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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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1 (This hearing was taken before Angella D. Clukey,
2 Notary Public, at the Stearns Jr. Sr. High School,
3 199 State Street, Millinocket, Maine, on Tuesday,
4 October 17, 2023, beginning at 8:30 a.m.)

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

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

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

17 MR. ELLSWORTH: Perry Ellsworth, Franklin County.

18 MS. FITZGERALD: Betsy Fitzgerald, Washington
19 County.

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

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

24 MS. HILTON: Gwen Hilton, Somerset County.

25 MR. PRAY: Peter Pray, Penobscot County.

1 MR. TRUDEL: Leo Trudel, Aroostook County.

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

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

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

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

15 AUDIENCE MEMBERS: I do.

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

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

21 MS. BEYER: Yep.

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

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

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

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

13 The rezoning area, as we discussed yesterday, is
14 374 acres outlined in red on this figure. The area
15 is -- existing area is forested with forested
16 wetlands and other types of wetlands as inclusions.

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

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

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

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

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

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

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

1 the Penobscot River.

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

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

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

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

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

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

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

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

15 As I mentioned before, Pickett Mountain Pond
16 flows into Grass Pond. Grass Pond is approximately
17 1.75 miles northeast of the rezone area and has a
18 maximum depth of only 5 feet. It is a state heritage
19 fish water, which means there's a native brook trout
20 population that has not been stocked in the past
21 25 years.

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

1 16 feet and it's also a state heritage fish water
2 that has not been stocked in 25 years and contains
3 native population of both brook trout and landlocked
4 salmon.

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

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

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

25 To further evaluate the visual effects of the

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

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

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

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

21 MR. WORCESTER: We have a question here.

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

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

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

8 MS. HILTON: So Mount Katahdin --

9 MR. STEWART: Mount Katahdin, yes.

10 MS. HILTON: -- included? Okay.

11 MR. STEWART: Yes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5 Thank you.

6 MR. WORCESTER: Anybody have questions? Thank
7 you.

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

18 Wolfdan hired me to help them quantify --

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

22 MS. FITZGERALD: Yep.

23 MR. WORCESTER: Okay.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 the biggest assumption is that the spending on the
2 project proceed as Wolfden expects it to.

3 Particularly that's important in regards to spending
4 on a local, within-region goods and labor. If there
5 are constraints and Wolfden cannot spend what they
6 intend to in the local region, then clearly my
7 results would need to be revised accordingly.

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

11 So Wolfden projects to spend roughly \$622,000,000
12 on the total project. Of that, that line-by-line
13 analysis I mentioned, estimates that roughly
14 340,000,000 will be spent on within region supplies
15 and labor. That within region spending will in turn
16 support \$715,000,000 of total economic output. You
17 can think of that as business sales through all
18 levels of the supply chain.

19 248,000,000 in earnings. And that is earnings to
20 Wolfden employees but also to the earnings -- also
21 earnings to the employees of Wolfden's suppliers and
22 others that support the folks working on the project.
23 And 4,540 job years. A job year is just what it
24 sounds like, it is a single job either full or part
25 time for a single year.

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

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

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

20 Thank you.

21 MR. WORCESTER: I guess we have no questions.

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

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

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

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

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

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

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

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

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

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

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

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

22 I have been on the Katahdin Tourism Partnership,
23 which is -- oversees the scenic byway. It's an
24 89-mile byway from the north gate to the south gate
25 of Baxter. I'm very active on that byway. And,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7 Anybody have any questions to share -- ask me?

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

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

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

19 MR. WORCESTER: Anyone else? Leo.

20 MR. TRUDEL: I have a question for Michael.

21 MR. WORCESTER: Okay. This is for Michael.

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

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

3 MR. LEVERT: Yes, that's correct.

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

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

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

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

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

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

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

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

8 MR. LEVERT: Absolutely, right.

9 MR. TRUDEL: Okay. Thank you.

10 MR. WORCESTER: No one else? Okay.

11 MS. HILTON: I have a question.

12 MR. WORCESTER: Gwen.

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

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

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

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

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

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

12 MS. HILTON: Okay. Thank you.

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

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

17 MS. BROWNE: If I could --

18 MR. WORCESTER: It's on.

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

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

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

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

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

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

15 MR. STEWART: Yes, they were.

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

19 MR. STEWART: Yes, there would be.

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

22 MR. STEWART: There were not.

23 MS. BROWNE: What about the Passamaquoddy?

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

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

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

8 MR. WORCESTER: Leo.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

6 MR. TRUDEL: Very good. Thank you.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18 MR. WORCESTER: Do I hear any objections?

19 MS. BROWNE: No, that's fine.

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

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

25 MR. BEAUPAIN: This is the request that you

1 denied.

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

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

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

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

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

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

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

20 CROSS-EXAMINATION OF: MICHAEL LEVERT

21 BY MR. MAHONEY:

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

1 A Yes, that's correct.

2 Q Okay. And -- and last year -- or just over a year --
3 just under a year ago you prepared a report for the
4 Coastal Maine Botanical Gardens, correct?

5 A I don't recall when it was, but that is roughly
6 correct.

7 Q Okay. That is HX63. And in that report -- or is it
8 fair to say that Coastal Maine Botanical Gardens is a
9 place that is consistent with that theory of quality
10 of place adding to the economic benefit of the state?

11 A Yeah, I think so. I mean, quality of place is an
12 economic framework. That's how I would use it. I
13 wouldn't -- I wouldn't put specific types of -- of
14 building -- of businesses towards quality of place,
15 but...

16 Q Okay. That's fair. If we can go HX42, Hannah.

17 Are you aware -- you're aware of Katahdin Woods
18 and Waters National Monument, correct?

19 A Yes.

20 Q And would you agree that that also is an area
21 consistent with this concept of Quality of Place?

22 A I don't disagree with that. I just want to clarify
23 that. To me quality of place was an economic
24 framework that -- that -- it was a signal to
25 communities that they had assets that they could

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

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

11 So that's --

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

13 MR. MAHONEY: That's HX42.

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

17 MR. MAHONEY: This is --

18 MS. BROWNE: -- into evidence?

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

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

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

25 MR. BLOOM: We have it.

1 MR. MAHONEY: Okay.

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

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

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

12 BY MR. MAHONEY:

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

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

16 BY MR. MAHONEY:

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

22 A I was not aware of that, no.

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

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

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

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

11 A Yes.

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

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

17 A Yes.

18 Q Okay. In this --

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

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

25 MR. WORCESTER: Those aren't --

1 MR. MAHONEY: -- to be used --

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

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

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

10 MR. MAHONEY: Okay.

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

14 MR. WORCESTER: Would you mind --

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

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

1 all the time just getting documents --

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

8 MR. MAHONEY: So in --

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

11 MR. MAHONEY: Okay. Thank you, Chair.

12 BY MR. MAHONEY:

13 Q You have your prefiled testimony before you, correct?

14 A I do.

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

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

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

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

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

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

9 A That's my understanding, yes.

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

11 A That's right.

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

16 A Yes.

17 Q And then two years for remediation?

18 A Yes.

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

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

25 What I used for the inputs of my model was the

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

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

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

15 A That's right. And so what I did in my model was make
16 some assumptions around how much of the labor will be
17 local. And, again, so I did not assume that
18 100 percent of the labor will be local.

19 Q Okay.

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

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

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

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

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

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

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

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

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

1 A Yes.

2 Q -- her -- your review?

3 You noted in your prefiled testimony that she
4 agreed with some of your -- some of your methodology.
5 But did you not, perhaps understandably, note where
6 she disagreed or had critiques of your -- of your
7 report; is that correct?

8 A Is it correct that I noted that? I -- I think that's
9 correct.

10 Q Did you note the critiques that she had on -- with
11 respect to your approach?

12 A In my prefiled testimony?

13 Q Yes.

14 A No, I did not. There is a separate memo where I
15 responded to Ms. Bovia's responses.

16 Q Where is that memo?

17 A I don't know, the -- I believe the -- I don't know.

18 Q Have you submitted that memo to the -- have you
19 submitted that memo to the Commission, do you know?

20 MS. BROWNE: It's -- it's filed in connection
21 with the applicant's response to Agency review
22 comments. I believe that was in August.

23 MR. MAHONEY: Okay. Thank you.

24 MR. BRANN: I don't know if the Commission has
25 more questions for the panel. We're going to bring

1 back Mr. LeBlanc now otherwise.

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

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

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

12 MR. ELLSWORTH: Turn on your mic, please.

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

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

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

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

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

1 MR. TRUDEL: Great. Thank you.

2 CROSS-EXAMINATION OF: BRIAN LEBLANC

3 BY MR. BRANN:

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

5 Good morning, Mr. LeBlanc --

6 A LeBlanc.

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

9 If we go to the -- from the -- the 200-page PEA,
10 preliminary economic assessment, the overall level of
11 accuracy of all of those numbers and all of those
12 predictions in that report is 40 -- plus or minus
13 40 percent; is that correct, according to Page 701 of
14 the application?

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

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

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

23 Q All right.

24 A But if you say so.

25 Q All right. If --

1 A But -- like I --

2 Q Can you -- oh, I'm sorry.

3 A I can't quite read it like --

4 Q All right.

5 A I've just had surgery for cataracts so my eyes are --
6 and I haven't got glasses yet, so...

7 Q I understand. Okay. All right. Just for the
8 record, so it's on Page 691 of the -- of the
9 application.

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

14 A Okay. That's fine.

15 Q All right. Do you recall that all -- that the --
16 stating that the -- in the -- in the PEA that market
17 capitalization of Wolfden would be an important
18 factor to be able to finance this project, which
19 appears on the application at Page 502; do you recall
20 that?

21 A Yes, that's normal for a company.

22 Q Okay. And are you aware -- if we go to Hearing
23 Exhibit No. 69 -- that the current market
24 capitalization of this company is approximately \$14.8
25 million Canadian, which would be about -- if I got

1 the exchange rate right, approximately \$11,000,000?

2 A Okay.

3 Q And so -- but the market capitalization of this
4 company would be important as to whether or not this
5 project could be financed, correct?

6 A It's one factor, but the project itself is the main
7 factor. The grades of this deposit are incredible.

8 Q And -- but --

9 A We -- we heard from Shawn yesterday.

10 Q Understood. And I'm just -- I'm asking you about the
11 PEA which your company produced.

12 A Okay.

13 Q And -- and what you say is the market capitalization
14 is important and we're looking -- and the market
15 capitalization of this particular company is -- is
16 approximately \$11,000,000?

17 A At this time.

18 Q At this time.

19 A As -- as the progress -- as it progresses towards
20 production, the capitalization will rise.

21 Q One of the other things that the PEA had to take into
22 consideration was -- was to come up with a number to
23 be assigned to the financial assurance trust; do you
24 recall that?

25 A Yes.

1 Q And the number that came up in the -- in the 2020 PEA
2 that you did was \$13.7 million; is that correct?

3 A Yes.

4 Q And do you recall that in connection with the prior
5 withdrawn application from -- to the LUPC there were
6 questions from -- that came up from the staff that
7 said the 13.7 million looks kind of low; could you
8 explain it, could you justify it?

9 Do you recall that?

10 A I wasn't part of that.

11 Q Okay. And -- but do you recall in -- in connection
12 with the update that came out under your signature,
13 was there -- there wasn't any update or any change to
14 the \$13.7 million for the financial assurance trust;
15 is that correct?

16 A The only thing I was asked to look at was relocating
17 the mill and what the haulage costs would do to the
18 general cash flow. The \$13.7 million was not a
19 number I came up with. It was a number developed by
20 the -- by Wood.

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

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

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

4 Q Okay. Well, let's --

5 A You say it's low --

6 Q Let's --

7 A -- but I say it's high.

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

14 Do you see that?

15 A I can't see it.

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

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

1 or cover catastrophic -- a catastrophic event.

2 Do you recall that?

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

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

9 Is that fair to say?

10 A I would have to look at the details of the
11 spreadsheet. I've got -- my cash flow is fed by
12 25 spreadsheets. The one spreadsheet from the --
13 from Wood, I'd have to go into those details. I
14 haven't got it here. What they put in -- they know
15 the rules.

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

19 A Yes.

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

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

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

4 A Okay.

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

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

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

15 Would you -- would you agree with that?

16 MR. LEBLANC: They are an educated guess.

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

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

1 MR. LEBLANC: I'm not publicly traded.

2 MR. TRUDEL: But Wolfden is.

3 MR. LEBLANC: But I'm not Wolfden.

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

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

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

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

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

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

1 morning while everything was going on. Zinc over the
2 last four years is down -- from -- from the PEA it's
3 down a nickel. Lead is down a nickel. Copper is up
4 \$0.60, 20 percent. Gold is up over \$400. Silver is
5 up.

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

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

12 MR. LEBLANC: 18.

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

15 So there's some considerable fluctuations.

16 MR. LEBLANC: There are.

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

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

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

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

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

13 MR. TRUDEL: Very good. Thank you.

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

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

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

25 And I know that both sides have talked about

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

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

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

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

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

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

3 MR. ELWELL: Thank you.

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

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

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

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

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

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

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

25 AUDIENCE MEMBER: I do.

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

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

9 I think I may have the distinction of having --
10 as a member of the public having attended the most
11 meetings of the Land Use Planning Commission and the
12 Land Use Regulation Commission over the last
13 30 years. So it's nice to be back for those of you
14 that I have met before. Nice to see you and nice to
15 meet those of you I haven't met before.

16 We're going to have a big change of pace now in
17 terms of what we're going to talk about. I was --
18 when I worked for NRCM I was involved in the drafting
19 as a member of the public of both the 1997 and the
20 2010 comprehensive land use plans. And I'm going to
21 talk primarily about the values and the mission of
22 the land use plan and how this project does or does
23 not further those -- those principal values.

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

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

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

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

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

8 MR. WORCESTER: Yep.

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

13 MR. WORCESTER: I don't recall that.

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

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

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

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

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

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

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

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

7 MS. JOHNSON: Sure.

8 THE REPORTER: Thank you.

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

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

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

25 Natural resource protection, recreational

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

5 The LUPC jurisdiction continues to provide --

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

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

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

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

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

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

20 MR. WORCESTER: Do you need that?

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

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

3 MS. BROWNE: I would --

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 the water or soils.

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

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

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

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

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

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

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

25 The proposed mine and associated industrial

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

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

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

19 The outdoor recreation economy in the Patten
20 region, according to the applicant, increased almost
21 30 percent between 2010 and 2021. This period
22 included a significant and continuing growth in
23 investment in outdoor recreation including the
24 establishment of Katahdin Wood and Waters National
25 Monument, the upgrading of the Seboeis River Trail

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

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

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

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

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

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

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

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

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

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

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

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

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

15 Thank you.

16 MR. WORCESTER: The applicant cross-examination.

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

18 MR. WORCESTER: Oh, okay. Sorry.

19 (A discussion was held off the record.)

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

1 Wolastoq, which is people of the beautiful river.

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

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

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

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

1 within their main sort of territory.

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

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

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

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

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

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

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

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

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

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

13 This is a predictive model of the Meduxnekeag
14 River watershed based on a study back in, I believe,
15 1992 to help with a bridge upgrade near our tribal
16 lands. I mentioned this because of -- the area of
17 northern Maine has significantly less area of study
18 than southern Maine.

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

1 more research done.

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

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

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

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

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

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

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

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

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

25 And then there's other cultural aspects that are

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

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

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

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

20 And I think that is it for me.

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

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

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

3 CROSS-EXAMINATION OF: CATHY JOHNSON

4 BY MS. BROWNE:

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

7 A I do.

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

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

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

20 Q So you're aware --

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

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

1 A I'm not sure that I'm aware of what rural energy
2 projects the Commission has approved.

3 Q So, for example, the Kibby Wind Project the
4 Commission rezoned more than 2,000 acres for wind,
5 correct?

6 A Yes.

7 Q And more recently the Commission has rezoned more
8 than 600 acres for solar development as part of the
9 Three Corners Project, correct?

10 A I'm not familiar with that one.

11 MR. WORCESTER: Can I interrupt just for a
12 second?

13 MR. ELLSWORTH: Could you just move the mic a
14 little bit closer? I'm a little bit hard of hearing
15 sometimes.

16 MS. JOHNSON: Sorry.

17 BY MS. BROWNE:

18 Q And are you aware that the Commission has also
19 recently approved the rezoning for the Three Rivers
20 Project, again, more than 600 acres for solar energy,
21 and in a location that abuts the west branch of the
22 Narraguagus River?

23 A Certainly all of these renewable energy projects are
24 important for the transition to a climate -- a new
25 climate future and climate impacts have impacted a

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

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

7 A Yes.

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

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

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

19 A It was part of outdoor recreation.

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

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

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

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

4 A Yes, there have been a number of changes over the
5 30 years that I worked for NRCM.

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

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

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

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

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

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

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

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

8 Q Yes.

9 A It's at the bottom of Page 3.

10 Q Okay.

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

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

22 Q No, but it --

23 A -- consider.

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

1 A I think it was more like increased --

2 Q Okay. That's all right.

3 A -- consideration.

4 Q I'll let -- I'll let -- the Commission is familiar
5 with their own guidance. That's fine.

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

10 As I understand your testimony, the Commission
11 places increased emphasis on sort of remoteness
12 values within the jurisdiction, correct?

13 A The vision for the CLUP talks about remoteness as
14 being part of the principal value to be protected,
15 yes.

16 Q And could you pull up the location map?

17 So are you aware that T6R6 touches a -- the Town
18 of Hersey, which is incorporated?

19 A Yes, I'm aware of that.

20 Q This one.

21 And you're aware that Mt. Chase and Moro
22 Plantation on either side of T6R6 are both locations
23 of primary and secondary -- primary and secondary
24 locations for the Commission.

25 A I'm not sure I'm familiar with that --

1 Q Okay.

2 A -- particular map. If you have it, I'd -- I'd be
3 happy to see it.

4 Q That's okay. If you're not familiar with it, no
5 problem.

6 And you're also aware -- now you can bring up the
7 expedited wind permitting map, please.

8 You're aware T6R6 is within the expedited
9 permitting area, correct?

10 A I have not been aware of a wind project in that area,
11 so I haven't really focused on which parts of that
12 area are expedited for wind.

13 Q Okay. Well, you -- when you were with NRCM, do you
14 recall meeting with Alec Giffen when they were
15 determining areas that were appropriate or not
16 appropriate for expedited wind power?

17 A I recall many, many meetings with Alec Giffen. I'm
18 not sure if I recall any -- any specific meeting that
19 you're talking about.

20 Q But this area was, in fact, expedited -- and I think
21 as you can tell from the map, not only is T6R6
22 expedited, which means it's rezoned to allow grid
23 scale wind energy, correct? That's -- that's what it
24 means to be within the expedited wind permitting
25 area?

1 A Yes.

2 Q And that Moro Plantation and Mt. Chase are also
3 within the expedited wind -- zoned for wind power?
4 You'll have to take my word --

5 A I can't see that from the map -- from here; my eyes
6 aren't that good either.

7 Q Okay. Well -- so, in fact, isn't there a -- all
8 things being equal, a desire to place development
9 closer to the edge of jurisdiction as opposed to its
10 remote core?

11 A Yes, in general. But it's important to evaluate each
12 particular site.

13 Q Absolutely. But this is on the edge of the
14 jurisdiction as opposed to the remote core of the
15 jurisdiction?

16 A I wouldn't call this the edge of the jurisdiction
17 given that the towns that are surrounding it are so
18 undeveloped. If you drive between -- north from
19 Patten, it's -- it's clearly a very remote area and
20 this goes off the road.

21 Q But the edge of the jurisdiction refers to the border
22 between the organized and the unorganized
23 jurisdiction. So I didn't ask whether it's remote or
24 heavily populated.

25 But it is on the edge of the jurisdiction?

1 A It is remote and not heavily populated.

2 Q That wasn't my question. It is on the edge of the
3 jurisdiction?

4 A I guess -- I guess you could say that.

5 Q You also talked about the Dark Sky. I wonder if we
6 could pull up the Dark Sky application.

7 Were you involved at all in the application for
8 the Katahdin Woods and Waters Dark Sky?

9 A I was not.

10 Q Okay. Were you aware that that's something that a
11 landowner applies for and requests certification for?

12 A Yes.

13 Q And are you aware that as part of their application
14 they identified threats to the Dark Sky?

15 A Sorry, I don't understand the question.

16 Q So could you flip to the page -- as part of their
17 application they identified areas that presented a
18 threat. And in the application they specifically
19 identified proximity to other communities as threats
20 to the Dark Sky.

21 A Yes.

22 Q So Millinocket, East Millinocket, Medway, Patten and
23 Mt. Chase.

24 A Yes.

25 Q And you're aware that as part of that designation and

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

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

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

10 A That's not my --

11 Q -- the principles --

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

17 Q So including with --

18 A -- lighting and --

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

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

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

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

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

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

6 A Definitely.

7 Q And are you aware that this rezoned area is
8 347 acres?

9 A Something like that.

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

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

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

16 A I don't recall the exact acreage.

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

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

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

24 A I can't recall. I would --

25 Q Okay.

1 A -- have to look at the data.

2 Q But you would suggest -- you would agree the
3 Commission should take into account size when they're
4 evaluating the impact on habitat fragmentation?

5 A I thought you were -- your question earlier had to do
6 with the size of the habitat overall. Any
7 development causes habitat fragmentation,
8 particularly when it's in the woods as this one is
9 far -- you know, miles away from the public road.

10 So it's fragmenting a much larger area than the
11 actual 300-whatever acres.

12 Q So you're aware that Wolfden owns a parcel that's
13 more than 7,000 acres?

14 A Yes.

15 Q And that the -- they're only developing -- proposing
16 to develop and rezone 347 acres, correct?

17 A Yes. Well, whatever it is. I keep hearing different
18 numbers --

19 Q And the --

20 A -- 364, 347, whatever.

21 Q And the remainder of their land will remain in
22 forestry management?

23 A That's my understanding.

24 Q Which is --

25 A I'm not sure there's any legal requirement for that.

1 Q And you're also aware that they're using existing
2 access roads, so they're not going to have to
3 construct new access roads which might fragment the
4 habitat?

5 A My understanding is that they're going to have to
6 widen the roads significantly to enable the -- the
7 trucks and the -- the 300-plus trips a day that I
8 understand will be going in and out of the -- the
9 mine site.

10 Q So your assumption is the roads will be significantly
11 widened?

12 A That was my understanding from the application.

13 Q So even if there were some widening of the roads, you
14 would agree that that -- it would be preferable to do
15 that than to construct new access roads through the
16 forest?

17 A Yes, it's always preferable to use existing roads.

18 Q You had some slides that were -- painted a lovely
19 picture of the jurisdiction.

20 Now, would you agree that the -- one of the
21 defining characters of the unorganized area, which is
22 more than 10 million acres, is private ownership of
23 land that is predominantly in forest management?

24 A Yes.

25 Q So it's not the case that the majority of the area is

1 a national park or a national monument, correct?

2 A That's correct. Most of the pictures I showed,
3 though, were of the private land surrounding the
4 proposed mine site.

5 Q I didn't see anything in active forest management or
6 clearings or forest roads?

7 A I was showing the area around the proposed mine site,
8 that's what it looks like right now.

9 Q You -- you would agree, though, that one of the
10 defining characters of the jurisdiction is it's a
11 multiuse area?

12 A I'm not sure what you mean by multiuse. I would
13 agree that a large part of the jurisdiction is
14 managed for forestry and that when clear cuts happen,
15 they're not pretty, but they grow back.

16 Most of the Baxter State Park was under forest
17 management before it became a park. So the forest,
18 when it's managed for forestry on a sustainable
19 basis, does grow back. And as we can see from the
20 pictures around the Pickett Mountain Mine, that the
21 forest is -- looks quite nice in that area right now.

22 Q And one of the other defining characters of the
23 jurisdiction is probably that private landowners
24 allowed public access to their property for
25 recreational use, wouldn't you agree?

1 A That is a longstanding wonderful practice in northern
2 Maine that's not found anywhere else. And I think
3 it's also a result of the very large unfragmented
4 forest that we have that it has not been parcelized
5 and no trespassing signs put up.

6 Q And you're aware that Wolfden intends to allow
7 continued public access to the remainder of their
8 7,000 acres that's not being rezoned?

9 A Yes.

10 Q And I think you actually in your testimony said
11 you've been to the project site, correct?

12 A That's correct.

13 Q So you went along a private road to get there and you
14 went on private property to get there, correct?

15 A That's the longstanding practice in northern Maine is
16 that lands that aren't posted are open to the public.
17 It's a wonderful thing about our forest.

18 Q And it requires landowner permission, correct?

19 A The landowners have -- by not gating it have
20 generally given permission, yes.

21 Q And you understand that snowmobile and ATV use will
22 continue on the Wolfden and surrounding parcels
23 uninterrupted, correct?

24 A That's what I read in the application.

25 Q So fair to say you're not as familiar with the ATV

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

3 A I'm not --

4 Q -- recreational use?

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

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

11 Q Do you have their names?

12 A I do not have their names.

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

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

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

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

1 Q You heard the testimony of Terry Hill today?

2 A Yes, I did.

3 Q And you'd agree she's very involved in ATV and
4 snowmobile communities and business, correct?

5 A Yes, I've seen the growth of their business as I've
6 gone through there.

7 Q Okay. And you wouldn't disagree it's an important
8 economic engine in the community?

9 A It is one of the types of outdoor recreation that's
10 part of the outdoor recreation economy in the region
11 along with all the other ones that I mentioned.

12 Q And you're not suggesting to the Commission that
13 you're particularly well positioned to comment on the
14 impact of this project on her type of business, are
15 you?

16 A Not on her -- not specifically on her type of
17 business, but on outdoor recreation in general.

18 Q Okay. But you don't -- you don't own a small
19 business in the region, do you?

20 A No, I don't. But I do know a lot of business owners.
21 I got quite acquainted with many business owners in
22 the region doing my work on Katahdin Woods and Waters
23 National Monument. So I know a lot of folks who run
24 businesses in the Katahdin region.

25 Q But you would agree the Commission should listen to

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

4 A (Answer was redacted from the record.)

5 Q Okay.

6 A (Answer was redacted from the record.)

7 Q I --

8 A (Answer was redacted from the record.)

9 Q With all due respect --

10 A (Answer was redacted from the record.)

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

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

17 A (Answer was redacted from the record.)

18 Q So you don't have any specific examples?

19 A (Answer was redacted from the record.)

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

22 You would agree that the CLUP requires a
23 balancing?

24 A I agree with that.

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

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

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

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

14 Q And including significantly snowmobiling and ATV use,
15 correct?

16 A Including snowmobile and ATVs, absolutely.

17 Q It's a --

18 A And camping --

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

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

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

1 be able to continue.

2 MS. BROWNE: I think that's all I have.

3 Two minutes to spare. I'm keeping track of it. I'm
4 coming back for it later.

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

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

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

13 Now it's Intervenor 1's cross.

14 CROSS-EXAMINATION OF: ISAAC ST. JOHN

15 BY MR. BEAUPAIN:

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

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

23 A I'm not aware of Chapter 200 guidelines.

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

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

4 A I don't have that knowledge.

5 Q Well, assume.

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

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

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

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

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

18 MR. BEAUPAIN: Or he doesn't know.

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

20 MR. BEAUPAIN: Thank you.

21 CROSS-EXAMINATION OF: CATHY JOHNSON

22 BY MR. BEAUPAIN:

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

25 A I believe the application says that there will be 55

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

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

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

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

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

19 Q How many trucks a day?

20 A I have not seen that data.

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

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

1 Q Do you know the heavy truck use on Route 11?

2 A No, I do not.

3 Q Do you know the heavy truck route on Route 11 north
4 of Moro going to Fort Kent?

5 A I -- I don't have any data on heavy truck use,
6 period.

7 Q Okay. So as far as heavy trucks go, 55 roundtrips
8 in 12 hours would work out to less than five an hour?

9 A Well, that -- 55 would be 110 trips along the road in
10 12 hours -- you can do -- you can do the math.

11 Q If do you it that way, it would be about nine, about
12 every nine minutes there would be a truck.

13 A Yes, I'll trust your moth.

14 Q And do you think that's heavy use?

15 A I think that the fish and wild -- the wildlife and
16 the birds in the area would think that's heavy use.

17 Q I see.

18 A The invertebrates that are trying to cross the road,
19 that would be frequent problems for them.

20 Q A problem for deer?

21 A I'm sure that there will be deer collisions.

22 Q Do you know how many deer there are per square mile
23 in that area?

24 A I do not.

25 Q You've got quite a few deer down to Alna?

1 A Yes, we do.

2 Q I can tell you we've got a lot less up there, a lot
3 less. One or two a square mile maybe.

4 A I don't know the -- those data.

5 Q Do you remember Great Northern Paper Company?

6 A I do.

7 Q Did you use the Golden Road in those days?

8 A Yes.

9 Q Did you know that Great Northern produced about
10 800,000 tons of paper a year?

11 A I did not know how much paper they produced.

12 Q And did you know that 800,000 tons of paper requires
13 about 800,000 cords of wood?

14 A No, I didn't know that.

15 Q You knew they used a lot of wood?

16 A I knew they harvested.

17 Q And would it surprise you to learn that most of that
18 wood came from the Commission's jurisdiction?

19 A No, it wouldn't surprise me.

20 Q And a lot of it came from this area?

21 A Great Northern owned 3 million acres, as I recall.

22 Q 2 million.

23 A 2 million -- 2.1 million. 2.1 million.

24 Q It varied a little over time, we always said 2.

25 A So, yes, they owned millions of acres and the wood

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

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

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

10 Q Assuming --

11 A -- I don't know --

12 Q -- 800,000 --

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

16 Q Right. Well, those would simply go north.

17 A Is that a question?

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

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

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

25 Q Did people still feel they were in the wilderness?

1 A I think people feel they were in the wilderness more
2 when there's not -- when they're not right on the
3 Golden Road.

4 Q I would agree with that. But was the purpose of the
5 Golden Road at that time to move wood?

6 A Yes.

7 Q It was not to provide a wilderness experience to
8 people, was it?

9 A Well, I believe the woods have always been open.
10 That's one of the great benefits of -- of our large
11 unfragmented forest is that the landowners have kept
12 it open.

13 Q Right. So the Pleasant --

14 A So -- so there have been recreational users.

15 Q So the Pleasant Lake road is a logging road, correct?

16 A I presume so.

17 Q And its primary purpose is to move large goods?

18 A I'm not sure that I'm that familiar with the Pleasant
19 Lake road.

20 Q Do you see a difference between an 18-wheeler hauling
21 a load of logs and an 18-wheeler hauling ore?

22 A Not -- it depends on what context you're asking --

23 Q Thank you.

24 A -- in terms of impacts on what.

25 Q Right. Now, you think Patten is a remote area?

1 A The town of Patten --

2 Q Yes.

3 A -- itself? No.

4 Q Where does the remoteness start?

5 A The remoteness starts when there's no development.

6 Q How about Hersey, is that remote?

7 A Parts of Hersey are quite remote.

8 Q Okay. We're in Millinocket. Is this remote?

9 A Downtown Millinocket is not remote.

10 Q Now, Millinocket is a small part of Indian
11 Purchase 3.

12 Is the remainder of Indian Purchase 3 remote?

13 A I'm not familiar with Indian Purchase 3.

14 Q It's a township.

15 A I'm not familiar with it.

16 Q Okay. I'm just wondering why you think the project
17 area is remote as compared to the Upper St. John
18 Nature Conservancy piece with a million acres.

19 Do you consider that remote?

20 A I do.

21 Q How do you compare the remoteness of that to the
22 project area?

23 A I -- I feel like both are remote.

24 Q Okay. So you believe that the project area is not on
25 the fringe of jurisdiction?

1 A I think we looked at maps earlier. It depends on how
2 you're defining the fringe.

3 Q Okay. So you don't think the short- and long-term
4 socioeconomic benefits of this project are worth it?

5 A I think that the public values of the area outweigh
6 any potential socioeconomic benefits this project
7 might provide.

8 Q And is there any value in allowing the applicant to
9 go through the Chapter 200 process to find out?

10 A That's not the question before the Commission. The
11 question for the Commission is whether or not the
12 project meets the Commission's criteria for approval
13 for rezoning. That's a different question.

14 Q Right. But that rezoning question can only be for a
15 metallic mining project that gets a permit under
16 Chapter 200, correct?

17 A I'm not sure I understand your question. The DPD can
18 be used for a variety of different types --

19 Q Oh --

20 A -- of projects.

21 Q -- no. No, no. This particular zoning change is
22 only for a metallic mining project?

23 A That's what the application is, I believe, yes.

24 Q Right. And that project cannot go forward without a
25 permit under Chapter 200; is that correct?

1 A I'm actually not familiar with Chapter 200. At NRCM
2 I focused on things in front of the Land Use Planning
3 Commission and other members of the NRCM staff
4 focused on DEP issues so that's not really within my
5 area of expertise.

6 Q So your comments didn't take that into account?

7 A Didn't take what into account?

8 Q A permitted project under Chapter 200.

9 A No, my comments were based on this proceeding which
10 is to determine whether or not this application meets
11 LURC's -- the Land Use Planning Commission's criteria
12 for approval for rezoning.

13 Q Okay. So if just the zoning proposal is approved,
14 what adverse impacts would occur that day from your
15 perspective?

16 A It would open the door to an application for a permit
17 from DEP.

18 Q And that alone is an adverse impact?

19 A It will lead to an adverse impact potentially.

20 Q Okay. Now, are you a lighting expert?

21 A No, I am not.

22 Q Have you been up in the Katahdin National Monument at
23 night?

24 A Many times.

25 Q And have you been able to see the project area?

1 A Not from Katahdin Woods and Waters, but from the top
2 of Mr. Chase you can see the project area.

3 Q Okay. But your concern was Dark Skies under the
4 monument, right?

5 A Yes. And Dark Skies throughout, yes.

6 Q Okay. Can you see the lights in Patten from the
7 monument?

8 A I have haven't been in every part of the monument.
9 I've spent a lot of time there, but I haven't been
10 everywhere.

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

17 Q Okay. And you don't actually know, if this project
18 is completed, if you'll be able to see the lights
19 from the monument?

20 A Well, it's impossible to know because there's no
21 lighting plan in this application. So it's really
22 hard to evaluate --

23 Q I agree.

24 A -- without a plan.

25 Q I agree. Now, do you know if the Monument has gone

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

4 A I do not know.

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

7 A I do not know.

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

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

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

15 MS. JOHNSON: I don't believe so.

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

17 MS. JOHNSON: I don't believe so.

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

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

1 of financial activity, as we heard this morning.

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

8 MS. JOHNSON: I don't recall it.

9 MR. WORCESTER: Okay.

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

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

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

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

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

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

22 Perry.

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

1 about recreational opportunities.

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

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

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

14 MR. ELLSWORTH: Thank you.

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

17 MR. WORCESTER: We can do that. If -- if nobody
18 is opposed, we'd like to take the break from 12:00 to
19 1:00 and reconvene at 1:00. Okay? With no
20 objections, thank you, people.

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

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

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

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

1 start, so...

2 MS. MAEST: Okay.

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

6 MS. MAEST: I do.

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

10 MS. MAEST: Okay. Nice to meet you.

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

14 DIRECT-EXAMINATION OF: ANN MAEST:

15 BY MR. BLOOM:

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

18 A Good afternoon, Aaron.

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

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

24 A Yes.

25 Could I have the next slide, please?

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

8 Yeah, I have an undergraduate degree in geology
9 from Boston University. My senior thesis was on the
10 Androscoggin Lake pluton in Maine, which is about
11 20 miles west of Augusta as the crow flies. And
12 petty much all of our field trips when I was an
13 undergrad were to Maine.

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

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

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

1 time. I'm now in southwestern Colorado.

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

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

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

13 A Yes I was.

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

18 A Yes.

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

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

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

24 Q Or Page 1 of it.

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

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

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

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

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

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

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

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

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

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

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

24 I have never had to do that before or after in my
25 40-year career. It's not who I am, I would never do

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

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

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

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

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

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

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

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

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

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

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

20 But is what is acid-mine drainage?

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

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

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

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

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

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

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

19 And the next slide.

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

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

1 to move to the next.

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

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

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

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

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

1 Next slide.

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

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

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

17 Next slide.

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

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

1 here debating whether these are potentially
2 acid-generating materials.

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

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

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

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

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

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

24 A Yes, I did.

25 Q And does that application acknowledge all of the

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

3 A It doesn't.

4 Next slide, please.

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

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

15 Q And did you -- did you review the prefilled testimony
16 of Dr. Finley?

17 A Yes, I did.

18 Next slide.

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

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

5 What's your response to that statement?

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

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

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

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

1 climate change.

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

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

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

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

13 A If we can have the next slide, please.

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

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

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

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

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

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

14 Next slide.

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

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

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

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

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

12 Next slide.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

4 A Yes, I have.

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

8 A If we could have the next slide, please.

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

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

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

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

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

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

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

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

22 So quite a few shortcomings.

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

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

4 A Could I have the next slide, please?

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

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

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

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

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

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

8 Next slide.

9 So I wanted to show -- the Buckhorn Mine is a
10 small underground gold mine that stopped operating in
11 2017. And I've been involved with this mine for over
12 20 years. They do a very similar thing, but they
13 don't have the brine mixed in the cement.

14 And so these are these long-term leach tests that
15 we've been talking about for a while. It's a little
16 hard to see what's going on here, but the top graph
17 shows these long-term leach tests. And on the bottom
18 axis here it's number of weeks. So we've got 0,
19 10 -- or 20, 40, et cetera, up to -- this is 100
20 here.

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

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

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

12 If these tests had been cut off at 20 weeks or
13 40 weeks or even a year, you might not have seen that
14 these arsenic increases were happening. So this is
15 the sort of thing that could happen over time with
16 the backfill in the Pickett Mountain project. But we
17 have the added impact of brine which will have high
18 metal concentrations.

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

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

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

25 A Next slide, please.

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

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

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

19 So next slide, please.

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

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

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

3 A Yes. Next slide, please.

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

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

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

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

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

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

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

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

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

19 A Yeah. Just, you know, one of the reasons, you know,
20 why -- so why were there all these failures? And one
21 of the -- actually, the primary reason was that
22 mitigation measures failed in over 50 percent --
23 64 percent of the mines.

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

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

4 And next slide, please.

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

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

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

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

25 Those concentrations overall are decreasing over

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

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

11 And this is operated by a very conscientious
12 mining company, Lundin. And they are -- they're
13 actually funding a community monitoring program at
14 \$300,000 a year and all the reports from that
15 monitoring are available online.

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

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

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

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

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

9 A Next slide, I believe.

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

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

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

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

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

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

16 And I think if we look at the next slide.

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

25 Next slide.

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

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

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

14 A Yeah. I realize that. Yeah.

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

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

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

1 A Yes. And you see another lake kind of up -- in the
2 upper right of that diagram and, of course --

3 Q Could --

4 A -- Pickett Mountain Pond.

5 Q -- could it be Grass Pond there?

6 A I think that's Grass -- yeah, I think that's Grass
7 Pond.

8 Q Okay. And have you developed any opinion regarding
9 the application's discussion of water balance?

10 A Yeah, I just want to talk about this super briefly
11 because we're running out of time here. But, you
12 know, water balance is something that is -- and if we
13 could have the next slide -- notoriously inaccurate,
14 especially at this stage of development.

15 It generally tends to get better over time, but
16 the estimate is that there's only going to be
17 30 gallons per minute coming into underground mine.
18 And that's the dewatering amount that would go to the
19 treatment plant. But there's no basis presented in
20 the application for this and, importantly, no
21 site-specific information and climate change was not
22 considered.

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

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

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

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

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

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

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

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

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

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

18 A Okay.

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

21 CROSS-EXAMINATION OF: ANN MAEST:

22 BY MS. BROWNE:

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

1 A Good afternoon.

2 Q -- comments on Chevron and I appreciate how difficult
3 a topic that is.

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

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

18 A Okay.

19 Q So as I understand -- and can you hear and see okay?

20 A Yes, I can.

21 Q Thank you. And you've got your prefiled testimony
22 available if we need it?

23 A I do.

24 Q Okay. Great. So as I understand it, you do believe
25 and you have written on and studied that there are

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

4 A Yes, that's true.

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

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

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

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

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

1 Q So --

2 A -- do your best job mitigating.

3 Q -- so it would be accurate to state that you can do a
4 state-of-the-art geochemical characterization of the
5 site, correct?

6 A Yes.

7 Q A topic you've that got considerable expertise on?

8 A Yes, I do.

9 Q And do a state-of-the-art predictive modeling to
10 evaluate potential impacts and to evaluate things
11 like water balance?

12 A You can. But I -- I feel the need to say that
13 modeling is always an estimate. And as we've seen in
14 a lot of -- you know, the study that Jim Kuipers and
15 I did and also even for the Eagle Mine in Michigan, a
16 lot of those -- and Dr. Finley mentioned this
17 yesterday -- the predictions are, you know, often
18 inaccurate.

19 Q And so in that instance it's important to continue to
20 test as you go along.

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

1 A Yes, that's right.

2 Q So that's a way to validate and update your early
3 predictions, correct?

4 A Yeah, I don't know that you would ever really be able
5 to validate them. But you do need to continue to do
6 your geochemical characterization and try to do as
7 many prevention measures as you can. But it's not
8 always possible to prevent the formation of acid-mine
9 drainage, as we've seen.

10 Q So isn't, actually, the best -- I think you said the
11 prevention is the best step one.

12 So don't you first need to identify whether rock
13 is PAG, potential acid generating, or non-PAG?

14 A Yes. And, you know, the seven samples that we've
15 seen so far are, you know, so-called static tests
16 were done. And that is --

17 Q And I'm just --

18 A -- acid basic counting, yeah.

19 Q Yeah. I'm just talking generically. So for the
20 first step is to identify whether the rock is
21 potentially acid generating?

22 A And -- that's right. And metal or contaminant
23 leaching.

24 Q And did you -- and if you can avoid exposing
25 acid-generating rock, then you're going to prevent

1 acid-mine drainage, correct?

2 A I wouldn't say that's absolutely correct. You know,
3 that's a good approach, preventing, you know, that --
4 you know, but even if you --

5 Q Well, isn't that the best approach?

6 A -- minimize your exposure to -- to oxygen and water,
7 the reaction can happen pretty quickly.

8 Q Okay. So that's my second -- you're ahead of me,
9 which is going to happen throughout this.

10 But the first step is, let's avoid placing
11 infrastructure in -- or let's avoid exposing
12 potential acid-generating rock to oxygen or water,
13 correct? That's --

14 A Right.

15 Q -- like, Step One?

16 A Yes.

17 Q So I don't -- I think you were here for Dr. -- or you
18 listened to Dr. Finley's testimony and Mr. Dudek.
19 But I wonder, Maye, if you can pull up the halo slide
20 from Dr. Finley's testimony.

21 All right. Now, are you able to see that,
22 Dr. Maest?

23 A Yes, I am.

24 Q Okay. And this is schematic, which is about all I
25 can understand anyway. And in the lower right-hand

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

6 Can you see that?

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

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

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

13 Q But did you hear Mr. Dudek's testimony that the
14 plan -- and based on his assessment of these
15 2,000-plus core samples he believes is possible --
16 the plan is to at least put the ramps that go down
17 into the mine in nonacid-generating rock?

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

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

23 A Right.

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

1 non-PAG, correct?

2 A If you can do it, yes.

3 Q Yes.

4 A But it might not be the case here.

5 Q Yep.

6 A We don't know yet.

7 Q Yep. I know, I'm just -- just bear with me. I'm
8 just thinking simple terms. So that's Step One.

9 Now, the other, as I understand it -- other
10 factor that influences the potential for acid-mine
11 drainage is the time that if you -- if you do have to
12 disturb PAG or potentially acid-generating rock that
13 the time of exposure is relevant, correct, how long
14 it's exposed?

15 A That's right.

16 Q And -- and what's just sort of the -- you know,
17 what's the time frame in which leaching might occur?
18 Are we talking months, years, decades?

19 A That you can't really say. Some leaching can start
20 right away. You might not produce acid right away.
21 It depends on how much neutralizing material is there
22 and how -- what kind of contact it's -- you know, if
23 it's next to the acid-producing material.

24 So you often see sulfate concentrations being
25 released very quickly.

1 Q And when you say "very quickly," are we talking days,
2 months?

3 A You know, I -- I could throw out some -- some time,
4 but --

5 Q Well, just --

6 A -- it's really site-specific.

7 Q Right, but just generally. I mean, I don't know if
8 we're talking decades or minutes.

9 A Yeah, I mean, you know, you can -- you know, if you
10 look at some of these long-term leach tests that I
11 showed an example of, you can see elevated sulfate
12 concentrations and metal concentrations increasing
13 within a couple of weeks. Those are accelerated
14 tests.

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

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

25 Q But you would agree that's another mitigation measure

1 is to limit the time of exposure of the rock to
2 oxygen and water?

3 A Yeah. And we see that a lot -- you know, there are a
4 lot of modern mines that are -- are attempting to do
5 that.

6 Q And -- and what measures are they using?

7 A You mean to limit the --

8 Q Yeah.

9 A -- time that it's exposed?

10 Q So, for example, I don't know, are you aware that the
11 ore rock which is brought to the surface will
12 generally not be there for more than a week?

13 A Yeah, that's -- I'm not aware of that, actually. So
14 thank you --

15 Q But you would agree --

16 A -- for that.

17 Q -- you would agree that is a preventative measure
18 that helps reduce the risks of at least that material
19 generating acid -- acid-mine --

20 A It -- it does. However, we know that the ore is
21 going to be crushed and sorted underground for an
22 extended period of time. So that's another potential
23 source. And there will be air and oxygen in the
24 underground mine --

25 Q Okay.

1 A -- so...

2 Q But just -- just to, you know, keep it simple.

3 So one measure and the best measure is to limit
4 the amount of PAG rock that's disturbed?

5 A That's one measure, yes.

6 Q And the second is to limit the time of exposure to
7 air and water, correct?

8 A Yes. Limiting the amount of PAG rock that is exposed
9 is -- is difficult, though. I mean, they -- you
10 know, obviously they want to get the orebody out of
11 here if this project goes forward. So all of that
12 will be disturbed.

13 And as mentioned, you can't surgically remove it,
14 so a lot will remain on the walls.

15 Q And you understand that that's going to be backfilled
16 in relatively short order?

17 A Some of it will be from what I understand, yes. It's
18 going to be backfilled with a mix of cemented rock,
19 which will be made with this high concentrate brine.
20 And some will be uncemented waste rock, which could
21 be acid generating.

22 Q You understand that before they can -- that there
23 will -- are you familiar with Chapter 200?

24 A I've read through it. I can't say I'm, you know,
25 super familiar with it. I'm familiar with some of

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

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

11 You're familiar with that, right?

12 A Yes.

13 Q And would you agree that at least to the extent
14 you've reviewed it, that Maine's Chapter 200 reflects
15 those types of best practices and probably more?

16 A My understanding, yes, is that Chapter 200, for
17 example, does not allow tailings -- wet tailings
18 impoundments.

19 Q And -- and you'd agree that that's a -- you know, the
20 wet tailings impoundments historically have been a
21 significant source of contamination with mines?

22 A Yes. And -- yes. And lots of very extensive
23 problems. But, you know, one of the issues is
24 because a wet tailings impoundment is not allowed
25 under Chapter 200, most mines that I'm familiar

1 with -- and this includes modern mines -- will take
2 the brine from the water treatment plant and put it
3 on the wet tailings impoundment. That can't be done
4 in Maine.

5 So that's why the brine, it has to be mixed with
6 a cement and put in the underground mine. So -- but,
7 yes, I mean, Chapter 200 has some really good
8 requirements.

9 Q And you'd agree that either explicitly as part of the
10 surveys that are required -- baseline surveys that
11 are required for implicitly to demonstrate that
12 you're going to -- that a project would not adversely
13 impact water quality, a project is going to have to
14 do the types of comprehensive geochemical testing and
15 analysis that both you and Dr. Finley have described?

16 A That is my understanding, yes. And when you say
17 baseline are -- what are you referring to?

18 Q So Chapter 200 has sort of baseline studies that have
19 to be done on the site, water quality, hydro
20 geological monitoring, there's a public process for
21 the public to review and comment on the -- the
22 protocols for those studies and that's before you
23 even file an application.

24 And then when you file the application, there are
25 a number of standards, you need to identify a

1 waste -- you know, have a waste characterization
2 plan, waste handling plan, et cetera.

3 A Okay. Yeah.

4 Q So you would agree that before they could -- a
5 project could get a permit under Chapter 200, they're
6 going to have to do exactly the types of things that
7 you and Dr. Finley have described about long-term
8 leaching tests, humidity tests, tests that I've
9 forgotten and can't think about, correct?

10 A That is my understanding, yes.

11 Q You also talked about -- well, let me just back up
12 for a minute.

13 I -- I think in your testimony you said that
14 Wolfden doesn't have a plan for capturing
15 mine-impacted water.

16 You're aware that during operation of the mine
17 they're planning to pump water out of the mine and
18 all of that water will be collected, treated before
19 it's reintroduced into the environment?

20 A Yes, I think what I said in my prefiled testimony is
21 that they don't have a plan to capture all
22 potentially mine-influenced water.

23 Q And --

24 A And as I mentioned, it's just really hard to do that.
25 You know, a lot of mines have dewatering wells on the

1 outside of the orebody. I don't know if that's the
2 plan here or not. If it is needed, that's going to
3 create a lot more water.

4 And I've certainly seen mine water capture be
5 less than hoped for, let's say.

6 Q So -- and as I understand it -- you may have to
7 correct me on this, but a dewatering well is a well
8 outside of the mine and the risk is that the level of
9 that well drops below the level of the mine and then
10 mine water can leave the mine into the surrounding
11 groundwater? Did I totally --

12 A No.

13 Q -- butcher it?

14 A No, that's -- no -- actually --

15 Q Okay.

16 A -- kind of, but, you know, the dewatering -- the
17 purpose of the dewatering wells is to bring down the
18 groundwater table so that you can mine. Okay?
19 Because you can't mine very well in a flooded
20 underground tunnel.

21 So, you know, that -- most mines that I've seen,
22 that's what they do, they have these dewatering
23 wells. And that really increases -- and, you know,
24 you -- the blasting --

25 Q So let me just --

1 A -- residue and the other, you know, mine contaminants
2 end up in these dewatering wells.

3 Q Yeah. And they --

4 A But what I'm --

5 Q And they're --

6 A Go ahead.

7 Q They're more typical of a larger mine -- open-pit
8 mines, or a larger underground mine, correct?

9 A No. No --

10 Q Okay. Well, you're aware --

11 A -- that's not true.

12 Q And you mention dewatering wells three times in your
13 testimony and the concerns about that being bypassed.

14 Are you aware that this project does not include
15 any dewatering wells?

16 A I haven't seen anything about dewatering wells,
17 that's correct.

18 Q So that would eliminate one of your concerns about
19 bypass, right?

20 A No, no, no.

21 Q So you weren't concerned about dewatering wells as a
22 source of bypass?

23 A No. It's -- it's actually kind of the opposite. If
24 your dewatering wells work really well, maybe you
25 won't have very much bypass.

1 But the thing that really can make a difference
2 is the presence of faults and other features --
3 geologic features that the mine water can escape out
4 of this kind of zone of protection that you have
5 around the mine, whether it's from sumps that you're
6 pumping out or dewatering wells.

7 Q So you don't view dewatering wells as a potential
8 risk of bypass?

9 A No, no.

10 Q Because I think --

11 A Not at all.

12 Q -- you mention them three times in your prefiled
13 testimony.

14 A Yes, but not in the context of -- that if you have --
15 I think what you're saying is, if you have dewatering
16 wells, then the -- the potential for a bypass
17 increases. That is not true at all and that's not
18 what I was --

19 Q No, I was referring to the potential impact to the
20 dewatering well from the mine water because the
21 dewatering well is not captured and treated.

22 A Oh, no, it is. It is, actually. So these dewatering
23 wells are around the periphery of the mine site and
24 they're pumped -- and that water is pumped to the
25 water treatment plant.

1 Q Okay. Well, just -- since we don't have any
2 dewatering wells, I'm going to move on because --
3 just so you know, there are no dewatering wells here.

4 A Right. Yeah. But what I -- what I'm concerned about
5 is escaping capture. Okay? So even though you're
6 pumping and you're taking tuff out of the underground
7 mine with sumps, it's likely that you're not going to
8 be -- be able to capture 100 percent of the
9 mine-influenced water. That's all.

10 Q And -- and you're suggesting that the water in the
11 mine is going to flow out of the mine and that's a
12 risk?

13 A It potentially can --

14 Q Okay.

15 A -- yes.

16 Q All right. You also talked about the water treatment
17 study. And I just want to be clear that I understand
18 your testimony on that.

19 You -- and I think you said this today.

20 You agree that the ultrafiltration reverse
21 osmosis technology works.

22 So there's no real question about the ability of
23 this technology to treat the water, whatever its
24 constituents, and to treat it to background water
25 quality, whatever those waters are, correct?

1 A That's generally true. I think in mines like this
2 or, you know, deposits like this where the sulfite
3 content is super high, you're going to have to
4 replace those membranes maybe a lot more frequently
5 than you would like.

6 And so we really don't have a sense -- I mean, I
7 do want to say that reverse osmosis is a good
8 technique. And what comes out of the membranes on
9 the clean side, what Mr. Danyliw referred to as
10 permeate yesterday, is usually good stuff. You know,
11 it's almost like distilled water, it's almost too
12 good. But --

13 Q So, I'm --

14 A -- what we have here --

15 Q -- sorry, I'm getting the clock that I have
16 five minutes, so --

17 A Sorry.

18 Q -- I don't mean to cut you off, but I'm going to --

19 A No, no. Go ahead.

20 Q -- just beg your accommodation on that one.

21 So -- and you understood -- did you hear
22 Mr. Danyliw testify that the primary purpose of the
23 modeling is really to help determine the number of
24 membranes passes that you're going to have to go
25 through and establish costs and O and M costs for

1 mine planning?

2 A But -- I didn't actually hear him say that, but...

3 Q But -- but the model is not necessary to conclude
4 that the technology works because the technology is
5 in affect around the world in multiple applications,
6 correct?

7 A It is, but I don't understand why there's so many
8 shortcomings in that model. Or, you know, if it
9 wasn't necessary, why did they do it and why did they
10 have so many missing parameters.

11 Q And you understand that as part of the Chapter 200
12 process the applicant will have to gather detailed
13 background water -- groundwater, surface water
14 information, and that that will be the -- the data
15 upon which the background -- the discharge limits are
16 set, correct?

17 A I don't know that last part about that's how the
18 discharge limits will set -- be set. But, yes, they
19 will have to do background water quality sampling.

20 Q And also for the -- for the input water quality or
21 characteristics, that will be based on site-specific
22 information as well, correct?

23 A The input water quality, what do you mean by that?

24 Q The -- the water that's being treated by the plant.

25 A That's going into the treatment plant?

1 Q Yeah. So Halfmile was used as an analog, but nobody
2 is suggesting that no -- that we're not going to get
3 the actual water quality from the mine and that's --
4 that's going to be used and that will be the basis
5 for designing the final water treatment system?

6 A Maybe, but I've certainly seen a lot of mines that
7 don't do that in advance. And I'm not sure what's
8 required here.

9 Q You haven't seen a mine --

10 A I mean, you --

11 Q -- that's having --

12 A -- have to have the whole --

13 Q -- to meet Chapter 200 --

14 A -- thing set up before -- yeah.

15 You need to have that whole system set up before
16 you really know the kind of mine water that's going
17 to be produced.

18 And I think, you know, the concern is really the
19 brine and mixing it with the cement.

20 Q Okay. And you understand that there -- there will be
21 a plan in place to test that material before it's
22 backfilled, right? That the -- as part of
23 Chapter 200 there has to be a plan for evaluating the
24 suitability of the backfill before it's used as
25 backfill?

1 A Okay. That's good.

2 Q And I think one of your other concerns was the
3 assumption that the water treatment plan was going to
4 be cost-prohibitive and an assumption that you would
5 have 20 to 30 percent brine as a result of the
6 process. That was in your prefiled testimony,
7 correct?

8 A Yeah. I did -- I did mention that just briefly.
9 Yeah.

10 Q And you heard Mr. Danyliw explain that, in fact, it's
11 just over 2 percent because of the lime reactor
12 process that's added onto this plan?

13 A Yeah, I think the final output was, like, 5 gallons
14 per minute of brine from what he said.

15 Q Right. So just over 2 percent as opposed to
16 25 percent?

17 A Yeah.

18 Q You also talked about the risk of acid-mine drainage
19 occurring postclosure because of the seasonal water
20 table fluctuations.

21 That can be avoided as long as you're not
22 disturbing -- you're not mining ore close to the
23 surface. In other words, if you -- if you are mining
24 further down, that's going to be less of a risk,
25 correct?

1 A It -- it will be less of a risk, but the orebodies go
2 right up to the surface and the blasting underneath
3 can cause fissures in that overlying material as
4 well.

5 Q But is it your assumption that Wolfden is planning to
6 mine up to the surface of the orebody?

7 A I -- I don't know.

8 Q Okay. What do I have? Oh, 22 seconds. Where do I
9 go from here?

10 Have you designed -- do you have any sense of the
11 cost of designing the type of comprehensive hydro
12 geologic and geochemistry analysis that would be
13 done, required -- could I have a minute? 30 seconds?

14 MR. WORCESTER: It's better not to ask.

15 BY MS. BROWNE:

16 Q -- to do the type of analysis that you think is
17 necessary to identify with some level of
18 definitiveness the risk of acid-rock drainage from
19 this particular project and from the particular
20 mining plan that's being proposed?

21 A I'm sorry, the question --

22 Q How much would it cost to do that type of work?

23 A How much -- I mean, hundreds of thousands of dollars.

24 Q Millions of dollars probably, right?

25 A Maybe. Yeah, if you factor in the consultants that

1 are needed and all that.

2 Q And if we do it up to the standards that you and
3 Dr. Finally with talked about?

4 A Yeah. We're -- we're very picky.

5 MS. BROWNE: Thank you. I only got to two out of
6 my six pages of outline.

7 MR. WORCESTER: Time management, that's the --

8 MS. BROWNE: I'm a lawyer, I get paid by the
9 hour.

10 MR. WORCESTER: Intervenor 1's cross.

11 CROSS-EXAMINATION OF: ANN MAEST:

12 BY MR. BEAUPAIN:

13 Q Good afternoon. My name is Dean --

14 A Good afternoon.

15 Q -- Dean Beaupain, I'm the attorney for one of the
16 intervenors.

17 A Nice to meet you.

18 Q Unfortunately, I need to ask you some questions about
19 this Chevron thing.

20 What year did you say that started?

21 A You mean my involvement?

22 Q Yes. No, no, no, the -- the fraud. We can just
23 focused on the fraud.

24 A I'm not exactly sure. I guess it would be 2007ish.

25 Q And you had been working on the project how long

1 before you came to the conclusion that this was
2 fraudulent conspiracy?

3 A About a year.

4 Q And when did the fraudulent conspiracy end?

5 A I -- I'm not really sure. I mean, the -- my
6 understanding -- and I didn't have any knowledge of
7 this at the time is that the judgment in Ecuador --
8 Steven Donziger paid for that to be written by an
9 Ecuadorian attorney.

10 So, you know, up until the judgment was, you
11 know, put into the record, at least up until then,
12 which I think was two thousand -- I'm not sure. I'm
13 not sure of the date.

14 Q Well, was your primary involvement preparing the
15 report for the so-called expert?

16 A I -- you know, all the detail is in my declaration.
17 I can tell you that I -- I didn't actually write any
18 of the report itself. But the company that I worked
19 part-time for, Stratus, wrote about, you know,
20 three-quarters of that report.

21 I was involved in some of the appendixes that had
22 to do with data -- evaluation of data quality.

23 Q And did these appendices have accurate information or
24 inaccurate information?

25 A Accurate.

1 Q So was it --

2 A Accurate information, but the problem was that we
3 received all the data from the -- from Donziger and
4 his team.

5 Q And you knew that information was false?

6 A No, no.

7 Q Well, why was he changing it then?

8 A I -- I don't think he did change it. He had no
9 interest in the data.

10 Q Okay.

11 A Yeah. No, the data were the data. The -- the whole
12 question is given the whole -- you know, the fraud
13 and everything, I did not feel that I could vouch for
14 anything and that's why I disavowed everything.

15 Q Okay. And did you tell Mr. Donziger that?

16 A Tell him what?

17 Q That you weren't comfortable with what was going on.

18 A I didn't see him very much. I certainly told him
19 that we didn't have enough groundwater data to say
20 that groundwater had been affected away from the
21 pits.

22 Q And is that what the final report of the expert said?

23 A The -- as I understand it, that -- the groundwater --
24 you know, the expanded groundwater contamination was
25 not included in the expert report.

1 Q Okay. Did you ever meet with the expert?

2 A Yes, I did.

3 Q And did you raise any concerns with him?

4 A I did not. I'm not sure I even ever spoke to him.
5 And he didn't speak English and my Spanish was very
6 bad at that point. So, no.

7 Q Did you at any time bring the fraud to Chevron's
8 attention?

9 A No.

10 Q Did you bring it to your employer's attention?

11 A You mean Stratus Consulting --

12 Q Yes.

13 A -- where I worked part-time?

14 You know, I don't know how much -- I mean, they
15 knew everything that I knew and possibly more. So I
16 didn't -- I didn't -- I don't recall right now
17 talking to them about it.

18 Q And you didn't testify in the Ecuador in court?

19 A No. I was not a designated expert in that matter.

20 MR. BEAUPAIN: Okay. I don't have any other
21 questions. Thank you.

22 MR. WORCESTER: Do any of the commissioners have
23 a comment question?

24 MS. HILTON: I do. If -- I'm just -- a simple
25 question. Do you think that this is a good location

1 for this mine with -- just thinking about Maine and
2 all the water that we have in Maine, I mean, is it
3 this -- is it possible to build a mine using all the
4 latest technology that has a high potential for not
5 polluting?

6 MS. MAEST: And so the question is, do I think
7 this is a good location for the mine?

8 MS. HILTON: Yes.

9 MS. MAEST: Okay. You know, mines are where they
10 are; you can't, like, move them to some other
11 location. Right? But I -- the thing that concerns
12 me the most about this mine development is that we
13 know that these materials that are going to be
14 extracted or plan to be extracted are acid-generating
15 metal leaching, contaminant leaching.

16 And the other thing that is pretty amazing is
17 that the waters that are very close to where this
18 planned operation would occur are really clean. So
19 from what I understand about Chapter 200, you would
20 hardly be able to have any uncaptured mine water
21 because they're so close to the streams, groundwater,
22 ponds and lakes that are very clean that it would be
23 exceedingly difficult to not cause an adverse affect
24 to the water quality.

25 MS. HILTON: Okay. That answers my question.

1 Thank you.

2 MR. WORCESTER: So I'm no expert on this 200
3 regulation.

4 Have you ever seen a regulation tighter than
5 this?

6 MS. MAEST: As I mentioned, I'm not as familiar
7 with it as I could be. But I think that it's -- you
8 know, it's touted as the most restrictive in the
9 country. And I don't have any reason to think that
10 that isn't true.

11 So, you know, just the fact that you aren't
12 allowed to have wet tailings impoundments and, you
13 know, you have to do a lot of baseline sampling and,
14 you know, all of that. There are a lot of
15 jurisdictions that don't have those requirements.

16 So I think it's -- from what I understand of it,
17 it seems like a very good set of regulations,
18 protective.

19 MR. WORCESTER: Well, it -- it seems to me that
20 there aren't many places in the state of Maine that
21 might have ore that would satisfy a lot of people in
22 terms of water quality. It's like -- it's like this
23 is the bedrock for the opposition, it's all about
24 water quality.

25 I get the feeling that you can't -- if you're

1 held to these high standards, but you never get to
2 them because this commission never moves on to give
3 it to the DEP to run through the process, to see what
4 might happen, it's kind of like a Catch-22.

5 Now, that's not a question, it's just an
6 observation. But do you see what I'm coming at?

7 MS. MAEST: I do see what you're saying and I
8 think, you know, we have to acknowledge that mining
9 will cause pollution. And from -- my understanding
10 from Chapter 200 is that you're allowed to pollute
11 within 100 feet of the mine.

12 I'm not exactly sure where that would end up or,
13 you know -- but then beyond that you're not allowed
14 to pollute. So -- so most jurisdictions have
15 regulations and requirements that allow a certain
16 amount of pollution up to a standard, up to a permit
17 limit, et cetera.

18 So, you know, we have to admit that there will be
19 some pollution if we want these metals.

20 I'm not sure that's what you were getting at,
21 but...

22 MR. WORCESTER: Tracy (sic), do you have a
23 question?

24 MS. BEYER: Yeah, I just have one. You testified
25 that you aren't aware of a plan that can address

1 acid-mine drainage from the first flush of the mine
2 wall. Dr. Finley testified -- when he testified he
3 suggested using lime in the water as the mine fills
4 back up or -- and/or pumping and treating that water
5 as it -- as it refills.

6 Could you comment on that -- those two
7 suggestions?

8 MS. MAEST: Yeah. I mean, that's a good approach
9 and I think Dr. Finley was just talking about after
10 mining is done and water levels are rising back to,
11 you know, the groundwater levels they were there.

12 You could add lime and he mentioned -- he gave an
13 example of the Sleeper Mine, it was an open pit mine
14 in Nevada where they added lime and everything was
15 wonderful. You know, they've got fish swimming
16 around in that pit.

17 But, you know, the -- this -- the release from
18 the mine walls will happen during operations as well.
19 And if not all the mine water is captured, then some
20 of that is going to bypass the treatment system and
21 it could pollute down gradient groundwater.

22 MS. BEYER: That's it.

23 MR. WORCESTER: Thank you, Dr. Maest.

24 MS. MAEST: Thank you.

25 MR. WORCESTER: I believe we're at our mandatory

1 break.

2 (Whereupon a recess was held at 2:23 p.m., and
3 the hearing was resumed at 2:42 p.m. this date.)

4 MR. WORCESTER: Life is always interesting. We
5 had an issue at break with a breach of the ex parte
6 rule that we follow, which, essentially, means we
7 don't talk to any of you outside of the hearing and
8 you don't talk to us.

9 So in full disclosure, Leo is going to explain
10 what happened.

11 MR. TRUDEL: Yes. During the previous discussion
12 that took place I was thinking about the -- the acid
13 walls, the floors, the whole process. And
14 unbeknownst to me, I started thinking about, we have
15 solutions for all kinds of things out there. And I
16 thought that there might be an industry solution, so
17 I actually asked Dr. Finley.

18 And I asked Dr. Finally and -- and he actually
19 asked me, he said, Is this something that we should
20 be concerned about? And I said, Well, I thought I
21 was asking you an industry standard.

22 And I asked him about, Is there some substance
23 that is put on walls that might reduce the acid
24 content as well as the leaching? And it was based
25 upon the previous testimony of how there's certain

1 bacteria that seem to complicate this matter and --
2 and expedite it.

3 That being said, apparently, it can be done and
4 that's what I found out.

5 I apologize to anyone who -- I certainly didn't
6 think that I was breaking any rules, but that's that.

7 MR. WORCESTER: Intervenor 2's testimony and
8 evidence.

9 MR. ELWELL: I think first we were going to
10 give -- under our rules after there's been an exparte
11 disclosure, the -- the parties have a brief
12 opportunity to respond. I don't know if Intervenor 2
13 wants to...

14 MR. BLOOM: Thank you for -- for letting us know
15 that, I appreciate that.

16 MR. WORCESTER: Are we good to go? Okay.
17 Intervenor 2's testimony. And the way this schedule
18 has changed, you have 45 minutes in this segment.
19 Okay.

20 DIRECT EXAMINATION OF: STUART LEVIT:

21 BY MR. BLOOM:

22 Q Good afternoon -- good afternoon, Mr. Levit. Would
23 you please introduce yourself and then describe your
24 professional and educational background?

25 A Sure. Thank you. My name is Stew Levit. I am based

1 out of Missoula, Montana -- a little word where
2 glasses, sorry -- based out of Missoula, Montana. I
3 am a staff scientist with the Center For Science in
4 Public Participation. And I've been doing that for
5 about 20 years. Actually, more, but it's been a
6 little off and on it a couple times.

7 And I provide research analysis, technical review
8 particularly of mining, and mine reclamation and
9 provide specific reporting and advice. My primary
10 focus has been on mining and on water, other natural
11 resources as well as mine reclamation,
12 rehabilitation, in particular, and cleanup.

13 In the past I worked for the Montana Department
14 of State Lands, now it's part of the Natural
15 Resources Department, NRD, in the state, doing
16 abandon mine reclamation as a land reclamation
17 specialist also. And there the focus was on water
18 quality and planning and designing, reclamation
19 clean-up type plans to deal with mine waste, mine
20 problems.

21 I started, I guess, my mining career, if you
22 will, as a master's degree from Montana State
23 University in land reclamation or land rehabilitation
24 it was called at the time, I think.

25 Q And so let's start with water treatment. Wolfden

1 states in the rezoning application that the project's
2 water treatment approach is designed to treat mine
3 process -- process and stormwater to remove chemicals
4 to meet background levels prior to its return to the
5 natural environment.

6 To your knowledge has Wolfden presented the LUPC
7 with an example of a comparable mine that has
8 accomplished this?

9 A No, I don't believe it has.

10 Q And in your 20-plus years of experience are you aware
11 of such a mine?

12 A No, I'm not.

13 Q And in your -- in your opinion what is the
14 significance of the lack of such an example?

15 A It might not be possible to do that. It also might
16 be technologically or economically unpracticable.
17 That may be also a case.

18 Q And what is your opinion as to whether Wolfden has
19 demonstrated in the rezoning application that
20 treating Pickett Mine -- Pickett Mountain Mine water
21 the background levels would be financially feasible?

22 A It hasn't really -- it has proposed ultrafiltration
23 and reverse osmosis, which are, actually, good
24 technologies. They're -- they're quite good
25 technologies, especially together they could. But

1 they can be very expensive to operate.

2 In my opinion, the mineral data is not sufficient
3 to at this time estimate the actual costs for that in
4 a reliable way.

5 And I guess my concern might be that the -- it's
6 easy for a company to promise to do something and
7 it's another two actually design or plan something
8 to -- to deliver it and demonstrate that it is
9 possible, specifically at a particular site.

10 There's also the point that I believe
11 Dr. Maest made that -- reverse osmosis can be
12 expensive in generating also a brine, which can be 20
13 to 30 percent of the treated volume and that, too,
14 can be a problem.

15 And I believe that was pointed out by Lincoln
16 Engineering, which was an LUPC consultant for the
17 2020 application. And it actually -- it's stated:
18 RO reject, i.e., brine. Disposal can be a severe
19 problem and Wolfden's plan for such disposal should
20 be better defined -- or excuse me, should be defined
21 better, if I'm reading a quote.

22 And Wolfden has stated as part of its scoping
23 that it would store the brine and use that as feed
24 water to make cement for underground, but it hasn't
25 demonstrated that it's actually technologically going

1 to work in this situation or what the -- it's allowed
2 applicable regulations.

3 So it's a good idea, but I feel like there should
4 be more -- or could be more to really identify
5 whether or not that will work at this site as
6 promised. And I think that should probably be --
7 that would be to me a necessary component.

8 Q Now, when we're talking -- let's switch to the topic
9 of water balance. I'm going to -- we've heard a bit
10 about this mine seepage flow rate, the 30 gallons per
11 mine.

12 I'm going to skip questions about defining what
13 exactly a mine seepage flow rate is because -- for
14 time and just say, you know, what is your opinion
15 regarding whether the 30 gallons per minute mine
16 seepage flow rate that we've been hearing about --
17 whether that's supported by Wolfden -- information in
18 Wolfden's rezoning application?

19 A It's actually not clearly supported in the
20 application in my opinion.

21 The application states, quote, although
22 engineering, slash, hydrologic studies have not been
23 conducted to quantify flow rates required to keep the
24 working area of the mine in a dewatered state, it is
25 currently estimated based on similar site experience

1 and the likelihood of low transmissivity bedrock at
2 depth that these, quote, unquote, seepage flows are
3 likely to be on the order of 30 gallons per minute
4 long term.

5 The application doesn't explain what similar site
6 experience is or the likelihood of low transmissivity
7 bedrock at depth or describes how these two ambiguous
8 factors combined to actually be 30.

9 I'll note yesterday in her testimony -- and I
10 apologize if I'm butchering someone's name -- but I
11 believe it was Dr. Turner had said that she had
12 conducted -- or she had talked to a number of people
13 about this, if I'm recalling correctly. And -- and
14 that's good, but I -- I have not seen in the
15 application anything to support really where that
16 number comes from.

17 In the 2020 review Lincoln Engineering concurred
18 with the conclusion that the flow rate is too
19 speculative for a water management plan or water
20 balance. Lincoln specifically stated, There is no
21 real basis for estimate -- for estimate -- and that
22 might be my typo -- of mine dewatering flow -- flow
23 rate. The water management needs to have flexibility
24 in case flows are higher.

25 Q Now -- and when you're referring to the Lincoln

1 Engineering report, that's a report that was
2 submitted to the LUPC in -- in response to the first
3 application --

4 A Yes. Correct.

5 Q -- correct?

6 And that's already been added to the record by
7 the LUPC at the outset.

8 Now, why would a significant deviation from an
9 estimated seepage rate matter?

10 A Well, if it's higher, you're going to need to treat
11 and discharge more water, which could change expense.
12 If it's significantly so, it could change actual --
13 the -- the planning, it may not work in the plan with
14 that adjustment.

15 Likewise -- or, similarly, I guess, if it's lower
16 than predicted, you may need to consume additional
17 water, both of which have impact -- or potential
18 impact to the overall water balance that is proposed
19 at the site.

20 A big concern with the lack of, I guess, more
21 concrete data or reliable data is you can't really
22 estimate the time that it's going to take for the
23 waste to inundate the mine area once -- the mine
24 workings once the area is proposed back for flooding
25 and when they close the mine.

1 The problem with that is you can have a
2 fluctuating water table that does wet and dry things
3 that can create acid-mine drainage as a result of the
4 wet and drying being -- adding and removing air water
5 and, of course, the minerals are -- are the constant.

6 So that could -- that could have an impact on
7 contaminant creation and/or release.

8 In my opinion, the groundwater studies could have
9 been done or more detailed information could have
10 been created. And that would help answer this. I
11 use, I guess, as an example the Pogo Mine in Alaska
12 as just an example of the notion that it had
13 originally predicted an average of 139 gallons per
14 minute would be created.

15 That was later revised to 205, I believe. And by
16 some odd years later it was at 400 gallons per
17 minute.

18 I'm not suggesting those numbers are necessarily
19 applicable here, but the concept, I think, really is.
20 And that type of thing is a concern. And that's
21 why -- I guess, that's why I think it's important to
22 consider.

23 Q Thank you. So I'd like to now move to the topic of
24 acid-mine drainage. I think we've -- we've heard
25 about the -- we've heard from a number of people how

1 acid-mine drainage -- what it is and how it's
2 created.

3 So let's -- we can skip that and we can just --
4 let's just talk about, what's your opinion as to
5 whether mining at Pickett Mountain is likely to
6 generate acid-mine drainage?

7 A I would concur, I think many people have suggested, I
8 totally think it will happen here or is likely to
9 happen here, highly likely.

10 The -- you've got the materials. I believe the
11 estimate was that 40 to 60 percent pyrite-containing
12 minerals around. So mining and processing activities
13 are going to create the very high chance for
14 acid-mine drainage.

15 Q And -- and I think -- and does Wolfden's application
16 acknowledge all of the mine's potential sources of
17 acid-mine drainage?

18 A No. As Dr. Maest identified also, the mine walls are
19 a significant potential, the mind workings
20 underground. You take out the materials and there's
21 going to still be pyrite -- sulfide-containing
22 materials in the walls.

23 And that has the potential for creating acid-mine
24 drainage whether it's from -- well, air is obviously
25 going to be in front of it, but water coming through

1 it from the groundwater or water entering through the
2 workings. So there is a very high probability.

3 Q And in addition, what about ore and tailings, would
4 those be --

5 A Oh, the same thing on the surface. Once the
6 materials are on the surface, the waste rock itself
7 can produce acid-mine drainage, the -- there are
8 things that can be done -- I believe the mine has
9 proposed them -- to minimize duration.

10 But you'd still have, in particular, waste rock
11 stored for long periods of time. I'll note that the
12 notion -- and it's been sort of bantered around a
13 little bit that while there's going to be a liner,
14 we'll have a double liner. And those are very good
15 things, I'm not trying to say they're not.

16 However, there's a reason that liner -- liner --
17 what do you call it -- warranties aren't forever.
18 Part of it, obviously, a business reality, but liners
19 leak. They leak from human error, someone driving a
20 truck over it in an improper way, improper
21 installation, weight causing things to rip. And --
22 and they do leak. It happens in the real world.

23 And the notion that it is really going to be
24 absolute is not something that I think can be relied
25 on. There are things that can be done to try and

1 mitigate when there's a leak.

2 However, you can't untoll the bell once you've
3 started a leak. You can stop it or potentially try
4 and stop it, but if you have a liner underneath a
5 huge quantity of material that is going to be
6 uneconomic or difficult to remove for one reason or
7 another, you're going to have to pump back or do
8 other treatment methods that are really following the
9 problem rather than preventing it.

10 So I think there has been discussion about the
11 importance of preventing, but I think there should be
12 more about what happens once there's a problem and
13 having -- having a real plan for that.

14 Q And you -- you were talking now about storage or
15 waste rock on the surface.

16 Now, what's your opinion about whether Wolfden
17 has demonstrated that it would be able to prevent
18 acid-mine drainage impacts that might arise from
19 backfilling the waste rock back into the mine
20 workings as they're planned -- planning to do?

21 A I think it actually largely omits that potential. It
22 acknowledges it might be real in the hearing today,
23 but in the application I don't think it's adequately
24 covered.

25 The probability of acid-mine drainage is high.

1 Once again, Lincoln Engineering in its 2020 review
2 had said, It is an inevitable condition that either
3 needs a mitigation plan to prevent it from happening
4 or a water treatment plant capable of treating the
5 additional loading or both.

6 The problem is -- is real. And it has a real
7 threat.

8 Q Now, you noted in your prefiled testimony that
9 Wolfden plans to transport 55 truckloads of ore per
10 day to an off -- to an offsite ore processing
11 facility.

12 What's your opinion as to whether Wolfden has
13 demonstrated that it will prevent acid-mine drainage
14 impacts to water arising from ore transportation?

15 A I think it's been largely discounted or -- or not
16 adequately, in my opinion, planned for. If you have
17 trucks leaving, there's many different types of
18 trucks and there's different things you can do such
19 as covering them.

20 However, the -- there are many types of
21 transport, train, truck, loader -- conveyor belts
22 that will have dust -- fugitive dust and/or leaks
23 that -- that you are not going to stop all of them.
24 I don't think it's practicable to say; you want to be
25 able to stop everything.

1 And those can create what is effectively a
2 corridor long contaminant source that itself could be
3 creating acid-mine drainage. There are things that
4 can be done to mitigate them and there is also
5 monitoring that can be done to try and detect it.

6 I just don't think it's a good idea to sort of
7 say, Well, we'll deal with that later. I think
8 that's -- that's a problem.

9 Q And speaking more broadly about acid-mine drainage,
10 in your opinion has Wolfden presented an adequate
11 plan to detect acid-mine drainage if it occurs?

12 A No, it -- in my opinion, it has not. Really most
13 monitoring is being left for a later planning period
14 that it will be sort of -- we'll plan for it and
15 we'll deal with it later.

16 I think the importance of a robust plan as early
17 as possible in a decision process, for instance, this
18 one, in fact, is necessary. If you're going to try
19 and say, Well, we're dealing with all these things,
20 then show how it's going to be dealt with and allow
21 for an actual review.

22 There's plenty of examples where monitoring can
23 miss something. And -- and some of that is not
24 unreasonable. There -- you can't monitor constantly
25 everywhere. But a minimal plan would be appropriate,

1 in my opinion.

2 Q And in your opinion has Wolfden presented an adequate
3 plan to manage acid-mine drainage if it occurs?

4 A No, I don't think it has. Once you detect acid-mine
5 drainage, you're going to have to do something with
6 it. You've got to plan for it. Whether you're going
7 to try and contain it, reverse course.

8 I'll note that, for instance, using what you were
9 talking about -- bacteria sides that you mentioned --
10 are all methods that may be considered. Some of them
11 can work, some of them will not. It really is very
12 site-specific what -- what treatments or
13 methodologies are really going to work.

14 However, that needs to be planned for in advance
15 and should be done not only as a matter of, Well, it
16 makes sense to know it, but you can't really assess
17 the economic -- the economic viability of a mine or
18 the economic impact of acid-mine drainage and all the
19 other things that can happen without doing some of
20 those things in advance -- or most of them, I would
21 argue.

22 So, no, I don't think it has planned for it in --
23 sufficiently.

24 Q And this is sort of -- moving on to a related topic.

25 You're aware that there under Maine law a mining

1 company is going to have to set aside a financial
2 trust amount to cover a worst case mining disaster.

3 In your opinion has -- was Wolfden demonstrated
4 that the proposed \$13,700,000 that I think is
5 included in its -- in its preliminary economic
6 assessment for that trust fund, do you think that
7 would be adequate to cover a worst-case mining
8 disaster at Pickett Mountain?

9 A I have not seen any mine that could possibly do much
10 of anything with \$13,700,000 for a worst-case
11 scenario. Worst-case scenario really is things have
12 just fallen down and something happened that is
13 dramatic.

14 And, no, I don't think that would be adequate.
15 The -- as you say, the preliminary economic
16 assessment, the PEA, does identify it, but it's not
17 clear really where it comes from, at least not to me.
18 I couldn't understand where that number was derived
19 from.

20 I use an example that comes from -- from my
21 state, Montana -- though I acknowledge I moved there
22 in the mid '80s, I actually grew up in New Jersey.
23 But at Zortman Landusky Mine, which is a name you've
24 probably heard before -- or maybe you've heard
25 before, that the company said, We will not have

1 acid-mine drainage and if we do, we're going to deal
2 with it and we have a plan to deal with it.

3 And once acid-mine drainage happened, they
4 weren't able really deal with it. They got behind
5 the ball. And the company ultimately went bankrupt
6 and the taxpayers in Montana have been paying for
7 decades and it's likely to go on into perpetuity.
8 It's over \$100,000,00 -- or near \$100,000,000 now of
9 state money, taxpayer money has gone to dealing with
10 that problem.

11 I'd note also that the lead of the company that
12 had done that, Pegasus Gold was the name of the
13 company, its president is now part of a completely
14 different set of mines being proposed -- or mine
15 being proposed that he's saying, Well, we're not
16 going to do that again, we're going to do better.

17 And when it comes to financial surety, my -- my
18 real feeling is you need to have a little better --
19 you have to be really secure for the state to protect
20 state resources and financial surety.

21 Q And I think at Zortman Landusky, as I recall in
22 your -- your prefiled testimony, you stated there was
23 a certain amount per year that was being spent just
24 for -- just for pumping out -- pumping and treating
25 the water.

1 Do you -- was that --

2 A It was like \$20,000,000 a year, if I recall --

3 Q I think it --

4 A -- or 2 million.

5 Q I think you said 2 -- I think it was 2 million.

6 A 2 million. Excuse me. Thank you.

7 Q But going on for many years?

8 A Yes. And -- and that's the problem with acid-mine
9 drainage, once it starts, you're going to have a heck
10 of a time completely stopping it. There are things
11 you can do to mitigate it or manage it, but they cost
12 money.

13 Q And now I want to move on to the -- discussing the
14 ore processing and tailings facility, also sometimes
15 called a concentrator in a tailings disposal
16 facility.

17 In your opinion can the economic viability of
18 this mining project be adequately assessed without
19 considering Wolfden's plans -- specific plans for ore
20 processing and tailings disposal in a nearby town?

21 A No. No, I don't think it can. The pieces of a mine,
22 in my opinion, are all necessarily intertwined and
23 interconnected no what matter -- no matter what you
24 do.

25 You have a place where you're getting the

1 materials, you have a place where you're putting
2 waste and you have a place where you're going to
3 treat -- excuse me, process the ore and deal with the
4 waste from the ore, as well as, of course,
5 administrative and lots of other things.

6 But those are the main -- the main components
7 that to remove one of them and say, Well, that's not
8 a part of this anymore is, as a matter of financial
9 reality, completely unsupportable in my opinion.

10 As a matter of logistics, if it's going to be
11 anywhere nearby, there is a reasonable potential that
12 the disposal site for the tailings and, of course,
13 the treatment plant itself -- the processing plant,
14 excuse me, itself are going to be nearby and you
15 don't know, unless identified and reviewed, whether
16 that's going to have any impact on the mine's own
17 watershed, the hydrologically connected with the same
18 resources, or just have regional impact that -- that
19 should be considered.

20 I think that kind of chopping pieces apart --
21 personally, I think it's unreasonable from the review
22 point of view because you can't just say, We're not
23 going to process our ore. That's -- that's where the
24 money comes from. It is inextricably intertwined
25 with the economics of the company.

1 Q And so just stepping -- stepping back to talk about
2 the ore processing.

3 What does that -- what does that process entail?
4 What does ore processing entail, how does that work?

5 A Ore is the stuff that had value at the mine site
6 itself. You take it out of the ground, in this case,
7 and through underground workings you bring it up.

8 And about 90 percent of it is probably -- or
9 more, it depends, or less, call it 90 percent just
10 for explanatory purposes, of that is useless. The
11 10 percent that is valuable minerals is going to be
12 treated -- the whole thing is ground up. I should
13 back up. I apologize.

14 You take your ore, you grind it up generally into
15 a fine powder and you use a variety of processes and
16 chemicals to, essentially -- float is the easiest way
17 to describe it, if you think about it graphically.
18 You're floating away the valuable minerals -- and
19 those are done often in tanks -- that that is -- that
20 is then the valuable stuff.

21 It's taken away. 90 percent of it is going to
22 fall down, think about, again, just graphically,
23 conceptually. 90 percent of it is going to be waste.
24 That's going to become your tailings.

25 You also have with both of those a variety of

1 chemicals, many of them toxic, many of them not of
2 course that have to be dealt with. From the ore that
3 had the valuable minerals and now the minerals are
4 separate, you're going to wash it and send it off for
5 further processing. That's the money, that's the
6 paycheck.

7 The waste also has all of the chemicals in it.
8 And many places will dispose of it by putting it into
9 what's called a tailings pond or tailings
10 impoundment; big dam, hold all the stuff. That's not
11 allowed in Maine, is my understanding.

12 Therefore, the mine has proposed to further
13 process it to make what is a very low or lower
14 moisture cake or dry stack, it's called -- though,
15 it's not technically really dry -- and dispose of it
16 that way.

17 There are costs associated with any disposal
18 method, but the cost of all of those things are part
19 of the company's bottom line. And just as the ore
20 becoming concentrated minerals going offsite that
21 forms the paycheck is part of the process, so too the
22 waste that's dropping down and has to be dealt with
23 as dry stack tailings, for instance.

24 And to separate it is -- I find it almost
25 implausible as a regulatory matter or as financial

1 matter.

2 Q And what are the -- what environmental risks can ore
3 processing pose for a project like this one?

4 A They can be big, of course. You've got any sorts --
5 well, the chemicals themselves both coming to the
6 site can be a risk if there's a leak or a spill;
7 storage on the site, of course, of the chemicals can
8 be a problem.

9 Generally speaking the work -- the workings of
10 the processing facilities themselves are fairly
11 closely monitored because that's your money. That
12 liquid, that waste materials, even if they're
13 combined, is still very valuable to the company,
14 that's where the money comes from.

15 But there are leaks that have happened. I've
16 heard of mines leaking their process solution, which
17 is not something you'd want to do. But that is then
18 taken off. You've got the waste materials that have
19 to be treated to remove the toxic materials -- in
20 this case, if they're using a dry stack tail -- and
21 then dispose of the chemicals or the waste either by
22 reusing it, which is actually a preferred method, I
23 would suggest, or at some point treating it or
24 disposing of it on or offsite to -- to remove it or
25 contain it from environmental risk.

1 Like everything else, though, there can be spills
2 and they occur. They can be from human error, maybe
3 machine problems. There's a variety of things that
4 can happen. And -- and they do.

5 Is that likely? Not necessarily, but they happen
6 and, therefore, they need considered as real and
7 planned for as real.

8 Q And -- so now I want to switch topics a bit to talk
9 about financial -- the company's and the project's
10 financial viability.

11 With respect to Wolfden, has -- has Wolfden
12 demonstrated that it has the financial capacity to
13 complete this proposed project in your opinion?

14 A In my opinion, it hasn't. I think it was on the --
15 yesterday -- I was thinking of the first day, but
16 that's not that long ago -- there was discussion
17 about the -- the sort of junior mining company is
18 sometimes how it's described and the economics that
19 they run and the normalcy of being a low capital
20 company.

21 But that doesn't -- the normalcy, perhaps, of it
22 doesn't remove the potential risk of it. It is still
23 a company that is not, in my opinion, financially
24 resourced to do this. The idea that it will or could
25 come up with finances is not invaluable, but at this

1 time this company does not have the ability to do
2 what it is proposing to do.

3 Q And, in your opinion, has Wolfden demonstrated that
4 the value of the Pickett Mountain Deposit is
5 sufficient to make this a financially viable project?

6 A No, it has not. The orebody itself is characterized
7 as being -- and, actually, I'm blanking entirely now
8 the words for it -- indicated versus inferred --
9 thank you, I'm sorry for that.

10 The -- the notion of both of those are less than
11 proven. We don't know what is actually there. There
12 are good indexes that can be relied on for a variety
13 of business purposes. But to really say that, yes,
14 this is a viable project, I don't find supportable
15 personally or professionally, more important.

16 The -- the basis for that is -- is in the
17 numbers. And Wolfden has not done the review and the
18 data necessary -- and you saw the -- I believe it was
19 Mr. Finley put up -- and I could be wrong with the
20 name again, I apologize -- all the drill holes in the
21 cores and there were, I think, four core examples
22 here.

23 That in all of those data -- there could be much
24 more data available. The problem with that as -- I
25 think, is the cost of doing that can be high and,

1 therefore, you know we're not going to get there yet.

2 Well, in my opinion you don't get your permit
3 until you can prove it. And you don't get --
4 similarly, a land use change, in my opinion, requires
5 knowing that this is a viable orebody and a viable
6 company. I won't bother reading the quotes unless
7 you want me to, I guess --

8 Q Well --

9 A -- in the --

10 Q Go ahead.

11 A Oh. In the PEA there's a variety of statements about
12 the company's viability and the risks and the meaning
13 of inferred and indicated resources. But there's
14 still no demonstration of viable corporation or
15 proven resources.

16 Q Why don't you explain to us how much of the -- what
17 percentage is an inferred resource and what does an
18 inferred -- how much of the mineral resource is
19 inferred and what does an inferred resource --

20 A Okay.

21 Q -- mean?

22 A The preliminary economic assessment, which was
23 completed in 2020, states and says, quote, the
24 diluted mineral resource, end quote, that is, quote,
25 comprised of 50 percent indicated resources and

1 50 percent inferred resources.

2 The PEA acknowledges that, quote, inferred
3 mineral resources are considered too speculative
4 geologically to have economic considerations applied
5 to them that would enable them to be comprised as
6 mineral -- categorized, excuse me, as mineral
7 reserves.

8 Therefore, there's no guarantee that the economic
9 projections contained in this PEA would be realistic.
10 Further, indicated resources cannot be considered a
11 proven reserve either.

12 And that's -- I'll note that's, I think, standard
13 language in a PEA. Because that is -- the whole
14 point of a PEA is creating something to prevent a
15 company or prevent from an individual from saying,
16 This is -- this is gold worth a fortune for you.
17 Well, I've got to do certain mineralogic analyses to
18 show that this has value.

19 And that's the whole point of a PEA. And,
20 therefore, the caveats in there are standard. But
21 that means, though, that this orebody has not
22 advanced to a -- a point that demonstrates that it is
23 more than indicated or inferred, that it is actually
24 a proven resource; we've got whatever we say we have.

25 And that's, I guess, the basis of my -- my

1 concern.

2 Q And now let's move on to discussion briefly of -- of
3 jobs.

4 In -- in your opinion based on your review of the
5 application, has Wolfden demonstrated that the jobs
6 associated with this mine will be filled primarily
7 with -- from the local workforce?

8 A No, I -- I don't think that it has. In the
9 application it states, quote, it is Wolfden's
10 objective that the primary workforce be employed
11 locally from residents, end quote. But it doesn't
12 specify how this is actually going to be achieved.

13 Yesterday there was testimony about the sort of
14 talking with different colleges or different
15 planning. And I believe even in the budget there
16 was -- there was money proposed for -- or included
17 inherently in things to educate a workforce and
18 create a workforce.

19 But that's -- that's sort of a promise to
20 promise, in my opinion, as opposed to an actual plan
21 or anything that is reliable. The idea of having
22 seven-day on, seven-day off schedule at many places
23 is conducive to a fly-in/fly-out, it's called.

24 And that's not necessarily flying in, literally
25 flying, but people coming in, working for a period

1 and then going back home, wherever it may be, because
2 they're working for a week and they can go home for a
3 week.

4 In this case here with the mines over -- just
5 over the Canadian border, it might be that people
6 could be coming from there. I don't know that that
7 is what would happen, but I don't see a clear plan
8 from Wolfden nor commitments of what happened.

9 I will note also, even if there were commitments,
10 full disclosure, I would be saying to you, Well, even
11 if there was commitments, it's not clear that they
12 would be binding on if, for instance, a major company
13 taking over the junior company -- a major company
14 takes it over, there's nothing to say that the larger
15 company would say, Well, we don't care; that was
16 Wolfden, we're not Wolfden.

17 Without a binding commitment or some clear
18 standard for local jobs and actual numbers, you don't
19 have any -- in my opinion you don't have anything
20 except a promise or a promise to promise something.

21 The -- in my opinion there should be a
22 requirement to identify the specific jobs that will
23 be created. And the reason I say that is because
24 oftentimes when jobs are created, they're -- they're
25 not created, you know what the mine needs. The

1 skilled jobs often can go to people who already have
2 the skills and the lesser jobs go to the people who
3 don't have the skills.

4 Training and other things may get them there, but
5 without clear commitments to, These are the positions
6 and here's what we're going to do with them, it's a
7 promise. And that's not necessarily without some
8 merit, but I don't believe that it's something upon
9 which I could rely and say, Yes, that is likely.

10 There also should be a requirement to describe
11 how it will ensure that the training and other stuff
12 is done. To say you're in talks with the local
13 community, et cetera is good, but I don't think that
14 is adequate. And making it clear that this is
15 binding on whatever the future may be of the mine as
16 opposed to the company that is looking as a minor
17 company to be taken over or sell it.

18 Lastly, I think there should be a requirement to
19 analyze how all of those plans change if those
20 commitments are not met. If you're looking to the
21 financial analysis of, well, this is going to be an
22 impact to, in this case, the committees, well, what's
23 the impacts if that doesn't happen? What are the
24 financial benefits going to be if those jobs are not
25 filled locally? And what happens then?

1 And I think those -- those things are all missing
2 in my opinion.

3 MR. BLOOM: Okay. Thank you. I have no -- I'm
4 done with the direct.

5 MR. WORCESTER: So it's the applicant's
6 cross-examination time.

7 CROSS-EXAMINATION OF: STUART LEVIT

8 BY MS. EMLEIN:

9 Q Good afternoon. Maye Emlein, counsel for the
10 applicant.

11 Mr. Levit, you have covered a great deal in your
12 testimony. And as a preliminary question I wanted to
13 ask you about your curriculum vitae, which was
14 submitted this past week.

15 You state that you've worked on a series of
16 framework projects including framework for
17 responsible mining; is that correct?

18 A Yes.

19 Q And this refers to a report that was published in
20 2005, right?

21 A I couldn't tell you the date, but I'll trust you,
22 yes.

23 Q Okay. And you provided feedback and comments on this
24 report to the authors; is that correct?

25 A Yes, it is.

1 Q Okay. And in the executive summary of this report it
2 states that, quote, nearly all negative social and
3 environmental impacts are avoided -- are avoidable,
4 excuse me, if companies would operate according to
5 the best possible standards, correct?

6 A Yes.

7 Q Okay.

8 A I don't actually recall the statement, but I'm --
9 you're reading, so I'm trusting.

10 Q Okay. But you don't deny that that's what the report
11 says?

12 A No, I do not.

13 Q Okay. Drawing your attention specifically to both
14 your testimony here today and your prefiled
15 testimony, you discuss -- you have a great deal of
16 discussion about the reverse osmosis technology.

17 And you agree that the reverse osmosis technology
18 is technologically possible, correct?

19 A Yes.

20 Q And you would agree that it is an effective tool to
21 clean water?

22 A Yes.

23 Q So you agree with Mr. Danyliw and Dr. Thoen that the
24 proposed water treatment is a viable method of
25 achieving the treatment standards required under

1 Maine law?

2 A Would you repeat that?

3 Q You would agree with them that the proposed water
4 treatment, it's a viable method of achieving the
5 treatment standards?

6 A Yes.

7 Q Okay. So your concern is not the technology is
8 ineffective, it's that it's -- in your words, it's
9 expensive and cost-prohibitive?

10 A Yes.

11 Q Okay. On Page 4 of your prefiled testimony you
12 specifically cite the Bald Mountain report to support
13 your conclusion that this technology is expensive and
14 complex.

15 And this report is from 1990, correct?

16 A I'm looking for it. I'm not sure I have the page
17 pagination as you, but I'll believe yes.

18 Q Okay. But you cited to the Bald Mountain report --

19 A Yes.

20 Q -- you submitted that in your testimony?

21 Okay. So if it's from 1990, it's more than
22 30 years old, correct?

23 A Yes.

24 Q And you would agree that this report is specific to
25 Bald Mountain and the unique hydrological

1 characteristics and economic conditions, correct?

2 A Yes.

3 Q Okay. And you state specifically in your prefiled
4 testimony that the reverse osmosis technology has not
5 changed substantially since 1990, correct?

6 A Well, the answer then -- if I said that, then, yes, I
7 said that. Yes.

8 Q And you were present yesterday and heard Mr. Danyliw
9 and Dr. Thoen testify?

10 A I was, but if -- if you want something specific, I --
11 I can't remember who's who for sure, but --

12 Q That's okay. But you -- you were present in the room
13 to listen?

14 A Yes, I was.

15 Q Okay. And so you heard them testify that this
16 technology has become more common and, therefore,
17 more affordable?

18 A Yes.

19 Q Okay. And you are also aware that Mr. Danyliw
20 testified that there are many mines globally and
21 other industries that are using this RO technology?

22 A Yes.

23 Q Okay. And you also heard Mr. Danyliw testify that
24 brine is going to be significantly less here because
25 of the concentrate recovery system, correct?

1 A I heard that, yes.

2 Q Okay. So based on this testimony -- on Mr. Danyliw's
3 testimony, you're aware that the proposed water
4 treatment system produces significantly less than the
5 20 to 30 percent that Dr. Maest assumed in her
6 testimony?

7 A Then -- 20 to 30 -- 30 percent -- 20 to 30 percent
8 less than -- could you repeat that?

9 Q Than Dr. Maest mentioned --

10 A Oh, Maest. I'm sorry, I didn't -- I didn't catch
11 the -- the who. Sorry. Thank you.

12 Yes, I'm aware of that, but I -- I'm not clear, I
13 guess, the -- every mine is -- is unique, as I think
14 you're sort of beginning to try and point out, and
15 this one is, too. I have not seen the data here to
16 demonstrate the actual costs at this site based on
17 the mineralogies, flows, et cetera.

18 Q You would agree that Mr. Danyliw testified that there
19 is technology that has been put in place in the
20 proposed mine that reduces the amount of brine that
21 would come out of the reverse osmosis system?

22 A Yes, I heard his testimony. Yes.

23 Q Okay. And you have never designed a mine water
24 treatment system, correct?

25 A No, I have not.

1 Q And you've never operated a mine water treatment
2 system?

3 A No, I have not.

4 Q Okay. And you heard that Mr. Danyliw and -- and
5 Dr. Thoen have collectively designed hundreds of such
6 RO treatment systems, correct?

7 A Yes.

8 Q So it's accurate to say that you've never been
9 responsible for developing cost estimates or
10 designing and operating a mine water treatment
11 system?

12 A Correct.

13 Q Okay. During your testimony here today and at
14 several points in your prefiled testimony you
15 reference Lincoln Engineering's report both in
16 reference to the water balance and acid-mine
17 drainage. And on Page 8 of your testimony you
18 specifically say that Lincoln concurred with the
19 conclusion that Wolfden's flow rate is too
20 speculative for a water management plan or water --
21 or a water balance.

22 Are you aware that Lincoln also stated in its
23 summary opinion that Wolfden's documents were, quote,
24 fairly well detailed for the expected level of
25 project development, end quote, and that there were,

1 quote, no major category gaps?

2 A I can't say I recall or don't recall that specific
3 statement. But my quoting of Lincoln is, I think,
4 based on my personal opinion and not Lincoln's
5 opinion necessarily of the amount of information that
6 is necessary and appropriate for -- for making a
7 determination about the ecological -- or technologic
8 and financial viability of a project.

9 Q But you would agree that you only included -- you did
10 not include Lincoln's ultimate conclusion in their
11 analysis in your prefiled testimony?

12 A I don't agree with their characterization that it is
13 an ultimate conclusion, but I -- I do agree I did not
14 include that statement in my testimony.

15 Q Okay. And are you aware that Lincoln's analysis was
16 part of a larger report that SWCA Environmental
17 Consultants prepared for the Land Use Planning
18 Commission?

19 A Yes.

20 Q Okay. And SWCA in its -- in its report, of which the
21 Lincoln report was an attachment, concluded, quote,
22 given the level of effort for this state of
23 development and compared with similar deposits, the
24 proposed development is technically feasible with the
25 understanding that significant detail is still

1 required for the design of individual mine components
2 in accordance with the State of Maine rules and
3 regulations for development of this project.

4 And your testimony does not reference SWCA --
5 SWCA's Environmental Consultant's conclusion,
6 correct?

7 A Correct, it does not.

8 Q Okay. In your prefiled testimony and today you have
9 described Wolfden's proposed financial assurance as
10 inadequate.

11 And one of the things that you point specifically
12 to is acid-mine drainage as a reason for this
13 inadequacy, correct?

14 A Yes.

15 Q Isn't it more accurate to state that the amount of
16 financial assurance may need to be adjusted based on
17 the results of additional hydrological and
18 geochemistry characterization?

19 A It is, but the reason I have my statement as it was
20 is because the financial viability of the whole
21 project is -- needs to include, among other things,
22 the financial surety cost because that is an actual
23 cost for a mine.

24 And to try and say, Well, it needs to be
25 adjusted -- all of these things I acknowledge need to

1 be adjusted. However, to make a determination that
2 the project is viability, in my opinion, requires
3 more than is present currently.

4 Q And are you familiar with the Chapter 200 standards
5 from the DEP?

6 A Very, very little, quite honestly.

7 Q Okay. Are you aware that as part of the Chapter 200
8 requirements a third-party reviewer who has to be
9 approved by the DEP is hired to provide estimated
10 costs associated with mine closure reclamation and a
11 catastrophic event?

12 A I'm not, and I -- but I would assume it's there only
13 because most state regulations require something
14 along those lines. The reason, quite honestly, I am
15 not familiar with it is I didn't really spend much
16 time in it.

17 In -- my understanding is that is a later permit
18 review to be done. And my comments were -- were
19 designed to help inform or respond to the LUPC
20 Commission which has its own standards, its own rules
21 and its own requirements. And I had no idea that the
22 LUPC would be relying on a future permit review for
23 its decision here.

24 So I -- I, actually, have very little I could
25 probably add for you on Chapter 200.

1 Q So your statements in your testimony referring to,
2 you know, inadequate monitoring, more soil sampling,
3 more soil characterization, all of which will be done
4 in Chapter 200, none of your statements in your
5 testimony account for that additional
6 characterization that will come at the next phase of
7 this project?

8 A I would say, no, because I don't think they're
9 relevant to my understanding of the permit being
10 given today. The LUPC Commission's rules and
11 obligations, I thought, were the LUPC's
12 determinations, not the LUPC's determinations based
13 on some future regulatory process.

14 Q And, Mr. Levit, just to clarify, you're aware that
15 this is a rezoning process rather than a permitting
16 process, correct?

17 A Correct.

18 Q Okay. And are you aware that during the LUPC
19 Commission's Chapter 12 rulemaking process
20 stakeholders argued that additional level of detail
21 on things like soils, surface groundwater should be
22 included in the rezoning phase?

23 A I don't think I'm aware of that. I -- would you
24 repeat that?

25 Q Yes. I mean --

1 A I'm sorry.

2 Q So during -- during the Chapter 12 rulemaking process
3 stakeholders were able to comment and --

4 A What does the Chapter 12 process specifically apply
5 to? The names and numbers I'm not familiar with, I'm
6 sorry.

7 Q Yes. So Chapter 12 is relevant here related to
8 rezoning of the mining operation. So --

9 A That's the LUPC's governance?

10 Q Correct.

11 A Thank you. I -- I didn't know the name. Thank you.

12 Q So during that stakeholder process several
13 stakeholders argued that additional level of detail
14 was required on soils, surface and groundwater
15 samplings.

16 Were you aware of that?

17 A No, I was not.

18 Q And are you aware that the Commission declined to add
19 those additional requirements because these detailed
20 studies are part the Chapter 200 permitting process?

21 A I'm not aware of it, but I'm also not sure how you --
22 I'm not sure from the hearing or from your question,
23 I guess, where the delineation is between, we have to
24 have a conceptual plan, we have to have a conceptual
25 plus 20 percent, 50 percent, 90 percent of what would

1 be the Chapter 200 processes.

2 That is to say, I don't -- I guess I don't know
3 where that delineation would be. My comments are
4 based on the conceptual need for the basis of a
5 financial valuation to say, yes, this is practicable
6 or -- or possible or, no, it is not.

7 Q So you don't have specifically any knowledge as to
8 what's required in the rezoning phase of the project
9 versus the permitting phase?

10 A No, I could not compare them.

11 Q Returning to the topic of the statement that the
12 financial assurance is inadequate. You specifically
13 cited both here today and in your prefiled testimony
14 the Zortman Landusky mines that Pegasus owns. And
15 you cite these two mines as evidence that the -- the
16 financial assurance is inadequate.

17 On the --

18 A Could I actually -- I don't actually say that it
19 is -- if I said that is evidence of the inadequacy at
20 Wolfden, that is -- I did not intend to imply that.

21 Q Let me rephrase.

22 A Okay.

23 Q Let me rephrase.

24 So you cite these two particular mines as an
25 example of the high costs associated with mine

1 operation?

2 A I cited it with the intent of an example of the high
3 cost where there is a failure.

4 Q Okay.

5 A Not as an example of comparison or suggesting that
6 would be here. It's a very different mine.

7 Q Okay.

8 A As I see your picture now.

9 Q Yes. And this is an open-pit mine, correct?

10 A Correct, it is.

11 Q And it has wet tailings?

12 A Yes.

13 Q Okay. And this is over 1,200 acres about; you would
14 agree with that?

15 A That sounds about right, yeah.

16 Q Okay. And the proposed Pickett Mountain project
17 is -- they're proposing rezoning of 374 acres,
18 correct?

19 A Mm-hum.

20 Q Okay. So -- and the Zortman and Landusky mines
21 operated from about 1970 to 1990s, thereabout?

22 A Yes. Sorry, I'm not...

23 Q So you would agree that this mine operated pre, you
24 know, contemporary mining standards, pre current
25 characterization standards?

1 A Not entirely. I guess I'm not going to compare
2 Montana's standards to Maine's because I don't know
3 them well enough. Montana has advanced quite a bit
4 in -- in response in many cases to the Zortman Mine.

5 My comments are not based on, I think, the
6 comparable of that mine in its current state or
7 the -- with this mine nor on the regulatory rubric of
8 that mine versus the Wolfden mine. It's based on the
9 conceptual there are huge risks.

10 I don't think that the footprint of a mine is
11 necessarily going to correlate with the footprint --
12 or the impacts that it will yield financial or
13 chemical or technical. A small mine -- what -- I
14 think -- I will not agree with the idea that a small
15 mine is only going to have small impacts, whether
16 it's geographic or otherwise. So I'm not -- I'm not
17 sure, I guess, the question.

18 Q But you would agree that an upfront financial
19 assurance should be based on the specific conditions
20 of a particular mine?

21 A Yes.

22 Q So when -- in your testimony when you pointed to
23 Zortman and Landusky as having \$100,000 -- or
24 \$100,000,000 in cleanup costs, it sounds like you
25 would agree that that is -- you're not saying that

1 that is the amount that would necessarily be required
2 in this particular circumstance --

3 A No. No --

4 Q -- and that additional information would be needed?

5 A Yes, it would. I think the amount has to be
6 calculated based on specifics for the site. And I
7 did not -- I have not seen sufficient information,
8 nor any calculation made other than what's in the
9 PEA.

10 And I didn't find the support in the PEA to, I
11 guess, really understand where that number come from
12 to say that is a reasonable number. Based on even
13 minor costs that can occur from acid-mine drainage
14 and treatment into perpetuity, 13.7 seems to me low.

15 Am I saying it's a hundred million? No, not
16 even -- I have no idea, but it could be an order of
17 magnitude difference from 13.7. And that's where
18 I'm -- that's the -- I guess the purpose of citing to
19 Zortman.

20 I don't -- I don't intend to say that I have the
21 number, I don't see the number or see a basis for the
22 number.

23 Q Okay. But you would agree that additional
24 information would be required and you would agree
25 that that would occur at the Chapter 200?

1 A I agree more information is required. I think that
2 is necessary for any financial assessment of the mine
3 because that cost can be significant. So I won't
4 specify or limit to just that -- that's something for
5 Chapter 200.

6 I think any financial evaluation of the mine
7 requires some reasonable number upon which it can
8 make that determination.

9 Q And you do not have a background as an economist,
10 correct?

11 A Correct.

12 Q Okay. And have you ever invested in a mine?

13 A No, I have not.

14 Q Okay. Or have you ever developed, owned or operated
15 a mine?

16 A No, I have not.

17 Q Okay. So you don't necessarily have an opinion as
18 to, you know, a rate of return that would be required
19 for a mine to be an attractive investment or -- to be
20 an attractive investment for those who generally
21 invest, own and operate mines?

22 A No, I do not.

23 Q Okay. And you referenced the PEA earlier in your
24 testimony.

25 And you're -- you are not a qualified person

1 under the N43-101 standard which governs the PEA,
2 correct?

3 A Correct, I am not.

4 Q So based on your experience you don't have an expert
5 opinion as to the economic value or financial
6 viability of this particular project?

7 A Based on my experience -- I'm just thinking about
8 your question.

9 Would you read it again? I'm sorry.

10 Q Based on your -- on your experience you don't have an
11 expert opinion as to the economic value or the
12 financial viability of this particular mine?

13 A Oh, no, I do not. My -- my statements were based on
14 my reading of -- of the PEA and, in fact, relying on
15 it and its language knowing the difference between
16 inferred, for instance, and proven or other standards
17 that are used for PEAs.

18 And that's -- that's the basis.

19 Q Okay. I'm just checking -- oh, four minutes, okay.

20 You reference in your testimony the tailings and
21 the concentrator.

22 You are aware -- or are you aware that
23 Chapter 200 will evaluate the entire project as a
24 whole?

25 A Yes, I am -- oh, excuse me. Actually, I guess, no,

1 I'm not, but I've heard that a number of times
2 through the proceedings today and here -- or
3 yesterday and today here.

4 The reason I said what I did is because the
5 financial viability, in my opinion, requires those
6 included in the analysis because those are
7 significant financial pieces of a mine and,
8 therefore, I thought that they should be included.

9 Q And as you testified previously, you know that this
10 is a rezoning proceeding.

11 And you understand that the Commission cannot
12 determine zoning outside of the jurisdiction,
13 correct?

14 A Yes.

15 Q Okay. And you are also aware that the PEA considered
16 all costs, correct?

17 A Yes.

18 Q Okay. In your prefiled testimony you noted that the
19 application did not take into account evaporative
20 losses in the water distribution system.

21 You are aware that Wolfden did in fact account
22 for that, correct?

23 A Yes. The -- I read -- from my reading of the
24 application, I did not -- and I'm not sure if I
25 missed it or did not download it at the time --

1 the -- there was a response, I believe, to a
2 question -- or I think it was a Wolfden response to a
3 LUPC question.

4 And I had not seen them at the time that I wrote
5 the -- I guess, the testimony.

6 Q Okay. And you are aware that under the Chapter 200
7 process there's going to be additional baseline site
8 characterization for soils, hydrology, flow paths,
9 velocity, gradients, you know, additional groundwater
10 surface interactions, runoff infiltration, correct?

11 A I wouldn't say I'm aware of it, but I know that it's
12 there, I've heard it's there. The -- again, the
13 reason I put what I put is because of what I think is
14 the need to have that as part of consideration for
15 something like this as compared to all of it being
16 included sometime in the future prospectively.

17 MS. EMLEIN: Okay. All right. I have no more
18 questions.

19 A Thank you.

20 MR. BEAUPAIN: I have no questions for this
21 witness.

22 MR. WORCESTER: This day is getting better all
23 the time. Do the commissioners have any questions?

24 MS. FITZGERALD: I do. I'm curious -- you talked
25 to -- at one point you talked about monitoring.

1 MR. LEVIT: Yes.

2 MS. FITZGERALD: Is that monitoring daily,
3 weekly, monthly? Can -- can you expand on that a
4 little for me?

5 MR. LEVIT: Sure. The -- I'll back up a couple
6 steps. The concept of -- and I'm speaking to
7 environmental monitoring. This is sort of seeing
8 what's at the site and what's happening. And I'll
9 be -- try and be quick here because it's actually a
10 fun rabbit hole to go down, but I doubt you want to.

11 But the -- the idea of monitoring is fairly
12 straightforward, that you want to be able to assess
13 what is happening at the site and, more importantly,
14 what you don't know is happening that could be a
15 problem.

16 So, for instance, there's monitoring of effluent,
17 you're going to discharge something in a pipe, in
18 this case proposed, for instance, to be spray
19 irrigated. You need to make sure that water is of a
20 certain quality to be discharged.

21 There's also monitoring, though, that is looking
22 for leaks or to detect something that may not be
23 so -- that is not planned or that may be anticipated
24 to detect what's happening there.

25 So, for instance, underground -- if you have

1 the -- if this is the mine workings, you may also
2 have a -- and it's not to scale -- you would also
3 have possibly a drill well that you are intercepting
4 some of the groundwater going into and/or out of the
5 site as well as, of course, they're going to monitor
6 the -- the pump, the seepage, that they're collecting
7 from the mine to get an idea of what's happening in
8 the environment, where are things going, how are they
9 interacting?

10 The reality of groundwater and the interaction
11 with a mine is very complex -- or can be very
12 complex. And you need to be able to see, well,
13 what's happening over there? If we think we're
14 capturing all of the water and it's all clean, it's
15 possibly you're not.

16 There may be some seepage that's going through a
17 natural fissure or one that was created by blasting
18 when the mine was put in that there's a little bit of
19 water seeping out from the side, or you may have
20 surface activities over here -- you know, surface
21 operations, whatever it may be that these are
22 leaking.

23 These may go this way towards the mine and will
24 be captured by this well or in the seepage, but they
25 may also been going that way, so you need another

1 thing other here.

2 And you -- you're going to have a series of
3 wells, you're also going to test -- so you're going
4 to test at different levels in the well, if it's
5 possible, or just the -- the aggregate from the well
6 and detect, well, gee, we have a problem over here or
7 be able to point and say we don't and the mine is --
8 we're not responsible for something that may be
9 happening elsewhere.

10 You're going to do the same thing with the
11 surface flows. If you've got on the surface above
12 all of these different things water, you're going to
13 monitor, you're going to test it.

14 So, really, all monitoring refers to is a rubric
15 and a plan, or both, to try and identify the problems
16 that may occur at the mine and, hopefully, not find
17 them. I mean, the ideal monitoring well is one that
18 always comes up clean. They don't always come up
19 clean.

20 And you need to be able to detect it to identify
21 where there's a failure, where there's a problem.
22 Once that's identified, if there's problem, then you
23 can deal with it. You being the company is going to
24 have to deal with it with, of course, regulatory
25 agencies, et cetera.

1 The reason I include it now and the reason I
2 think it's important now is because the cost of that
3 can be significant and it also helps to identify both
4 conceptually and financially what liabilities may
5 come ahead.

6 And -- and I guess that may go to the question --
7 I apologize over there, I don't recall your name --
8 the attorney for the proponent -- or the applicant --
9 the -- you know, the bond, the planning, the
10 financials, all of that stuff kind of comes in to --
11 whether it's being calculated numerically or a gut
12 feel of they've got a handle on this or that they
13 don't.

14 And to me monitoring is significant because it
15 helps speak to the risks that can come later. And
16 that was, I guess, a little bit of underpinning of my
17 feeling that a -- or conclusion that a small mine
18 doesn't necessarily have small impacts or a small
19 footprint. There can be plenty of problems without.

20 The monitoring plan will help identify where
21 these may occur. If you have an extremely fractured
22 geography -- geology, you may have to have a little
23 bigger monitoring plan or it's going to go a little
24 further.

25 Is that going to be a massive cost? No. No,

1 probably not at least not, or at least at the start
2 or unless there's problems detected, but it is
3 something to consider.

4 Does that answer your question?

5 MS. FITZGERALD: It does. Thank you.

6 MR. LEVIT: Okay. Hopefully not too far down a
7 rabbit hole.

8 MR. WORCESTER: Leo.

9 MR. TRUDEL: Yes. You mentioned about the
10 financial trust amount and the number that was
11 bantered around was 13.7 million. And I believe you
12 said that's not enough.

13 My question is, is there a particular metric
14 within the industry, 25 percent of the gross,
15 30 percent of the gross that is considered a standard
16 for mining operations?

17 MR. LEVIT: I'll be honest, if there is -- if
18 there is one, I have not heard of it. I have not
19 heard of a reliable one. But I would also caution
20 that any -- every mine is unique, it's going to have
21 unique geology, it's going have unique everything.

22 And, therefore, I don't know that I would -- at
23 an outset, I don't know that I would want to rely on
24 it. If you're looking for a true back of the
25 envelope something, I have not heard of it, but that

1 doesn't mean it doesn't exist.

2 I would also say that my -- and this is, I think,
3 related to that question -- my saying that in my
4 opinion 13.7 is not -- 13.7 million is not adequate,
5 is not an absolute statement that it is not adequate.
6 It is based on my experience.

7 I have never seen a mine -- certainly not a hard
8 rock mine that that would have been -- or would I
9 consider that a sufficient bond. I've, actually,
10 worked on gravel mines, which generally have very
11 little or no environment risk to water quality, that
12 have a \$13,000,000 bond or more.

13 So that's sort of the basis of me saying that's
14 not adequate. I cannot say what the number is,
15 though, at this -- at this project.

16 MR. TRUDEL: The other point that I'd like to
17 just briefly ask you is you had also made mention of
18 a series of plans, we'll say, that are not in place,
19 if you will. And I'm going to call them risk
20 mitigation plans, if nothing else.

21 Is it possible to -- that this mine could go and
22 become feasible based upon better documentation,
23 better risk management plans, mitigation plans going
24 forward?

25 MR. LEVIT: Yes, it is. The -- really the

1 question I think -- I guess to me that that raises is
2 when does all that stuff be completed? And the
3 notion that the Chapter 200 -- and I continue to
4 acknowledge my unfamiliarity with the requirements of
5 that law specifically.

6 However, any state's regulatory requirements for
7 a mine tend to be pretty expansive. And I understand
8 that is more than what is required here.

9 But there is no -- there is no impossibility,
10 it's very possible that the mine could have completed
11 everything for Chapter 200 now before the LUPC's
12 decision is made. The reason I think reasonably --
13 and I won't put any words into the mine's mouth or
14 the mine's proponents -- is that would be
15 economically significant, the costs of doing that are
16 great.

17 But there is -- there is nothing to say that
18 those things can't be done or more can be done. I
19 don't know from any set of regulations that say, you
20 can only do this up until now, you can't do this, the
21 much bigger one. And if there is the need for the
22 information, I think that it should be included.

23 So I think the reason I think that sort of
24 relates to your question is there is no limit to what
25 can be done to provide information to the LUPC except

1 those made by the applicant for business or other
2 reasons. But the -- to say that, well, it's all
3 going to be done in the future is the point that I
4 make that I don't think that is -- that is
5 necessarily reasonable.

6 MR. TRUDEL: Thank you.

7 MR. WORCESTER: I have a -- it seems to me that
8 with any project, including this project, you start
9 out conceptualizing it, you put some money into it to
10 see you're headed in the right direction, and then
11 you put a little more money into it. And it always
12 seems to come up to the person who's developing, in
13 this case this mine, they think they've provided
14 enough information so that we can make a decision.

15 The other side says, no, no, we need a lot more
16 information.

17 How does -- how does an applicant -- or for that
18 matter, the opposition draw that line?

19 MR. LEVIT: I don't have a great answer for you,
20 but I do have a very -- an opinion on the matter.
21 And I think it's actually a great question because it
22 begs the question when is enough enough, which I
23 think is sort of what you were getting to.

24 And it really applies to probably everything in
25 life, but I'm going to try not to philosophical here.

1 Ultimately I look to it as who has a burden of doing
2 something?

3 If I want something, I have the burden of showing
4 that it's possible and reasonable and doable. And,
5 therefore, I tend to think that the applicant for
6 something bears the burden, obviously, of coming up
7 with it.

8 And if there is to be any question when is enough
9 enough, that answer should be based on more, not less
10 because it is the applicant that is -- that is making
11 the financial risk at the beginning, but it is
12 ultimately the public trust that is being, you know,
13 risked in the long term, so to speak.

14 If the mining company goes bankrupt and the
15 public is the one who's left dealing with it. And I
16 started my career, quite honestly, in Superfund work,
17 cleaning up of Superfund sites where things just all
18 went kitty wampus.

19 Many of those are old sites, I acknowledge it,
20 especially in mining, but not all of them. And
21 current companies go bankrupt leaving the public with
22 literally holding the bag, so to speak, or taking
23 money out of the public bag to try and amend the
24 failures of the corporate bag.

25 And the reason I feel that that is -- is to me

1 personally and professionally -- or it's
2 professionally supported in my opinion, the way to
3 answer is because the company is seeking to make the
4 profit, the -- the public can get jobs and other
5 things.

6 However, this is the company's proposal, this
7 isn't the public's proposal. And where the public is
8 risking the -- you know, what is left behind I err on
9 the side of more should be provided, the public
10 should not be left risking failure.

11 MR. WORCESTER: Anyone else? Thank you.

12 MR. LEVIT: Thank you. I appreciate your -- your
13 time and your interest. Have a good day.

14 MR. WORCESTER: Unless somebody is going to
15 object, the technical sessions of this hearing will
16 be continued at 8:30 tomorrow morning here at
17 Stearns.

18 This evening we meet at 6:30 where the public
19 will comment. See you all in the morning or this
20 evening.

21 (Suspended this hearing at 3:58 p.m. this date.)
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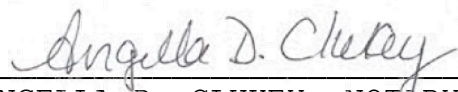
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CERTIFICATE

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, NOTARY PUBLIC
Court Reporter

My commission expires March 17, 2024

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