
in hand with crafting that first Mines Research magazine [Colorado School of Mines Research], President Scoggins 
also wanted to really come up with a new tagline for the school, a new way for the school to put its best foot 
forward. We were sitting in a meeting discussing this research magazine and trying to come up with, you know, 
what we were going to call it, and I said, “Well, we’re talking about the earth and the energy and the environment, 
and all of those things and I feel like it should be something around that.” He liked me and he said, “Mines: Earth, 
Energy, Environment. I like it.” And the rest is history; that became the new tagline of the School and it was what 
we put on the first research magazine. Ever since then, I’ve seen it in many, many places. You go out to DIA 
[Denver International Airport] and it’s up there on the banners and it’s really cool to see something like that  that I 
had a hand in.

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NEKUDA MALIK: I remember, leaving Mines during my last Continuum [The Continuum: A Celebration of Women 
at Mines, sponsored by SWE], I went up to get my rose, just like all of the other young women who are leaving 
Mines. And Bill Scoggins called me back up and he said, “I’ve got something for you,” and he came up and he 
presented me with this [shows a framed copy of the Mines Research magazine: Earth, Energy, Environment]; this is 
the first Research magazine that I wrote.

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NEKUDA MALIK: And I worked with him and I worked with John Poate [John M. Poate, Vice President for Research 
and Technology Transfer, Colorado School of Mines], the Vice President of Research at the time. He was a really, 
really amazing man. The two of them signed it for me and they, there's the page where you can see my picture and 
I was the first editor and all of that. So, he gave this to me right before I graduated as a remembrance of what I did, 
and my help in rebranding the School. It's kind of a cool thing to thing to remember and thing to have to 
remember that time of Mines.

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NEKUDA MALIK: So yeah, I think that's, those are the big major things that for me were really impactful during my 
time at Mines. Mel, did you have any other questions?
RAYGOZA-HEREDIA: I don't personally have any questions. Is there anything you’d like to add before we end, though?

NEKUDA MALIK: Nothing much. I just, Mines is a great experience for me and I'm really glad that that's where I went. Thanks for your time.

RAYGOZA-HEREDIA: Thank you. Well, this concludes the session with Jen Nekuda Malik for the Women of Mines Oral History Project.

[End recording]