STATE OF MAINE

LAND USE PLANNING COMMISSION HEARING

In the Matter of

Zoning Petition ZP 779A

Wolfden Mt. Chase, LLC

Application for Zone Change, Pickett Mountain Mine

October 17, 2023

Day 2 of 3 of Testimony and Evidence

BEFORE: Angella D. Clukey, Notary Public, at Stearns Jr. Sr. High School, 199 State Street, Millinocket, Maine.

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(This hearing was taken before Angella D. Clukey, Notary Public, at the Stearns Jr. Sr. High School, 199 State Street, Millinocket, Maine, on Tuesday, October 17, 2023, beginning at 8:30 a.m.)

MR. WORCESTER: Good morning, everyone. I now -- I now call to order this session of the public hearing of the Land Use Planning Commission on zoning petition ZP 779A, Wolfden Mt. Chase, LLC's proposal for rezoning to allow for the development of the Pickett Mountain Mine.

My name is Everett Worster, I represent Piscataquis County and I will be the hearing officer for today.

And let me have my fellow people up here introduce themselves. Perry, do you want to start, please?

MR. ELLSWORTH: Perry Ellsworth, Franklin County.

MS. FITZGERALD: Betsy Fitzgerald, Washington County.

MR. ELWELL: Caleb Elwell, assistant attorney general and counsel for the Commission.

MS. BEYER: Stacie Beyer, executive director for the Commission.

MS. HILTON: Gwen Hilton, Somerset County.

MR. PRAY: Peter Pray, Penobscot County.

MR. TRUDEL: Leo Trudel, Aroostook County.

MR. WORCESTER: All right. Just a reminder, we have a court reporter here today creating a record of these proceedings. For her to do that, everyone present -- everyone testifying must speak slowly so that she can take down what you are saying.

Also, in cross-exam please speak one at a time in order for her to get the questions and the answers on the record.

At this time I ask all persons planning to testify today to please stand and raise their right hand.

Do you affirm that the testimony you are about to give is the whole truth and nothing but the truth?

AUDIENCE MEMBERS: I do.

MR. WORCESTER: Thank you. You may be seated.

And as you know, we've had some slight changes to the original schedule. We've added another break. This is Day 2, Session 1, Intervenor 2's testimony and evidence. Where am I? Am I in the wrong place?

MS. BEYER: Yep.

MR. WORCESTER: Oh, applicant's testimony and evidence. And the applicant has 40 minutes.

MR. STEWART: Good morning. My name is Doug Stewart. I'm a wetland scientist and ecologist with

Stantec Consulting from Topsham, Maine. My role in the application was coordinating and supporting the document preparation.

My testimony today will focus on the environmental and ecological characteristics of the site and the potential impacts that could occur. Some of my testimony is unrelated to my area of expertise. And although I may be able to answer some specific -- some questions, I may not be able to answer all specific questions. And I would rely on other subject matter experts on our team to answer those questions.

The rezoning area, as we discussed yesterday, is 374 acres outlined in red on this figure. The area is -- existing area is forested with forested wetlands and other types of wetlands as inclusions.

There are existing gravel roads throughout the area and it's very similar to the area outside of the rezoned area, forested with forested wetlands and gravel roads. Forest management activities are present throughout.

There's no existing residences or commercial businesses within the rezone area. And the nearest residences to the rezoning area are on the south shore of Pleasant Lake, about a mile away from the

rezone area. There's no commercial businesses within the rezone area. And the only commercial activities outside of the rezone area are commercial forest activities.

This figure shows the rezone area in blue with the greater Wolfden property outlined in yellow. There's no recreational activities really within the rezone area other than hunting in the fall and potentially mountain biking on some of the gravel roads and tote roads.

However, outside of the rezone area there's much more opportunity for recreation associated with the many lakes such as Pickett Mountain Pond, Pleasant Lake Mud Lake and so on. Activities outside of the rezoned area are things like ATVs, snowmobiles, hunting, fishing, kayaking, canoeing and so on.

The greater -- the greater region, as we all know, has Baxter State Park, which is over 20 miles away and Katahdin Woods and Water, which is over 8 miles away.

This figure shows the greater Penobscot River watershed as well as the subwatershed, the Mattawamkeag River, which is what the rezone area is in. It's approximately 100 river miles between the rezone area and where the Mattawamkeag River meets

the Penobscot River.

Looking at the inset, Figure -- where the project area is, there's a watershed divide that occurs and runs across the site in a westerly to easterly trending area. Everything on the south side of that watershed area flows towards Pickett Mountain Pond and Pickett Mountain Pond flows to Grass Pond, which then flows to Mud Lake, to the west branch of the Mattawamkeag River to Rockabema lake.

Everything on the north side of that watershed divide flows toward Pleasant Lake and then Pleasant Lake flows into Mud Lake.

This now shows some of the activity in the greater watershed of the Penobscot River, specifically in the orange circles those are Maine DEP discharge permits. And within the Mattawamkeag area there's two of those -- I should say there's 54 discharge permits within the greater Penobscot River watershed and two within the Mattawamkeag watershed.

The black diamonds are dams or partial dams within the Penobscot River watershed. The closest of which is on Rockabema Lake approximately 3 miles from the project area.

So drilling down a little bit further into the site characteristics, Pickett Mountain Pond is

roughly 1,500 feet southeast of the project area. It's been surveyed by IF & W. And primarily most of the information that we know about Pickett Mountain Pond comes from correspondence with IF & W so far.

It has a maximum depth of 7 feet. And IF & W has recently surveyed the pond as recently as 2004 and reports that there's little opportunity for brook trout occurrence, spawning, rearing or adults. The most recent survey in 2004 no brook trout were captured.

Because there will be no impacts to water quality and the water will be reintroduced into the environment in a sustainable way, there are no anticipated impacts to Pickett Mountain Pond.

As I mentioned before, Pickett Mountain Pond flows into Grass Pond. Grass Pond is approximately 1.75 miles northeast of the rezone area and has a maximum depth of only 5 feet. It is a state heritage fish water, which means there's a native brook trout population that has not been stocked in the past 25 years.

Grass Pond then flows into Pleasant Lake. Pleasant Lake -- I'm sorry, Grass Pond flows into Mud Lake, Mud Lake is connected to Pleasant Lake. Pleasant Lake and Mud Lake have a maximum depth of

16 feet and it's also a state heritage fish water that has not been stocked in 25 years and contains native population of both brook trout and landlocked salmon.

The -- the inlet and outlet of Mud Lake and Pleasant Lake is the west branch of the Mattawamkeag River, and as I mentioned before, flows down into Rockabema Lake, which then, again, because the west branch of the Mattawamkeag River.

And as I mentioned before, because there will be no impact to water quality and the water will be reintroduced into the environment in a sustainable manner, we don't expect any impacts to these lakes.

To evaluate the visual impacts of the project, we conducted a GIS model using the headframe, which extends 120 feet from the project site above -- above the ground. We also included a 40-foot tree canopy. Using this analysis we determined that the headframe would be visible from four different areas, which include the snowmobile trail south of the rezone area, which is in purple; Pickett Mountain Pond, which you can see shaded in green; the north shore of Pleasant Lake where there are seasonal camps; and the summit of Mt. Chase.

To further evaluate the visual effects of the

headframe and the solar array at the project site we evaluated -- we conducted -- or, actually, Terry DeWan Associates conducted a line of sight analysis from the north shore of Pickett Pond -- I'm sorry, Pleasant Lake and also Pleasant Lake itself.

And what that analysis found was that there would be some visual observance of the headframe from Pleasant Lake, both the camps and the lake, but you would not necessarily see the -- the solar field because of the intervening vegetation.

So to further evaluate impacts beyond the 3 miles that we -- we completed in the visual analysis that you just saw, we also took a look at key recreational areas within the region, Baxter State Park, Katahdin Woods and Water National Monument, Katahdin Woods and Water Scenic byway, the Seboeis River Trail and International Application Trail.

And what we found was that because of intervening topography and vegetation, the headframe would not be visible from those locations.

MR. WORCESTER: We have a question here.

MS. HILTON: Here I go. Look out. Okay. I just wanted to interrupt when you were talking about the Baxter State Park, Katahdin Woods and Waters National Monument.

Do you know whether you can see the mine from the top of Mount Katahdin?

MR. STEWART: The analysis that we completed showed us the intervening vegetation and topography you would not see the headframe or the Pickett Mountain project from Baxter State Park, Mount Katahdin, yes.

MS. HILTON: So Mount Katahdin --

MR. STEWART: Mount Katahdin, yes.

MS. HILTON: -- included? Okay.

MR. STEWART: Yes.

MS. HILTON: And I haven't -- and maybe you can't answer this. I haven't seen a photograph of what the headframe looks like. Maybe that's -- anyway.

MR. STEWART: There -- I believe there are examples in the petition. It's a -- it's a -- either a concrete or a steel structure, framework-type structure that extends a hundred -- the one that's been specced out for the project is 120 feet tall.

MS. HILTON: Right. Okay. Good. Thank you.

MR. STEWART: Dark Skies is responsible for helping public entities and industry control light pollution. And they've developed five lighting principles that Wolfden has -- has indicated that they would be able to follow with this project.

Those include use-only-light when it is needed, direct light so it only falls where it is needed, light should be no brighter than necessary, light only when it is needed, and use warm color lights where possible. And although a specific lighting plan has not been yet developed for the project, Wolfden has reviewed these and has agreed to follow these principles.

Wood, now WSP, completed a noise assessment for the project. They considered the noises from the project when it was operating from equipment such as generators, front-end loaders, backfill plant, haul truck, both on the underground and the surface. To be conservative in their analysis, they assumed that all of those different pieces of machinery they're operating at once.

And what the results of their model found was that there would be no noise impact to the receptors. And those receptors that were evaluated were either at the property line of the Wolfden property or the camps on the south end of Pleasant Lake.

So just quickly, other resources and information that we looked at as part of the project. There was a review of soil suitability that was completed by water resources consultants. They conducted a --

both a desktop and a field survey -- initial survey of the site's soils and found that overall the sites were either soil -- were either suitable or had some limitations. And any limitations they found, such as seasonably high groundwater or shallow bedrock, could become -- could be overcome with standard engineering practices.

We also contacted several different resource agencies for initial consultation. Those agencies included Native American tribes, U.S. Fish & Wildlife Service, IF & W, Maine Natural Areas Program.

Information from Maine Natural Areas Program indicated that there were no known botanical features or communities on the site. And they also recommended that a -- a desktop evaluation of those communities be done with the information that was available.

A botanist from Stantec completed that evaluation and found that there was a very low to no probability of botanical features at the site. In our correspondence with Maine Natural Areas Program, they identified a -- graminoid shrub fen in between Pleasant Lake and Mudd Lake. That feature has not been evaluated, but would be evaluated under Chapter 200.

Consultations with IF & W indicated that there was no significant wildlife habitat. In some correspondence with IF & W they identified a moderate value wading bird and waterfowl habitat on the western shore of Pickett Mountain Pond.

They then went back and reevaluated that habitat in September of this year and found that it didn't meet the criteria to be considered moderate or high value. So no significant wildlife habitat and that includes features like deer wintering areas, wading bird and waterfowl habitat, significant vernal pools. None of those are in the rezone area.

In correspondence with U.S. Fish & Wildlife Service they identified Atlantic salmon critical habitat in the area of the rezone. And because there will be no impact to water quality and the water will be reintroduced in a sustainable manner, there would be no impacts to critical salmon habitat.

So in summary, there's a 400-foot undisturbed vegetative buffer around the developed area that would minimize impacts. Operations are largely below ground and will minimize surface disturbance. There's limited visibility and sound impacts. No significant wildlife habitat is impacted. No wetland or streams will be adversely impacted. Aquatic

habitat and hydrology will be maintained. And infrastructure removal at the end of the site operations would be restored and aquatic habitat and groundwater monitored after closure.

Thank you.

MR. WORCESTER: Anybody have questions? Thank you.

MR. LEVERT: Good morning. Thank you for the opportunity to speak with you today. My name is Michael LeVert, I'm an applied economist. I've spent roughly the last 15 or 20 years in the field working for State and legislative government, large corporations; I've been on the profit sector and I currently run an organization called Stepwise Data Research that provides economic analysis for a variety of different types of organizations across New England on a variety of topic.

Wolfden hired me to help them quantify --

MR. WORCESTER: Excuse me, Michael. Do you mind turning your mic off and using this one? You're going to turn that one up? Can everybody hear fine?

MS. FITZGERALD: Yep.

MR. WORCESTER: Okay.

MR. LEVERT: Thank you. Wolfden hired me to help them quantify the economic impact of their proposed

Pickett Mountain Project. And I believe you have the report that I developed in regards to that. It was submitted as part of the application and my prefiled testimony.

So what I thought I had would do today is briefly summarize the process and methodology that I understood to develop those economic impact estimates and briefly summarize the results.

I will say as preface that I think and hope that this analysis is helpful to everyone, whether they're for or against this project, and that it provides a common understanding of how an investment like this can translate through the regional economy and that common understanding in hand can, perhaps, help elevate the conversation around other more controversial issues, or at least that's my hope.

So in terms of process and methodology, the approach I took for the economic modeling was a fairly straightforward common approach that economic analyses of this type follow. And so what I did was I used an input/output model of the regional economy that can quantify how major investments into a regional economy from outside of that economy flow through the economy and support additional economic activity in the form of interindustry spending, which

is commonly called the indirect economic impact and additional household spending, which is commonly called the induced economic impact.

To be more specific with this project, I used the RIMs II input-output model, which has -- has been created and maintained by the U.S. Bureau of Economic Analysis. And I used as inputs Wolfden's spending and used the model to quantify how Wolfden's proposed spending on the project would support additional economic activity on behalf of their supplies as they purchase intermediate goods and labor to support their contracts with Wolfden and additional household spending on behalf of both Wolfden employees and the employees of their supplies and contractors.

One thing that was different about my approach that is not typical in economic impact analyses is that my approach was much more detailed and rigorous than is typical. And what I mean by that is that many economic impact studies are forced to rely on very little data and so they may use as the inputs to their modeling a single estimate of project spending or project revenue.

I had the luxury of access to lots of data. And I used Wolfden's line-by-line budget projections for their spending. And for each -- for each line item

of their budget a separate estimate was made for how much would be spent on materials or labor, which the model treats very differently and how much of the spending would be expected to be -- to be purchased on local goods or supplies or labor.

And that methodology is called the bill of goods approach and it's been shown to be more accurate and more conservative than a typical approach. In my case, I was able to exclude roughly 45 percent of Wolfden's projected spending of the total project from the multiplicative effect of the model because it would likely not be spent within the region. And that's what I mean by being conservative.

So there are lots more details on the methodology in the report, but, in essence, that's the methodology I followed. So in terms of results, what's nice is while the underlying methodology is complex and the data is sophisticated, the results are fairly straightforward and even intuitive.

And what I mean by that is that not surprisingly if you inject several hundred millions of dollars into a relatively small region, lots of economic activity pops up to support that.

Obviously, there are a number of assumptions that underlie the results of this model of which probably

the biggest assumption is that the spending on the project proceed as Wolfden expects it to. Particularly that's important in regards to spending on a local, within-region goods and labor. If there are constraints and Wolfden cannot spend what they intend to in the local region, then clearly my results would need to be revised accordingly.

My report has a number of details, a number of tables, lots of numbers about, but I'll just summarize the top line numbers here.

So Wolfden projects to spend roughly $622,000,000 on the total project. Of that, that line-by-line analysis I mentioned, estimates that roughly 340,000,000 will be spent on within region supplies and labor. That within region spending will in turn support $715,000,000 of total economic output. You can think of that as business sales through all levels of the supply chain.

248,000,000 in earnings. And that is earnings to Wolfden employees but also to the earnings -- also earnings to the employees of Wolfden's suppliers and others that support the folks working on the project. And 4,540 job years. A job year is just what it sounds like, it is a single job either full or part time for a single year.

And, perhaps, a more accessible way to think about that is that it is roughly 320 jobs per year for 14 years. Although, the project would not be uniform in that way.

One final thing before I conclude. It was important for me to inform you and others of the total economic impact of the total project over the entire region. But if it is helpful, I also ran the same model with just the spending on the mine and I'll present those results here.

So on the mine only, Wolfden expects to spend roughly $401,000,000. That line-by-line analysis estimated that 232,000,000 would be spent within the region on locally procured labor and materials, which would support roughly $509,000,000 in business output or business sales; 175,000,000 in earnings to Wolfden employees and employees of their contractors and others. And 3,140 job years or roughly 220 jobs per year for 14 years.

Thank you.

MR. WORCESTER: I guess we have no questions.

MR. THURSTON: Hi. Good morning, commissioners and staff. My name is Terry Thurston Hill. Maye and I -- I've never done this, I'm nervous. We -- I decided she needed to prompt me and help me, but this

morning I decided I'm going to wing it the best I can do.

I wanted to tell you where I live. I own Shin Pond Village. And it's right between the upper and lower pond on the map. So you can see I'm 15 miles from Baxter State Park, from the northern entrance to the monument, the lower parcel, familiar with Pickett mountain with everything in between.

We've been in business 38 years -- actually, my husband 41, 38 for me. We raised our family there, sent our son away to college.

What I want to say is that living, making a living in a region really has you vested. The people that are visiting us are not vested the same way that we are. They can come -- last night I stayed for comments, I've heard them all.

And they can talk about wanting the pristine area, but they're not raising their families there, they're not paying their bills. And this is really important to those of us that have been there and plan to stay there.

My grandchildren are now back, my son returned home seven years ago with his family, four grandchildren, wife; have taken over the day-to-day running of our business. My husband and I are still

involved, I get to work from home. I feel retired now. I get to see my grandchildren.

My husband still works at 70 every day doing maintenance. He is the head of the fire department for 40 years. We are vested.

This project, in our opinion, my whole family's opinion, feels will fit our region. We need to have industry along with tourism.

In 1999 the Sherman Lumber Mill closed. That was -- I don't know the years of the Millinocket mills. And as a result of that, a group of businesses from Mt. Chase, Patten, Sherman, Stacyville formed the Upper Valley Economic Council. I was part of that. For five years we worked very hard at trying to bring in any kind of industry to increase tourism.

We are open to anything on the board that's going to be a benefit to our region, which is why we support this project. And I'm no longer on the board, it's still in existence. As a -- I just, you know, moved on to other things in life.

I have been on the Katahdin Tourism Partnership, which is -- oversees the scenic byway. It's an 89-mile byway from the north gate to the south gate of Baxter. I'm very active on that byway. And,

again, we are -- on the byway we do encourage tourism, we encourage history.

I've worked on the Katahdin Area Chamber of Commerce, the greater Houlton Chamber of Commerce with mapping, Patten Lumbermen's Museum.

Also, our school was going to be closed, Katahdin schools. We were going to be sending our children to Houlton or possibly Millinocket. I couldn't see that happen. My grandchildren were home. I wasn't going to want them to travel that far.

So I jumped on with five or six other businesspeople and community members to say, We pulled our school back, we saved it. We now have Katahdin schools, we have 300 kids. We -- school is essential to a community, as is industry, tourism, churches, businesses.

I want to tell you a bit about our business. When I first moved there, I had came from the Old Town area, I had worked three jobs as a single mother. And the first winter that I was done, I -- we had $1,000 to live on. I cried. My husband said, We'll make it. We both were raised on farms, we knew we would make it, and we did.

Since then we've watched our business transition from the hunting and fishing, which was great for us

at that point. We have campsites, cottages, a restaurant, a store, a public laundromat, we have public showers. We're open to everybody that wants to come.

Things started to tank in the '90s, 2000 and we had to reinvent ourselves, figure out where we were going to go. So we started hosting weddings, family reunions, small company retreats. They've done extremely well for us.

Along the way came Katahdin Woods and Waters National Monument, Roxanne Quimby. I'm going to tell you at the beginning I was opposed, I held meetings opposing it. I was fearful of the unknown. Our greatest snowmobile trail went through that land along the east branch of the river. And those scenic views we -- you know, they're hard to get back, we won't get them back for snowmobiling.

So I decided it -- it ate at me for a year and a half the negativity of fighting this monument. So I said, I'm going to reach out some more. And Lucas St. Clair came into the picture.

And he and I would sit at tables outside and talk about how we could make it work. I stressed to him the things that were important to us as a community, snowmobile trails, ATV trails, not limiting the

development of our communities, not coming and saying, You can't have that because we're here now. Those are things I stressed to him. And I felt -- and he was honest.

So I jumped on board. I endorsed the monument. I lost best friends over it, friends of 25 years because of the stand I felt was best for my community. And I still feel that today. Okay. I'm not happy with the way everything went. I'm on the board of the Friends. Okay.

I am not happy -- I did not vote for the letter that was sent to you because my understanding when I jumped on that board was I wanted to be at the table during all of the process. And they said, We will never limit development in a region. And they are, they want to. That is not right.

So I'm also -- is it working? I'm sorry, I can't see it. I'm sorry. Yes. I do talk fast. I helped form a snowmobile club 35 years ago that's still in existence today. We -- I'm secretary/treasurer, have written over a million dollars in grants that have come back to our community, which has benefitted us economically.

Seven years ago I formed an ATV club, the same thing. Patten ATV has over 500 members. They build

an incredible network. It is known statewide that people come to our region to ATV. We formed a club to jump on with them. We added 70 more miles to their 100. It's 170 miles of ATV trails. Side-by-sides are predominantly what people are riding today. It is fun.

I can't hike anymore, I've got a bad hip, a bad knee. But I can get out in my side-by-side and I can visit places that I went to with my son when he was young. I've done all the hiking, paddling. I'm grateful. I've done Katahdin, Mt. Chase, all of these places.

This project to our family will fit in with the -- we need to have continued uses of the land. We need to have industry. The -- I jumped on with Wolfden because I wanted to learn more. I learned that through the Roxanne days and the Monument days that I had to be more open-minded. That is one thing I took away from it, that I couldn't be opposed right from the beginning.

I asked to be on the community advisory council, which I sit on, encourage people to come and visit. I'm excited to think that maybe there's a company that can use the Chapter 200 rules and show us how mining can be done. And technology changes every

day. We'll be able to -- Wolfden will be able to use that new technology that changes.

We can't survive on tourism alone. We've got to have a mix. If you think that tourism alone is going to sustain a community and our kids stay, that's a fairytale. Sorry, it really is. I love where I live, I love everything about it. I -- my heart and soul is in it.

I don't see any impacts at all to the hunting, the fishing, the snowmobiling, the ATVing. And as you are aware, studies have shown that motorized use in Maine is the driver economically. And it will continue to be the driver because the money spent on trucks, trailers, your vehicle to sled or to ride is what is going to pay the bills at the end of the day for our region. And this is from Sherman to Mattagamon.

Mattagamon has a great bear hunting that is still probably the biggest hunting season for all of us. When I moved here 38 years ago, my shower house would have 30 to 40 people in line taking showers on Wednesday nights. Now we close early because there is no great deer hunting in our region anymore.

We continue ATVing until the end of October. And then we'll reopen for snowmobiling. So we do have

downtime. During that we work on our cottages and our buildings. But I just -- and the increase in tourism in the area, which I've seen some facts about it, about 30 percent, is -- it is going to be some of the recreational low base some, but the majority is motorized, it is where we're at.

Anybody have any questions to share -- ask me?

MR. WORCESTER: So what impact has the Woods and Waters Monument had on your business?

MR. THURSTON: We have seen an increase. Yeah, we have. Not to the degree of our motorize increase. The ATV trails that we've established the last seven years -- our son now is in -- he brought younger blood. He now runs snowmobiles and ATVs. He does 25 sleds, 12 to 15 side-by-sides.

So those -- he's brought a different group of people to us. And that has really the biggest impact for us.

MR. WORCESTER: Anyone else? Leo.

MR. TRUDEL: I have a question for Michael.

MR. WORCESTER: Okay. This is for Michael.

MR. TRUDEL: Michael, I just want to ask you in regards to your bill of good faith approach that you speak of. The calculations -- or I should say, the itemizations that you received and went through,

those were all numbers that were given to you, correct, by Wolfden?

MR. LEVERT: Yes, that's correct.

MR. TRUDEL: Was there any analysis to determine the viability of those particular numbers going forward?

MR. LEVERT: I believe that those numbers -- I would defer to Wolfden on the origin of those numbers, but I believe that they came from a third-party, A-Z Mining, I think, is the name of the -- the organization.

So I took those numbers and asked for certain estimates or certain finetuning of the numbers.

But I think to answer your question directly, there was no analysis that I did on those -- on those numbers in terms of how appropriate they would be for a project like this.

MR. TRUDEL: And am I correct that the revenue stream that they're looking at is based on commodity-based materials that fluctuate considerably especially during hard times, good times what have you.

MR. LEVERT: Again, I would defer to -- to Wolfden's business folks for that, but one of the reasons that I chose to use the bill of goods

approach, which is based on spending, is so that I would -- my analysis would not be dependent on revenue projections, it would just be on spending on the project.

MR. TRUDEL: And I -- and I appreciate that. At the same time revenue is the other half of the income statement.

MR. LEVERT: Absolutely, right.

MR. TRUDEL: Okay. Thank you.

MR. WORCESTER: No one else? Okay.

MS. HILTON: I have a question.

MR. WORCESTER: Gwen.

MS. HILTON: This is for Terry Hill. So what gives you confidence that the Pickett Mine will be a positive addition to the community? I mean, with respect to its -- you know, how it's going to be affected -- affecting the environment?

MR. THURSTON: The fact that it's going to be bring jobs to our community is the -- for me number one. We have in our area alone 20 to 25 young men traveling outside of the state, across the country that go to mill shutdowns.

They'd love to be home with their families, go to their kids ball games. This is an opportunity for some of them maybe to retire the last ten years, for

some of them maybe a ten-year commitment and also gain a new skill.

MS. HILTON: And that -- and I understand that and that makes sense, but I -- have you felt that it's going to be done in a responsible, sustainable manner, that it's going to be a good project, if you will?

MR. THURSTON: I do. I feel comfortable with the newly written laws that the State of Maine passed, what, six years ago, seven, I'm not sure. I feel that if DEP is doing their job, then it will be, yes.

MS. HILTON: Okay. Thank you.

MR. WORCESTER: If there are no other questions, I guess -- are you presenting as well? No?

MS. HUDGELL: I'm not specifically presenting, but I'm available to answer questions.

MS. BROWNE: If I could --

MR. WORCESTER: It's on.

MS. BROWN: I think we have a little bit of extra time, so I thought I might ask Mr. Stewart just to talk about the work that Gemma-Jayne did since she's not presenting. And that gives you context for the work that she did.

So, Mr. Stewart, you indicated that there was consultation with the tribes, but could you just

describe briefly the work that Northeast Archeology did in connection with the project?

MR. STEWART: Yes. We retained Northeast Archaeological to do a desktop survey of the site and any potential cultural resources that could be present.

Based on that they wrote a study plan to go out and do a Phase 0 study in which they had results that have been submitted as part of the petition. Any specifics related to those results I would rely on Ms. Hudgell to report on.

MS. BROWNE: And were the results of the Phase 0 sent to the tribes in connection with the consultation letters?

MR. STEWART: Yes, they were.

MS. BEYER: And is there any anticipated ongoing consultation as part of that next -- part of the Phase 1?

MR. STEWART: Yes, there would be.

MS. BROWNE: And was there any response from the tribes in response to the consultation?

MR. STEWART: There were not.

MS. BROWNE: What about the Passamaquoddy?

MR. STEWART: There was a response from the Passamaquoddy, not specifically to the consultation

letter, but in relation to the overall petition. They acknowledged that they received it and would want to be involved in future studies.

MS. BROWNE: Thank you. And so Gemma-Jayne Hudgell is here from Northeast Archeology and can talk about the -- that work if there are questions. Thank you.

MR. WORCESTER: Leo.

MR. TRUDEL: You described a desktop study. Can you go into specifics as to what that actually means?

MS. HUDGELL: Good morning, commissioners. Yes. So archeology proceeds in Maine and we also work in New Hampshire and Vermont. And it proceeds in the same manner in those states, by a phased approach.

And a desktop study is the first phase. Before we go out to actually conduct any subsurface testing archeology, we look at maps, we look at soil surveys and look at the topography of an area and see what we think would be the most likely locations for potential archeological sites.

And then we call that a desktop study. In this case in Maine it's referred to as a Phrase 0, which is the report that Wolfden has.

As well as the desktop review, we also do a field inspection to kind of ground truth of what we see in

our desktop review. So I personally went out and I walked the vast majority of the -- the rezoning area. Anywhere I couldn't walk was -- you know, anywhere really thick with vegetation. It's actually quite open, you can see for quite a long ways. So you can get a really good idea of topography, land form drainages, those kind of things.

And as part of our study, as specifically outlined by the Maine Historic Preservation Commission -- they outlined that there was a known archeological site nearby just near the -- where the water comes into Pickett Mountain Pond.

So a known archeological site. So I specifically looked at a similar land form, flat area near the pond to where that site was found. And also specifically MHPC were particularly concerned with the types of artifacts that were found at that site. And they believe them to be from local stone resources.

So we also specifically went out -- I met with Don Dudek, who you heard speak yesterday, the geologist. We went out and we specifically looked for surface geological outcrops which could have potentially been used in the past by native people to make stone tools.

From the description of the previously-known site, we believe that the outcrops that we found potentially where they've got that material to make the tools for that site. So we defined those areas, we defined the same land form as the archeological site as archeologically sensitive area where we might expect to find a site.

And we also defined those areas of the rock outcrops themselves as another area where we might expect to find remains of activities.

And I just want to clarify that when we're talking about an archeological site, we mean very specifically things that we can identify that remain in Maine soils that we would expect to find. So normally we talk about stone tools and the leftover bits and pieces from making those stone tools.

And those archeologically sensitive areas are included in Wolfden's plans. And as far as I know so far the -- the -- when Jeremy introduced the very first plans, they avoid directly impacting those sensitive areas.

However, the next step of the archeological process is for us to go out and conduct what's called a Phase 1 site identification survey, which would be us to go out and actually do some subsurface

excavation, see if I can identify a site in any of these defined sensitive areas.

And then we would proceed with, you know, next -- next phases to decide what to do with the site if it was then found.

MR. TRUDEL: Very good. Thank you.

MR. WORCESTER: I was -- I must admit, I -- when I started thinking about this project, I said, As a kid, the first thing I did was look for the highest hill and climb it. And I'm thinking, Why -- I'm sure the Native Americans did the same thing.

So I was surprised that we haven't heard more on this topic, but, apparently -- they also generally gathered where streams converged.

For example, in Milo they just built a new bridge across the river. And before they did that, I bet they spent three or four years with an archeological dig because they had found a sensitive site.

So I guess it's hard to dig up on top of Pickett Mountain, so maybe that's why you're not finding anything there or at this point it's not that obvious. And I guess the -- the one site that has been mentioned was down near water -- somewhere on the...

MS. HUDGELL: Yes, we -- we work off of a

predictability model. And a really good example of the model that we work off of was provided by Intervenor 2, I believe.

They did a Mattawamkeag survey that got put into the documentation. And that's a good example of you are more likely to find a large site near water because that's where encampments would have been. Of course, you can't expect to find every location where a person has been.

You know, these days we would cross a landscape and something might fall out of our pockets, where you would expect to find that artifact? You can't predict on the landscape where you would look for that artifact.

Most states, including Maine, do have an allowance for those type of strictly speaking archeological sites, but we -- we more commonly refer to them as fine spots, individual fine spots.

And in a -- in precontact sense a good example might be if you were out hunting and you lost an arrow, you shot at an animal and you didn't retrieve the -- the arrow, the shaft would degrade and the arrowhead -- the point might survive in Maine soils.

And you might come across that somehow if you're walking across a landscape. But how would you

predict as an archeologist where to look to locate that artifact?

And the top of mountains are just a generalized landscape unless there's something very specific, like a specific resource or they're a very specific cultural area which would be outlined by the tribes in their analysis of our -- of our work as somewhere extra to do more investigation at a Phase 1 level.

MR. WORCESTER: Just as a general comment, so much of what we've heard in the last day is based on predictive models. I -- I know that that's the way most professions operate, they -- they have these desktop models that they run numbers through and they come up with predictions.

But I must tell you, my confidence level on those kind of things isn't real high. But then again, I'm not an expert in that. But it just -- it makes -- it makes me nervous when you take a bunch of numbers and extrapolate into the future.

I know you have to do something like that, but my confidence level in those kinds of predictions isn't real high. That's probably what nobody wanted to hear.

Is that -- any more questions or comments or? I believe that's -- we'll go to cross-examination.

MR. MAHONEY: Good morning, Chair Worcester, members of the Commission, staff and the hardest-working court reporter in the state of Maine over the last day and a half.

My name is Sean Mahoney, I'm with the Conservation Law Foundation. And as we're getting set up, I wanted to make a request before we get into the cross-examination of this panel, similar to the request that Mr. Bloom made yesterday, which is that we think it would be of greater benefit today if we were able to recall Mr. LeBlanc, who you haven't heard from yet on direct testimony, who prepared the preliminary economic analysis.

So what we'd propose is that we'd use some of our time for some of the members of this pan panel and then call Mr. LeBlanc up for five to ten minutes of questions.

MR. WORCESTER: Do I hear any objections?

MS. BROWNE: No, that's fine.

MR. BEAUPAIN: Isn't this the request you denied earlier?

MR. WORCESTER: You don't have your mic on. I don't know how that works. That looks like a different mic.

MR. BEAUPAIN: This is the request that you

denied.

MR. ELWELL: It's actually the request that granted yesterday.

MR. BEAUPAIN: That's right. And I didn't say anything at the time. I thought it was a one-time event. Okay?

This request was made, you considered everyone's comments and denied it. So you shouldn't change it right in the middle of the hearing.

MR. WORCESTER: My -- my legal beagle says I have the discretion to overrule myself. I -- I think this is what I'm going to do.

Please cross-examine these people and -- and then we'll bring the other witness up and you can spend a small amount of time with them.

MR. MAHONEY: That's very fair. Thank you. I appreciate you semi-overruling yourself.

Okay. Are we set? Okay. Great. So I've got some questions for Mr. LeVert.

CROSS-EXAMINATION OF: MICHAEL LEVERT

BY MR. MAHONEY:

Q Good morning, Mr. LeVert. As a state economist you championed -- back in 2010 you championed a relatively new concept of the importance of quality of place, correct?

A Yes, that's correct.
Q Okay. And -- and last year -- or just over a year -- just under a year ago you prepared a report for the Coastal Maine Botanical Gardens, correct?
A I don't recall when it was, but that is roughly correct.
Q Okay. That is HX63. And in that report -- or is it fair to say that Coastal Maine Botanical Gardens is a place that is consistent with that theory of quality of place adding to the economic benefit of the state?
A Yeah, I think so. I mean, quality of place is an economic framework. That's how I would use it. I wouldn't -- I wouldn't put specific types of -- of building -- of businesses towards quality of place, but...
Q Okay. That's fair. If we can go HX42, Hannah.
Are you aware -- you're aware of Katahdin Woods and Waters National Monument, correct?
A Yes.
Q And would you agree that that also is an area consistent with this concept of Quality of Place?
A I don't disagree with that. I just want to clarify that. To me quality of place was an economic framework that -- that -- it was a signal to communities that they had assets that they could

market and use to attract people -- some tourists, but more importantly working families to their regions who would live and work and have their kids go to schools. That's what Quality of Place was for me.

Q And Exhibit 42 that's up on the screen there is a report from the National Park Service that notes that in 2021 after less than five years Katahdin Woods and Waters had added about 38 jobs to the region and about 3.1 million in economic benefit.

So that's --

MS. BROWNE: Excuse me, what document is this?

MR. MAHONEY: That's HX42.

MS. BROWNE: We don't have any reference to what documents you're talking about. So is this something you're introducing --

MR. MAHONEY: This is --

MS. BROWNE: -- into evidence?

MR. MAHONEY: -- this is something that was submitted last Thursday, Juliette.

MS. BROWNE: As potentially to be used as an exhibit. So do you have a copy that you can provide me?

MR. MAHONEY: I -- I don't have it offhand.

MR. BLOOM: We have it.

MR. MAHONEY: Okay.

MS. BROWNE: I just want to clarify that everything that was prefiled is not necessarily in the record. It needs to be introduced to the record and through a witness.

So oftentimes there's stuff there that's put up for a microsecond on the screen and it's not clear to me that that's intended to be part of the record.

MR. MAHONEY: This is intended to be part of the record -- part of the record. And it was provided and we're using it now.

BY MR. MAHONEY:

Q To get to the region, in your prefiled testimony --

MS. BROWNE: I'm sorry, was there a question for him on this exhibit?

BY MR. MAHONEY:

Q I was just -- I was asking if he was aware that Katahdin Woods and Waters and the National Park Service had issued a report that Katahdin Woods and Waters had added 38 jobs in the region and 3.1 million -- 3.3 million in economic benefit?

A I was not aware of that, no.

Q In talking about the region, in your prefiled testimony you state that the region is not a gateway community.

And I'm curious to know if that at the time you prepared the report did you realize that the north entrance to Baxter State Park runs through Patten?

A I -- I think I did realize that. I think what I meant was that most of the economic activity for folks visiting Katahdin was fairly far away from the project. That's what I was intending to say in that statement.

Q Okay. But Patten is the last town before the north entrance of the park, you're -- you're aware of that?

A Yes.

Q Okay. And -- okay. And about the region -- HX57, which is a letter to the editor from the deputy director of the Maine Forest Products Council.

Would you agree that one of the region's principal industries is the forest products industry?

A Yes.

Q Okay. In this --

MR. WORCESTER: Excuse me. I think this is another case where this document isn't currently on the record.

MR. MAHONEY: It's -- it is in the -- it is part of the documents that were submitted last Thursday electronically --

MR. WORCESTER: Those aren't --

MR. MAHONEY: -- to be used --

MR. WORCESTER: -- on the record until they've been introduced.

MR. MAHONEY: Okay. So I'm -- so I'm introducing -- so we haven't --

MR. WORCESTER: So anything you're going to use from last Thursday you need to preface it by introducing it as a document if you want it entered on the record.

MR. MAHONEY: Okay.

MS. BROWNE: I think you need to ask the witness's familiarity with the document if you intend to introduce it through that witness.

MR. WORCESTER: Would you mind --

MR. ELWELL: It's my understanding that up until now what we've been doing is we've been allowing those prefiled exhibits to be entered and if the other parties would like to make an objection to that, they certainly can and we'll consider it. But we haven't been very formal about that introduction up until now.

MR. MAHONEY: I think also the problem is we have such limited time for cross-examination that if we have to enter every document and go through an authentication with the document, we're going to use

all the time just getting documents --

MS. BROWNE: No, I'm not suggesting it needs to be authenticated, but just -- you know, the document comes up on the screen for a nanosecond and then we move on. So I just want to make sure that we've identified what the document is and its relevance to the witness's testimony.

MR. MAHONEY: So in --

MR. WORCESTER: I've given you the pathway to enter documents.

MR. MAHONEY: Okay. Thank you, Chair.

BY MR. MAHONEY:

Q You have your prefiled testimony before you, correct?

A I do.

Q Okay. So let's just turn to your prefiled testimony. If you could turn to Page 7 of your prefiled testimony, please. On that you -- I'm sorry, Page 8.

So in your direct testimony you talked about how the project as a whole includes the -- both the mine as well as the processing and tailings impoundment. And most of your prefiled testimony talks about the project as a whole, but on Page 8 you talk about the economic impact of the mine only.

And I just want to walk through some of those numbers with you just so I understand this.

And, again, all of this information is from Wolfden, you haven't done any independent analysis of the Wolfden numbers or had any other party review their projections on spending?

A Yeah, just to be clear the inputs to the model were from Wolfden, the analysis was mine.

Q Okay. So if we -- and it's your understanding that the project has a 14-year lifespan, correct?

A That's my understanding, yes.

Q And the first two years are preparation of the site?

A That's right.

Q The next ten years are the development of the underground mine workings and the actual mining of the ore as well as the processing and -- processing and of -- of the tailings?

A Yes.

Q And then two years for remediation?

A Yes.

Q Okay. And you're familiar -- and you're also aware that for the first three years the employees will be employees of contractors and not direct hires of Wolfden?

A That is what I've heard, but just to -- to be just a point of clarity about my modeling approach.

What I used for the inputs of my model was the

spending projections. And so the spending on labor was projected and that's what I used. And so it was diagnostic, so to speak, of whether those employees were Wolfden's or contractors.

One of the reasons I did that -- well, there were several reasons, but one of the reasons I did that is that is a conservative way to do this because the model is much more conservative about spending on labor. And so I used -- so it doesn't matter whether the employees are Wolfden's or not to my modeling.

Q Okay. And those contracted employees don't necessarily need to be from the region, they could be coming from Canada if that's where the expertise and skills are, correct?

A That's right. And so what I did in my model was make some assumptions around how much of the labor will be local. And, again, so I did not assume that 100 percent of the labor will be local.

Q Okay.

A I think it was 75 -- roughly 75 percent. But, again, as I said in my statement -- I'm sorry to take away your time, but --

Q And are you aware that yesterday Mr. Ouellette testified that as part of their training plans that they intend to pay trainees and trainers in addition

to the people who are contracted to do the work in the first three years?

A I -- I did not listen to the hearing yesterday. I'm sorry.

Q So the -- so if trainees and trainers were to be included, that would either increase the total amount of wages spent or decrease the average salary amount depending on how they -- how they paid those trainees and trainers; is that a fair assumption?

A You're saying that they -- they could either replace employees with trainees or they could add them onto?

Q The testimony was that at the same time that they were hiring people to do the work, they would also be hiring people to be trainees so that those trainees would eventually replace the contracted employees. So they've added new people to the payroll.

A My -- my question would be -- and I think Wolfden would be in a better position to answer this. Is that a new thing that would not be in the projected spending that was already in my model? If it is, then it would affect the results. If it was already planned for, then it would not affect my -- my results.

Q Okay. Are you -- final question is, have you reviewed the report from Ms. Bouvier concerning --

A Yes.
Q -- her -- your review?
You noted in your prefiled testimony that she agreed with some of your -- some of your methodology. But did you not, perhaps understandably, note where she disagreed or had critiques of your -- of your report; is that correct?
A Is it correct that I noted that? I -- I think that's correct.
Q Did you note the critiques that she had on -- with respect to your approach?
A In my prefiled testimony?
Q Yes.
A No, I did not. There is a separate memo where I responded to Ms. Bovia's responses.
Q Where is that memo?
A I don't know, the -- I believe the -- I don't know.
Q Have you submitted that memo to the -- have you submitted that memo to the Commission, do you know?
MS. BROWNE: It's -- it's filed in connection with the applicant's response to Agency review comments. I believe that was in August.
MR. MAHONEY: Okay. Thank you.
MR. BRANN: I don't know if the Commission has more questions for the panel. We're going to bring

back Mr. LeBlanc now otherwise.

MR. WORCESTER: Anybody have questions? I guess you folks can be excused. Nobody seems to have questions.

MS. BROWNE: Mr. Chair, I request an opportunity following their cross to ask some limited redirect since we're sort of going out of order here.

MR. BRANN: I'd note that the -- there's time set aside for redirect for the applicant. Presumably they could use -- we're just using the same amount of cross.

MR. ELLSWORTH: Turn on your mic, please.

MR. BRANN: There's redirect in the record -- in the schedule is what I was trying to say.

MR. WORCESTER: I guess we're going to deny the redirect.

Leo, I think you might -- did I wake you? I think you had a question before that you didn't get the opportunity to ask and maybe you can ask it --

MR. ELWELL: I think some of the questions you were asking, Leo, Michael indicated that AZ Mining would be better directed -- and I believe Mr. LeBlanc is from AZ Mining. So if you would like to ask those questions while he's up here.

MR. BRANN: Leo, let me know when you're ready.

MR. TRUDEL: Great. Thank you.

CROSS-EXAMINATION OF: BRIAN LEBLANC

BY MR. BRANN:

Q Why don't you put 701 and we'll start.

Good morning, Mr. LeBlanc --

A LeBlanc.

Q LeBlanc, I'm sorry. I should know. I grew up in Lewiston/Auburn.

If we go to the -- from the -- the 200-page PEA, preliminary economic assessment, the overall level of accuracy of all of those numbers and all of those predictions in that report is 40 -- plus or minus 40 percent; is that correct, according to Page 701 of the application?

A By definition a PEA is the first step in developing a project. And, yes, it's a broad brush approach; plus or minus 40 percent is normally considered the accuracy.

Q Okay. And in -- in the predictions of using the 2020 numbers the predicted overall capital expenditures were approximately $153,000,000; is that correct?

A I don't have the numbers in front of me.

Q All right.

A But if you say so.

Q All right. If --

A But -- like I --
Q Can you -- oh, I'm sorry.
A I can't quite read it like --
Q All right.
A I've just had surgery for cataracts so my eyes are -- and I haven't got glasses yet, so...
Q I understand. Okay. All right. Just for the record, so it's on Page 691 of the -- of the application.

Do you recall that in your report the sustaining capital that those -- that projection was going to be approximately $100,000,000, Page 692 of the -- of the application also from your PEA, correct?

A Okay. That's fine.
Q All right. Do you recall that all -- that the -- stating that the -- in the -- in the PEA that market capitalization of Wolfden would be an important factor to be able to finance this project, which appears on the application at Page 502; do you recall that?
A Yes, that's normal for a company.
Q Okay. And are you aware -- if we go to Hearing Exhibit No. 69 -- that the current market capitalization of this company is approximately $14.8 million Canadian, which would be about -- if I got

the exchange rate right, approximately $11,000,000?
A Okay.
Q And so -- but the market capitalization of this company would be important as to whether or not this project could be financed, correct?
A It's one factor, but the project itself is the main factor. The grades of this deposit are incredible.
Q And -- but --
A We -- we heard from Shawn yesterday.
Q Understood. And I'm just -- I'm asking you about the PEA which your company produced.
A Okay.
Q And -- and what you say is the market capitalization is important and we're looking -- and the market capitalization of this particular company is -- is approximately $11,000,000?
A At this time.
Q At this time.
A As -- as the progress -- as it progresses towards production, the capitalization will rise.
Q One of the other things that the PEA had to take into consideration was -- was to come up with a number to be assigned to the financial assurance trust; do you recall that?
A Yes.

Q And the number that came up in the -- in the 2020 PEA that you did was $13.7 million; is that correct?
A Yes.
Q And do you recall that in connection with the prior withdrawn application from -- to the LUPC there were questions from -- that came up from the staff that said the 13.7 million looks kind of low; could you explain it, could you justify it?

Do you recall that?

A I wasn't part of that.
Q Okay. And -- but do you recall in -- in connection with the update that came out under your signature, was there -- there wasn't any update or any change to the $13.7 million for the financial assurance trust; is that correct?
A The only thing I was asked to look at was relocating the mill and what the haulage costs would do to the general cash flow. The $13.7 million was not a number I came up with. It was a number developed by the -- by Wood.

They went through and they costed everything out based on a hundred years and based on 2 percent growth on the money. I have to rely on them. They're the experts. They gave me that number.

What I'm familiar with in Canada, this size of a

project would be somewhere between 2 and $5,000,000 to close it out. This was a lot higher than anything I've ever dealt with.

Q Okay. Well, let's --

A You say it's low --

Q Let's --

A -- but I say it's high.

Q I hear you. Okay. Let's -- let's put up from the application also from the PEA Page 524 just so -- and this is something that the Commission knows far better than you or I as to -- these are -- included the types of things that are included in the financial assurance trust.

Do you see that?

A I can't see it.

Q Let me -- let me try it differently. Let's go to exhibit -- Page No. -- Page No. 693 of the -- of the application. We're going to try and bring -- make that larger. And this is -- and that part of the -- which is coming out of the PEA.

And in there there's a -- it tells how the -- how your company came up with the closure costs. But there doesn't -- there doesn't appear to be any discussion as to how the company came up with the numbers for -- to cover a hundred years of monitoring

or cover catastrophic -- a catastrophic event.

Do you recall that?

A I can't foresee any kind of catastrophic event with this type of deposit.

Q Exactly. And so there -- and so that even though Maine law requires coming up with enough money to cover a catastrophic event, there is no -- you don't foresee it and there's no money allocated for that?

Is that fair to say?

A I would have to look at the details of the spreadsheet. I've got -- my cash flow is fed by 25 spreadsheets. The one spreadsheet from the -- from Wood, I'd have to go into those details. I haven't got it here. What they put in -- they know the rules.

Q Understood. And just so that we're clear, the -- the PEA is subject to rules from the Canadian securities folks right?

A Yes.

Q And so if you -- we were to go and -- Hearing Exhibit No. 36, we're going to look at Page 38 just for -- for a moment -- for a very brief moment. And so there are limitations to what you could do with a PEA, correct?

That is, the securities folks say, Don't be --

basically, don't be overselling what you think you have, right? Isn't that the whole -- wouldn't that be fair to say?

A Okay.

MR. MAHONEY: And I think I hear a bell, so I'm going to stop. Thank you.

MR. WORCESTER: Leo, do you have some questions for this witness.

MR. TRUDEL: Yes, thank you. Mr. LeBlanc, you speak -- you speak about projections on a consistent basis, assumptions; we've heard, again -- I'm reiterating the chair -- predictive models. But we know that those are nothing more than -- than best guesstimates forward.

Would you -- would you agree with that?

MR. LEBLANC: They are an educated guess.

MR. TRUDEL: Okay. So that being said, I guess -- I guess the model that I would revert to, and I think the Commission should have access to, are actual financial statements that are audited.

And since -- because we're looking at a book valuation as opposed to an assumption going forward. And I'm assuming that since you're publicly traded that you have such documents and that they should be --

MR. LEBLANC: I'm not publicly traded.

MR. TRUDEL: But Wolfden is.

MR. LEBLANC: But I'm not Wolfden.

MR. TRUDEL: Have you looked at their -- their financial statements?

MR. LEBLANC: No. I was hired to do a job. I was hired to design a mine, which is what we did. And we put our best estimates forward as to what that would cost.

A preliminary economic assessment is the first step in moving towards bringing a project to production. Okay? It's not carved in stone.

Those are -- all it does is give the idea of what a deposit could be, the possibility of what could happen here. It gives the company an idea where they finished drilling to do a resource and put numbers to that, put a value to that, should we spend any money moving forward with this project or should we just walk away from it? This is, in my mind, a good project.

Okay, the grades are very good. I've heard a lot about the volatility of markets. Well, we usually work on a three-year trailing average for prices. That kind of smooths the volatility out.

I mean, looking -- I was looking at it this

morning while everything was going on. Zinc over the last four years is down -- from -- from the PEA it's down a nickel. Lead is down a nickel. Copper is up $0.60, 20 percent. Gold is up over $400. Silver is up.

The overall blend of how this works is I ran some numbers before these meetings, the project is up 2 percent.

MR. TRUDEL: And if you're using an average of three years -- I'm thinking back three years ago -- silver was running around $11 an ounce.

MR. LEBLANC: 18.

MR. TRUDEL: Three years ago it was 11. I know, I traded it. And -- and it went to as high as 26.

So there's some considerable fluctuations.

MR. LEBLANC: There are.

MR. TRUDEL: And that's -- that's why I'm asking about the -- the inputs that are putting in as these models are developed. I mean, they fluctuate considerably.

And to simply look at the expenses and not take into account the -- the revenues, especially the revenues that will be needed on a consistent basis in order to make cash flow, in order to pay the bills is a relevant piece.

MR. LEBLANC: That's fine, but as -- all we have to work with is the past. Nobody can predict the future. That's why we work with a trailing average of three years; every month, you know, what the price was, it's all averaged out.

This deposit, I think, has -- if -- for this deposit to become, I think, even break even, you'd need 40 cent zinc. We haven't seen 40 cent zinc in decades.

I mean, if it's -- if the prices go down, they won't develop the deposit. Right now what we're looking at doing is moving forward with this process.

MR. TRUDEL: Very good. Thank you.

MR. WORCESTER: Thank you. We have time for staff questions. I think we -- no, go ahead.

MR. ELLSWORTH: I -- I need to understand something here that keeps coming up about contracted labor in the first two years. I heard it a number of times today.

And I'm trying in my own mind to figure out why we would need to bring in contractors to do generalized work. The site development itself is clearing of trees, clearing of vegetation, setups, those types of things.

And I know that both sides have talked about

contracted labor, but in my own mind I'm trying to figure out -- I lived up in this area, north of here, for seven or eight years and I worked the Allagash. And I know that there's plenty of talent in the area to take care of that.

So when I hear people talking about the economics of contracted labor, I'm trying to figure out where that's going to come from because it's -- there sure is heck plenty of it available in the area. That's just maybe a general statement, but it's something that is -- as I've listened for the last day and a half, I keep about this period of when we're going to bring in contracted labor.

Bringing in contracted labor to me means there are contractors probably available locally who will be utilized. Maybe larger companies, maybe smaller companies, I'm not sure, but Maine companies.

MR. ELWELL: My suggestion would be at the end of the day tomorrow the applicant has an opportunity for redirect. I think if there's any outstanding questions that commissioners have we can maybe use that opportunity to ask some final questions.

It sounds like that would probably be directed to Mr. Ouellette, who I'm imagining will be around and available for redirect and further questions.

MS. BROWNE: Yes, that was going to be my suggestion as well. Thank you.

MR. ELWELL: Thank you.

MR. BLOOM: Can I clarify one thing about the questions. I think the -- the statement I made in my opening statement which was that it was about underground workers was the reference to the contract is my understanding.

MS. BROWNE: It's probably best to have Mr. Ouellette describe it so we're all on the same page.

MR. BLOOM: I just didn't wanted want you to think I was misrepresenting.

MR. WORCESTER: We're going to take a 15-minute break.

(Whereupon a recess was held at 9:55 a.m., and the hearing was resumed at 10:12 a.m. this date.)

MR. WORCESTER: I understand there might be have been one or two late to the party this morning so if you're going to testify and you weren't sworn in when we did that before, please stand and I'll swear you in now. Just one? Okay.

Do you affirm that the testimony you're about to give is the whole truth and nothing but the truth?

AUDIENCE MEMBER: I do.

MR. WORCESTER: Thank you. I believe it's Intervenor 2's testimony and evidence that we're about to hear.

MS. JOHNSON: Should I go? Good morning, commissioners. My name is Cathy Johnson. I worked with the Natural Resources Council for 30 years and I retired in 2020, two weeks before the pandemic shutdown; best decision I ever made.

I think I may have the distinction of having -- as a member of the public having attended the most meetings of the Land Use Planning Commission and the Land Use Regulation Commission over the last 30 years. So it's nice to be back for those of you that I have met before. Nice to see you and nice to meet those of you I haven't met before.

We're going to have a big change of pace now in terms of what we're going to talk about. I was -- when I worked for NRCM I was involved in the drafting as a member of the public of both the 1997 and the 2010 comprehensive land use plans. And I'm going to talk primarily about the values and the mission of the land use plan and how this project does or does not further those -- those principal values.

You probably recall that the very beginning of the comprehensive land use plan talks about the four

principal values of the jurisdiction. And that's a large -- that's largely what I'm going to talk about.

There was a lot of conversation yesterday about the Chapter 200 rules that the DEP applies. And --

MR. WORCESTER: Just a moment, please. We --

MR. BEAUPAIN: Your Honor, can I raise a point of order?

MR. WORCESTER: Yep.

MR. BEAUPAIN: I believe in procedural order 2, maybe it was 3 you ruled testimony on CLUP was not necessary, would not be allowed because of your rules under Chapter 12. So --

MR. WORCESTER: I don't recall that.

MR. BEAUPAIN: Well, let's go on with it and I'll go through the procedural order and come back if I've remembered it correctly.

MR. WORCESTER: No, I -- I don't -- does anyone else recall that?

MR. ELWELL: That's a criteria, so I think it would be.

MR. BEAUPAIN: Well, we had asked to have the CLUP as an issue for discussion and you said no.

MS. BEYER: I think he's referring to the topics for the hearing. There was a specific list of topics for the hearing.

MR. WORCESTER: Yeah, I -- I don't have that memory. But then again, you know, I'm up there.

MR. BEAUPAIN: I'll go through the orders, your honor. Sorry.

THE REPORTER: Cathy, can I remind you to slow down a little bit for me?

MS. JOHNSON: Sure.

THE REPORTER: Thank you.

MS. JOHNSON: Sorry. Maine's north woods are incredibly special because they're the largest relatively unfragmented forest in the U.S. east of the Mississippi. Because of its size, this large unfragmented forest does four primary things.

It conserves multiple diverse ecosystems and natural resources that are crucial for the protection of biodiversity. It provides diverse recreational opportunities ranging from motorized to nonmotorized and from intensive to widely disturbed primitive recreational experiences.

It provides economic opportunities based on sustainable forestry and outdoor recreation. And it retains a natural character which furthers all of these previous three values providing a high quality of life for Maine residents and visitors alike.

Natural resource protection, recreational

opportunities, economic opportunities based on the forest and the natural character, those are the four principal values that the comprehensive land use plan directs the Commission to retain.

The LUPC jurisdiction continues to provide --

MR. WORCESTER: Cathy, we need to interrupt. I'm sorry.

MR. BEAUPAIN: Could we have a brief caucus with counsel and the chairman?

MR. ELWELL: Excuse me? We can't go off the record.

MR. BEAUPAIN: Two of us, myself and the listed CLUP --

THE REPORTER: If you want this on the record, I need to hear you guys.

MR. ELWELL: Yeah, I think we're all going to need to speak into our microphones for this conversation. We can't have sidebars like you can in a -- a court.

MR. WORCESTER: Do you need that?

MR. BEAUPAIN: Yes. Two of us had put the CLUP as issues for the issues list to be discussed today and the discussion was that was not appropriate. And the underlined part, the chairman said that you can talk about the CLUP in relation to another issue.

That's not what we're listening to. We're listening to a dissertation on the CLUP.

MS. BROWNE: I would --

MR. ELWELL: I -- I remember that discussion now. And if I recall -- the presiding officer issued the order, he can correct me if I'm wrong. I think what we were aiming for there was that we wouldn't need the CLUP as a separate topic and we can tie in -- which, as I understand -- I've read Ms. Johnson's testimony.

I believe she's tying in those topics related to natural resource impacts, water and fish resources to the CLUP, which is a standard we are charged with -- with assessing this is compliant with. So I don't -- I would advise that she be allowed to continue, but the -- the decision is with the presiding officer.

MS. BROWNE: Could I just clarify one thing? We had identified consistency with the CLUP as a topic for the hearing, which is exactly what Ms. Johnson is testifying to. So, necessarily, consistency with the CLUP would be talking about how the project ties into values of the CLUP.

So we had originally proposed to have a witness testify similarly to Ms. Johnson. That being said, I don't object to proceeding, but I -- I do think it

should be noted that we had specifically identified consistency with the CLUP as an issue and it's primarily a legal policy issue as opposed to a factual issue.

MR. WORCESTER: I suppose -- I suppose I can always revert to I have the authority to overrule myself. I'm -- I'm going to let her continue. Proceed, Cathy.

MS. JOHNSON: Thank you very much. The LURC -- the LUPC jurisdiction continues to provide these principal values in the year 2023 largely because of the existence of the Land Use Planning Commission and its predecessor the Land Use Regulation Commission. For the last 50 years LUPC and LURC have faithfully maintained the vision that is set out in the comprehensive land use plan to retain these four principal values.

Adherence to the vision and the goals, policies and regulations that implement that vision have largely avoided the incremental loss of unfragmented forests that is seen throughout the eastern U.S.

Turning first to the existing natural resources and features. The CLUP focuses on maintaining, quote, diverse, abundant and unique high value natural resources and features, closed quote.

The site of the proposed mine is part of the Katahdin region, which includes Katahdin Woods and Waters National Park -- National Monument, Baxter State Park and numerous other public and private conservation lands interspersed with sustainably managed forest lands.

The area includes a wide variety of interconnected ecosystem types, it provides habitats for many types of plants, invertebrates, fish and wildlife including nearly the full complement of predators, weasels, otters, martins, bobcats, coyotes and lynx. This full complement of predators is not found in small parcels of conservation land. You need the large unfragmented forest to have this full complement of predators.

And you need the large undeveloped, unfragmented forest to provide this habitat for these predators so that they can maintain viable and healthy populations over time.

In addition to terrestrial habitats, the area includes Pleasant, Mud and Grass lakes and Pickett Mountain Pond. Pristine clean water resources providing habitat for aquatic species of all types.

Also of international significance in the area are the Dark Skies of Katahdin Woods and Waters

National Monument that have been recognized as an international Dark Skies sanctuary. The sanctuary status is the most protected of all of the Dark Sky categories.

And I believe there's a letter in the record from the Dark Skies International folks that talks about -- more about the process and the reasons for the Dark Sky. But one of the things in that letter that jumped out at me the most was that 99 percent of the population live in areas with polluted skies.

What we have in -- in the Dark Skies sanctuary at Katahdin Woods and Waters is very, very, very rare. There are only two such places in the United States. And that -- they noted also in that letter that light pollution is growing at 10 percent a year.

So not only are our Dark Skies very rare, but we are losing them in a significant amount every year. And Dark Skies -- well, light has a significant impact not just for humans to see the sky, which is -- which is important, but they also -- light has significant negative impacts on a wide variety of wildlife.

It affects their movements and their -- their life cycles. So it's really -- light is really an important aspect of the natural environment.

And the other thing they mentioned in their letter is that the glow of light is visible from quite a distance. And -- and, perhaps, many of you have experienced this when you've been in a dark area and you can see the glow of a town 10, 15, 20 miles away. Light really does travel quite some distance.

And what we have in Katahdin Woods and Waters is a sanctuary, the most protected of all the Dark Sky places. Dark Skies International does work with committees and towns and other areas to encourage lower light pollution types of lights and so forth. And that's all excellent.

And for any kind of development we should be encouraging the types of lights that direct light down. But that doesn't mean that every place is okay to have lights pointing down. We need to maintain these areas that have -- that are completely dark because they are so rare.

All of these natural resources and features, whether it's the Dark Skies, the predators, the wildlife, the -- the ponds, would be significantly degraded by stripping the land and converting it to industrial uses by the light, dust and noise of the operation and transportation associated with it and the high potential for environmental pollutants in

the water or soils.

These effects are not consistent with maintaining, quote, the diverse, abundant and unique high value natural resources and features, closed quote, envisioned by the CLUP.

Turning now to recreational opportunities. The CLUP focuses on maintaining, quote, diverse and abundant recreational opportunities, closed quote. The Katahdin region currently has a wide variety of recreational opportunities from dispersed primitive pursuits like paddling, camping, hunting, fishing, bird watching, star gazing and exploring to more organized pursuits involving -- including trails for hikers, cross-country skiers, snowmobilers and ATVers.

Visitors come to the Katahdin region for all of these activities. These activities take place in Baxter State Park, Katahdin Woods and Water National Monument, the International Application Trail, the Seboeis River Trail and the extensive ATV and snowmobile trail networks.

And visitors come for dispersed primitive activities in the remote and undeveloped forest that surround all of these attractions, conserved lands and the proposed mine site.

The area immediately around the mine -- proposed mine site is part of this large undeveloped landscape needed to provide this full diversity of recreational opportunities in the Katahdin region. The immediate area provides both important trails, the Mt. Chase Trail, the International Application Trail, and ATV and snowmobile trails and unfragmented areas for all of the dispersed primitive recreational pursuits, such as fishing, camping, hunting and bird watching.

Patten is a gateway community for outdoor recreation of all types. Patten is the gateway to the north end of Baxter State Park, as we heard earlier, and it's also the gateway to the north end of Katahdin Woods and Waters National Monument and it's also the gateway to the Seboeis River Trail, which has been recently upgraded, and it's the gateway to all of the dispersed lakes, ponds, camping places, fishing places, hunting areas.

So it's a -- it's a hub for outdoor recreation in the -- in the north part of the Katahdin region. The key to Patten's outdoor recreation draw, whether they are ATVers or hikers or anglers, is the large unfragmented landscape, the so-called north woods experience.

The proposed mine and associated industrial

activities' destruction of the habitat, dust, noise, and water and light pollution would degrade or destroy many of these recreational opportunities, not just in the proposed mine area, but in the greater Katahdin region.

This industrial activity would degrade or destroy the reputation of the Patten area as a remote north woods experience. Once that reputation is lost, it will be lost not just for the ten or so years the mine will be operating, but for decades, if not forever.

Closely related to the negative impacts on the diverse and abundant recreational opportunities are the negative impacts that the mine would cause to the regional economy. The CLUP envisions a sustainable economy based on the forest. The forest-based economy includes both forestry and outdoor recreation.

The outdoor recreation economy in the Patten region, according to the applicant, increased almost 30 percent between 2010 and 2021. This period included a significant and continuing growth in investment in outdoor recreation including the establishment of Katahdin Wood and Waters National Monument, the upgrading of the Seboeis River Trail

and the upgrading and expansion of lodges, such as Mt. Chase Lodge, and retail and service establishes catering to outdoor recreation enthusiasts of all types in the Patten region.

Simply drive through Patten and you will see kayaks and more outdoor equipment that you would not have seen 15 years ago. Outdoor recreation is a growing industry in the Patten region.

All of this outdoor recreation-based economy is compatible with the forestry that continues in the region. As envisioned by the CLUP, the forestry and outdoor recreation economies are interconnected and can enhance each other.

An industrial mine, on the other hand, would significantly damage perception of the region, which in turn would negatively impact the outdoor recreation economy.

Last, but perhaps most important, the proposed mine would degrade or restore the natural character of the region. As the CLUP notes, the natural character includes, quote, the uniqueness of a vast forested area that is largely undeveloped and remote, closed quote.

The CLUP further states, quote, remoteness and the absence of development are perhaps the most

distinctive of the jurisdiction's principal values do mainly to their increasing rarity in the northeastern United States.

And you can see on this slide the roads in east -- not just northeastern, but the entire eastern United States. And Maine's north woods sticks out I would say like a sore thumb except that suggests that it's bad. You can clearly see the area that we are talking about as -- as one of the most natural areas in the eastern United States.

Continuing with the CLUP, quote, these values may be difficult to quantify, but they are integral to the jurisdiction's identity and to its overall character, closed quote.

The region's natural character is the foundation that supports the region's other three principal values, the natural resources, the outdoor recreation and the forest-based economy. And it is the natural character that is most threatened by the industrial mine development.

An industrial mine at Pickett Mountain would destroy the natural character of the region and cause undue adverse impacts on the natural resources, the recreational opportunities and the local economy, the overriding public values that the CLUP and the LUPC

regulations are intended to protect. These public values outweigh any short-term economic benefits a mine might provide.

Today you're faced with a proposal that would chip away at these priceless values of the north woods. This proposal is inconsistent with the faithful application of the long-term vision, goals and policies of the comprehensive land use plan and the intent of the laws and regulations implementing the CLUP and would cause undue adverse impacts on the natural character, the natural resources, the recreational opportunities and the local economy of the area, the four principal values the CLUP charges you to retain.

Thank you.

MR. WORCESTER: The applicant cross-examination.

MS. BROWNE: I think they're not done yet.

MR. WORCESTER: Oh, okay. Sorry.

(A discussion was held off the record.)

MR. ST. JOHN: Can anybody hear me? Okay. Good morning. I'm Isaac St. John, I'm a member of the Houlton Band of Maliseet Indians with the Metaksonekiyak, which means people of the Meduxnekeag River, which is a more localized name for the Houlton Band, which comes from the Maliseet, which is

Wolastoq, which is people of the beautiful river.

I'm the tribal historic preservation officer for my tribe, which means that I am the state historic preservation officer's position but for tribal lands and affairs. And what that means is I deal with Section 106 reviews for projects that receive federal funding or army corps of engineer wetlands permitting issues.

Up here, as you can see on my first slide, is our tribal seal. And I just want to -- is this the clicker -- and just say that our people are river people or water people and river and water is important to us.

As you can see here, this is the traditional territory of the Wabanaki people which is consisting of the four tribes in Maine, the Penobscot -- Penobscot, Maliseet, Micmac, Passamaquoddy. In the center there highlighted is the Maliseet traditional territory, which abuts several other traditional territories.

And to that point I want to say that the traditional territories on these maps aren't set boundaries, but rather sort of membranes that villages and groups of people would go through based upon waterways, tributaries, rivers, lakes, portages

within their main sort of territory.

Again, we are river people. Throughout the center of our territory is the Saint John River or the Wolastoq, which means beautiful river. And it includes both the main river itself, its tributaries, lakes, streams, brooks, including the Meduxnekeag River, which is where my tribe is currently located on on the American side of the border versus the Canadian side, which is a more -- you know, obviously hard border than what the tribal borders were and are.

And this map just shows the current tribal holdings -- this -- not current. This was made -- I made this a couple years ago, so there's a little bit more that might not be included on this map. But as you can see, that it is -- especially specifically in the Penobscot area based upon the Penobscot River is why it's sort of like a -- a snake shape in the center.

But most of the tribal holdings are based around water. And sort of the main tribal holdings are based around rivers and streams and tributaries. So, again, the Wabanaki people are river people and water people, so water is central to a lot of our cultural practices and beliefs.

These are pictures of the Meduxnekeag River, which runs through Houlton, Maine and through our tribal territory. The top two pictures are from the -- a few summers ago when the water was relatively low and the bottom two are from this fall where we've had a lot of rain so it's relatively high.

I bring up the Meduxnekeag and its watersheds and everything else to sort of bring home the point that we are not new to river pollution and river restoration. For the last 30 years, for my entire life, we had been working with the Town and several other ecological groups to restore the river to what we believe would be the precontact health of the river -- or at least trying to get it to that point.

We have been removing heavy metals from the river and trying to reintroduce other types of fish and cultural practices upon the river that have been lost because of industrial impacts that have been keeping us from practicing our culture.

Up until recently we were only allowed to eat one fish a month -- or one fish portion, which is the size of a playing card deck per month per person. And they recently upgraded that to two portions per month per person, which is a very different situation

to what we were used to traditionally speaking before industrial pollutants.

And growing up I never used to fish in this river because of that fact because you couldn't really eat what you catch in -- in this river. And I wouldn't fish just to trophy fish or just to fish. I would fish to eat and consume the fish that I caught.

But this goes to the fact that when I speak about a river or a specific water body, it's not just the river pictured, it's the tributaries, the lakes, the -- everything connected to that river or within that watershed.

This is a predictive model of the Meduxnekeag River watershed based on a study back in, I believe, 1992 to help with a bridge upgrade near our tribal lands. I mentioned this because of -- the area of northern Maine has significantly less area of study than southern Maine.

And to create a predictive model based on previous research and previous findings is harder to do up in northern Maine because of the lack of body of research in the area versus southern Maine. So there's a little bit more degree of accuracy -- there's less degree of accuracy in these models than there would be in, say, southern Maine where there's

more research done.

And to the point of the previous testimony, if there was a letter sent to the tribe, I didn't receive it. It might have went -- gone to the chief. And the chief is a busy woman, she's all over the state, all over the country. And it might have -- she gets a lot of mail.

And for the most part for culturally significant projects, culturally significant anything, it usually comes to me as well since I do deal with preservation and revitalization. So if there was a letter, it didn't get to the right people.

And to their -- their study, I don't find any fault in sort of their phase work, but I do find that there is less emphasis on the cultural aspects on the land itself such as medicines, plants, animals that are culturally significant to the tribes in the area rather than just money-making trees, money-making items on the -- on the environment.

So there's that breakdown between economically important objects versus culturally important plants and animals, objects that I would like to bring up.

And, finally, I would just like to reiterate again, we are river people, water, water access, water health, river health, that's all important to

our people. And that's why I'm here today to try and reiterate that what could be not a polluted watershed in the best case still might be in the worst case and that culturally does not stay within the single watershed, culturally that affects other watersheds because of just how attached to watersheds we are.

And I would just like to sort of add how important water is to us with a few sort of story -- I'm not going to tell you stories, I'm just going to sort of tell you about stories that we have culturally that deal with water.

We have stories about horned serpents in the water that are sort of just telling you to respect the water, not to play around in it because you can get washed away. Fang serpents in Penobscot -- Passamaquoddy Bay that take people away to be aware of the dangers of water.

We have a story about a lake monster that has soaked up all the water and isn't allowing people to drink the water so we have our cultural hero go and defeat this monster and turn him into -- well, there's some variations -- turn him into a frog or just beat him and then release all the water for the tribes to use and drink.

And then there's other cultural aspects that are

more close to home of fiddleheads, if anybody has ever had fiddleheads from the river, which are prefurled ostrich fern, I guess, they're buds, I don't really -- I don't remember what specifically they're called.

We have sweat grass, which when I say medicine, I don't necessarily mean stuff that you eat or take in sort of, like, pill form. It could mean something sort of like a -- spiritually you burn it for incense, stuff like that.

Sweat grass is a medicine that we use. Cattails, which are called the grocery -- or the supermarket of the -- the wetlands because you can use them for food, cordage making, fire making, all sorts of stuff. And ash wood, which grows near wetlands.

And these are all sort of plants that may and could be impacted by industrial pollutants that we would have to sort of limit our use and limit our inclusion into our cultural practices.

And I think that is it for me.

MR. WORCESTER: I think now we come to the applicant's cross-examination.

MS. BROWNE: Good afternoon. Juliette Browne for the applicant. Nice see you, Ms. Johnson, nice to meet you, Mr. St. John.

Given limited time, I think probably most of my questions are going to be directed to Ms. Johnson.

CROSS-EXAMINATION OF: CATHY JOHNSON

BY MS. BROWNE:

Q So do you have a copy of your prefiled testimony with you?

A I do.

Q Great. So on Page 2 you state that the CLUP allows economic activities based on outdoor recreation, forestry and farming. And that was in your direct presentation as well.

Now, you would agree, wouldn't you, that the CLUP and this Commission have allowed a broad range of economic activities that go well beyond outdoor recreation forestry and farming?

A Well, the CLUP specifically calls those out as the focus of economic development. They may have allowed other things when there aren't public values that override them.

Q So you're aware --

A That's the vision is -- the vision is for forest-based economic --

Q And you're aware that the Commission has approved multiple renewal energy projects as being consistent with the CLUP, correct?

A I'm not sure that I'm aware of what rural energy projects the Commission has approved.
Q So, for example, the Kibby Wind Project the Commission rezoned more than 2,000 acres for wind, correct?
A Yes.
Q And more recently the Commission has rezoned more than 600 acres for solar development as part of the Three Corners Project, correct?
A I'm not familiar with that one.
MR. WORCESTER: Can I interrupt just for a second?
MR. ELLSWORTH: Could you just move the mic a little bit closer? I'm a little bit hard of hearing sometimes.
MS. JOHNSON: Sorry.
BY MS. BROWNE:
Q And are you aware that the Commission has also recently approved the rezoning for the Three Rivers Project, again, more than 600 acres for solar energy, and in a location that abuts the west branch of the Narraguagus River?
A Certainly all of these renewable energy projects are important for the transition to a climate -- a new climate future and climate impacts have impacted a

lots of natural resources. So these projects that help hedge against climate change are important for protecting the principal values of the jurisdiction.

Q So you would agree that the Commission should take into account the value of advancing the clean energy economy, correct?

A Yes.

Q Okay. And you're also aware that the Commission has rezoned areas for residential and hotel development, specifically the Plum Creek Moosehead concept plan they rezoned more than 16,000 acres for dwellings and resorts?

A That was primarily an outdoor recreation development and it did not happen.

Q But the Commission concluded that more than 2,000 dwelling units and 1,050 resort accommodations, that that type of development was also consistent with the CLUP?

A It was part of outdoor recreation.

Q And you're aware that the CLUP also specifically contemplates mining in the jurisdiction?

A Yes, when there aren't overriding public values, which I believe there are here.

Q And you're also aware that -- and maybe we could pull up Section 681, the statutory change.

Are you aware that the legislature updated Section 681, which governs the Commission's activities and purpose and scope of what they do?

A Yes, there have been a number of changes over the 30 years that I worked for NRCM.

Q And -- and this particular change resulted in an increased focus on economic development and honoring the rights and desires of local populations, correct?

A It did, but if you look at the basis statement for this, you will see that it's clearly balanced with maintaining protection for all of the other values that are -- are mentioned in the purpose statement.

Q Okay. Well, are you aware that the Commission approved guidance after this statutory change, 2012 guidance? Are you familiar with that guidance document?

A I am. I don't have it in front of me, but I have red it in the past.

Q Okay. And you're aware that as part of that guidance the Commission concluded that as part of the balancing that they do consistent with the statutory change they were going to place increased emphasis on, one, serving the regions in which the unorganized and deorganized areas are located; two, honoring the rights and participation of residents and property

owners; and, three, encouraging and facilitating regional economic viability?

A I'm not familiar with that document you're reading from and I don't see it there, so I'm a little confused.

So what you just read was what's at the bottom of Page 3?

Q Yes.

A It's at the bottom of Page 3.

Q Okay.

A But I do know, having read that, I can't give you the exact place, but I do know that that document also reinforces that this is not to contradict the -- the Commission's traditional protection of natural resources, abundant outdoor recreation opportunities, the local economy and the natural character.

So it was -- it was some increased -- increased recognition of regional interest, but not suggesting that regional interest should override the statewide interest that the Land Use Planning Commission is directed to --

Q No, but it --

A -- consider.

Q -- specifically places increased focus on economic viability, correct?

A I think it was more like increased --
Q Okay. That's all right.
A -- consideration.
Q I'll let -- I'll let -- the Commission is familiar with their own guidance. That's fine.

So I think you also talk about the value of remoteness in the jurisdiction. And I think you suggested that this is a remote area -- or let me back up.

As I understand your testimony, the Commission places increased emphasis on sort of remoteness values within the jurisdiction, correct?
A The vision for the CLUP talks about remoteness as being part of the principal value to be protected, yes.
Q And could you pull up the location map?

So are you aware that T6R6 touches a -- the Town of Hersey, which is incorporated?
A Yes, I'm aware of that.
Q This one.

And you're aware that Mt. Chase and Moro Plantation on either side of T6R6 are both locations of primary and secondary -- primary and secondary locations for the Commission.
A I'm not sure I'm familiar with that --

Q Okay.
A -- particular map. If you have it, I'd -- I'd be happy to see it.
Q That's okay. If you're not familiar with it, no problem.
And you're also aware -- now you can bring up the expedited wind permitting map, please.
You're aware T6R6 is within the expedited permitting area, correct?
A I have not been aware of a wind project in that area, so I haven't really focused on which parts of that area are expedited for wind.
Q Okay. Well, you -- when you were with NRCM, do you recall meeting with Alec Giffen when they were determining areas that were appropriate or not appropriate for expedited wind power?
A I recall many, many meetings with Alec Giffen. I'm not sure if I recall any -- any specific meeting that you're talking about.
Q But this area was, in fact, expedited -- and I think as you can tell from the map, not only is T6R6 expedited, which means it's rezoned to allow grid scale wind energy, correct? That's -- that's what it means to be within the expedited wind permitting area?

A Yes.
Q And that Moro Plantation and Mt. Chase are also within the expedited wind -- zoned for wind power? You'll have to take my word --
A I can't see that from the map -- from here; my eyes aren't that good either.
Q Okay. Well -- so, in fact, isn't there a -- all things being equal, a desire to place development closer to the edge of jurisdiction as opposed to its remote core?
A Yes, in general. But it's important to evaluate each particular site.
Q Absolutely. But this is on the edge of the jurisdiction as opposed to the remote core of the jurisdiction?
A I wouldn't call this the edge of the jurisdiction given that the towns that are surrounding it are so undeveloped. If you drive between -- north from Patten, it's -- it's clearly a very remote area and this goes off the road.
Q But the edge of the jurisdiction refers to the border between the organized and the unorganized jurisdiction. So I didn't ask whether it's remote or heavily populated.
But it is on the edge of the jurisdiction?

A It is remote and not heavily populated.
Q That wasn't my question. It is on the edge of the jurisdiction?
A I guess -- I guess you could say that.
Q You also talked about the Dark Sky. I wonder if we could pull up the Dark Sky application.
Were you involved at all in the application for the Katahdin Woods and Waters Dark Sky?
A I was not.
Q Okay. Were you aware that that's something that a landowner applies for and requests certification for?
A Yes.
Q And are you aware that as part of their application they identified threats to the Dark Sky?
A Sorry, I don't understand the question.
Q So could you flip to the page -- as part of their application they identified areas that presented a threat. And in the application they specifically identified proximity to other communities as threats to the Dark Sky.
A Yes.
Q So Millinocket, East Millinocket, Medway, Patten and Mt. Chase.
A Yes.
Q And you're aware that as part of that designation and

application the Katahdin Woods and Waters also agreed to implement the types of Dark Sky night lighting recommendations that Wolfden is proposing to follow here?

A I believe that the application talks about avoiding lights whenever possible.

Q Correct. So they're implementing the same guidelines that Wolfden would be following? It may be implemented different, but --

A That's not my --

Q -- the principles --

A -- understanding. My understanding of the application is that they are going to avoid lights altogether because of -- whenever possible. And that's not what I understand Wolfden is going to do. They are going to have --

Q So including with --

A -- lighting and --

Q -- lodges and -- and other kinds of infrastructure that they may be developing?

A Sorry, what was the first part of that question?

Q Including avoid lights associated with any infrastructure this they may be developing?

A I assume so. I'm not deeply involved in the management of the Monument.

Q Okay. You had a number of slides and talked about wildlife impacts and -- and threats presented by fragmentation of habitat.

Would you agree that size matters when you're talking about habitat fragmentation?

A Definitely.

Q And are you aware that this rezoned area is 347 acres?

A Something like that.

Q Okay. And just for context, are you aware that the Saddleback ski area, which is another DPD rezoned area, is more than 2,000 acres?

A I'm not familiar with Saddleback's size.

Q And as I mentioned earlier, the Kibby Wind Project rezoned more than 2,000 acres?

A I don't recall the exact acreage.

Q Okay. And are you aware of other rezonings that the Commission has done a DPD rezoning for?

A My memory is faded since I retired three years ago. I'm not sure.

Q Okay. But you would agree at least of the ones you're familiar with that this would be one of the smallest DPD rezone areas?

A I can't recall. I would --

Q Okay.

A -- have to look at the data.
Q But you would suggest -- you would agree the Commission should take into account size when they're evaluating the impact on habitat fragmentation?
A I thought you were -- your question earlier had to do with the size of the habitat overall. Any development causes habitat fragmentation, particularly when it's in the woods as this one is far -- you know, miles away from the public road.
So it's fragmenting a much larger area than the actual 300-whatever acres.
Q So you're aware that Wolfden owns a parcel that's more than 7,000 acres?
A Yes.
Q And that the -- they're only developing -- proposing to develop and rezone 347 acres, correct?
A Yes. Well, whatever it is. I keep hearing different numbers --
Q And the --
A -- 364, 347, whatever.
Q And the remainder of their land will remain in forestry management?
A That's my understanding.
Q Which is --
A I'm not sure there's any legal requirement for that.

Q And you're also aware that they're using existing access roads, so they're not going to have to construct new access roads which might fragment the habitat?
A My understanding is that they're going to have to widen the roads significantly to enable the -- the trucks and the -- the 300-plus trips a day that I understand will be going in and out of the -- the mine site.
Q So your assumption is the roads will be significantly widened?
A That was my understanding from the application.
Q So even if there were some widening of the roads, you would agree that that -- it would be preferable to do that than to construct new access roads through the forest?
A Yes, it's always preferable to use existing roads.
Q You had some slides that were -- painted a lovely picture of the jurisdiction.

Now, would you agree that the -- one of the defining characters of the unorganized area, which is more than 10 million acres, is private ownership of land that is predominantly in forest management?
A Yes.
Q So it's not the case that the majority of the area is

a national park or a national monument, correct?
A That's correct. Most of the pictures I showed, though, were of the private land surrounding the proposed mine site.
Q I didn't see anything in active forest management or clearings or forest roads?
A I was showing the area around the proposed mine site, that's what it looks like right now.
Q You -- you would agree, though, that one of the defining characters of the jurisdiction is it's a multiuse area?
A I'm not sure what you mean by multiuse. I would agree that a large part of the jurisdiction is managed for forestry and that when clear cuts happen, they're not pretty, but they grow back.

Most of the Baxter State Park was under forest management before it became a park. So the forest, when it's managed for forestry on a sustainable basis, does grow back. And as we can see from the pictures around the Pickett Mountain Mine, that the forest is -- looks quite nice in that area right now.
Q And one of the other defining characters of the jurisdiction is probably that private landowners allowed public access to their property for recreational use, wouldn't you agree?

A That is a longstanding wonderful practice in northern Maine that's not found anywhere else. And I think it's also a result of the very large unfragmented forest that we have that it has not been parcelized and no trespassing signs put up.
Q And you're aware that Wolfden intends to allow continued public access to the remainder of their 7,000 acres that's not being rezoned?
A Yes.
Q And I think you actually in your testimony said you've been to the project site, correct?
A That's correct.
Q So you went along a private road to get there and you went on private property to get there, correct?
A That's the longstanding practice in northern Maine is that lands that aren't posted are open to the public. It's a wonderful thing about our forest.
Q And it requires landowner permission, correct?
A The landowners have -- by not gating it have generally given permission, yes.
Q And you understand that snowmobile and ATV use will continue on the Wolfden and surrounding parcels uninterrupted, correct?
A That's what I read in the application.
Q So fair to say you're not as familiar with the ATV

and snowmobile recreational user group as you are with the hiking, passive --

A I'm not --

Q -- recreational use?

A -- as familiar, but on one of my trips to the region I did talk with some ATVers that I ran into when I was looking at the Pickett Mountain site.

And -- and we got into a conversation about the proposed mine and I was quite interested that these ATVers were very opposed to the proposed mine.

Q Do you have their names?

A I do not have their names.

Q So you're not suggesting the Commission should rely on this anecdotal conversation you had to evaluate whether ATV clubs and ATV users and snowmobile clubs and snowmobile users are generally supportive or not supportive of the project?

A It's one piece of data that they can consider as they wish.

Q Right. But you wouldn't suggest that that would be appropriate for them to rely on -- we don't know who they are and it was an anecdotal conversation that you had with some unknown people, right?

A It was a -- a spur-of-the-moment conversation that I had on the road with some ATVers.

Q You heard the testimony of Terry Hill today?
A Yes, I did.
Q And you'd agree she's very involved in ATV and snowmobile communities and business, correct?
A Yes, I've seen the growth of their business as I've gone through there.
Q Okay. And you wouldn't disagree it's an important economic engine in the community?
A It is one of the types of outdoor recreation that's part of the outdoor recreation economy in the region along with all the other ones that I mentioned.
Q And you're not suggesting to the Commission that you're particularly well positioned to comment on the impact of this project on her type of business, are you?
A Not on her -- not specifically on her type of business, but on outdoor recreation in general.
Q Okay. But you don't -- you don't own a small business in the region, do you?
A No, I don't. But I do know a lot of business owners. I got quite acquainted with many business owners in the region doing my work on Katahdin Woods and Waters National Monument. So I know a lot of folks who run businesses in the Katahdin region.
Q But you would agree the Commission should listen to

the voices of the businesses directly as opposed to anecdotal opinions that you might have on those businesses?

A (Answer was redacted from the record.)

Q Okay.

A (Answer was redacted from the record.)

Q I --

A (Answer was redacted from the record.)

Q With all due respect --

A (Answer was redacted from the record.)

Q -- I'm going to move to strike. That is not responsive and it's -- it's third-party hearsay.

I think it would be helpful for the Commission to hear directly about your views and what you've experienced as opposed to your thoughts about what other people might or not might be feeling.

A (Answer was redacted from the record.)

Q So you don't have any specific examples?

A (Answer was redacted from the record.)

Q Okay. Well, I renew my objection to strike that testimony.

You would agree that the CLUP requires a balancing?

A I agree with that.

Q So the Commission has to balance on the one hand the

values that you've articulated very eloquently and shown pictures of with on the other hand regional economic development that was articulated very eloquently by Terry Hill?

A The regulations the CLUP has regarding mining are clear that the balance should be between the -- the mine and the overriding public values. So, yes, the Commission needs to do that balancing act.

And I think in this case the overriding public values of this region are clear because -- partly because the economics of the region rely on the natural resources and the outdoor recreation and the natural character.

Q And including significantly snowmobiling and ATV use, correct?

A Including snowmobile and ATVs, absolutely.

Q It's a --

A And camping --

Q -- multitude of uses, it's not just one?

A I think I have made clear in my testimony that the recreational uses go all the way from nonmotorized to motorized, from very organized to very dispersed primitive recreation.

I think all of those types of recreation happen in the Katahdin region and should continue -- should

be able to continue.

MS. BROWNE: I think that's all I have. Two minutes to spare. I'm keeping track of it. I'm coming back for it later.

MR. WORCESTER: I think we've reached the court reporter's break, so we'll take 15 minutes.

(Whereupon a recess was held at 11:16 a.m., and the hearing was resumed at 11:32 a.m. this date.)

MR. WORCESTER: Before we go on, I'm going to go back and -- and support Ms. Browne's request to strike the comments relative to what area businesspeople might or might not be willing to say.

Now it's Intervenor 1's cross.

CROSS-EXAMINATION OF: ISAAC ST. JOHN

BY MR. BEAUPAIN:

Q Thank you. Good morning. I'm Dean Beaupain, I'm here for H.C. Haynes, Incorporated. Mr. St. John, I would like to ask you a question.

Would you agree that if this zone change is approved by the Commission that the zone change alone without a permit Chapter 200 will not adversely affect any of your Nation's interests?

A I'm not aware of Chapter 200 guidelines.

Q Well, that is a DEP rule under which a mining permit would be processed; and as part of that rule, DEP has

to make a determination that there are no adverse impacts on any uses or if there are any adverse impacts, they can be mitigated.

A I don't have that knowledge.

Q Well, assume.

A I can't -- I can't say comfortably.

Q Okay. Well, the zone change itself, what will that do to adversely impact the Nation's interests if it doesn't authorize any work, any permit, anything at all other than filing an application with the DEP?

A I don't know. I -- I'm not that knowledgeable on that.

Q Well, if the zone change is approved, will there be any -- any change to surface water runoff?

UNIDENTIFIED SPEAKER: Asked and answered. I think he's asked the same line of questions several times now and he says he's not familiar.

MR. BEAUPAIN: Or he doesn't know.

MR. WORCESTER: I think we need to move on.

MR. BEAUPAIN: Thank you.

CROSS-EXAMINATION OF: CATHY JOHNSON

BY MR. BEAUPAIN:

Q Ms. Johnson, did you testify in your direct testimony that there would be 300 trips a day of trucks?

A I believe the application says that there will be 55

roundtrips by ore-carrying trucks, an additional, as I recall, roughly 200 with employees and contractors and visitors and so forth going back for a total of roughly 300 vehicle trips along the roads per day.

Q And would you see the same problem with heavy truck traffic as opposed to employee cars?

A I think they both have adverse impacts on wildlife. And the -- the heavy trucks may have more adverse impacts, but I think all vehicle trips have adverse impacts on the surrounding environment.

Q Okay. And do you know what the heavy truck use is on the Pleasant Lake road right now?

A I'm aware that they use those roads for timber harvesting. And when they're harvesting, the log trucks do use some of those roads; not all of them because some of the roads on the -- that are there could not take a -- a loaded log truck, but I am aware that the log trucks are on those roads.

Q How many trucks a day?

A I have not seen that data.

Q Do you have any data on nonheavy truck use of the Pleasant Lake road?

A I don't have any data. I have been there myself and seen very light traffic when I was there, but that was just my -- my various visits there.

Q Do you know the heavy truck use on Route 11?
A No, I do not.
Q Do you know the heavy truck route on Route 11 north of Moro going to Fort Kent?
A I -- I don't have any data on heavy truck use, period.
Q Okay. So as far as heavy trucks go, 55 roundtrips in 12 hours would work out to less than five an hour?
A Well, that -- 55 would be 110 trips along the road in 12 hours -- you can do -- you can do the math.
Q If do you it that way, it would be about nine, about every nine minutes there would be a truck.
A Yes, I'll trust your moth.
Q And do you think that's heavy use?
A I think that the fish and wild -- the wildlife and the birds in the area would think that's heavy use.
Q I see.
A The invertebrates that are trying to cross the road, that would be frequent problems for them.
Q A problem for deer?
A I'm sure that there will be deer collisions.
Q Do you know how many deer there are per square mile in that area?
A I do not.
Q You've got quite a few deer down to Alna?

A Yes, we do.
Q I can tell you we've got a lot less up there, a lot less. One or two a square mile maybe.
A I don't know the -- those data.
Q Do you remember Great Northern Paper Company?
A I do.
Q Did you use the Golden Road in those days?
A Yes.
Q Did you know that Great Northern produced about 800,000 tons of paper a year?
A I did not know how much paper they produced.
Q And did you know that 800,000 tons of paper requires about 800,000 cords of wood?
A No, I didn't know that.
Q You knew they used a lot of wood?
A I knew they harvested.
Q And would it surprise you to learn that most of that wood came from the Commission's jurisdiction?
A No, it wouldn't surprise me.
Q And a lot of it came from this area?
A Great Northern owned 3 million acres, as I recall.
Q 2 million.
A 2 million -- 2.1 million. 2.1 million.
Q It varied a little over time, we always said 2.
A So, yes, they owned millions of acres and the wood

came from their land, which was both to the west of Baxter State Park and to the east of Baxter State Park and north quite a distance.

Q Right. Now on the Golden Road in particular as well as the logging roads up here, we would have had more heavy truck traffic when the paper mills operated, correct?

A It depends on how much wood is being taken out. And --

Q Assuming --

A -- I don't know --

Q -- 800,000 --

A -- because some of the wood is coming out for the hardwood mills and -- the wood mills as opposed to -- you know, in addition to the --

Q Right. Well, those would simply go north.

A Is that a question?

Q No, I was trying to clarify that Great Northern had a mill in -- Pinkham Lumber Company, in Ashville Plantation.

So did all that truck traffic destroy the wilderness concept in the Commission's jurisdiction?

A I think it definitely degrades the natural resources in the -- in the area.

Q Did people still feel they were in the wilderness?

A I think people feel they were in the wilderness more when there's not -- when they're not right on the Golden Road.
Q I would agree with that. But was the purpose of the Golden Road at that time to move wood?
A Yes.
Q It was not to provide a wilderness experience to people, was it?
A Well, I believe the woods have always been open. That's one of the great benefits of -- of our large unfragmented forest is that the landowners have kept it open.
Q Right. So the Pleasant --
A So -- so there have been recreational users.
Q So the Pleasant Lake road is a logging road, correct?
A I presume so.
Q And its primary purpose is to move large goods?
A I'm not sure that I'm that familiar with the Pleasant Lake road.
Q Do you see a difference between an 18-wheeler hauling a load of logs and an 18-wheeler hauling ore?
A Not -- it depends on what context you're asking --
Q Thank you.
A -- in terms of impacts on what.
Q Right. Now, you think Patten is a remote area?

A The town of Patten --
Q Yes.
A -- itself? No.
Q Where does the remoteness start?
A The remoteness starts when there's no development.
Q How about Hersey, is that remote?
A Parts of Hersey are quite remote.
Q Okay. We're in Millinocket. Is this remote?
A Downtown Millinocket is not remote.
Q Now, Millinocket is a small part of Indian Purchase 3.

Is the remainder of Indian Purchase 3 remote?

A I'm not familiar with Indian Purchase 3.
Q It's a township.
A I'm not familiar with it.
Q Okay. I'm just wondering why you think the project area is remote as compared to the Upper St. John Nature Conservancy piece with a million acres.

Do you consider that remote?

A I do.
Q How do you compare the remoteness of that to the project area?
A I -- I feel like both are remote.
Q Okay. So you believe that the project area is not on the fringe of jurisdiction?

A I think we looked at maps earlier. It depends on how you're defining the fringe.
Q Okay. So you don't think the short- and long-term socioeconomic benefits of this project are worth it?
A I think that the public values of the area outweigh any potential socioeconomic benefits this project might provide.
Q And is there any value in allowing the applicant to go through the Chapter 200 process to find out?
A That's not the question before the Commission. The question for the Commission is whether or not the project meets the Commission's criteria for approval for rezoning. That's a different question.
Q Right. But that rezoning question can only be for a metallic mining project that gets a permit under Chapter 200, correct?
A I'm not sure I understand your question. The DPD can be used for a variety of different types --
Q Oh --
A -- of projects.
Q -- no. No, no. This particular zoning change is only for a metallic mining project?
A That's what the application is, I believe, yes.
Q Right. And that project cannot go forward without a permit under Chapter 200; is that correct?

A I'm actually not familiar with Chapter 200. At NRCM I focused on things in front of the Land Use Planning Commission and other members of the NRCM staff focused on DEP issues so that's not really within my area of expertise.
Q So your comments didn't take that into account?
A Didn't take what into account?
Q A permitted project under Chapter 200.
A No, my comments were based on this proceeding which is to determine whether or not this application meets LURC's -- the Land Use Planning Commission's criteria for approval for rezoning.
Q Okay. So if just the zoning proposal is approved, what adverse impacts would occur that day from your perspective?
A It would open the door to an application for a permit from DEP.
Q And that alone is an adverse impact?
A It will lead to an adverse impact potentially.
Q Okay. Now, are you a lighting expert?
A No, I am not.
Q Have you been up in the Katahdin National Monument at night?
A Many times.
Q And have you been able to see the project area?

A Not from Katahdin Woods and Waters, but from the top of Mr. Chase you can see the project area.
Q Okay. But your concern was Dark Skies under the monument, right?
A Yes. And Dark Skies throughout, yes.
Q Okay. Can you see the lights in Patten from the monument?
A I have haven't been in every part of the monument. I've spent a lot of time there, but I haven't been everywhere.

The parts of the monument that are closest to Patten, I know there are plans to put the Dark Sky -- to have that be the area where it's open for Dark Skies, you know, group -- group get-togethers. I don't actually know whether you can see the lights of Patten from there.

Q Okay. And you don't actually know, if this project is completed, if you'll be able to see the lights from the monument?
A Well, it's impossible to know because there's no lighting plan in this application. So it's really hard to evaluate --
Q I agree.
A -- without a plan.
Q I agree. Now, do you know if the Monument has gone

to any of the adjacent landowners and asked for lighting easements whereby they would restrict their use of lights at night?

A I do not know.

Q So you don't know if there's any such easement on the project property?

A I do not know.

MR. BEAUPAIN: I don't have any other questions, Your Honor.

MR. WORCESTER: Thank you. Now it's the Commission's time to ask questions.

Ms. Johnson, in your long career have you ever testified against the establishment of a snowmobile trail?

MS. JOHNSON: I don't believe so.

MR. WORCESTER: How about a four-wheeler trail?

MS. JOHNSON: I don't believe so.

MR. WORCESTER: Those were very controversial issues in the early days. And there was a lot of agitation to prevent them from going into the unorganized territory. I happen to be old enough to remember that.

I find it interesting now that everybody sort of accepts the fact that this is a good thing. And I believe it is because it, obviously, generates a lot

of financial activity, as we heard this morning.

But those vehicles they also make a lot of noise and they have headlights and they go day and night. But -- it's -- it's just interesting that we now accept them. But it was a -- a very contentious issue and I'm surprised that in your long career that you didn't testify against those.

MS. JOHNSON: I don't recall it.

MR. WORCESTER: Okay.

MS. JOHNSON: I wouldn't say absolutely that we never did, but I don't recall it.

MR. WORCESTER: Do you think snowmobiles are affecting the Dark Sky?

MS. JOHNSON: I think they have the potential to do that, yes.

MR. WORCESTER: So I assume you would say the same thing about four-wheelers.

MS. JOHNSON: I have not seen four-wheelers at night.

MR. WORCESTER: Okay. Believe me, they're out there. That's all I have.

Perry.

MR. ELLSWORTH: Just as a -- just as a follow-up, Cathy. You've had -- I know you've had a long career and -- but I have to ask you, you talk -- we talk

about recreational opportunities.

So do you consider snowmobiles, the snowmobile traffic, the extra people we have here utilizing the trails with ATVs, is that a recreational activity that you would promote or not promote?

MS. JOHNSON: I think I'm in Chairman Worster's category of it's a popular activity and we've learned to accept it. There are things that we've learned to accept.

And I do think that, you know, it's one of the uses that people come to the region for and the Katahdin region as a whole provides this diversity of recreational opportunities.

MR. ELLSWORTH: Thank you.

MS. BEYER: Do you want to adjust the schedule so that we're breaking at noon to 1:00?

MR. WORCESTER: We can do that. If -- if nobody is opposed, we'd like to take the break from 12:00 to 1:00 and reconvene at 1:00. Okay? With no objections, thank you, people.

(Whereupon a recess was held at 11:51 a.m., and the hearing was resumed at 1:00 p.m. this date.)

MR. WORCESTER: Dr. Maest, can you hear me?

MS. MAEST: Yes, I can. Can you hear me?

MR. WORCESTER: I need to swear you in before we

start, so...

MS. MAEST: Okay.

MR. WORCESTER: Do you affirm that the testimony you're about to give is the whole truth and nothing but the truth?

MS. MAEST: I do.

MR. WORCESTER: I apologize, I didn't introduce myself. My name is Everett Worcester, I'm the -- the hearing officer for this afternoon.

MS. MAEST: Okay. Nice to meet you.

MR. WORCESTER: I think with that we're ready to start the afternoon. Where did we leave off? Intervenor 2's testimony and evidence.

DIRECT-EXAMINATION OF: ANN MAEST:

BY MR. BLOOM:

Q Good afternoon. Good afternoon, Dr. Maest -- or good morning to you where you are.

A Good afternoon, Aaron.

Q So we'll be doing this in a sort of a question-and-answer style with -- but also, Dr. Maest has a slide presentation that we'll be going through.

Dr. Maest, would you please briefly describe your relevant profession and educational background?

A Yes.

Could I have the next slide, please?

And, first of all, I'd like to thank the Commission for allowing me to testify remotely. It -- I know it's not ideal, but it's very helpful because my husband had knee replacement surgery a week ago and he's hobbling around and not able to do most things himself. So thank you very much for that.

Yeah, I have an undergraduate degree in geology from Boston University. My senior thesis was on the Androscoggin Lake pluton in Maine, which is about 20 miles west of Augusta as the crow flies. And petty much all of our field trips when I was an undergrad were to Maine.

I have a Ph.D. from Princeton in geochemistry and water resources and then worked first as a postdoctoral fellow and then as a project chief at the U.S. Geological survey where I was a researcher for six years.

That was my first encounter with mine water. And I built a laboratory for water analysis for mine water and other, you know, just natural groundwaters and surface waters.

I worked at Environmental Defense Fund for about a year and a half, but missed research and became a consultant in Boulder, Colorado where I lived at the

time. I'm now in southwestern Colorado.

And my clients were State and Federal agencies, tribes, nonprofits and foreign government. I was elected to a number of study committees at the National Academy of Sciences and also to a committee called the Committee on Earth Resources.

And then eventually after serving two terms on that overarching board called BESR, the Board on Earth Sciences and Resources. And I was an invited speaker on mining issues at the United Nations.

Q Now, you were involved in a well-known case involving Chevron and Ecuador more than a decade ago, correct?

A Yes I was.

Q And you signed a sworn declaration regarding your involvement in that matter as part of a settlement of a lawsuit brought against you and others by Chevron; is that correct?

A Yes.

Q And can we just pull that up on the screen? We're going to just quickly pull that up.

So do you see that -- does that appear to be your declaration?

A I believe so. I think it's --

Q Or Page 1 of it.

A -- 16 pages. That looks like it, yes.

Q Yes. Okay. And we've -- we've submitted this as one of the hearing exhibits, Hearing Exhibit 55 on our list and we've submitted that.

Now, you can go back to the slide presentation. That declaration describes some pretty troubling things that occurred in that matter, some of which involved you.

Is there anything you'd like to tell the Commission?

A Yes. As Aaron mentioned, I was involved in a lawsuit in Ecuador against Chevron. I initially went into it thinking that I'd be able to help the local people and that my work would lead to remediation of the extensive crude oil pollution that I saw in the jungle.

I started working on the project in late 2005, so 18 years ago, with a small nonprofit that I worked with called Etech International. The first year was mostly okay; I wrote a couple of preliminary reports on soil pollution.

But after that point our little nonprofit wasn't big enough to handle the multidisciplinary work. And I suggested to the U.S. attorney whose name is Steven Donziger that he talk to Stratus Consulting in Boulder where I worked part-time.

So in a nutshell, this attorney, Steven Donziger, who was leading the lawsuit set up a fraudulent scheme to get a so-called independent expert appointed by the Ecuadorian court and then to have the plaintiffs, which was his side and our side, write the majority of that report as if it was the expert's report.

So there was a large report, comments on the report and then responses to the comments. And I very much regret to say that I got caught up in this scheme and I participated in it. We won a large judgment in Ecuador, but at the same time Chevron sued Stratus Consulting, me, Doug Beltman who managed the project at Stratus and many others.

And the details are provided in my declaration and other court documents. I want everyone to know there that I am extremely sorry that this ever happened and for my involvement in it.

As Aaron mentioned the case against me, Beltman and Stratus was settled ten years ago in 2013. I signed a declaration, which has been submitted. And in that declaration I disavow everything I had written on the whole project because of the fraud.

I have never had to do that before or after in my 40-year career. It's not who I am, I would never do

it again. I wish very much I had left the project early on. And this whole thing has been really a very painful lesson for me.

I've worked hard to continue in my career and it is has gone on despite this horrible taint on my record. And I feel that I've done some good work that I'm proud of.

I did consider getting into some other line of work, but I really love my work and I feel that I have a lot of experience in understanding the potential environmental affects of metal mining and how to best minimize and prevent them.

And that's why I decided to get involved in this project. And I hope that my expert report and the remaining testimony that I give today will be helpful to the LUPC.

Q And so what work have you done since your involvement in the Chevron matter and since that settlement?

A If we could go ahead two slides, I believe. Okay. So the lawsuit, as I mentioned, was settled ten years ago in 2013. I was after that time reelected to the National Academy of Sciences Board on earth sciences and resources and served out my second 3-year term.

I'm an associate editor for the International Mine Water Association's journal, mine water in the

environment. I continued working for the same kinds of clients, governmental, communities, nonprofits, tribes and First Nations in Canada on mining issues and also monitoring issues around the world.

This next one is the one that I'm most interested in right now and that is working with the mining industry nonprofits and others to create an implement a mine certification standard for mining companies that are leaders in their field.

I also helped create an auditable sustainability standard for the Diamond -- Diamond Sector. I've also tried to keep up with research. I've published peer-reviewed papers on mine waste geochemistry. And I've just completed a manuscript on the use of mine waste as a source of renewable energy metals and -- which is known as remining.

Q Thank you, Dr. Maest. Now I think we're going to move on to a topic that probably has been covered a bit by others, so maybe we can move quickly through.

But is what is acid-mine drainage?

A You're right, we heard a lot about this yesterday. I tuned in to most, but not all, of yesterday.

Acid-mine drainage -- if we could go to the next slide, please.

You know, one of the things about it is that it

is a long-lasting water quality problem and one that is certainly associated with sulfide deposits like we have at the Pickett Mountain Deposit.

The photo on the right shows an acid-mine drainage stream coming in called Cement Creek and mixing with a cleaner stream, the Animas River in my home state in Colorado.

And as Mr. Dudek mentioned yesterday, you don't need very much iron to really color a rock. That is true, you could -- you know, less than 1 percent of iron in a rock can turn that rock reddish.

But in this case with acid-mine drainage you have a lot of iron precipitating on the streambed. And that can kind of smother the habitat for aquatic insects which fish feed on. So acid drainage, in addition to the acidity and the metals, has a substantial adverse affect on habitat for aquatic life as well.

And the next slide.

I'm just going through this reaction kind of step-by-step, but not dwell on this too much because we've heard -- everyone there is going to be an expert in acid drainage.

So the main mineral associated with the formation of acid-mine drainage is pyrite. I'll just say click

to move to the next.

So this is -- it's a brassy mineral that is an iron sulfide mineral. And when this mineral is dug up from the ground in a mining process and mixed with oxygen, click, and water, click, it forms acid and acid-mine drainage.

And the thing that really makes this reaction go forward rapidly is microbes. There are certain microbes that make a living off of oxidizing the iron and sulfide in pyrite. And that can speed up this reaction by up to a million times.

So this reaction only goes forward in this direction and it forms sulfuric acid and sulfate. Click.

The acid -- the thing about the acid is that it dissolved metals in other minerals, in sulfide minerals, but also other minerals. And the ones we have here are lead, zinc and copper minerals. And sulfate -- if the sulfate concentrations are increasing, it can be an indicator of the formation of acid-mine drainage.

And then the last one, iron precipitate, is from the oxidization of iron and the pyrite and you get this characteristic reddish/orangish coating on streams if there's a lot of it.

Next slide.

So the thing about acid-mine drainage is that it's very difficult to stop it once it's started. And I put forth in my prefiled testimony two examples, one from Bolivia and one from Spain and Portugal. And these mines were started 500 and 5,000 years ago respectively.

Not to say that these are the same at all as the Pickett Mountain Deposit, but just to show that once this starts, if you aren't mitigating it and trying to prevent it in the first place, which is certainly best, this can go on for -- the acid-mine drainage can go on for a very long time.

And it's -- perpetual treatment is often required if acid-mine drainage develops and is not properly mitigated.

Next slide.

Q So based on the -- the information you presented in the application and other information you've reviewed, what is your opinion about the potential for the Pickett Mountain Deposit to generate acid-mine drainage?

A I feel that it's nearly certain that acid-mine drainage will develop. And I think this was also stated by Dr. Finley yesterday. I don't think we're

here debating whether these are potentially acid-generating materials.

So, yes, I think it will form. And the question is, can it be prevented and mitigated?

Q Okay. So do you want to skip through this slide or just summarize it or -- or are we good?

A I -- okay. There we go. So, unfortunately, the sulfides that are of interest to Wolfden, which are the zinc, lead and copper sulfides are overlaying and in sharp contact with this massive pyrite, which is what the orebody is in.

So they're kind of intimately interlayered with the pyrite, which is the main cause of acid-mine drainage. And this means that the ore, of course, but also the mine walls, the waste rock associated with the ore, and the tailings will all have high acid-generating potential.

And all of those mined minerals are going to be exposed to oxygen and water, which create the conditions for acid-mine drainage. And that's why I say that it's nearly certain that it will develop.

Q Thank you. And did you review Wolfden's discussion of acid-mine drainage in the rezoning application?

A Yes, I did.

Q And does that application acknowledge all of the

potential sources of acid-mine drainage that the project would cause?

A It doesn't.

Next slide, please.

In fact, it says that the sources are limited to mineralized rock from the underground being temporarily stored on the surface. But we did hear from Dr. Finley yesterday that mine walls are another potential source of acid-mine drainage.

And these walls will be exposed to oxygen and water throughout the development and operation and closure process. And so the pyrite will remain on the walls of the underground workings and be in the waste rock ores and tailings, as I mentioned.

Q And did you -- did you review the prefiled testimony of Dr. Finley?

A Yes, I did.

Next slide.

Q And he says on Page 6 of his testimony, Should there be acid rock drainage metal leaching production in the mine walls due to the mineralogy of rock exposed there could be a flush of acid-rock drainage metal leaching materials during refilling of the underground by groundwater at the end of mining. Again, characterizing the mine wall rock and

developing a plan to address potential first flush conditions, i.e., acidity, sulfate and metals would be part of an acid-rock drainage metal leaching management plan.

What's your response to that statement?

A Well, I was very glad to see that Dr. Finley mentioned the mine walls because that is another potential source that will need to be considered.

And I have seen this kind of flush of sulfate and acidity and metals that he's talking about as the water levels return to their premining condition.

But the -- the mine walls will also leach metals and potentially cause acid-mine drainage during operations and throughout the life the mine. Even after the mine is filled with water, after all the operations stop, you will have seasonally fluctuating water levels and exposure to water and oxygen even after closure.

And we saw in Mr. Dudek's presentation yesterday that these orebodies go close to the surface, they go up to the surface. So the fluctuation of those -- the groundwater table after mining -- and I think one of the commissioners brought this up -- there could be droughts -- you know, we've seen a lot of variability in climatic conditions as a result of

climate change.

So that fluctuating water level will affect -- will expose, you know, the -- the walls to oxygen and water alternating conditions, which is the perfect setup for acid-mine drainage formation.

And there is no plan right now that I'm aware of for preventing or minimizing acid drainage and metal leaching from the walls of the underground workings.

Q Now let's discuss Wolfden's geochemical testing for acid-rock drainage and metal leaching potential.

What's your opinion regarding whether Wolfden's geochemical testing was adequate?

A If we can have the next slide, please.

I think we've heard a fair bit about this yesterday and we heard that only seven samples were tested. There's a lot more variety in the geology, in the alteration chemistry of these rocks.

So we can't say that these seven samples are representative of really very much of anything. There's no information in the application about the location of these samples or the rock types or how they've been altered.

And -- but we did find out later in Mr. Dudek's prefiled testimony that five samples are in the footwall and two are in the hanging wall. So, in

other words, these seven samples are not representative at all of the orebody itself.

And there are lots of samples that were available from this effort, even at this point during exploration. We learned from the application that 25 -- 2,550 samples were used to create the block model for the economic part.

And so some of those samples certainly could have been used to create, even at this stage, a representative analysis of the potential for acid-mine drainage and to get some kind of a sense of the type of water quality that would be forming from development of -- of this orebody.

Next slide.

So here's a cross-section of the Pickett Mountain Deposit. And it shows -- you know, the different rock types are shown in different colors. So there's five different colors.

And this is from the report, it's called an NI 43-101 that was released in 2019. So there are at least five different geologic units. And even within one unit there can be a lot of different alteration from the hydrothermal fluids that went through this deposit when it was formed.

So it's not enough to just say, All of this rock

on the right side, this kind of beigeish, you know, can be characterized by a single sample or even ten samples. Because you need to understand the different -- how the -- these hot fluids that went through it -- the deposit when it was formed could have brought in sulfide minerals. Even away from these red lenses, which are the two orebodies -- the west and the east zone orebodies.

So a lot more sampling is needed to understand the kind of water quality that could develop from operation of this mine.

Next slide.

And I know we've gone through this before, but there are two elements to acid-mine drainage or acid-rock drainage. One is this acid-based accounting. And we heard a little bit about this yesterday. And that is, you know, what is the balance between the acid-generating and the acid-neutralizing parts of these rocks and altered rocks?

And this is a little bit in the weeds, but the seven samples had really equivocal results. And that is that, you know, you measure these separately, the acid-generation potential and acid-neutralizing potential.

And the thing about this is they were both low, low acid-production potential and low acid-neutralizing potential. And we now know that these were not in the orebody, as I mentioned, they were out kind of on the limbs of this deposit away from the orebodies.

So when you have these low amounts of acid-neutralizing and acid-generating, you know, amounts, you need to do more testing. You need to do mineralogy and determine what is causing the acid-neutralizing potential that we see in these rocks and to start long term leach tests. And these could have been started now.

RPC is the consultant that did this report. And they realized that they were out of their pen here. And recommended that a special consultant would be needed to really understand and interpret the results of these tests.

And, again, we know that these seven samples are not from the orebody and we don't know if these samples would eventually generate acid.

So the other part of acid-mine drainage has to do with metal and other contaminant leaching. And what we have so far from these seven samples is the total concentrations of a bunch of different metals.

And what is typically done with these is comparing those concentrations to average crustal abundances of rocks around the world. And we saw that the total concentrations of many elements, including antimony, arsenic, cadmium, cobalt, mercury, lead, thallium and zinc were higher than average crustal abundances. And some of them were a whole lot higher, like cadmium, lead and zinc.

And this is the indication of the potential for metal leaching, but we don't really know what would happen without doing more extensive testing.

And so all of these rocks were not even in the orebody, these are in the ones that Wolfden is proposing to drill as access tunnels for -- through.

So we have a situation with these seven samples that we don't know if they would generate acid or not eventually. And we see that there is potential for leaching of these metals, some of which are toxic to humans in drinking water and others which are toxic to aquatic life at low concentrations.

So the best thing would have been at the to start long-term leach tests already and that could have been done.

Q Now let's turn to Wolfden's water treatment scoping study.

Have you reviewed Exhibit 10D to the application, which is titled: Wolfden Resources Pickett Mountain Project Mine Water Treatment Scoping Study?

A Yes, I have.

Q And does that study give you confidence that Wolfden will be able to treat mine water to natural background levels?

A If we could have the next slide, please.

This study has a lot of shortcomings. And one of them is they -- they selected the Halfmile Mine in New Brunswick as representative of the Pickett Mountain Deposit.

I have to say after hearing the testimony yesterday by Mr. Dudek that I am somewhat more convinced that these deposits are similar, but none of that information was presented in the application. But the modeling here was really poor.

We have, supposedly, samples from the Halfmile Mine, but we don't know where these samples came from, we don't know when they were collected, we don't know even how long this mine operated.

There was some talk yesterday about a pilot project and some operation, but we don't know where they came from. And, importantly, a lot of key parameters are missing.

This is a sulfide deposit, the Halfmile Mine, yet there are no measurements of sulfate that went into this model and also no measurements of nitrate and ammonia, which are the result of blasting. And that would be really important to put in this model to see how reverse osmosis would -- would fare in terms of treating this.

There was also no information on alkalinity, mercury, chloride, fluoride, lots of parameters were missing. So based on that model we can't really say very much of anything.

The other thing that wasn't so great about this study was that the target water quality values were not defined. They appear to be from surface water -- and I am pretty sure we saw a map yesterday showing ten locations.

Yet, the treated water from the RO system would be discharged to groundwater, not surface water. And this study said that the results from the target water quality values will -- are in an appendix, but when you looked, there was no such appendix.

So quite a few shortcomings.

Q So now I'd like to talk to you about a related topic, the water treatment plan will create a concentrated wastewater stream called brine.

What is your opinion regarding Wolfden's plan to use brine to make cemented rockfill that will be used to backfill the mine?

A Could I have the next slide, please?

The brine is almost certainly going to have elevated concentrations of metals and sulfate because that's what's rejected by -- when you put this -- the mine-influenced water through this reverse osmosis and ultrafiltration process, you get really clean water on the other side. But the brine is going to have a lot of the metal and sulfate concentrations.

It's possible that after hearing Mr. Danyliw's presentation yesterday that some of the information about the brine chemistry is in the application. And if that is correct, it's -- and this is what went through the model, okay? So it's modeled, it's not real world.

It's got high concentrations of arsenic and very high concentrations of a bunch of metals, cadmium, copper, cobalt, lead, manganese. So we need to -- I -- you know, look at that again. But it seems that the brine is going to have high metal concentrations.

And the plan is eventually to mix this brine in with the cement and the waste rock and place that in the underground mine. That will remain in the

underground mine in perpetuity. So we need leach tests on these cemented rockfill made with the brine.

And there's certainly risk of leaching of this brine-cemented rockfill to downgrading groundwaters, especially in locations that are near the surface where you have this fluctuating groundwater table that I mentioned earlier.

Next slide.

So I wanted to show -- the Buckhorn Mine is a small underground gold mine that stopped operating in 2017. And I've been involved with this mine for over 20 years. They do a very similar thing, but they don't have the brine mixed in the cement.

And so these are these long-term leach tests that we've been talking about for a while. It's a little hard to see what's going on here, but the top graph shows these long-term leach tests. And on the bottom axis here it's number of weeks. So we've got 0, 10 -- or 20, 40, et cetera, up to -- this is 100 here.

So these tests went on for more than 100 weeks. Okay? And -- so you take the cemented rockfill, break it up into pieces, put in the column, expose it to humidified air and then water and then see what comes out the bottom.

So in the beginning of this testing the alkalinity, which is a measure of the neutralizing potential was really high. But then in less than -- in about ten weeks the alkalinity or neutralizing potential dropped very much, okay, to, you know, 20 or 30 milligrams per liter as calcium carbonate.

The other thing that happened, if you look at the bottom graph, is that over time the arsenic concentrations increased indicating that there was arsenic leaching out of the waste rock and going into solution.

If these tests had been cut off at 20 weeks or 40 weeks or even a year, you might not have seen that these arsenic increases were happening. So this is the sort of thing that could happen over time with the backfill in the Pickett Mountain project. But we have the added impact of brine which will have high metal concentrations.

Q So, thank -- thank you, Dr. Maest.

Now, have you done any research into the question -- oh, I'm sorry, I was skipping one.

In your opinion is it likely that Wolfden will be able to capture and treat all of the water that will be affected by mining?

A Next slide, please.

This is something that I worry about a lot because I've seen it at a lot of mine sites. It's really, really difficult to capture all the mine-influenced water. You have pumps, you have some dewatering. But if you have faults or fractures, you can have mine-influenced water escaping the underground mine.

And, of course, you can only treat what you can capture. So water that -- some mines call this bypass flow -- that is not captured. And it's very unlikely that dewatering of the underground mine will capture all mine-influenced water.

There's a study that was released in 2019 showing that nearly all operating copper mines -- and these are large mines -- failed to capture and control mine wastewater and did impact -- adversely impact water quality down gradient. And this happens at smaller mines as well and modern mines.

So next slide, please.

So the problem with uncaptured mine water is that it can contaminate down -- down gradient water resources and a plan should be submitted to capture all the mine-influenced water as much as possible at the mine site.

Q Thank you. Now, have you done any research into the

question of whether hard rock mines typically live up to their water quality predictions?

A Yes. Next slide, please.

This was a large study that Jim Kuipers and I did. It was released in 2006. And it was focused on large mines. We wanted to get a sense of the large U.S. mines and how their predictions in environmental impact statements compared with actual water quality once the mines were operating and some of them were in closure.

So we reviewed 145 environmental impact statements for 71 mines and we selected 25 to be representative of those 71 mines. It took a really long time to get all the information. We were directed to boxes with microfiche and paper and all of that.

What we found was that 76 percent of these case study mines had mine-related exceedances of water quality standards. And I think that an even more important finding was that if the mine had these inherent characteristics -- and when I say "inherent characteristics," these are things that you can't really change about the mine.

Does it have elevated acid-drainage potential, is it close to water resources? We found that mines

with those characteristics had a lot more exceedances of water quality standards than even the 76 percent. And at that time most of these predicted that there would be no exceedances.

So the concern with the Pickett Mountain Deposit is that it does have these factors. It has known acid-mine drainage potential and is close to water resources.

Q And just before you talk about the last bullet, I just -- when you say "exceedances," you mean not exceedances as in doing better, but as in doing worse, right?

A Right. Were the concentrations that we found higher, in other words, worse than water quality standards. We also were very careful to make sure that these were mine-related exceedances of water quality standards.

Q Did you want to talk about the last bullet about --

A Yeah. Just, you know, one of the reasons, you know, why -- so why were there all these failures? And one of the -- actually, the primary reason was that mitigation measures failed in over 50 percent -- 64 percent of the mines.

So even though the mitigation measures -- and this could be liners and caps and, you know, mixing

of, you know, nonacid-generating and acid-generating waste rock -- that there was -- there were a lot of failures of those even though they were implemented.

And next slide, please.

And, you know, the -- the commissioners were asking several times yesterday, okay, there are lots of examples of bad mines. Do you have examples of good mines?

And the -- what I've seen, you know, thus far is that modern mines have water quality problems as well. And these are mines -- I just wanted to talk about two of them -- the Buckhorn Mine in Washington state.

It is similar to the plan for the Pickett Mountain project in that all ore is processed offsite. So they -- they haul the ore offsite in large trucks. But there are many, many permit exceedances on the mine site, even though that's taken off site, for blasting -- from blasting.

And so that is -- nitrated ammonia concentrations are -- you know, exceed standards and permit limits. And also there's very high fluoride concentrations from previous water treatment. It was an iron exchange system.

Those concentrations overall are decreasing over

time because the mine closed in 2017, but we're seeing elevated sulfate concentrations from sulfide mineral oxidization. And those are ongoing and seem to be, if anything, increasing over time.

The other one is the Eagle Mine in Michigan. And this was mentioned yesterday. This is a relatively small underground base metal mine. You know, somewhat like the Pickett Mountain project in that all ore is processed offsite. It's got base metals in it.

And this is operated by a very conscientious mining company, Lundin. And they are -- they're actually funding a community monitoring program at $300,000 a year and all the reports from that monitoring are available online.

And what you can see is that sulfate concentrations in groundwater have been increasing and are much higher than predicted. And so this is a mine that could be a good example, but, unfortunately, we've seen exceedances of benchmark values that had to be reported to the agencies.

Q And you mentioned that sulfate was a potential indicator of acid-mine drainage?

A Yes. So the -- the -- some of the pH values are a little depressed at the Eagle Mine, but we don't see

acid-mine drainage being generated now. But when you see increasing sulfate concentrations, it's kind of a -- you want to pay special attention because it easily could be an indication of the formation of acid-mine drainage.

Q Now, if -- if mining were to -- if mining the Pickett Mountain Deposit were to lead to water contamination, how would that affect the near by waters?

A Next slide, I believe.

Yeah, this -- the fate and transport is kind of a, you know, area that I have focused a lot of my work on. And simply put, it's -- you look at the sources. In this case we were talking about the mine-related sources, the underground walls, the -- the ore, the waste rock, et cetera.

How those potential contaminants can move through pathways and reach receptors. And for the Pickett Mountain area we have a lot of ponds and lakes and streams running into them that are nearby, quite nearby. So some of the pathways could be, you know, for getting mine-influenced water out of the underground mine would be faults or fissures that would lead to down gradient groundwater.

And the thing about the Pickett Mountain receptors are that they are very clean. It's quite

impressive. They have very little buffering capacity, which means that if acid-mine drainage does form and gets to them, they have very low ability to -- to counteract that acid input.

They also have low hardness, which is a measure of the calcium magnesium content. And hardness protects aquatic life, but it's very low there. There's also really low sulfate, close to analytical detection limits.

So these waters are really clean, which means that you have to be extremely carful in terms of what could come out of the mine. And it's my understanding that there's ongoing exploration that could bring the mine-influenced waters even closer to some of these receptors.

And I think if we look at the next slide.

Yeah, we saw these ten locations that were from the so-called groundwater study, but they appear to all be in surface water. So these are the waters -- we have, like, a summary of them. I think it was average or maximum concentrations. And that's what I'm basing this information on that the alkalinity, the hardness and the sulfate are very, very low. These are super clean waters.

Next slide.

So this is from the 2020 preliminary economic assessment and it shows these future targets. And these colors are from zinc, lead and copper soil maps. And here's the Pickett Mountain Pond kind of on the lower right. And you can see some other ponds over here above that. These are the west and the east lenses.

But you can see that there's some plan to expand these areas potentially. And that would bring -- that would expand the potential mind area and bring these sources closer to other receptors.

Q And, obviously, we can't see what you're pointing to on the -- on your screen.

A Yeah. I realize that. Yeah.

Q But I think -- the areas circled in red, are the ones you're referring to as the expanded area?

A Yes, the -- the ones that are circled in red are so-called target zones, they're labeled A, B, C and D. And those are ones with -- according to this key here, moderate connectivity area. So those are ones that have the potential at least to have maybe ore.

Q Okay. And those -- those, you say, are even closer to some of the water bodies we were talking about like Pleasant Lake, et cetera?

A Yes. And you see another lake kind of up -- in the upper right of that diagram and, of course --
Q Could --
A -- Pickett Mountain Pond.
Q -- could it be Grass Pond there?
A I think that's Grass -- yeah, I think that's Grass Pond.
Q Okay. And have you developed any opinion regarding the application's discussion of water balance?
A Yeah, I just want to talk about this super briefly because we're running out of time here. But, you know, water balance is something that is -- and if we could have the next slide -- notoriously inaccurate, especially at this stage of development.

It generally tends to get better over time, but the estimate is that there's only going to be 30 gallons per minute coming into underground mine. And that's the dewatering amount that would go to the treatment plant. But there's no basis presented in the application for this and, importantly, no site-specific information and climate change was not considered.

So, you know, this is a -- especially, at this stage -- very inaccurate estimate of the water balance.

Q And, finally, can you briefly summarize your overall opinion regarding the Pickett Mountain project's potential impacts to water resources?

A Yes. The next slide has the summary. Pickett Mountain, I think we all agree, has inherently high acid-generation and contaminant-leaching potential and is close to groundwater and surface water. And this leads to a higher potential for water quality impacts.

Unfortunately, we can't surgically remove the ore and there will be some remaining and we also have this altered rock that will also have acid-generation potential.

More work in my opinion should have been done already to understand the water quality that could have been generated, including the walls of the underground workings. And as one of the commissioners mentioned yesterday, the crushing of the ore in the underground. That's another potential source of acid-mine drainage.

The water treatment study -- you know, I should say that reverse osmosis is generally a really good technique, but the water treatment study has so many shortcomings that it doesn't give us con -- doesn't give me confidence and has not demonstrated its

ability to meet the strict discharge requirements that are required in the state of Maine.

The water balance doesn't have a great basis for the dewatering rate, which seems quite low. And it doesn't consider uncaptured mine water or -- and very importantly climate change, which we know has been affecting -- having lots of precipitation this last summer, could have very low precipitation in the future.

And the ore and the future targets are close to these high quality lakes and ponds and streams that are important fisheries and water resources that have very little capability or capacity to counteract the affects of acid-mine drainage because they are -- the water there is so pure, so...

MR. BLOOM: Thank you. I think that's -- that's it. One minute to spare.

A Okay.

MR. WORCESTER: We have the applicant's cross-examination.

CROSS-EXAMINATION OF: ANN MAEST:

BY MS. BROWNE:

Q Good morning, slash, afternoon, Dr. Maest. I'm Juliette Browne, counsel for the applicant. And I will be conducting cross. I appreciate your --

A Good afternoon.
Q -- comments on Chevron and I appreciate how difficult a topic that is.

And I guess my only comment is a -- or, I guess, a request is that you remember that certainly I and, I think, probably most of the Commission, don't have the expertise that you have in these -- this subject area and that you try to be as straightforward in providing information that's helpful to the Commission as opposed to overstating the evidence and sort of advocating -- or if you're advocating for an outcome, that you just clarify that.

I am certainly not an expert and I think some of my questioning -- what I'm trying to do is sort of, you know, get it down to some really basic information. And if I mischaracterize things in the process of doing so, please -- please correct me.

A Okay.
Q So as I understand -- and can you hear and see okay?
A Yes, I can.
Q Thank you. And you've got your prefiled testimony available if we need it?
A I do.
Q Okay. Great. So as I understand it, you do believe and you have written on and studied that there are

measures that can be -- effective measures that can be implemented to avoid and mitigate acid-mine drainage?

A Yes, that's true.

Q And -- and just so we're all on the same page, what are those measures?

A As I mentioned in my presentation today, prevention measures are a lot better than measures that would be implemented after acid-mine drainage forms.

So if you know that acid-mine drainage has the potential to form -- and we certainly know that at the Pickett Mountain Deposit -- the first really important thing is to do a very thorough characterization of the acid drainage and metal and contaminant leaching potential of all the potential sources that would be exposed to oxygen and water as part of the mining process.

So -- and there -- you know, there are geochemical methods that have been used and have improved somewhat over time. And some of these are the long-term leach tests that Dr. Finley discussed and I've discussed as well.

So if you don't have that initial characterization, you don't really know how to mitigate --

Q So --
A -- do your best job mitigating.
Q -- so it would be accurate to state that you can do a state-of-the-art geochemical characterization of the site, correct?
A Yes.
Q A topic you've that got considerable expertise on?
A Yes, I do.
Q And do a state-of-the-art predictive modeling to evaluate potential impacts and to evaluate things like water balance?
A You can. But I -- I feel the need to say that modeling is always an estimate. And as we've seen in a lot of -- you know, the study that Jim Kuipers and I did and also even for the Eagle Mine in Michigan, a lot of those -- and Dr. Finley mentioned this yesterday -- the predictions are, you know, often inaccurate.
Q And so in that instance it's important to continue to test as you go along.

So, in other words, you don't just characterize the site at the beginning, which is typically what happened with older mines, and then go mine on your merry way without doing testing and evaluation throughout the life of a project, correct?

A Yes, that's right.
Q So that's a way to validate and update your early predictions, correct?
A Yeah, I don't know that you would ever really be able to validate them. But you do need to continue to do your geochemical characterization and try to do as many prevention measures as you can. But it's not always possible to prevent the formation of acid-mine drainage, as we've seen.
Q So isn't, actually, the best -- I think you said the prevention is the best step one.

So don't you first need to identify whether rock is PAG, potential acid generating, or non-PAG?
A Yes. And, you know, the seven samples that we've seen so far are, you know, so-called static tests were done. And that is --
Q And I'm just --
A -- acid basic counting, yeah.
Q Yeah. I'm just talking generically. So for the first step is to identify whether the rock is potentially acid generating?
A And -- that's right. And metal or contaminant leaching.
Q And did you -- and if you can avoid exposing acid-generating rock, then you're going to prevent

acid-mine drainage, correct?
A I wouldn't say that's absolutely correct. You know, that's a good approach, preventing, you know, that -- you know, but even if you --
Q Well, isn't that the best approach?
A -- minimize your exposure to -- to oxygen and water, the reaction can happen pretty quickly.
Q Okay. So that's my second -- you're ahead of me, which is going to happen throughout this.
But the first step is, let's avoid placing infrastructure in -- or let's avoid exposing potential acid-generating rock to oxygen or water, correct? That's --
A Right.
Q -- like, Step One?
A Yes.
Q So I don't -- I think you were here for Dr. -- or you listened to Dr. Finley's testimony and Mr. Dudek. But I wonder, Maye, if you can pull up the halo slide from Dr. Finley's testimony.
All right. Now, are you able to see that, Dr. Maest?
A Yes, I am.
Q Okay. And this is schematic, which is about all I can understand anyway. And in the lower right-hand

corner it shows the orebody and something that Dr. Finley referred to as a halo. And then to the right of the orebody are some zigzags, which represent the tunnels -- the ramps down into the -- the ground.

Can you see that?

A Yes. What I can't see -- I know it's there because I saw it yesterday -- is this halo that Dr. Finley was talking about.

Q Oh, it's -- it's a lighter shade, so it may not be showing up on your screen.

A Okay. I will -- I know it's there.

Q But did you hear Mr. Dudek's testimony that the plan -- and based on his assessment of these 2,000-plus core samples he believes is possible -- the plan is to at least put the ramps that go down into the mine in nonacid-generating rock?

A You -- you hope that's true. We don't know how if that's true or not.

Q Yeah, I -- I totally -- I don't think anybody disputes we need a lot more information before we can make any definitive statements.

A Right.

Q But you would agree Step One is, let's put the infrastructure in rock that's determined to be

non-PAG, correct?
A If you can do it, yes.
Q Yes.
A But it might not be the case here.
Q Yep.
A We don't know yet.
Q Yep. I know, I'm just -- just bear with me. I'm just thinking simple terms. So that's Step One.

Now, the other, as I understand it -- other factor that influences the potential for acid-mine drainage is the time that if you -- if you do have to disturb PAG or potentially acid-generating rock that the time of exposure is relevant, correct, how long it's exposed?
A That's right.
Q And -- and what's just sort of the -- you know, what's the time frame in which leaching might occur? Are we talking months, years, decades?
A That you can't really say. Some leaching can start right away. You might not produce acid right away. It depends on how much neutralizing material is there and how -- what kind of contact it's -- you know, if it's next to the acid-producing material.

So you often see sulfate concentrations being released very quickly.

Q And when you say "very quickly," are we talking days, months?
A You know, I -- I could throw out some -- some time, but --
Q Well, just --
A -- it's really site-specific.
Q Right, but just generally. I mean, I don't know if we're talking decades or minutes.
A Yeah, I mean, you know, you can -- you know, if you look at some of these long-term leach tests that I showed an example of, you can see elevated sulfate concentrations and metal concentrations increasing within a couple of weeks. Those are accelerated tests.

So, you know, in theory it won't go as quickly in the real world, but you do see -- when you break things up into small pieces -- and Dr. Finley talked about this yesterday -- you really accelerate the leaching rate. And so that's what we're concerned with a lot is the ore that's crushed, left underground, put on the pads and also the waste rock.

So it can happen -- the leaching can happen pretty quickly, the formation of acid might take longer.

Q But you would agree that's another mitigation measure

is to limit the time of exposure of the rock to oxygen and water?
A Yeah. And we see that a lot -- you know, there are a lot of modern mines that are -- are attempting to do that.
Q And -- and what measures are they using?
A You mean to limit the --
Q Yeah.
A -- time that it's exposed?
Q So, for example, I don't know, are you aware that the ore rock which is brought to the surface will generally not be there for more than a week?
A Yeah, that's -- I'm not aware of that, actually. So thank you --
Q But you would agree --
A -- for that.
Q -- you would agree that is a preventative measure that helps reduce the risks of at least that material generating acid -- acid-mine --
A It -- it does. However, we know that the ore is going to be crushed and sorted underground for an extended period of time. So that's another potential source. And there will be air and oxygen in the underground mine --
Q Okay.

A -- so...
Q But just -- just to, you know, keep it simple.
So one measure and the best measure is to limit the amount of PAG rock that's disturbed?
A That's one measure, yes.
Q And the second is to limit the time of exposure to air and water, correct?
A Yes. Limiting the amount of PAG rock that is exposed is -- is difficult, though. I mean, they -- you know, obviously they want to get the orebody out of here if this project goes forward. So all of that will be disturbed.
And as mentioned, you can't surgically remove it, so a lot will remain on the walls.
Q And you understand that that's going to be backfilled in relatively short order?
A Some of it will be from what I understand, yes. It's going to be backfilled with a mix of cemented rock, which will be made with this high concentrate brine. And some will be uncemented waste rock, which could be acid generating.
Q You understand that before they can -- that there will -- are you familiar with Chapter 200?
A I've read through it. I can't say I'm, you know, super familiar with it. I'm familiar with some of

the, you know, most important elements of it, but that's about it.

Q Well -- so let me just back up for a minute. I think you've published -- Dr. Finley referred to some guidance that you published in 2005. He's also referred to the GARD -- I think it's GARD Guidance and then some guidance from Nevada that sort of puts forth best -- oh, sorry, I'm getting called to the principal's office -- that puts forth what I would call best practices for mining.

You're familiar with that, right?

A Yes.

Q And would you agree that at least to the extent you've reviewed it, that Maine's Chapter 200 reflects those types of best practices and probably more?

A My understanding, yes, is that Chapter 200, for example, does not allow tailings -- wet tailings impoundments.

Q And -- and you'd agree that that's a -- you know, the wet tailings impoundments historically have been a significant source of contamination with mines?

A Yes. And -- yes. And lots of very extensive problems. But, you know, one of the issues is because a wet tailings impoundment is not allowed under Chapter 200, most mines that I'm familiar

with -- and this includes modern mines -- will take the brine from the water treatment plant and put it on the wet tailings impoundment. That can't be done in Maine.

So that's why the brine, it has to be mixed with a cement and put in the underground mine. So -- but, yes, I mean, Chapter 200 has some really good requirements.

Q And you'd agree that either explicitly as part of the surveys that are required -- baseline surveys that are required for implicitly to demonstrate that you're going to -- that a project would not adversely impact water quality, a project is going to have to do the types of comprehensive geochemical testing and analysis that both you and Dr. Finley have described?

A That is my understanding, yes. And when you say baseline are -- what are you referring to?

Q So Chapter 200 has sort of baseline studies that have to be done on the site, water quality, hydro geological monitoring, there's a public process for the public to review and comment on the -- the protocols for those studies and that's before you even file an application.

And then when you file the application, there are a number of standards, you need to identify a

waste -- you know, have a waste characterization plan, waste handling plan, et cetera.

A Okay. Yeah.

Q So you would agree that before they could -- a project could get a permit under Chapter 200, they're going to have to do exactly the types of things that you and Dr. Finley have described about long-term leaching tests, humidity tests, tests that I've forgotten and can't think about, correct?

A That is my understanding, yes.

Q You also talked about -- well, let me just back up for a minute.

I -- I think in your testimony you said that Wolfden doesn't have a plan for capturing mine-impacted water.

You're aware that during operation of the mine they're planning to pump water out of the mine and all of that water will be collected, treated before it's reintroduced into the environment?

A Yes, I think what I said in my prefiled testimony is that they don't have a plan to capture all potentially mine-influenced water.

Q And --

A And as I mentioned, it's just really hard to do that. You know, a lot of mines have dewatering wells on the

outside of the orebody. I don't know if that's the plan here or not. If it is needed, that's going to create a lot more water.

And I've certainly seen mine water capture be less than hoped for, let's say.

Q So -- and as I understand it -- you may have to correct me on this, but a dewatering well is a well outside of the mine and the risk is that the level of that well drops below the level of the mine and then mine water can leave the mine into the surrounding groundwater? Did I totally --

A No.

Q -- butcher it?

A No, that's -- no -- actually --

Q Okay.

A -- kind of, but, you know, the dewatering -- the purpose of the dewatering wells is to bring down the groundwater table so that you can mine. Okay? Because you can't mine very well in a flooded underground tunnel.

So, you know, that -- most mines that I've seen, that's what they do, they have these dewatering wells. And that really increases -- and, you know, you -- the blasting --

Q So let me just --

A -- residue and the other, you know, mine contaminants end up in these dewatering wells.
Q Yeah. And they --
A But what I'm --
Q And they're --
A Go ahead.
Q They're more typical of a larger mine -- open-pit mines, or a larger underground mine, correct?
A No. No --
Q Okay. Well, you're aware --
A -- that's not true.
Q And you mention dewatering wells three times in your testimony and the concerns about that being bypassed.
Are you aware that this project does not include any dewatering wells?
A I haven't seen anything about dewatering wells, that's correct.
Q So that would eliminate one of your concerns about bypass, right?
A No, no, no.
Q So you weren't concerned about dewatering wells as a source of bypass?
A No. It's -- it's actually kind of the opposite. If your dewatering wells work really well, maybe you won't have very much bypass.

But the thing that really can make a difference is the presence of faults and other features -- geologic features that the mine water can escape out of this kind of zone of protection that you have around the mine, whether it's from sumps that you're pumping out or dewatering wells.

Q So you don't view dewatering wells as a potential risk of bypass?

A No, no.

Q Because I think --

A Not at all.

Q -- you mention them three times in your prefiled testimony.

A Yes, but not in the context of -- that if you have -- I think what you're saying is, if you have dewatering wells, then the -- the potential for a bypass increases. That is not true at all and that's not what I was --

Q No, I was referring to the potential impact to the dewatering well from the mine water because the dewatering well is not captured and treated.

A Oh, no, it is. It is, actually. So these dewatering wells are around the periphery of the mine site and they're pumped -- and that water is pumped to the water treatment plant.

Q Okay. Well, just -- since we don't have any dewatering wells, I'm going to move on because -- just so you know, there are no dewatering wells here.
A Right. Yeah. But what I -- what I'm concerned about is escaping capture. Okay? So even though you're pumping and you're taking tuff out of the underground mine with sumps, it's likely that you're not going to be -- be able to capture 100 percent of the mine-influenced water. That's all.
Q And -- and you're suggesting that the water in the mine is going to flow out of the mine and that's a risk?
A It potentially can --
Q Okay.
A -- yes.
Q All right. You also talked about the water treatment study. And I just want to be clear that I understand your testimony on that.

You -- and I think you said this today.

You agree that the ultrafiltration reverse osmosis technology works.

So there's no real question about the ability of this technology to treat the water, whatever its constituents, and to treat it to background water quality, whatever those waters are, correct?

A That's generally true. I think in mines like this or, you know, deposits like this where the sulfite content is super high, you're going to have to replace those membranes maybe a lot more frequently than you would like.

And so we really don't have a sense -- I mean, I do want to say that reverse osmosis is a good technique. And what comes out of the membranes on the clean side, what Mr. Danyliw referred to as permeate yesterday, is usually good stuff. You know, it's almost like distilled water, it's almost too good. But --

Q So, I'm --

A -- what we have here --

Q -- sorry, I'm getting the clock that I have five minutes, so --

A Sorry.

Q -- I don't mean to cut you off, but I'm going to --

A No, no. Go ahead.

Q -- just beg your accommodation on that one.

So -- and you understood -- did you hear Mr. Danyliw testify that the primary purpose of the modeling is really to help determine the number of membranes passes that you're going to have to go through and establish costs and O and M costs for

mine planning?
A But -- I didn't actually hear him say that, but...
Q But -- but the model is not necessary to conclude that the technology works because the technology is in affect around the world in multiple applications, correct?
A It is, but I don't understand why there's so many shortcomings in that model. Or, you know, if it wasn't necessary, why did they do it and why did they have so many missing parameters.
Q And you understand that as part of the Chapter 200 process the applicant will have to gather detailed background water -- groundwater, surface water information, and that that will be the -- the data upon which the background -- the discharge limits are set, correct?
A I don't know that last part about that's how the discharge limits will set -- be set. But, yes, they will have to do background water quality sampling.
Q And also for the -- for the input water quality or characteristics, that will be based on site-specific information as well, correct?
A The input water quality, what do you mean by that?
Q The -- the water that's being treated by the plant.
A That's going into the treatment plant?

Q Yeah. So Halfmile was used as an analog, but nobody is suggesting that no -- that we're not going to get the actual water quality from the mine and that's -- that's going to be used and that will be the basis for designing the final water treatment system?
A Maybe, but I've certainly seen a lot of mines that don't do that in advance. And I'm not sure what's required here.
Q You haven't seen a mine --
A I mean, you --
Q -- that's having --
A -- have to have the whole --
Q -- to meet Chapter 200 --
A -- thing set up before -- yeah.

You need to have that whole system set up before you really know the kind of mine water that's going to be produced.

And I think, you know, the concern is really the brine and mixing it with the cement.

Q Okay. And you understand that there -- there will be a plan in place to test that material before it's backfilled, right? That the -- as part of Chapter 200 there has to be a plan for evaluating the suitability of the backfill before it's used as backfill?

A Okay. That's good.
Q And I think one of your other concerns was the assumption that the water treatment plan was going to be cost-prohibitive and an assumption that you would have 20 to 30 percent brine as a result of the process. That was in your prefiled testimony, correct?
A Yeah. I did -- I did mention that just briefly. Yeah.
Q And you heard Mr. Danyliw explain that, in fact, it's just over 2 percent because of the lime reactor process that's added onto this plan?
A Yeah, I think the final output was, like, 5 gallons per minute of brine from what he said.
Q Right. So just over 2 percent as opposed to 25 percent?
A Yeah.
Q You also talked about the risk of acid-mine drainage occurring postclosure because of the seasonal water table fluctuations.

That can be avoided as long as you're not disturbing -- you're not mining ore close to the surface. In other words, if you -- if you are mining further down, that's going to be less of a risk, correct?

A It -- it will be less of a risk, but the orebodies go right up to the surface and the blasting underneath can cause fissures in that overlying material as well.
Q But is it your assumption that Wolfden is planning to mine up to the surface of the orebody?
A I -- I don't know.
Q Okay. What do I have? Oh, 22 seconds. Where do I go from here?
Have you designed -- do you have any sense of the cost of designing the type of comprehensive hydro geologic and geochemistry analysis that would be done, required -- could I have a minute? 30 seconds?
MR. WORCESTER: It's better not to ask.
BY MS. BROWNE:
Q -- to do the type of analysis that you think is necessary to identify with some level of definitiveness the risk of acid-rock drainage from this particular project and from the particular mining plan that's being proposed?
A I'm sorry, the question --
Q How much would it cost to do that type of work?
A How much -- I mean, hundreds of thousands of dollars.
Q Millions of dollars probably, right?
A Maybe. Yeah, if you factor in the consultants that

are needed and all that.
Q And if we do it up to the standards that you and Dr. Finally with talked about?
A Yeah. We're -- we're very picky.
MS. BROWNE: Thank you. I only got to two out of my six pages of outline.
MR. WORCESTER: Time management, that's the --
MS. BROWNE: I'm a lawyer, I get paid by the hour.
MR. WORCESTER: Intervenor 1's cross.

CROSS-EXAMINATION OF: ANN MAEST:

BY MR. BEAUPAIN:
Q Good afternoon. My name is Dean --
A Good afternoon.
Q -- Dean Beaupain, I'm the attorney for one of the intervenors.
A Nice to meet you.
Q Unfortunately, I need to ask you some questions about this Chevron thing.
What year did you say that started?
A You mean my involvement?
Q Yes. No, no, no, the -- the fraud. We can just focused on the fraud.
A I'm not exactly sure. I guess it would be 2007ish.
Q And you had been working on the project how long

before you came to the conclusion that this was fraudulent conspiracy?

A About a year.

Q And when did the fraudulent conspiracy end?

A I -- I'm not really sure. I mean, the -- my understanding -- and I didn't have any knowledge of this at the time is that the judgment in Ecuador -- Steven Donziger paid for that to be written by an Ecuadorian attorney.

So, you know, up until the judgment was, you know, put into the record, at least up until then, which I think was two thousand -- I'm not sure. I'm not sure of the date.

Q Well, was your primary involvement preparing the report for the so-called expert?

A I -- you know, all the detail is in my declaration. I can tell you that I -- I didn't actually write any of the report itself. But the company that I worked part-time for, Stratus, wrote about, you know, three-quarters of that report.

I was involved in some of the appendixes that had to do with data -- evaluation of data quality.

Q And did these appendices have accurate information or inaccurate information?

A Accurate.

Q So was it --
A Accurate information, but the problem was that we received all the data from the -- from Donziger and his team.
Q And you knew that information was false?
A No, no.
Q Well, why was he changing it then?
A I -- I don't think he did change it. He had no interest in the data.
Q Okay.
A Yeah. No, the data were the data. The -- the whole question is given the whole -- you know, the fraud and everything, I did not feel that I could vouch for anything and that's why I disavowed everything.
Q Okay. And did you tell Mr. Donziger that?
A Tell him what?
Q That you weren't comfortable with what was going on.
A I didn't see him very much. I certainly told him that we didn't have enough groundwater data to say that groundwater had been affected away from the pits.
Q And is that what the final report of the expert said?
A The -- as I understand it, that -- the groundwater -- you know, the expanded groundwater contamination was not included in the expert report.

Q Okay. Did you ever meet with the expert?
A Yes, I did.
Q And did you raise any concerns with him?
A I did not. I'm not sure I even ever spoke to him. And he didn't speak English and my Spanish was very bad at that point. So, no.
Q Did you at any time bring the fraud to Chevron's attention?
A No.
Q Did you bring it to your employer's attention?
A You mean Stratus Consulting --
Q Yes.
A -- where I worked part-time?

You know, I don't know how much -- I mean, they knew everything that I knew and possibly more. So I didn't -- I didn't -- I don't recall right now talking to them about it.

Q And you didn't testify in the Ecuador in court?
A No. I was not a designated expert in that matter.

MR. BEAUPAIN: Okay. I don't have any other questions. Thank you.

MR. WORCESTER: Do any of the commissioners have a comment question?

MS. HILTON: I do. If -- I'm just -- a simple question. Do you think that this is a good location

for this mine with -- just thinking about Maine and all the water that we have in Maine, I mean, is it this -- is it possible to build a mine using all the latest technology that has a high potential for not polluting?

MS. MAEST: And so the question is, do I think this is a good location for the mine?

MS. HILTON: Yes.

MS. MAEST: Okay. You know, mines are where they are; you can't, like, move them to some other location. Right? But I -- the thing that concerns me the most about this mine development is that we know that these materials that are going to be extracted or plan to be extracted are acid-generating metal leaching, contaminant leaching.

And the other thing that is pretty amazing is that the waters that are very close to where this planned operation would occur are really clean. So from what I understand about Chapter 200, you would hardly be able to have any uncaptured mine water because they're so close to the streams, groundwater, ponds and lakes that are very clean that it would be exceedingly difficult to not cause an adverse affect to the water quality.

MS. HILTON: Okay. That answers my question.

Thank you.

MR. WORCESTER: So I'm no expert on this 200 regulation.

Have you ever seen a regulation tighter than this?

MS. MAEST: As I mentioned, I'm not as familiar with it as I could be. But I think that it's -- you know, it's touted as the most restrictive in the country. And I don't have any reason to think that that isn't true.

So, you know, just the fact that you aren't allowed to have wet tailings impoundments and, you know, you have to do a lot of baseline sampling and, you know, all of that. There are a lot of jurisdictions that don't have those requirements.

So I think it's -- from what I understand of it, it seems like a very good set of regulations, protective.

MR. WORCESTER: Well, it -- it seems to me that there aren't many places in the state of Maine that might have ore that would satisfy a lot of people in terms of water quality. It's like -- it's like this is the bedrock for the opposition, it's all about water quality.

I get the feeling that you can't -- if you're

held to these high standards, but you never get to them because this commission never moves on to give it to the DEP to run through the process, to see what might happen, it's kind of like a Catch-22.

Now, that's not a question, it's just an observation. But do you see what I'm coming at?

MS. MAEST: I do see what you're saying and I think, you know, we have to acknowledge that mining will cause pollution. And from -- my understanding from Chapter 200 is that you're allowed to pollute within 100 feet of the mine.

I'm not exactly sure where that would end up or, you know -- but then beyond that you're not allowed to pollute. So -- so most jurisdictions have regulations and requirements that allow a certain amount of pollution up to a standard, up to a permit limit, et cetera.

So, you know, we have to admit that there will be some pollution if we want these metals.

I'm not sure that's what you were getting at, but...

MR. WORCESTER: Tracy (sic), do you have a question?

MS. BEYER: Yeah, I just have one. You testified that you aren't aware of a plan that can address

acid-mine drainage from the first flush of the mine wall. Dr. Finley testified -- when he testified he suggested using lime in the water as the mine fills back up or -- and/or pumping and treating that water as it -- as it refills.

Could you comment on that -- those two suggestions?

MS. MAEST: Yeah. I mean, that's a good approach and I think Dr. Finley was just talking about after mining is done and water levels are rising back to, you know, the groundwater levels they were there.

You could add lime and he mentioned -- he gave an example of the Sleeper Mine, it was an open pit mine in Nevada where they added lime and everything was wonderful. You know, they've got fish swimming around in that pit.

But, you know, the -- this -- the release from the mine walls will happen during operations as well. And if not all the mine water is captured, then some of that is going to bypass the treatment system and it could pollute down gradient groundwater.

MS. BEYER: That's it.

MR. WORCESTER: Thank you, Dr. Maest.

MS. MAEST: Thank you.

MR. WORCESTER: I believe we're at our mandatory

break.

(Whereupon a recess was held at 2:23 p.m., and the hearing was resumed at 2:42 p.m. this date.)

MR. WORCESTER: Life is always interesting. We had an issue at break with a breach of the ex parte rule that we follow, which, essentially, means we don't talk to any of you outside of the hearing and you don't talk to us.

So in full disclosure, Leo is going to explain what happened.

MR. TRUDEL: Yes. During the previous discussion that took place I was thinking about the -- the acid walls, the floors, the whole process. And unbeknownst to me, I started thinking about, we have solutions for all kinds of things out there. And I thought that there might be an industry solution, so I actually asked Dr. Finley.

And I asked Dr. Finally and -- and he actually asked me, he said, Is this something that we should be concerned about? And I said, Well, I thought I was asking you an industry standard.

And I asked him about, Is there some substance that is put on walls that might reduce the acid content as well as the leaching? And it was based upon the previous testimony of how there's certain

bacteria that seem to complicate this matter and -- and expedite it.

That being said, apparently, it can be done and that's what I found out.

I apologize to anyone who -- I certainly didn't think that I was breaking any rules, but that's that.

MR. WORCESTER: Intervenor 2's testimony and evidence.

MR. ELWELL: I think first we were going to give -- under our rules after there's been an exparte disclosure, the -- the parties have a brief opportunity to respond. I don't know if Intervenor 2 wants to...

MR. BLOOM: Thank you for -- for letting us know that, I appreciate that.

MR. WORCESTER: Are we good to go? Okay. Intervenor 2's testimony. And the way this schedule has changed, you have 45 minutes in this segment. Okay.

DIRECT EXAMINATION OF: STUART LEVIT:

BY MR. BLOOM:

Q Good afternoon -- good afternoon, Mr. Levit. Would you please introduce yourself and then describe your professional and educational background?

A Sure. Thank you. My name is Stew Levit. I am based

out of Missoula, Montana -- a little word where glasses, sorry -- based out of Missoula, Montana. I am a staff scientist with the Center For Science in Public Participation. And I've been doing that for about 20 years. Actually, more, but it's been a little off and on it a couple times.

And I provide research analysis, technical review particularly of mining, and mine reclamation and provide specific reporting and advice. My primary focus has been on mining and on water, other natural resources as well as mine reclamation, rehabilitation, in particular, and cleanup.

In the past I worked for the Montana Department of State Lands, now it's part of the Natural Resources Department, NRD, in the state, doing abandon mine reclamation as a land reclamation specialist also. And there the focus was on water quality and planning and designing, reclamation clean-up type plans to deal with mine waste, mine problems.

I started, I guess, my mining career, if you will, as a master's degree from Montana State University in land reclamation or land rehabilitation it was called at the time, I think.

Q And so let's start with water treatment. Wolfden

states in the rezoning application that the project's water treatment approach is designed to treat mine process -- process and stormwater to remove chemicals to meet background levels prior to its return to the natural environment.

To your knowledge has Wolfden presented the LUPC with an example of a comparable mine that has accomplished this?

A No, I don't believe it has.

Q And in your 20-plus years of experience are you aware of such a mine?

A No, I'm not.

Q And in your -- in your opinion what is the significance of the lack of such an example?

A It might not be possible to do that. It also might be technologically or economically unpracticable. That may be also a case.

Q And what is your opinion as to whether Wolfden has demonstrated in the rezoning application that treating Pickett Mine -- Pickett Mountain Mine water the background levels would be financially feasible?

A It hasn't really -- it has proposed ultrafiltration and reverse osmosis, which are, actually, good technologies. They're -- they're quite good technologies, especially together they could. But

they can be very expensive to operate.

In my opinion, the mineral data is not sufficient to at this time estimate the actual costs for that in a reliable way.

And I guess my concern might be that the -- it's easy for a company to promise to do something and it's another two actually design or plan something to -- to deliver it and demonstrate that it is possible, specifically at a particular site.

There's also the point that I believe Dr. Maest made that -- reverse osmosis can be expensive in generating also a brine, which can be 20 to 30 percent of the treated volume and that, too, can be a problem.

And I believe that was pointed out by Lincoln Engineering, which was an LUPC consultant for the 2020 application. And it actually -- it's stated: RO reject, i.e., brine. Disposal can be a severe problem and Wolfden's plan for such disposal should be better defined -- or excuse me, should be defined better, if I'm reading a quote.

And Wolfden has stated as part of its scoping that it would store the brine and use that as feed water to make cement for underground, but it hasn't demonstrated that it's actually technologically going

to work in this situation or what the -- it's allowed applicable regulations.

So it's a good idea, but I feel like there should be more -- or could be more to really identify whether or not that will work at this site as promised. And I think that should probably be -- that would be to me a necessary component.

Q Now, when we're talking -- let's switch to the topic of water balance. I'm going to -- we've heard a bit about this mine seepage flow rate, the 30 gallons per mine.

I'm going to skip questions about defining what exactly a mine seepage flow rate is because -- for time and just say, you know, what is your opinion regarding whether the 30 gallons per minute mine seepage flow rate that we've been hearing about -- whether that's supported by Wolfden -- information in Wolfden's rezoning application?

A It's actually not clearly supported in the application in my opinion.

The application states, quote, although engineering, slash, hydrologic studies have not been conducted to quantify flow rates required to keep the working area of the mine in a dewatered state, it is currently estimated based on similar site experience

and the likelihood of low transmissivity bedrock at depth that these, quote, unquote, seepage flows are likely to be on the order of 30 gallons per minute long term.

The application doesn't explain what similar site experience is or the likelihood of low transmissivity bedrock at depth or describes how these two ambiguous factors combined to actually be 30.

I'll note yesterday in her testimony -- and I apologize if I'm butchering someone's name -- but I believe it was Dr. Turner had said that she had conducted -- or she had talked to a number of people about this, if I'm recalling correctly. And -- and that's good, but I -- I have not seen in the application anything to support really where that number comes from.

In the 2020 review Lincoln Engineering concurred with the conclusion that the flow rate is too speculative for a water management plan or water balance. Lincoln specifically stated, There is no real basis for estimate -- for estimate -- and that might be my typo -- of mine dewatering flow -- flow rate. The water management needs to have flexibility in case flows are higher.

Q Now -- and when you're referring to the Lincoln

Engineering report, that's a report that was submitted to the LUPC in -- in response to the first application --

A Yes. Correct.

Q -- correct?

And that's already been added to the record by the LUPC at the outset.

Now, why would a significant deviation from an estimated seepage rate matter?

A Well, if it's higher, you're going to need to treat and discharge more water, which could change expense. If it's significantly so, it could change actual -- the -- the planning, it may not work in the plan with that adjustment.

Likewise -- or, similarly, I guess, if it's lower than predicted, you may need to consume additional water, both of which have impact -- or potential impact to the overall water balance that is proposed at the site.

A big concern with the lack of, I guess, more concrete data or reliable data is you can't really estimate the time that it's going to take for the waste to inundate the mine area once -- the mine workings once the area is proposed back for flooding and when they close the mine.

The problem with that is you can have a fluctuating water table that does wet and dry things that can create acid-mine drainage as a result of the wet and drying being -- adding and removing air water and, of course, the minerals are -- are the constant.

So that could -- that could have an impact on contaminant creation and/or release.

In my opinion, the groundwater studies could have been done or more detailed information could have been created. And that would help answer this. I use, I guess, as an example the Pogo Mine in Alaska as just an example of the notion that it had originally predicted an average of 139 gallons per minute would be created.

That was later revised to 205, I believe. And by some odd years later it was at 400 gallons per minute.

I'm not suggesting those numbers are necessarily applicable here, but the concept, I think, really is. And that type of thing is a concern. And that's why -- I guess, that's why I think it's important to consider.

Q Thank you. So I'd like to now move to the topic of acid-mine drainage. I think we've -- we've heard about the -- we've heard from a number of people how

acid-mine drainage -- what it is and how it's created.

So let's -- we can skip that and we can just -- let's just talk about, what's your opinion as to whether mining at Pickett Mountain is likely to generate acid-mine drainage?

A I would concur, I think many people have suggested, I totally think it will happen here or is likely to happen here, highly likely.

The -- you've got the materials. I believe the estimate was that 40 to 60 percent pyrite-containing minerals around. So mining and processing activities are going to create the very high chance for acid-mine drainage.

Q And -- and I think -- and does Wolfden's application acknowledge all of the mine's potential sources of acid-mine drainage?

A No. As Dr. Maest identified also, the mine walls are a significant potential, the mind workings underground. You take out the materials and there's going to still be pyrite -- sulfide-containing materials in the walls.

And that has the potential for creating acid-mine drainage whether it's from -- well, air is obviously going to be in front of it, but water coming through

it from the groundwater or water entering through the workings. So there is a very high probability.

Q And in addition, what about ore and tailings, would those be --

A Oh, the same thing on the surface. Once the materials are on the surface, the waste rock itself can produce acid-mine drainage, the -- there are things that can be done -- I believe the mine has proposed them -- to minimize duration.

But you'd still have, in particular, waste rock stored for long periods of time. I'll note that the notion -- and it's been sort of bantered around a little bit that while there's going to be a liner, we'll have a double liner. And those are very good things, I'm not trying to say they're not.

However, there's a reason that liner -- liner -- what do you call it -- warranties aren't forever. Part of it, obviously, a business reality, but liners leak. They leak from human error, someone driving a truck over it in an improper way, improper installation, weight causing things to rip. And -- and they do leak. It happens in the real world.

And the notion that it is really going to be absolute is not something that I think can be relied on. There are things that can be done to try and

mitigate when there's a leak.

However, you can't untoll the bell once you've started a leak. You can stop it or potentially try and stop it, but if you have a liner underneath a huge quantity of material that is going to be uneconomic or difficult to remove for one reason or another, you're going to have to pump back or do other treatment methods that are really following the problem rather than preventing it.

So I think there has been discussion about the importance of preventing, but I think there should be more about what happens once there's a problem and having -- having a real plan for that.

Q And you -- you were talking now about storage or waste rock on the surface.

Now, what's your opinion about whether Wolfden has demonstrated that it would be able to prevent acid-mine drainage impacts that might arise from backfilling the waste rock back into the mine workings as they're planned -- planning to do?

A I think it actually largely omits that potential. It acknowledges it might be real in the hearing today, but in the application I don't think it's adequately covered.

The probability of acid-mine drainage is high.

Once again, Lincoln Engineering in its 2020 review had said, It is an inevitable condition that either needs a mitigation plan to prevent it from happening or a water treatment plant capable of treating the additional loading or both.

The problem is -- is real. And it has a real threat.

Q Now, you noted in your prefiled testimony that Wolfden plans to transport 55 truckloads of ore per day to an off -- to an offsite ore processing facility.

What's your opinion as to whether Wolfden has demonstrated that it will prevent acid-mine drainage impacts to water arising from ore transportation?

A I think it's been largely discounted or -- or not adequately, in my opinion, planned for. If you have trucks leaving, there's many different types of trucks and there's different things you can do such as covering them.

However, the -- there are many types of transport, train, truck, loader -- conveyor belts that will have dust -- fugitive dust and/or leaks that -- that you are not going to stop all of them. I don't think it's practicable to say; you want to be able to stop everything.

And those can create what is effectively a corridor long contaminant source that itself could be creating acid-mine drainage. There are things that can be done to mitigate them and there is also monitoring that can be done to try and detect it.

I just don't think it's a good idea to sort of say, Well, we'll deal with that later. I think that's -- that's a problem.

Q And speaking more broadly about acid-mine drainage, in your opinion has Wolfden presented an adequate plan to detect acid-mine drainage if it occurs?

A No, it -- in my opinion, it has not. Really most monitoring is being left for a later planning period that it will be sort of -- we'll plan for it and we'll deal with it later.

I think the importance of a robust plan as early as possible in a decision process, for instance, this one, in fact, is necessary. If you're going to try and say, Well, we're dealing with all these things, then show how it's going to be dealt with and allow for an actual review.

There's plenty of examples where monitoring can miss something. And -- and some of that is not unreasonable. There -- you can't monitor constantly everywhere. But a minimal plan would be appropriate,

in my opinion.

Q And in your opinion has Wolfden presented an adequate plan to manage acid-mine drainage if it occurs?

A No, I don't think it has. Once you detect acid-mine drainage, you're going to have to do something with it. You've got to plan for it. Whether you're going to try and contain it, reverse coarse.

I'll note that, for instance, using what you were talking about -- bacteria sides that you mentioned -- are all methods that may be considered. Some of them can work, some of them will not. It really is very site-specific what -- what treatments or methodologies are really going to work.

However, that needs to be planned for in advance and should be done not only as a matter of, Well, it makes sense to know it, but you can't really assess the economic -- the economic viability of a mine or the economic impact of acid-mine drainage and all the other things that can happen without doing some of those things in advance -- or most of them, I would argue.

So, no, I don't think it has planned for it in -- sufficiently.

Q And this is sort of -- moving on to a related topic.

You're aware that there under Maine law a mining

company is going to have to set aside a financial trust amount to cover a worst case mining disaster.

In your opinion has -- was Wolfden demonstrated that the proposed $13,700,000 that I think is included in its -- in its preliminary economic assessment for that trust fund, do you think that would be adequate to cover a worst-case mining disaster at Pickett Mountain?

A I have not seen any mine that could possibly do much of anything with $13,700,000 for a worst-case scenario. Worst-case scenario really is things have just fallen down and something happened that is dramatic.

And, no, I don't think that would be adequate. The -- as you say, the preliminary economic assessment, the PEA, does identify it, but it's not clear really where it comes from, at least not to me. I couldn't understand where that number was derived from.

I use an example that comes from -- from my state, Montana -- though I acknowledge I moved there in the mid '80s, I actually grew up in New Jersey. But at Zortman Landusky Mine, which is a name you've probably heard before -- or maybe you've heard before, that the company said, We will not have

acid-mine drainage and if we do, we're going to deal with it and we have a plan to deal with it.

And once acid-mine drainage happened, they weren't able really deal with it. They got behind the ball. And the company ultimately went bankrupt and the taxpayers in Montana have been paying for decades and it's likely to go on into perpetuity. It's over $100,000,00 -- or near $100,000,000 now of state money, taxpayer money has gone to dealing with that problem.

I'd note also that the lead of the company that had done that, Pegasus Gold was the name of the company, its president is now part of a completely different set of mines being proposed -- or mine being proposed that he's saying, Well, we're not going to do that again, we're going to do better.

And when it comes to financial surety, my -- my real feeling is you need to have a little better -- you have to be really secure for the state to protect state resources and financial surety.

Q And I think at Zortman Landusky, as I recall in your -- your prefiled testimony, you stated there was a certain amount per year that was being spent just for -- just for pumping out -- pumping and treating the water.

Do you -- was that --
A It was like $20,000,000 a year, if I recall --
Q I think it --
A -- or 2 million.
Q I think you said 2 -- I think it was 2 million.
A 2 million. Excuse me. Thank you.
Q But going on for many years?
A Yes. And -- and that's the problem with acid-mine drainage, once it starts, you're going to have a heck of a time completely stopping it. There are things you can do to mitigate it or manage it, but they cost money.
Q And now I want to move on to the -- discussing the ore processing and tailings facility, also sometimes called a concentrator in a tailings disposal facility.

In your opinion can the economic viability of this mining project be adequately assessed without considering Wolfden's plans -- specific plans for ore processing and tailings disposal in a nearby town?
A No. No, I don't think it can. The pieces of a mine, in my opinion, are all necessarily intertwined and interconnected no what matter -- no matter what you do.

You have a place where you're getting the

materials, you have a place where you're putting waste and you have a place where you're going to treat -- excuse me, process the ore and deal with the waste from the ore, as well as, of course, administrative and lots of other things.

But those are the main -- the main components that to remove one of them and say, Well, that's not a part of this anymore is, as a matter of financial reality, completely unsupportable in my opinion.

As a matter of logistics, if it's going to be anywhere nearby, there is a reasonable potential that the disposal site for the tailings and, of course, the treatment plant itself -- the processing plant, excuse me, itself are going to be nearby and you don't know, unless identified and reviewed, whether that's going to have any impact on the mine's own watershed, the hydrologically connected with the same resources, or just have regional impact that -- that should be considered.

I think that kind of chopping pieces apart -- personally, I think it's unreasonable from the review point of view because you can't just say, We're not going to process our ore. That's -- that's where the money comes from. It is inextricably intertwined with the economics of the company.

Q And so just stepping -- stepping back to talk about the ore processing.

What does that -- what does that process entail? What does ore processing entail, how does that work?

A Ore is the stuff that had value at the mine site itself. You take it out of the ground, in this case, and through underground workings you bring it up.

And about 90 percent of it is probably -- or more, it depends, or less, call it 90 percent just fox explanatory purposes, of that is useless. The 10 percent that is valuable minerals is going to be treated -- the whole thing is ground up. I should back up. I apologize.

You take your ore, you grind it up generally into a fine powder and you use a variety of processes and chemicals to, essentially -- float is the easiest way to describe it, if you think about it graphically. You're floating away the valuable minerals -- and those are done often in tanks -- that that is -- that is then the valuable stuff.

It's taken away. 90 percent of it is going to fall down, think about, again, just graphically, conceptually. 90 percent of it is going to be waste. That's going to become your tailings.

You also have with both of those a variety of

chemicals, many of them toxic, many of them not of course that have to be dealt with. From the ore that had the valuable minerals and now the minerals are separate, you're going to wash it and send it off for further processing. That's the money, that's the paycheck.

The waste also has all of the chemicals in it. And many places will dispose of it by putting it into what's called a tailings pond or tailings impoundment; big dam, hold all the stuff. That's not allowed in Maine, is my understanding.

Therefore, the mine has proposed to further process it to make what is a very low or lower moisture cake or dry stack, it's called -- though, it's not technically really dry -- and dispose of it that way.

There are costs associated with any disposal method, but the cost of all of those things are part of the company's bottom line. And just as the ore becoming concentrated minerals going offsite that forms the paycheck is part of the process, so too the waste that's dropping down and has to be dealt with as dry stack tailings, for instance.

And to separate it is -- I find it almost implausible as a regulatory matter or as financial

matter.

Q And what are the -- what environmental risks can ore processing pose for a project like this one?

A They can be big, of course. You've got any sorts -- well, the chemicals themselves both coming to the site can be a risk if there's a leak or a spill; storage on the site, of course, of the chemicals can be a problem.

Generally speaking the work -- the workings of the processing facilities themselves are fairly closely monitored because that's your money. That liquid, that waste materials, even if they're combined, is still very valuable to the company, that's where the money comes from.

But there are leaks that have happened. I've heard of mines leaking their process solution, which is not something you'd want to do. But that is then taken off. You've got the waste materials that have to be treated to remove the toxic materials -- in this case, if they're using a dry stack tail -- and then dispose of the chemicals or the waste either by reusing it, which is actually a preferred method, I would suggest, or at some point treating it or disposing of it on or offsite to -- to remove it or contain it from environmental risk.

Like everything else, though, there can be spills and they occur. They can be from human error, maybe machine problems. There's a variety of things that can happen. And -- and they do.

Is that likely? Not necessarily, but they happen and, therefore, they need considered as real and planned for as real.

Q And -- so now I want to switch topics a bit to talk about financial -- the company's and the project's financial viability.

With respect to Wolfden, has -- has Wolfden demonstrated that it has the financial capacity to complete this proposed project in your opinion?

A In my opinion, it hasn't. I think it was on the -- yesterday -- I was thinking of the first day, but that's not that long ago -- there was discussion about the -- the sort of junior mining company is sometimes how it's described and the economics that they run and the normalcy of being a low capital company.

But that doesn't -- the normalcy, perhaps, of it doesn't remove the potential risk of it. It is still a company that is not, in my opinion, financially resourced to do this. The idea that it will or could come up with finances is not invaluable, but at this

time this company does not have the ability to do what it is proposing to do.

Q And, in your opinion, has Wolfden demonstrated that the value of the Pickett Mountain Deposit is sufficient to make this a financially viable project?

A No, it has not. The orebody itself is characterized as being -- and, actually, I'm blanking entirely now the words for it -- indicated versus inferred -- thank you, I'm sorry for that.

The -- the notion of both of those are less than proven. We don't know what is actually there. There are good indexes that can be relied on for a variety of business purposes. But to really say that, yes, this is a viable project, I don't find supportable personally or professionally, more important.

The -- the basis for that is -- is in the numbers. And Wolfden has not done the review and the data necessary -- and you saw the -- I believe it was Mr. Finley put up -- and I could be wrong with the name again, I apologize -- all the drill holes in the cores and there were, I think, four core examples here.

That in all of those data -- there could be much more data available. The problem with that as -- I think, is the cost of doing that can be high and,

therefore, you know we're not going to get there yet.

Well, in my opinion you don't get your permit until you can prove it. And you don't get -- similarly, a land use change, in my opinion, requires knowing that this is a viable orebody and a viable company. I won't bother reading the quotes unless you want me to, I guess --

Q Well --

A -- in the --

Q Go ahead.

A Oh. In the PEA there's a variety of statements about the company's viability and the risks and the meaning of inferred and indicated resources. But there's still no demonstration of viable corporation or proven resources.

Q Why don't you explain to us how much of the -- what percentage is an inferred resource and what does an inferred -- how much of the mineral resource is informed and what does an inferred resource --

A Okay.

Q -- mean?

A The preliminary economic assessment, which was completed in 2020, states and says, quote, the diluted mineral resource, end quote, that is, quote, comprised of 50 percent indicated resources and

50 percent inferred resources.

The PEA acknowledges that, quote, inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be comprised as mineral -- categorized, excuse me, as mineral reserves.

Therefore, there's no guarantee that the economic projections contained in this PEA would be realistic. Further, indicated resources cannot be considered a proven reserve either.

And that's -- I'll note that's, I think, standard language in a PEA. Because that is -- the whole point of a PEA is creating something to prevent a company or prevent from an individual from saying, This is -- this is gold worth a fortune for you. Well, I've got to do certain mineralogic analyses to show that this has value.

And that's the whole point of a PEA. And, therefore, the caveats in there are standard. But that means, though, that this orebody has not advanced to a -- a point that demonstrates that it is more than indicated or inferred, that it is actually a proven resource; we've got whatever we say we have.

And that's, I guess, the basis of my -- my

concern.

Q And now let's move on to discussion briefly of -- of jobs.

In -- in your opinion based on your review of the application, has Wolfden demonstrated that the jobs associated with this mine will be filled primarily with -- from the local workforce?

A No, I -- I don't think that it has. In the application it states, quote, it is Wolfden's objective that the primary workforce be employed locally from residents, end quote. But it doesn't specify how this is actually going to be achieved.

Yesterday there was testimony about the sort of talking with different colleges or different planning. And I believe even in the budget there was -- there was money proposed for -- or included inherently in things to educate a workforce and create a workforce.

But that's -- that's sort of a promise to promise, in my opinion, as opposed to an actual plan or anything that is reliable. The idea of having seven-day on, seven-day off schedule at many places is conducive to a fly-in/fly-out, it's called.

And that's not necessarily flying in, literally flying, but people coming in, working for a period

and then going back home, wherever it may be, because they're working for a week and they can go home for a week.

In this case here with the mines over -- just over the Canadian border, it might be that people could be coming from there. I don't know that that is what would happen, but I don't see a clear plan from Wolfden nor commitments of what happened.

I will note also, even if there were commitments, full disclosure, I would be saying to you, Well, even if there was commitments, it's not clear that they would be binding on if, for instance, a major company taking over the junior company -- a major company takes it over, there's nothing to say that the larger company would say, Well, we don't care; that was Wolfden, we're not Wolfden.

Without a binding commitment or some clear standard for local jobs and actual numbers, you don't have any -- in my opinion you don't have anything except a promise or a promise to promise something.

The -- in my opinion there should be a requirement to identify the specific jobs that will be created. And the reason I say that is because oftentimes when jobs are created, they're -- they're not created, you know what the mine needs. The

skilled jobs often can go to people who already have the skills and the lesser jobs go to the people who don't have the skills.

Training and other things may get them there, but without clear commitments to, These are the positions and here's what we're going to do with them, it's a promise. And that's not necessarily without some merit, but I don't believe that it's something upon which I could rely and say, Yes, that is likely.

There also should be a requirement to describe how it will ensure that the training and other stuff is done. To say you're in talks with the local community, et cetera is good, but I don't think that is adequate. And making it clear that this is binding on whatever the future may be of the mine as opposed to the company that is looking as a minor company to be taken over or sell it.

Lastly, I think there should be a requirement to analyze how all of those plans change if those commitments are not met. If you're looking to the financial analysis of, well, this is going to be an impact to, in this case, the committees, well, what's the impacts if that doesn't happen? What are the financial benefits going to be if those jobs are not filled locally? And what happens then?

And I think those -- those things are all missing in my opinion.

MR. BLOOM: Okay. Thank you. I have no -- I'm done with the direct.

MR. WORCESTER: So it's the applicant's cross-examination time.

CROSS-EXAMINATION OF: STUART LEVIT

BY MS. EMLEIN:

Q Good afternoon. Maye Emlein, counsel for the applicant.

Mr. Levit, you have covered a great deal in your testimony. And as a preliminary question I wanted to ask you about your curriculum vitae, which was submitted this past week.

You state that you've worked on a series of framework projects including framework for responsible mining; is that correct?

A Yes.

Q And this refers to a report that was published in 2005, right?

A I couldn't tell you the date, but I'll trust you, yes.

Q Okay. And you provided feedback and comments on this report to the authors; is that correct?

A Yes, it is.

Q Okay. And in the executive summary of this report it states that, quote, nearly all negative social and environmental impacts are avoided -- are avoidable, excuse me, if companies would operate according to the best possible standards, correct?
A Yes.
Q Okay.
A I don't actually recall the statement, but I'm -- you're reading, so I'm trusting.
Q Okay. But you don't deny that that's what the report says?
A No, I do not.
Q Okay. Drawing your attention specifically to both your testimony here today and your prefiled testimony, you discuss -- you have a great deal of discussion about the reverse osmosis technology.

And you agree that the reverse osmosis technology is technologically possible, correct?
A Yes.
Q And you would agree that it is an effective tool to clean water?
A Yes.
Q So you agree with Mr. Danyliw and Dr. Thoen that the proposed water treatment is a viable method of achieving the treatment standards required under

Maine law?
A Would you repeat that?
Q You would agree with them that the proposed water treatment, it's a viable method of achieving the treatment standards?
A Yes.
Q Okay. So your concern is not the technology is ineffective, it's that it's -- in your words, it's expensive and cost-prohibitive?
A Yes.
Q Okay. On Page 4 of your prefiled testimony you specifically cite the Bald Mountain report to support your conclusion that this technology is expensive and complex.

And this report is from 1990, correct?
A I'm looking for it. I'm not sure I have the page pagination as you, but I'll believe yes.
Q Okay. But you cited to the Bald Mountain report --
A Yes.
Q -- you submitted that in your testimony?

Okay. So if it's from 1990, it's more than 30 years old, correct?
A Yes.
Q And you would agree that this report is specific to Bald Mountain and the unique hydrological

characteristics and economic conditions, correct?
A Yes.
Q Okay. And you state specifically in your prefiled testimony that the reverse osmosis technology has not changed substantially since 1990, correct?
A Well, the answer then -- if I said that, then, yes, I said that. Yes.
Q And you were present yesterday and heard Mr. Danyliw and Dr. Thoen testify?
A I was, but if -- if you want something specific, I -- I can't remember who's who for sure, but --
Q That's okay. But you -- you were present in the room to listen?
A Yes, I was.
Q Okay. And so you heard them testify that this technology has become more common and, therefore, more affordable?
A Yes.
Q Okay. And you are also aware that Mr. Danyliw testified that there are many mines globally and other industries that are using this RO technology?
A Yes.
Q Okay. And you also heard Mr. Danyliw testify that brine is going to be significantly less here because of the concentrate recovery system, correct?

A I heard that, yes.
Q Okay. So based on this testimony -- on Mr. Danyliw's testimony, you're aware that the proposed water treatment system produces significantly less than the 20 to 30 percent that Dr. Maest assumed in her testimony?
A Then -- 20 to 30 -- 30 percent -- 20 to 30 percent less than -- could you repeat that?
Q Than Dr. Maest mentioned --
A Oh, Maest. I'm sorry, I didn't -- I didn't catch the -- the who. Sorry. Thank you.
Yes, I'm aware of that, but I -- I'm not clear, I guess, the -- every mine is -- is unique, as I think you're sort of beginning to try and point out, and this one is, too. I have not seen the data here to demonstrate the actual costs at this site based on the mineralogies, flows, et cetera.
Q You would agree that Mr. Danyliw testified that there is technology that has been put in place in the proposed mine that reduces the amount of brine that would come out of the reverse osmosis system?
A Yes, I heard his testimony. Yes.
Q Okay. And you have never designed a mine water treatment system, correct?
A No, I have not.

Q And you've never operated a mine water treatment system?
A No, I have not.
Q Okay. And you heard that Mr. Danyliw and -- and Dr. Thoen have collectively designed hundreds of such RO treatment systems, correct?
A Yes.
Q So it's accurate to say that you've never been responsible for developing cost estimates or designing and operating a mine water treatment system?
A Correct.
Q Okay. During your testimony here today and at several points in your prefiled testimony you reference Lincoln Engineering's report both in reference to the water balance and acid-mine drainage. And on Page 8 of your testimony you specifically say that Lincoln concurred with the conclusion that Wolfden's flow rate is too speculative for a water management plan or water -- or a water balance.

Are you aware that Lincoln also stated in its summary opinion that Wolfden's documents were, quote, fairly well detailed for the expected level of project development, end quote, and that there were,

quote, no major category gaps?
A I can't say I recall or don't recall that specific statement. But my quoting of Lincoln is, I think, based on my personal opinion and not Lincoln's opinion necessarily of the amount of information that is necessary and appropriate for -- for making a determination about the ecological -- or technologic and financial viability of a project.
Q But you would agree that you only included -- you did not include Lincoln's ultimate conclusion in their analysis in your prefiled testimony?
A I don't agree with their characterization that it is an ultimate conclusion, but I -- I do agree I did not include that statement in my testimony.
Q Okay. And are you aware that Lincoln's analysis was part of a larger report that SWCA Environmental Consultants prepared for the Land Use Planning Commission?
A Yes.
Q Okay. And SWCA in its -- in its report, of which the Lincoln report was an attachment, concluded, quote, given the level of effort for this state of development and compared with similar deposits, the proposed development is technically feasible with the understanding that significant detail is still

required for the design of individual mine components in accordance with the State of Maine rules and regulations for development of this project.

And your testimony does not reference SWCA -- SWCA's Environmental Consultant's conclusion, correct?

A Correct, it does not.

Q Okay. In your prefiled testimony and today you have described Wolfden's proposed financial assurance as inadequate.

And one of the things that you point specifically to is acid-mine drainage as a reason for this inadequacy, correct?

A Yes.

Q Isn't it more accurate to state that the amount of financial assurance may need to be adjusted based on the results of additional hydrological and geochemistry characterization?

A It is, but the reason I have my statement as it was is because the financial viability of the whole project is -- needs to include, among other things, the financial surety cost because that is an actual cost for a mine.

And to try and say, Well, it needs to be adjusted -- all of these things I acknowledge need to

be adjusted. However, to make a determination that the project is viability, in my opinion, requires more than is present currently.

Q And are you familiar with the Chapter 200 standards from the DEP?

A Very, very little, quite honestly.

Q Okay. Are you aware that as part of the Chapter 200 requirements a third-party reviewer who has to be approved by the DEP is hired to provide estimated costs associated with mine closure reclamation and a catastrophic event?

A I'm not, and I -- but I would assume it's there only because most state regulations require something along those lines. The reason, quite honestly, I am not familiar with it is I didn't really spend much time in it.

In -- my understanding is that is a later permit review to be done. And my comments were -- were designed to help inform or respond to the LUPC Commission which has its own standards, its own rules and its own requirements. And I had no idea that the LUPC would be relying on a future permit review for its decision here.

So I -- I, actually, have very little I could probably add for you on Chapter 200.

Q So your statements in your testimony referring to, you know, inadequate monitoring, more soil sampling, more soil characterization, all of which will be done in Chapter 200, none of your statements in your testimony account for that additional characterization that will come at the next phase of this project?
A I would say, no, because I don't think they're relevant to my understanding of the permit being given today. The LUPC Commission's rules and obligations, I thought, were the LUPC's determinations, not the LUPC's determinations based on some future regulatory process.
Q And, Mr. Levit, just to clarify, you're aware that this is a rezoning process rather than a permitting process, correct?
A Correct.
Q Okay. And are you aware that during the LUPC Commission's Chapter 12 rulemaking process stakeholders argued that additional level of detail on things like soils, surface groundwater should be included in the rezoning phase?
A I don't think I'm aware of that. I -- would you repeat that?
Q Yes. I mean --

A I'm sorry.
Q So during -- during the Chapter 12 rulemaking process stakeholders were able to comment and --
A What does the Chapter 12 process specifically apply to? The names and numbers I'm not familiar with, I'm sorry.
Q Yes. So Chapter 12 is relevant here related to rezoning of the mining operation. So --
A That's the LUPC's governance?
Q Correct.
A Thank you. I -- I didn't know the name. Thank you.
Q So during that stakeholder process several stakeholders argued that additional level of detail was required on soils, surface and groundwater samplings.

Were you aware of that?

A No, I was not.
Q And are you aware that the Commission declined to add those additional requirements because these detailed studies are part the Chapter 200 permitting process?
A I'm not aware of it, but I'm also not sure how you -- I'm not sure from the hearing or from your question, I guess, where the delineation is between, we have to have a conceptual plan, we have to have a conceptual plus 20 percent, 50 percent, 90 percent of what would

be the Chapter 200 processes.

That is to say, I don't -- I guess I don't know where that delineation would be. My comments are based on the conceptual need for the basis of a financial valuation to say, yes, this is practicable or -- or possible or, no, it is not.

Q So you don't have specifically any knowledge as to what's required in the rezoning phase of the project versus the permitting phase?

A No, I could not compare them.

Q Returning to the topic of the statement that the financial assurance is inadequate. You specifically cited both here today and in your prefiled testimony the Zortman Landusky mines that Pegasus owns. And you cite these two mines as evidence that the -- the financial assurance is inadequate.

On the --

A Could I actually -- I don't actually say that it is -- if I said that is evidence of the inadequacy at Wolfden, that is -- I did not intend to imply that.

Q Let me rephrase.

A Okay.

Q Let me rephrase.

So you cite these two particular mines as an example of the high costs associated with mine

operation?
A I cited it with the intent of an example of the high cost where there is a failure.
Q Okay.
A Not as an example of comparison or suggesting that would be here. It's a very different mine.
Q Okay.
A As I see your picture now.
Q Yes. And this is an open-pit mine, correct?
A Correct, it is.
Q And it has wet tailings?
A Yes.
Q Okay. And this is over 1,200 acres about; you would agree with that?
A That sounds about right, yeah.
Q Okay. And the proposed Pickett Mountain project is -- they're proposing rezoning of 374 acres, correct?
A Mm-hum.
Q Okay. So -- and the Zortman and Landusky mines operated from about 1970 to 1990s, thereabout?
A Yes. Sorry, I'm not...
Q So you would agree that this mine operated pre, you know, contemporary mining standards, pre current characterization standards?

A Not entirely. I guess I'm not going to compare Montana's standards to Maine's because I don't know them well enough. Montana has advanced quite a bit in -- in response in many cases to the Zortman Mine.

My comments are not based on, I think, the comparable of that mine in its current state or the -- with this mine nor on the regulatory rubric of that mine versus the Wolfden mine. It's based on the conceptual there are huge risks.

I don't think that the footprint of a mine is necessarily going to correlate with the footprint -- or the impacts that it will yield financial or chemical or technical. A small mine -- what -- I think -- I will not agree with the idea that a small mine is only going to have small impacts, whether it's geographic or otherwise. So I'm not -- I'm not sure, I guess, the question.

Q But you would agree that an upfront financial assurance should be based on the specific conditions of a particular mine?

A Yes.

Q So when -- in your testimony when you pointed to Zortman and Landusky as having $100,000 -- or $100,000,000 in cleanup costs, it sounds like you would agree that that is -- you're not saying that

that is the amount that would necessarily be required in this particular circumstance --

A No. No --

Q -- and that additional information would be needed?

A Yes, it would. I think the amount has to be calculated based on specifics for the site. And I did not -- I have not seen sufficient information, nor any calculation made other than what's in the PEA.

And I didn't find the support in the PEA to, I guess, really understand where that number come from to say that is a reasonable number. Based on even minor costs that can occur from acid-mine drainage and treatment into perpetuity, 13.7 seems to me low.

Am I saying it's a hundred million? No, not even -- I have no idea, but it could be an order of magnitude difference from 13.7. And that's where I'm -- that's the -- I guess the purpose of citing to Zortman.

I don't -- I don't intend to say that I have the number, I don't see the number or see a basis for the number.

Q Okay. But you would agree that additional information would be required and you would agree that that would occur at the Chapter 200?

A I agree more information is required. I think that is necessary for any financial assessment of the mine because that cost can be significant. So I won't specify or limit to just that -- that's something for Chapter 200.

I think any financial evaluation of the mine requires some reasonable number upon which it can make that determination.

Q And you do not have a background as an economist, correct?

A Correct.

Q Okay. And have you ever invested in a mine?

A No, I have not.

Q Okay. Or have you ever developed, owned or operated a mine?

A No, I have not.

Q Okay. So you don't necessarily have an opinion as to, you know, a rate of return that would be required for a mine to be an attractive investment or -- to be an attractive investment for those who generally invest, own and operate mines?

A No, I do not.

Q Okay. And you referenced the PEA earlier in your testimony.

And you're -- you are not a qualified person

under the N43-101 standard which governs the PEA, correct?

A Correct, I am not.

Q So based on your experience you don't have an expert opinion as to the economic value or financial viability of this particular project?

A Based on my experience -- I'm just thinking about your question.

Would you read it again? I'm sorry.

Q Based on your -- on your experience you don't have an expert opinion as to the economic value or the financial viability of this particular mine?

A Oh, no, I do not. My -- my statements were based on my reading of -- of the PEA and, in fact, relying on it and its language knowing the difference between inferred, for instance, and proven or other standards that are used for PEAs.

And that's -- that's the basis.

Q Okay. I'm just checking -- oh, four minutes, okay.

You reference in your testimony the tailings and the concentrator.

You are aware -- or are you aware that Chapter 200 will evaluate the entire project as a whole?

A Yes, I am -- oh, excuse me. Actually, I guess, no,

I'm not, but I've heard that a number of times through the proceedings today and here -- or yesterday and today here.

The reason I said what I did is because the financial viability, in my opinion, requires those included in the analysis because those are significant financial pieces of a mine and, therefore, I thought that they should be included.

Q And as you testified previously, you know that this is a rezoning proceeding.

And you understand that the Commission cannot determine zoning outside of the jurisdiction, correct?

A Yes.

Q Okay. And you are also aware that the PEA considered all costs, correct?

A Yes.

Q Okay. In your prefiled testimony you noted that the application did not take into account evaporative losses in the water distribution system.

You are aware that Wolfden did in fact account for that, correct?

A Yes. The -- I read -- from my reading of the application, I did not -- and I'm not sure if I missed it or did not download it at the time --

the -- there was a response, I believe, to a question -- or I think it was a Wolfden response to a LUPC question.

And I had not seen them at the time that I wrote the -- I guess, the testimony.

Q Okay. And you are aware that under the Chapter 200 process there's going to be additional baseline site characterization for soils, hydrology, flow paths, velocity, gradients, you know, additional groundwater surface interactions, runoff infiltration, correct?

A I wouldn't say I'm aware of it, but I know that it's there, I've heard it's there. The -- again, the reason I put what I put is because of what I think is the need to have that as part of consideration for something like this as compared to all of it being included sometime in the future prospectively.

MS. EMLEIN: Okay. All right. I have no more questions.

A Thank you.

MR. BEAUPAIN: I have no questions for this witness.

MR. WORCESTER: This day is getting better all the time. Do the commissioners have any questions?

MS. FITZGERALD: I do. I'm curious -- you talked to -- at one point you talked about monitoring.

MR. LEVIT: Yes.

MS. FITZGERALD: Is that monitoring daily, weekly, monthly? Can -- can you expand on that a little for me?

MR. LEVIT: Sure. The -- I'll back up a couple steps. The concept of -- and I'm speaking to environmental monitoring. This is sort of seeing what's at the site and what's happening. And I'll be -- try and be quick here because it's actually a fun rabbit hole to go down, but I doubt you want to.

But the -- the idea of monitoring is fairly straightforward, that you want to be able to assess what is happening at the site and, more importantly, what you don't know is happening that could be a problem.

So, for instance, there's monitoring of effluent, you're going to discharge something in a pipe, in this case proposed, for instance, to be spray irrigated. You need to make sure that water is of a certain quality to be discharged.

There's also monitoring, though, that is looking for leaks or to detect something that may not be so -- that is not planned or that may be anticipated to detect what's happening there.

So, for instance, underground -- if you have

the -- if this is the mine workings, you may also have a -- and it's not to scale -- you would also have possibly a drill well that you are intercepting some of the groundwater going into and/or out of the site as well as, of course, they're going to monitor the -- the pump, the seepage, that they're collecting from the mine to get an idea of what's happening in the environment, where are things going, how are they interacting?

The reality of groundwater and the interaction with a mine is very complex -- or can be very complex. And you need to be able to see, well, what's happening over there? If we think we're capturing all of the water and it's all clean, it's possibly you're not.

There may be some seepage that's going through a natural fissure or one that was created by blasting when the mine was put in that there's a little bit of water seeping out from the side, or you may have surface activities over here -- you know, surface operations, whatever it may be that these are leaking.

These may go this way towards the mine and will be captured by this well or in the seepage, but they may also been going that way, so you need another

thing other here.

And you -- you're going to have a series of wells, you're also going to test -- so you're going to test at different levels in the well, if it's possible, or just the -- the aggregate from the well and detect, well, gee, we have a problem over here or be able to point and say we don't and the mine is -- we're not responsible for something that may be happening elsewhere.

You're going to do the same thing with the surface flows. If you've got on the surface above all of these different things water, you're going to monitor, you're going to test it.

So, really, all monitoring refers to is a rubric and a plan, or both, to try and identify the problems that may occur at the mine and, hopefully, not find them. I mean, the ideal monitoring well is one that always comes up clean. They don't always come up clean.

And you need to be able to detect it to identify where there's a failure, where there's a problem. Once that's identified, if there's problem, then you can deal with it. You being the company is going to have to deal with it with, of course, regulatory agencies, et cetera.

The reason I include it now and the reason I think it's important now is because the cost of that can be significant and it also helps to identify both conceptually and financially what liabilities may come ahead.

And -- and I guess that may go to the question -- I apologize over there, I don't recall your name -- the attorney for the proponent -- or the applicant -- the -- you know, the bond, the planning, the financials, all of that stuff kind of comes in to -- whether it's being calculated numerically or a gut feel of they've got a handle on this or that they don't.

And to me monitoring is significant because it helps speak to the risks that can come later. And that was, I guess, a little bit of underpinning of my feeling that a -- or conclusion that a small mine doesn't necessarily have small impacts or a small footprint. There can be plenty of problems without.

The monitoring plan will help identify where these may occur. If you have an extremely fractured geography -- geology, you may have to have a little bigger monitoring plan or it's going to go a little further.

Is that going to be a massive cost? No. No,

probably not at least not, or at least at the start or unless there's problems detected, but it is something to consider.

Does that answer your question?

MS. FITZGERALD: It does. Thank you.

MR. LEVIT: Okay. Hopefully not too far down a rabbit hole.

MR. WORCESTER: Leo.

MR. TRUDEL: Yes. You mentioned about the financial trust amount and the number that was bantered around was 13.7 million. And I believe you said that's not enough.

My question is, is there a particular metric within the industry, 25 percent of the gross, 30 percent of the gross that is considered a standard for mining operations?

MR. LEVIT: I'll be honest, if there is -- if there is one, I have not heard of it. I have not heard of a reliable one. But I would also caution that any -- every mine is unique, it's going to have unique geology, it's going have unique everything.

And, therefore, I don't know that I would -- at an outset, I don't know that I would want to rely on it. If you're looking for a true back of the envelope something, I have not heard of it, but that

doesn't mean it doesn't exist.

I would also say that my -- and this is, I think, related to that question -- my saying that in my opinion 13.7 is not -- 13.7 million is not adequate, is not an absolute statement that it is not adequate. It is based on my experience.

I have never seen a mine -- certainly not a hard rock mine that that would have been -- or would I consider that a sufficient bond. I've, actually, worked on gravel mines, which generally have very little or no environment risk to water quality, that have a $13,000,000 bond or more.

So that's sort of the basis of me saying that's not adequate. I cannot say what the number is, though, at this -- at this project.

MR. TRUDEL: The other point that I'd like to just briefly ask you is you had also made mention of a series of plans, we'll say, that are not in place, if you will. And I'm going to call them risk mitigation plans, if nothing else.

Is it possible to -- that this mine could go and become feasible based upon better documentation, better risk management plans, mitigation plans going forward?

MR. LEVIT: Yes, it is. The -- really the

question I think -- I guess to me that that raises is when does all that stuff be completed? And the notion that the Chapter 200 -- and I continue to acknowledge my unfamiliarity with the requirements of that law specifically.

However, any state's regulatory requirements for a mine tend to be pretty expansive. And I understand that is more than what is required here.

But there is no -- there is no impossibility, it's very possible that the mine could have completed everything for Chapter 200 now before the LUPC's decision is made. The reason I think reasonably -- and I won't put any words into the mine's mouth or the mine's proponents -- is that would be economically significant, the costs of doing that are great.

But there is -- there is nothing to say that those things can't be done or more can be done. I don't know from any set of regulations that say, you can only do this up until now, you can't do this, the much bigger one. And if there is the need for the information, I think that it should be included.

So I think the reason I think that sort of relates to your question is there is no limit to what can be done to provide information to the LUPC except

those made by the applicant for business or other reasons. But the -- to say that, well, it's all going to be done in the future is the point that I make that I don't think that is -- that is necessarily reasonable.

MR. TRUDEL: Thank you.

MR. WORCESTER: I have a -- it seems to me that with any project, including this project, you start out conceptualizing it, you put some money into it to see you're headed in the right direction, and then you put a little more money into it. And it always seems to come up to the person who's developing, in this case this mine, they think they've provided enough information so that we can make a decision.

The other side says, no, no, we need a lot more information.

How does -- how does an applicant -- or for that matter, the opposition draw that line?

MR. LEVIT: I don't have a great answer for you, but I do have a very -- an opinion on the matter. And I think it's actually a great question because it begs the question when is enough enough, which I think is sort of what you were getting to.

And it really applies to probably everything in life, but I'm going to try not to philosophical here.

Ultimately I look to it as who has a burden of doing something?

If I want something, I have the burden of showing that it's possible and reasonable and doable. And, therefore, I tend to think that the applicant for something bears the burden, obviously, of coming up with it.

And if there is to be any question when is enough enough, that answer should be based on more, not less because it is the applicant that is -- that is making the financial risk at the beginning, but it is ultimately the public trust that is being, you know, risked in the long term, so to speak.

If the mining company goes bankrupt and the public is the one who's left dealing with it. And I started my career, quite honestly, in Superfund work, cleaning up of Superfund sites where things just all went kitty wampus.

Many of those are old sites, I acknowledge it, especially in mining, but not all of them. And current companies go bankrupt leaving the public with literally holding the bag, so to speak, or taking money out of the public bag to try and amend the failures of the corporate bag.

And the reason I feel that that is -- is to me

personally and professionally -- or it's professionally supported in my opinion, the way to answer is because the company is seeking to make the profit, the -- the public can get jobs and other things.

However, this is the company's proposal, this isn't the public's proposal. And where the public is risking the -- you know, what is left behind I err on the side of more should be provided, the public should not be left risking failure.

MR. WORCESTER: Anyone else? Thank you.

MR. LEVIT: Thank you. I appreciate your -- your time and your interest. Have a good day.

MR. WORCESTER: Unless somebody is going to object, the technical sessions of this hearing will be continued at 8:30 tomorrow morning here at Stearns.

This evening we meet at 6:30 where the public will comment. See you all in the morning or this evening.

(Suspended this hearing at 3:58 p.m. this date.)

CERTIFICATE

I, Angella D. Clukey, a Notary Public in and for the State of Maine, hereby certify that this hearing was stenographically reported by me to the best of my ability and later reduced to typewritten form with the aid of Computer-Aided Transcription, and the foregoing is a full and true record of the hearing to the best of my ability.

I further certify that I am a disinterested person in the event or outcome of the above-named cause of action.

IN WITNESS WHEREOF, I subscribe my hand and affix my seal this 26th day of October 2023.

Angella D. Clukey

ANGELLA D. CLUKEY, NOTARY PUBLIC
Court Reporter

My commission expires March 17, 2024

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