Myles Felch
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LD 1495

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Neither for nor against any bills presented on April 13th, 2023:
LD 1363, LD 1433, LD 1476,
LD 1508, LD 1471, LD 1495,
LD 1564

Senator Brenner, Representative Gramlich, and members of the Committee on Environment and Natural Resources. I am here to testify neither in favor of against any of the legislation presented to you here today. Instead, I am here to offer an opportunity for you to educate yourselves about the matters at hand.
My name is Myles Felch and I am a geologist and curator at the Maine Mineral and Gem Museum located in Bethel Maine. Over the past decade my research has focused on granitic pegmatite deposits, particularly those found in Maine, and especially those that are lithium-bearing! Because from a research perspective they are very interesting and produce some fascinating minerals.

I was also recently involved, along with a half dozen other geologist, in an intensive 2-year mapping project around the Plumbago Mountain lithium-deposits, as part of and Earth Mapping Resources Initiative (EMRI) funded by the United States Geological Survey and the Maine Geological Survey.

Over the course of the past three years I have also been researching and developing an exhibit on lithium resources and lithium's use in our daily lives. This includes understanding the different deposit types, the methods for extraction as well as the complex supply chains associated with the Li-ion battery supply chain. That will open this fall.

I have been listening remotely to this hearing today, and have admittingly been cringing a bit— as I'm sure some of the other geologists in the room have been— with the misuse of terminology and in some cases complete misunderstanding of geology and the complex global supply chain and current production of lithium products.

As an example, Mr. Didisheim of NRCM mentioned earlier that there are no lithium deposits in the Democratic Republic of Congo (DRC), and that is incorrect. There are spodumene deposits in different phases of development in the DRC. This is only one example of misinformation presented here today and an example of why it is important to speak with experts on this matter and not just generalists.

So, I am here today to bring awareness to this committee of some tremendous resources we have in this state. First the Maine Geological Survey, who recently published a circular on lithium in Maine. This should be the first thing you read if you have not already done so. I highly recommend looking into the references therein. Secondly, the Geological Society of Maine is a large network of professional and academic geologists with expertise beyond granitic pegmatites including, igneous petrology, structural geology, hydrogeology, economic geology to name a few. This is a vast network that is available to you.

Lastly, one of my favorite things about geology class as an undergraduate (at UMF) was all the field trips we would take to learn about geology. So, I am offering the members of this committee and opportunity to come and visit the Maine Mineral & Gem Museum to learn about pegmatite minerals as well as other minerals found in Maine. If you come you will learn about minerals, learn about the terminology that you've been grappling with today, and educate yourselves and in doing so you can educate your constituents. We offer a very comfortable learning environment for

people to be able to educate themselves and make informed decisions. It is something that we are proud to offer the public.

Furthermore, I would like to invite the members of this committee to an online lecture that I will be providing to the CEBE in Norway on March 24th from 6-7. The presentation will cover the mapping project I mentioned earlier around Plumbago Mountain and put the Plumbago North Deposit in context with other lithium deposits around the world.

One last point for perspective, a report that was published by the USGS in 1968 (Barton et al.) documented that by that date, the pegmatite quarries around Plumbago mountain has produced 250 tons for spodumene, among other mineral resources. So it would appear that spodumene has been mined in the state in the past.

References for further reading (I would be happy to provide any of this content to the committee or other interested parties):

Barton W.R., Goldsmith, C.E. (1969). New England beryllium investigations. US Bureau Mines Rept Invest 7070:177 pp

Berry, Henry N., IV, 2023, Lithium in Maine: Maine Geological Survey, Circular 23-2, 6 p.

Eusden, J. Dykstra, Jr., Felch, Myles M., Bradley, Dwight C., Mikulski, Maeve, and Saltman, Evan, 2022, Bedrock geology of the East Andover quadrangle, Maine: Maine Geological Survey, Open-File Map 22-17, scale 1:24,000. Maine Geological Survey Maps. 2161. https://digitalmaine.com/mgs_maps/2161

Simmons WB, Falster AU, Freeman, G., 2020,The Plumbago North pegmatite, Maine, USA: a new potential lithium resource: Mineralium Deposita (2020) 55:1505–1510. https://doi.org/10.1007/s00126-020-00956-y

Slack, J.F., 2017, Potential for significant undiscovered metallic ore deposits in Maine: Geological Society of Maine Fall Meeting, November 2017.

Books:
Volt Rush: The Winner And Losers In The Race To Go Green, by Henry Sanderson> **required reading**
The Powerhouse: Inside the Invention of a Battery to Save the World, by Steve Levine
Cobalt Red: How the Blood of the Congo Powers Our Lives, by Siddharth Kara