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 18, 2023

Day 3 of 3 of Testimony and Evidence

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

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(This hearing was taken before Angella D. Clukey, Notary Public, at the Stearns Jr. Sr. High School, 199 State Street, Millinocket, Maine, on Wednesday, October 18, 2023, beginning at 8:30 a.m.)

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

My name is Everett Worcester, I'm the current chair of the Land Use Planning Commission. I represent Piscataquis County. And I'm the hearing officer for today's session.

Leo, would you like to introduce yourself?

MR. TRUDEL: Good morning. My name is Leo Trudel, Aroostook County.

MR. PRAY: Peter Pray, Penobscot County.

MS. HILTON: Gwen Hilton, Somerset County.

MS. BEYER: Stacy Beyer, executive director the Land Use Planning Commission.

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

MS. FITZGERALD: Betsy Fitzgerald, Washington County.

MR. WORCESTER: Just as a reminder, we have a court reporter. Please speak distinctly and hopefully in a moderate level. At one time last evening I saw her just throw her hands up like this. And it's, like, I give up.

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

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

AUDIENCE MEMBERS: I do.

MR. WORCESTER: Thank you. You may be seated. And we're going on with the third morning. Intervenor 2's testimony and evidence.

MR. KUSNIERZ: Good morning, Chairman Worcester and fellow Commission members. I'm Dan Kusnierz and I'm the water resources program manager for the Penobscot Indian Nation.

MS. FITZGERALD: Sorry. I thought I heard you.

MR. KUSNIERZ: I thought I could hear myself.

I've served in this position for the last 30 years overseeing water quality for the Penobscot Nation. Some of the -- my duties involve the water quality laboratory on Indian Island; we do water quality sampling throughout the whole Penobscot watershed, on the tribe's trust lands, lakes and

ponds and streams; do a lot of studies, both ourselves and also with other agencies looking at contaminant levels found in fish and other wild foods that are consumed by the tribe.

We also do a lot of work using aquatic insects as indicators of water quality; anything to do with FERC relicensing, spills, discharge permits, water quality regulations. Basically, anything that has the potential of affecting, you know, water resources concerns of the tribe. We -- you know, we have a program to oversee that and try to address those issues. And we try to do so based on the data that we collect.

The Penobscot, or the Panawahpskewi are the people of the place of the white rocks. The Penobscots are a member of the -- the Wabanaki Confederacy. The Wabanaki are the Dawnland people, which refers to the people who live where the sunrise first touches each day. The Confederacy consists of the Penobscot, Passamaquoddy, Maliseet and Mi'kmaq tribes.

The Wabanaki have lived in this area since time and memorial and have a close relationship with the natural world. And, I'm sorry, I've been forgetting to advance my slides. They are not advancing.

MR. WORCESTER: Do we have a tech --

MR. KUSNIETZ: There we go. All right.

The Penobscot Nation has more than 4,900 acres of reservation land, which includes over 200 islands in the Penobscot River. In addition to the reservation, the tribe protects and manages over 90,000 acres of trust land that are shown here on this map in red, which are scattered around the state.

You'll be seeing a lot of maps today, so...

This map shows the location of Wolfden's proposed mine. It also shows Penobscot and Maliseet lands shown here in -- in tan. Also, the location of Baxter State Park, Katahdin Woods and Water National Monument and the lakes and ponds that we've been talking about over the last couple of days, and the West Branch Mattawamkeag River, which goes into the Mattawamkeag and then into the Penobscot.

Mt. Chase is located here. This map shows the town of Mt. Chase, but the mountain -- or the mountain peak that we heard about yesterday is located a little further up here right around where the C on Pickett Mountain is. All these hashmarks, these white hashmarks that go across the map, those are areas that are designated by NOAA National Marine Fishery Service as critical Atlantic salmon habitat.

The West Branch Mattawamkeag, the east branch of the Penobscot, the mainstem of the Penobscot and Matagamon law all under Maine state law has special designated use of sustenance fishing, which means that when calculating human health criteria in order to protect people from -- from harmful chemicals, you know, from toxins, including metals and other contaminants, they use a fire fish consumption rate. So typically 32 grams per day is used. In this case for those waters that are designated for sustenance fishing, they have a 200 gram per day consumption rate.

Additionally, portions of the west branch of the Mattawamkeag, Mattawamkeag, Penobscot and east branch of the Penobscot have been designated as outstanding river segments and are afforded special protection under Maine's Natural Resource Protection Act.

The Panawahpskewi watershed, the Penobscot watershed, is the largest watershed in Maine. The watershed has five major subwatersheds, one of which is the Mattawamkeag River, which is named for the gravel bar that is located or marks the confluence with the Penobscot River. The Penobscot watershed and -- has and continues to sustain the Penobscot people for thousands of years.

The tribe is a riverine tribe and their culture is deeply routed in their relationship with the river. The Penobscot River considers the river -- the Penobscot Nation considers the river to be a living relative. They look at the river differently than a lot of people do, it's a living relative. In fact, in 2019 tribe enacted a resolution to make the river a tribal citizen.

It's also important to note that the tribe looks at the river, I think, a lot differently than -- than society does. They don't divide it into things like the mainstem of the Penobscot, the -- you know, the west branch, the east branch, all those things. You know, historically the tribe thought of the whole watershed as the river.

And there are places along -- along it that have names and those names are associated with either some sort of navigation, some significant thing that would help people understand where they are, or activities that occurred there, things such as Mattamiscontis, meaning place of many alewives. So a lot of places have names that are associated with activities that take place there.

The river is a source of life that provides tribal citizens with wild foods including fish,

wildlife, plants, medicines and traditional cultural life ways. The Penobscot have treaty reserve sustenance fishing rights within reservation waters.

Just a couple of slides showing some of these cultural practices.

The Penobscot's traditional culture life ways did not fade away with the intrusion of industry and development, but are still practiced today. Unfortunately, the tribe is unable to fully carry out sustenance fishing because of health advisories due to dioxins, PCBs, mercury and other contaminants that are present in fish.

Historically fish and seafood comprised about 45 percent of Wabanaki people's diets. Even as Penobscot River was subjected contamination from industrial pollution, local fish is important for the diet -- for diet and nutrition. But Atlantic salmon and brook trout as well as many other species are more than just food, they are embedded in the culture and traditional beliefs of the Penobscot. The Penobscot are connected with salmon and all creatures for survival.

Water quality in the Penobscot watershed has seen tremendous improvements over the past 30 years as -- you know, as I have observed. Historic problems such

as large sheets of foam covering the river, unpleasant odors, low dissolved oxygen, high bacteria levels, algal blooms where the whole river turns green. Now those things are -- those are things of the past.

We've had -- made remarkable improvements. And this is partially demonstrated by the upgrades of water quality classes for hundreds of miles of stream segments. And much of this is based on water quality data that the Penobscot Nation has collected, which has shown that higher classes are being met and -- as part of a -- kind of anti-backsliding; we've made recommendations for those water classifications to be upgraded to protect that higher level.

So I should explain a little bit about Maine's water classification system. There are -- there are four classes of streams; there's AA, which is the highest classification, A, B and C. And this map here, it looks kind of like a spiderweb. There's a lot -- a lot to look at here. But if you -- whoops.

This area down here in green, that's roughly where the mainstem of the Penobscot River comes up and goes into the east and west branches. That is now Class B, but historically that was Class C, the lowest class. So we've seen a lot of the -- the

whole mainstem of the Penobscot went from being Class C to everything is now Class B. And then many sections of the west branch have also been upgraded to the higher classification.

Most of the streams in the watershed that are tributaries that come into the Penobscot historically were either Class C or Class B. Many of those are now -- most of those are now Class A. So the green is -- is Class B. Blue is Class A. And AA are kind of these purple colors. So, again, many of the streams have been upgraded from Class C or B to Class A and even AA.

Class AA waters are the highest classification and they are considered to be outstanding natural resources. No discharges or dams are allowed in those waters. Class A waters, which, again, are the ones in blue, are the second highest class. And they're also very high quality and they require that discharges to them must be as clean as natural background levels. So any discharge that goes into that -- into a Class A water has to be as good as that receiving water is.

So as you can see, nearly all of the streams in vicinity of the proposed mine are Class A with some AA streams in the east branch watershed and the lower

Mattawamkeag watershed.

So as we zoom in closer to Wolfden's proposed mine site, you can see from the blue color -- so here's the mine. You can see all of these streams that are in the vicinity are all Class A waters. The dissolved oxygen criteria for Class A waters is intended to be protective of all stages of salmonid species such as salmon and brook trout, including spawning and incubation.

Young salmonids require high dissolved oxygen, cool temperature and are very sensitive to acidity and metals. Acid mine drainage can easily upset this fragile environment during the spawning season, which could lead to the demise of these fisheries.

Again, Maine's laws require discharges to Class A must be equal to or better than the existing water quality of the receiving waters.

MR. WORCESTER: Can I ask a question?

MR. KUSNIERZ: Yes.

MR. WORCESTER: Go back to that slide a minute. What are the -- what do the triangles represent?

MR. KUSNIETZ: I don't know.

MR. WORCESTER: Okay. That's --

MR. KUSNIERZ: I wish I did.

MR. WORCESTER: -- that's two of us.

MR. KUSNIERZ: This is from Maine DEP's data layer for classification of waters. And I'm just not sure what they are. Yeah, I'm not sure. Very observant.

So while Wolfden has not included specifics about the ore concentrator, ore tailings facilities, they have proposed that there will be in either Stacyville, Hersey or Patten. So this map shows that all of the streams in the Stacyville area are Class A except a few very small streams that are shown here in green that are Class B. So there's streams there and here. And this is the Stacyville border.

Maine law prohibits the direct discharge of pollutants into waters with a drainage area of less than 10 square miles because of the lack of adequate delusion.

In the following maps I've used USGS stream stats to measure the drainage area of the Class B streams in Stacyville. And you can see here -- so this area that's in yellow, that is the whole drainage area of each of these Class B segments. And it doesn't show up too well, but on the bottom the mileage -- or the -- the drainage area is .95 which is less -- is, you know, less -- less than 1 square mile. Well, below the required 10 square miles for discharge.

And then this Class B stream has a drainage area of 1.42 square miles. And this stream -- Class B stream has a drainage area of .4 square miles. So all of the Class B segments -- or Class B streams that are located in Stacyville have a drainage area well below 10 square miles and, therefore, prohibit -- are prohibited from receiving direct discharge.

When you look at Hersey, you can see that all the Walters in Hersey are blue, which means they're all Class A waters. So any discharges to these streams need to meet background levels or be equal to or better than the receiving stream. And, likewise, all streams in Patten, as you can see from the blue, are Class A streams.

So the take-home message of these maps is that Wolfden cannot discharge to most waters around the mine site or the town's proposed for the ore concentrator or tailings management facility. And for those that it could discharge to, it would have to treat to levels that are equal to or better than the receiving water. And groundwater discharge also must meet these same background levels, which we think is a very high burden.

It's not moving. There we go. Here are just

some photos of Pleasant Lake and Grass Pond, both beautiful places.

In 2000, the year 2000, the Gulf of Maine distinct population segment of Atlantic salmon were listed as endangered under the Endangered Species Act. With that listing areas of critical habitat were designated by NOAA National Marine Fishery Service. These waters which I showed on that earlier map which had the cross-sections -- kind of white cross-sections going through them. Those include the Penobscot River watershed including the West Branch Mattawamkeag River and it's tributary waters.

These waters are deemed to contain the physical and/or biological features that are essential to the conservation and restoration of endangered Atlantic salmon. Significant efforts have been made to help restore Atlantic salmon and other sea run diadromous fish to the Penobscot watershed.

One of these is the Penobscot River Restoration Project of which Penobscot Nation was a partner. This project involved the removal -- the purchase and removal of two mainstem dams located in Great Works in Veazie and a bypass -- a river-like bypass channel built around the third in Howland with the ultimate loss -- no loss of power generation, but much

improved fish access.

This -- these photos here or these images show that the re -- on the left-hand side you can see what the -- before the dam removals what they -- access for sea-run fish was like into the Penobscot watershed. And you can see from kind of that pink area down on the bottom that really -- the fish really couldn't get above those dams. Once those dams came out, it improved -- vastly improved access to over 2,000 miles of historic river and stream habitat for Atlantic salmon and other sea-run species.

And excuse the typo on this because it says 1,000, but it's actually, you know, more like 2,000 miles.

For almost four decades the Penobscot Nation has worked with federal and state agencies including NOAA, U.S. Fish and Wildlife Service and Maine Department of Marine Resources to comanage and help restore Atlantic salmon, another diadromous fish species. These efforts, including stocking -- stocking Atlantic salmon fry in the east branch of the Penobscot and the Mattawamkeag watershed and adult Atlantic Salmon in the east branch of the Penobscot.

So historically there were about 75 to 100,000 adult Atlantic salmon that would return to the Penobscot watershed every year. That is greatly diminished now. The Penobscot hosts the largest -- but the Penobscot still hosts the largest run of Atlantic salmon left in the United States with recent returns ranging from 1,000 to 1500. And this year we have so far 1,600 -- over 1,600 fish that have returned as can be seen in this -- the bottom graph.

The success of salmon recovery is likely very dependent upon returns of other sea-run fish species. And the photograph in the upper right-hand corner is at the Milford fish lift. And you can see all the different fish species that are returning.

So you have -- the large one being Atlantic salmon, you have sea lamprey, American shad, stripped bass and river herring. And as seen in the graph in the bottom right-hand corner, before the dams were taken out, river herring were largely absent from the Penobscot being able to get up to Milford. And as of this year we had 5.5 million river herring return to the Penobscot.

I would like to make a note here that, you know, I reviewed Mr. Stewart's prefiled testimony about aquatic resource -- the summarized aquatic resources.

And he made no mention in the prefiled testimony about critical habitat for Atlantic salmon in the west branch Penob -- west branch of the Mattawamkeag and its tributaries.

The vast amount of resources to restore Atlantic salmon in the Penobscot watershed reflects that this is -- this habitat represents the best chance for Atlantic salmon recovery in the United States. To allow a metallic mineral mine to be developed so close to the headwaters of the West Branch Mattawamkeag would unnecessarily put these efforts and success at risk.

The proposed mine, as we -- as we've heard over the last couple of days, we believe has a high likelihood of creating acid mine drainage. I'm not going to spend time to talk about what acid mine drainage is, I think that's been well covered. But the low -- the low pH water from acid mine drainage -- not only is the pH harmful, but the heavy metals are leached out -- leached out as well.

And that can be both as it goes through the -- you know, through the ground, but also in the streams themselves. The low pH can cause metals that are bound up in sediment to then become available. They get on the gills of the fish and interfere with their

respiration. And as Dr. Maest talked about yesterday, the -- you also can get a red/orange precipitate from acid mine drainage that coats the gravel bottom.

And that gravel bottom is really important for the salmonid species that are living in there because when they're eggs or they're fry, they're actually living right in the gravel. So it smothers -- it smothers and destroys these clean gravels that are needed for spawning and incubation.

So Atlantic salmon thrive in waters of -- with a pH range of between 6.5 and 8.2. But water -- receiving waters from AMD can -- can be, like, down -- between 2.0 to 4.5, which are well below Maine's water quality standards, which are 6.5 to 9. Studies have shown that moderately acidic water can be fatal for young Atlantic salmon and affects the sensitive period of their lives as they transition from par to smolt to head to saltwater.

So remember, with something like an Atlantic salmon, they're -- when they're born or, you know, when they hatch out, they're very small, they grow up in that environment in freshwater. Now their body has to adapt to going to live in saltwater. So there's a process that they have to go through called

smoltification.

And acid mine drainage, low pH water can affect that process. So even short duration moderately -- moderate acidic conditions are reduce their tolerance of saltwater, cause aluminum accumulation in their gills. Another study found that mine pollution can actually cause Atlantic salmon to even avoid waters.

Moving on to brook trout. Maine is by far the most important state in the eastern United States for brook trout. It's the only state with extensive intact self-reproducing populations in lakes and ponds and is the last stronghold for stream-dwelling populations of wild brook trout.

Because of these populations, brook trout are an economically important sport fish in Maine. People come from all over the place to fish for our brook trout here. Lots of people from Maine fish for brook trout. They're wonderful to eat. And they're also very economically important for tribal guides who make their living taking people out to catch them.

Brook trout are also an important sustenance species for tribal citizens. And one of the really important parts of this is because they contain lower levels of contaminants than do many other species such as those found in mainstem rivers, that have

been contaminated by past industrial users.

So in the Penobscot River, as I mentioned, we have advisories in place for things like dioxins and PCBs and mercury. Much of that comes from historical, you know, discharges that have accumulated in the watershed. So tribal members know this and -- and try to go carry out their sustenance practices elsewhere and go to a lot of these, you know, smaller streams and places that don't have discharges to them in order to catch brook trout.

In fact, Maine CDC's health advisories are the least restrictive for, like, the sensitive populations of women of childbearing age and young children for -- for brook trout. Like, brook trout are one of the few species that they recommend people can -- can eat.

So the cream of the crop of Maine's brook trout ponds are the state heritage fish waters. These ponds, as we heard over the last couple days, are ponds with brook trout or Arctic char that have never been stocked or haven't been stocked in the last 25 years.

So there are three state heritage fish waters in the vicinity of the proposed Pickett Mine site, Pleasant Lake, Mud Lake and Grass Pond. I've been to

all of these and they're -- they're really beautiful gems. They're just gorgeous places.

Maine Department of Inland Fisheries and Wildlife states that the lakes, quote, support healthy populations of salmonids and smelts and it's vitally important to protect the tributaries as well as the lakes since they contain an abundance of spawning and rearing habitat.

Despite the evidence of the outstanding nature of these coldwater fisheries adjacent to the mine, the Wolfden application falsely states that -- it relies upon outdated surveys from the 1950s and falsely states that Mud and Pleasant Lake are not good coldwater fisheries. And makes -- and the application mischaracterizes more recent -- sorry. And it mischaracterizes more recent data saying it suggests potential rather than existing actual outstanding fisheries.

As with Atlantic salmon and other fish, acid mine drainage is a major threat to brook trout, especially in streams with low buffering capacity such as those found in this vicinity around the mine site because they're very clean waters, do not have a lot of the things in them that will help neutralize that acid as it comes into the -- the waters.

A Pennsylvania state report states that brook trout can tolerate a pH range of between 5.95, that being adult ones. But at either end of the range fish become stressed. And young fish and eggs are less tolerant -- much less tolerant and they can -- as I mentioned before, can get gill damage. An entire age class of fish can die.

Metal toxicity from acid mine drainage is another common stream killer. Because metal toxicity can increase with low pH, small amounts of these metals can stress or cause death, especially in young and developing fish. And acid mine drainage from coal and metal mines has contributed to the declines of brook trout in the mid Atlantic and Application historic range and rendered large numbers of streams in those areas unlivable for brook trout.

The Eastern Brook Trout Joint Venture estimated that AMD is impacting about 2,500 miles of rivers and streams in Pennsylvania.

That is all. Thank you.

MR. WORCESTER: The applicant's cross-examination.

MS. EMLEIN: Good morning. We appreciate Mr. Kusnierz's testimony. He has testified eloquently about the importance of the Penobscot

watershed and we agree. And we agree that Mr. Kusnierz is in the best position to speak about the cultural importance of the watershed to the Penobscot Nation. We appreciate the ongoing efforts of the Penobscot Nation to improve water quality and the surrounding habitats and we look forward to finding opportunities to partner with the tribes on this important work. Thank you.

MR. WORCESTER: Intervenor 1's cross-examination.

MR. BEAUPAIN: I don't have any questions for this witness and I agree with just about everything he said.

MR. WORCESTER: It's now the staff's opportunity to ask questions. Betsy.

MS. FITZGERALD: Just -- I'm just curious. You talked a lot about how many fish went up the river and down the river.

How do you count fish?

MR. KUSNIETZ: Good question. So currently the way -- like those graphs that I showed you with the salmon and river herring and all that, at the Milford dam there's a fish lift, like, an elevator that was put in so the fish can't go by the dam, they have to go into that elevator, they get lifted up, they go through a raceway.

And in that facility there are fish counters. So, like, the smaller fish there are tubes that they go through that have like --

MS. FITZGERALD: Oh, okay.

MR. KUSNIETZ: -- detectors in them that count the fish. Or they also have ways to send the fish into another -- like, with the Atlantic salmon they send them up another shoot and into a holding tank. So that's -- yeah, they have counters that do that.

I think when you start getting huge numbers of fish, like, when you have 5.5 million alewives coming through, it gets a little harder because they're all trying to go through small tubes.

MS. FITZGERALD: Thank you.

MR. WORCESTER: Leo.

MR. TRUDEL: You had given a range of pH as it pertained to the -- I'll say the optimum or the -- the ability for fish to live within that range. And at both ends the fish would be strained, as you stated.

MR. KUSNIETZ: Correct.

MR. TRUDEL: My question is, do you know what the pH is currently of the river and the waterways?

MR. KUSNIETZ: Which river -- the Penobscot River?

MR. TRUDEL: The waterways that would be affected if there were to be some sort of discharge.

MR. KUSNIERZ: We have -- we have not tested the water up in that area. So we'd have to look at the data from -- from studies that show, you know, what it is in that area. Most of the waters we find, like, in the Penobscot and surrounding areas are usually, you know, in the high 6s.

MR. TRUDEL: And I think I know the answer, but I'm going to ask it anyway -- the question.

And that is, do you know how much discharge would greatly affect it or minimally affect it?

MR. KUSNIETZ: It -- with acidity it really depends on how acidic it is and the stream's ability to neutralize that, so...

I'll give you an example on lakes and -- some lakes and ponds and some tribal trust lands. We have some places -- we have -- you've heard the acid rain before. So in the springtime after you have a lot of snow that's accumulated and it melts, there's a lot of acid that can come into the system.

So we have some lakes and ponds that because of their chemistry and geology of, you know, the surrounding area, they're able to absorb essentially -- they're able to absorb that acid

without causing a significant change in the pH. But the streams -- as Dr. Maest was talking about yesterday, a lot of the streams in this area are very clean and have very low acid neutralizing capacity.

So it doesn't take much acid in order to cause -- like, you see that change in the water. So the water can't absorb it and -- and not change.

MR. TRUDEL: Very good. Thank you.

MR. WORCESTER: I would -- I would like to have seen a pre and post on the watershed. I get the impression that you're suggesting that this whole watershed has been greatly improved over time. But I -- I'd like -- I would have liked to have seen a photograph, let's say, from 1900 and a photograph more recently.

MR. KUSNIETZ: I've only been there for 30 years.

MR. WORCESTER: Well, I'll take 30 years.

MR. KUSNIERZ: Yeah.

MR. WORCESTER: How do -- what do you attribute the cleanup of this area? Was it something you did or the tribe did or the State did or --

MR. KUSNIETZ: I think it's a combination of lots of things. I mean, one huge part, obviously, from the -- from a long time ago, you know, in the '70s we had the Clean Water Act. So we stopped treating

rivers as open sewers and, you know, put water quality standard in place, discharge licenses with permits and limits on them to drive that down. And those -- those continued to get better.

So a lot of the big problems that we used to have we're not really seeing now because a lot of the -- you know, a better understanding and just a lot of cleanup that's happened.

In the Penobscot, I mean, frankly, one of the things that has made a big difference, I hate to say this, but the paper mills have shut down. So -- you know, not that that's a desirable thing, but it's -- it's a reality. There's a lot of loading that was going into the rivers that's not happening now.

But -- but even prior to that when some of the mills were still operating, their discharges became much more clean than they had been, you know, over previous years.

MR. WORCESTER: That was what I had suspected, it was the loss of -- of industry that affected this greatly, probably on the positive side.

MR. KUSNIETZ: In part, yeah. I think it improved greatly just because of better permits, you know, putting permit limits in to help drive things down so that the river didn't turn green.

MR. WORCESTER: And then I guess stopping the log drives, apparently, was a big positive. I do miss that. I always enjoyed that. Marveled at the people's skill and running around on those logs with picks, but -- and I never quite understood what -- what chemicals came out of the wood that caused it to be a negative, but...

MR. KUSNIETZ: I think a lot of it had to do with just all that wood being in the river and as it goes to break down, it uses up all the oxygen and that kind of smoothers the bottom and, you know, changes the -- the substrate and the channels, so...

But, yeah, I remember -- I remember coming up on the Kennebec with my grandfather and him -- I was just a little kid. He made the -- he said, Remember this because this is the last time you'll see it. Because I had been used to seeing those river drives.

MR. WORCESTER: Right.

MR. KUSNIERZ: And he pointed that out. He said, This is the last one that's ever going to happen. And it kind of made a mark in my mind.

MR. WORCESTER: Thank you. We take a break?

MS. BEYER: We can, sure.

MR. WORCESTER: It says, Take a break.

MS. BEYER: We're significantly ahead of

schedule.

MR. WORCESTER: We are obviously going to finish up way ahead of schedule this morning if things go like this.

(Whereupon a recess was held at 9:14 a.m., and the hearing was resumed at 9:32 a.m. this date.)

MR. WORCESTER: Next up is Intervenor 1's testimony and evidence.

MR. BEAUPAIN: Thank you, Mr. Chairman. Could you folks come up here? Mr. Turner will start.

MR. TURNER: Good morning, commissioners and staff. As you can probably tell, this is the first time I've ever done this before you guys. I usually sit in the back and keep eyes -- my -- my mouth shut and ears open, but today I've got to talk, so...

Anyway, I hope you had a chance to just peruse through this thing because I am not going to sit here and read word for word. But the two main things that I want to get across is that this is a multiuse area. I mean, it is -- all aspects of it is -- and there's a lot of other different activities taking place there, the turbines, the other stuff that -- so it is not just a playground for -- for a bunch of other people.

So we've been -- like, very similar to, like,

Route 11 is, you know, one of the major trucking routes in Maine. And -- and, of course, the other thing about this whole thing is that -- is the economic value it has to this region -- part of the state of Maine. It is just -- can't -- I don't think anybody really can fathom it right today, but if this should happen to come to fruition, I think it would be a wonderful thing.

Okay. I'm currently -- I want to say, in the past I've been involved with quite a few conservation sales. We had Township 16, which is now in the nature's conservancy. We've got have the Lakeville parcel, which is now part of the Downeast -- Downeast Lakes Land Trust, and then Township Range -- 1 Range 4, Wells, which just currently was conveyed to IF & W.

And I'm also currently involved with a number of projects that I cannot mention where, but if they all happen to come to fruition, that would mean tens of thousands of more acres of conserved land. So -- and what I like about -- whether I can believe in this conservation movement or not is irrelevant, but what I like about this is that they pay for the land, they pay for that right to use it the way they want to.

And I think that's about all -- I guess what I

would like to have -- please give Wolfden the chance to prove they can do a good project before the DEP. I mean, because, you know, this is justa rezoning and they have to going through quite a few more steps after this assuming it's approved.

But thank you.

MR. FITZPATRICK: Good morning. My name is Joel Fitzpatrick. I was born in Houlton, Maine and have lived in Patten, Maine for 27 years. I've been married for 34 years, have three adult daughters. And for 26 years I owned and operated Patten Truck. I now operate Katahdin Brew Works, which is a local brewery, just a small brewery and work as a pharmacist for the Katahdin Valley Health Center, which is a rural health center in Patten, Maine.

Since 1996 when we moved to Patten the two mills in Millinocket have closed, the starch factory in Island Falls has closed, the plywood mill in Patten, Maine has -- has closed. The population in 1996, I was told, was about 1,200 people, maybe a little bit shy of that. And now the population is about 880. So there's really no argument that the population and the employment opportunities in the northern Penobscot area have declined.

In the past five years I've experienced more

activity in the Patten area. It would be great to see this continue. More infrastructure is needed for the greater Katahdin area to support any expanding or new business. I believe that the Pickett Mountain project could potentially add substantial value to the greater Katahdin area.

Wolfden will be required to meet all State of Maine mining laws and DEP regulations. I ask this question: If a person or business can abide and perform within the laws and regulations set forth by the State of Maine or any of its governing bodies, then why shouldn't they be allowed to operate?

Wolfden land parcel should be rezoned if it can follow the Maine rules and laws. This does not guarantee that Wolfden will be cleared to mine the land parcel.

I think Patten -- the Patten area is the most overlooked area in Maine. It has beautiful views, lakes, rivers, mountains and other natural resources. I think the natural -- the National Monument, Wolfden and other businesses have great potential to rejuvenate the northern Penobscot region. It would be great to be -- it would be great to be able to use all of the area resources responsibly to benefit all.

Thank you.

MR. WORCESTER: Intervenor 2's cross-examination.

MR. BEAUPAIN: No, no, that concludes our presentation.

MR. WORCESTER: Okay. Intervenor 2.

MR. MAHONEY: Beyond wishing that Mr. Fitzpatrick had brought some samples, we don't have any questions and thank the witnesses for coming today.

MR. WORCESTER: LUPC staff?

MS. HILTON: And I'm not sure who to ask this of. What do you -- what have you seen -- so your census status shows up to, I think, 2020 that you quote there -- or maybe a better question is, How much -- you know, are you seeing an influx of people and businesses since 2020 -- I guess since COVID even?

MR. WORCESTER: Oh, you turned it -- there you go, you're on.

MR. FITZPATRICK: I'm on? Okay. Great. Thank you.

Yeah, it's sad to say COVID did help our area quite a bit. We'll see with a few more violent winters if they -- if they continue to stay. That will be interesting. The people that came in -- I don't -- like I say, I don't know if they're going to stay. I think it was a nice place -- when you're living in New York City or Boston or whatever and you

come up and you -- you don't have to see your neighbor, that's kind of a nice thing especially with all the fear that was going on.

Businesses, a few, but not -- not many. A few. I don't really think we've seen -- I'd say not many.

MS. HILTON: Okay.

MR. WORCESTER: How would you characterize the location of Pickett Mountain in terms of the unorganized territory? Any one of you.

MR. TURNER: Well, personally, I think, as far as the mine site itself, it's a minor part of the -- of the unorganized territory, very minor. I mean --

MR. WORCESTER: Would you --

MR. TURNER: I've had other -- other uses up there take up a lot more land than that does.

MR. WORCESTER: Would you characterize it as being on the fringe of the UT?

MR. TURNER: Personally, yes, I would because of Route 11.

MR. WORCESTER: Okay. There's been --

MR. TURNER: That's my opinion.

MR. WORCESTER: Well, there's been some -- we've had some discussion about whether it's on the fringe or not. I was just wondering what your opinion was.

MR. TURNER: Yeah, that's -- you know, because I

know -- I mean, the Hersey area is being logged now for the last 20-something years and Route 11 goes right through it.

MR. WORCESTER: In terms of the land that Haynes owns, is it on the edge of that land?

MR. TURNER: It would be on the edge, I guess, you'd want to say, yeah. Yeah. Yes.

MR. WORCESTER: Anyone else? Thank you, gentlemen.

MR. TURNER: Thank you.

MR. WORCESTER: I'm sorry, we're now at the applicant's redirect. This is going so fast I can't keep up with where I am in the paperwork.

MS. BROWNE: Well, that's a perfect lead in to my request, Mr. Chair. We have 20 minutes for redirect. And since we're well ahead of scheduled and didn't use our cross for Panel 4, request that we have 15 minutes of additional time. We'll try to keep it below 30 minutes, but just want to make sure we cover topics that came up and are responsive to Commission questions.

MR. WORCESTER: That's fine. What's that? I need to get an opinion from Intervenor 2 whether they're comfortable with the added time or not.

MR. BLOOM: Well, I mean, we haven't been given

any opportunity for redirect, but if -- if there's something that we might want to recross on, maybe we would ask for the opportunity to do that afterwards. Otherwise we would, you know, object to this.

MR. WORCESTER: Okay. I'll let you redirect.

MR. BLOOM: Or recross -- or cross.

MR. WORCESTER: Whatever it was you said.

MR. BLOOM: Well, we may need a break to think about it after the -- after they're done to just --

MR. WORCESTER: Okay. That works, too.

(A discussion was held off the record.)

REDIRECT-EXAMINATION OF: JIM FINLEY

BY MS. BROWNE:

Q I think we're all set. All right. Good morning. I'm going to start with you, Dr. Finley. There was some testimony yesterday about -- and I probably caused some of the confusion in my questions of Dr. Maest, but a -- there was a testimony by Dr. Maest that there's the risk of water flowing out of the mine during mine operation.

Could you comment on that?

A Yes. So the mine -- you can think of the advancement of the ramp down through that squiggly part into the depths where they would access ore, but that opening acts just like a water well, which is to say

initially -- and I'll use my hand puppets here, but initially there is a -- a level at which the groundwater exists naturally.

And once they start advancing the mine workings or the ramp, they'll actually create an opening in the ground, which is just like you would do with a water well. And as Mr. Ouellette mentioned early on, that the pressure -- air pressure in that opening is -- is atmospheric, it's much lower than the pressure of the water outside of it.

And, effectively, water will flow downhill. That's kind of the bottom line. So as long as there's nothing outside of the mine working that exerts a condition where the water level is lower than the mine workings, all water will flow into the mine.

Q And what about the presence of fissures or faults, would that then allow -- if those existed, would water flow out of the mine during operation?

A Yeah. So -- so fractures or faults, which were mentioned yesterday by Dr. Maest, can act one of two ways. They can act -- either act as a barrier to the flow of water -- and that depends on the nature of the minerals that are associated with those features -- or they can act as a conduit.

So, again, the ruling principle is as long as the water level in the mine -- which is, of course, pumped out in order to continue working -- is lower than the groundwater level, the water can only flow into the mine. So if -- let's just say there is a fracture or a fault and it acts as a conduit, then that only means that the water can flow in faster. Water cannot flow uphill. That's really the basic.

Q Thank you. And we also have had a lot of discussion and we discussed with Dr. Maest whether it's possible to prevent or to minimize acid mine drainage at the Pickett project and a suggestion that all of the mine walls would, essentially, be leaching.

Can you comment on that?

A Absolutely. And, Maye, if you could please pull up the -- this is one of the -- the images from my presentation the other day. And I'd just ask you to focus on the lower right-hand corner which is a representation of underground workings.

So the black squiggly line that runs vertically is what is called the ramp. And as Mr. Dudek demonstrated, there is evidence that -- there's a portion of the rock that would be part of this mining activity that has very low potential to be acid generating.

And the intent then of the development of this ramp, this vertical squiggly line, would be to place that in the rock with the least likelihood of being acid generating. So that in and of itself is a mitigation measure.

But it's also important to understand that while this ramp is being advanced and developed, there'll be samples collected of materials coming out of that.

And that -- there's two reasons for that. One is we want to understand what the geochemical properties of those materials are as the ramp is advanced. But at some point in time all of that material, assuming it meets the -- the requirements that would be established under Chapter 200 for placing material back underground, would end up back underground.

So that is also a mitigation measure to understand what the geochemical properties of those materials are. There's also, actually, a third possibility or potential that that material actually has a neutralizing capacity associated with it. So not only would it have the benefit of not being stored on surface long-term, regardless of what its geochemical content is, but it also has the potential to act as a neutralizing source should there be PAG rock observed underground.

Okay. So we've talked about the ramp. The horizontal black lines are tunnels that head toward the ore. So this is just to access where the orebody exists.

Now, the majority of the tunnel we anticipate, again, based on the information available to Mr. Dudek, that most of that rock is not acid generating. We're still going to test it as that tunnel gets advanced toward the orebody.

And we talked about the sulfide alterations halo. Should that exist -- and in some parts of this deposit it does, in some parts it does not. Should that material or that zone exist, we'll have to go through it and we will measure its geochemical property so we understand what they are as the rock is taken from the ground.

Okay. So the tunnel is advanced to the orebody and then mining start. And that's where features called stopes -- and Mr. Ouellette can speak to this more clearly than I can. But the stopes are -- are advanced and they, basically, mine all that material out.

Now, it's very important -- we've talked about this a lot over the last couple of days -- for you to understand this zone where there are some places

where the pyrite content may be as high as 50 percent. So 50 percent of the material is pyrite.

As I mentioned in my testimony the other day, I don't need to test that. I know that material is PAG, but it's also the ore that is being extracted. So all of that material is -- will be excavated, mined out and removed from the -- from the system, basically. That all goes to the concentrator for processing.

Now, the stopes are -- this activity actually occurs on a fairly rapid basis, which is to say they -- they advance the stope, mine the material out and they backfill it right away. So they don't stand open for a long period of time. And we're talking generally less than a month.

Okay. So -- so one of the other things that we talked about that's important in generation of acid rock drainage or acid mine drainage is time. So, yes, there's oxygen, yes, there's water, but you also have to have enough time for the oxidation reaction to occur. So less than a month is actually a pretty short period of time for that reaction in general.

We're going to understand that also as we're going to characterize the geochemical properties of that material. Their objective is to remove all of

the ore. And, in fact, just because of the -- kind of the way you have to do it, they'll actually remove more than just the ore. So -- so this -- these stopes are going to overexcavate effectively in that zone. And that's not to say there isn't the potential for there to be mine walls in that area that contain sulfides. That -- that probably will happen at some point through the mining process.

But the fact that it's backfilled, the fact that a portion of the backfill is cemented rockfill, those are all mitigation measures. And plus that we are doing geochemical characterization during the mining activity allows them to plan whether or not they actually need to amend the backfill and add more neutralizing potential or -- or other measures -- mitigation measures.

So I think that's pretty important to understand in terms of the likelihood of acid generation -- or acid rock drainage occurring in the mining activity. We don't anticipate it in the -- in the ramp going down or in most of the tunnel length going into the ore zone.

Q And Dr. Maest also concluded that in her view this deposit had a high likelihood of acid mine drainage risks.

Do you agree with her conclusion?

A I don't. And the reason I don't is because of the information that Mr. Dudek has developed. And I think I mentioned this in my testimony the other day. Exploration, development of a geologic model of a deposit is advanced as -- as far as out in front of where typical geochemical -- environmental geochemical characterization takes place. That's the normal state of the business.

So what Mr. Dudek has the advantage of is a very large set of data, which -- some of which you saw. But equally important, a clear understanding based on the available information of what the geology is. And as he's described it, they're absolutely our zones that -- where there's sulfide oxidation.

But equally important, there are zones where he has not seen sulfide oxidation. And, again, the intent is to place mine workings in the zones with the least likelihood for there to be acid mine drainage.

So at a high level you characterize this deposit -- this volcanogenic massive sulfide deposit and place it in the context of some of the work that Dr. Maest has done in the past and you could reach that conclusion that it has a high likelihood. But

the details of this specific deposit suggest that's not the case.

REDIRECT-EXAMINATION OF: JEREMY OUELLETTE

BY MS. BROWNE:

Q Thank you. Mr. Ouellette, Dr. Finley talked about the typical timeframe for backfilling the stopes.

Can you just comment on that and then the typical amount of time that the tunnels, the horizontal lines on the slide, how long before those are backfilled?

A Yes. So as Dr. Finley had mentioned, it's typically, you know, within a month, but -- so we're proposing to mine smaller blocks that will typically be open for around a period of a week before they're backfilled. And then in terms of the drifts, because there are several of these smaller mining blocks along the length of a drift or a tunnel, one of those horizontal tunnels would be theoretically open for, you know, four to four -- five months, somewhere around there. So not overly long durations.

Q Thank you. And a question came up on whether there would be crushing of the ore underground.

Can you comment on that?

A Yes, certainly. So within the petition we described that crush -- any crushing activities would be underground. And I think it's worth noting that

we're not crushing -- the product of the crusher is still a relatively coarse rock. And so the surface areas that are exposed to generate ARD are still limited.

Q And how long would the crush material be -- remain underground?

A So typically we'd have about a one-day inventory and then that inventory would then be brought up to the surface ore pad where about a one-week stand would be the -- the largest inventory we have up there.

Q Thank you. And there was also a concern raised yesterday about the potential impact of a drop in the water table level and the potential after the mine is closed for a portion of the mine after it's flooded to be reexposed if there's a drop in the water table.

Can you -- and it was also discussed that the ore deposit goes very close to the surface.

So can you comment on that concern?

A Yeah, I sure can. So the deposit does express on surface, it comes to the top. But it's worth noting -- and it shows -- it actually shows in this diagram as well -- that the mining excavation does not go to the surface.

So the very top of the mine excavations would be roughly around 100 feet vertically from the surface

deposit, well below any potential fluctuation of that water table.

Q There was also -- although the commissioner is not here, there was a question on contractors and why you would have contractors in the early stage of construction in the project.

Can you just clarify that?

A Yeah. Thank you. There is a little bit of confusion there. So when I was speaking about the early stage contractors or those related to the mining-specific activities, and they would be hired to ultimately work with local workforce, increase skill set and experience in the mining operation.

The contractors that were discussed by the -- by the commissioner were related to the construction activities. And I'd like to just confirm that construction activities would indeed be hired through local contractors because those skill sets do exist in the state and it -- it only makes sense for us to hire, you know, as near the project as possible with skill sets that understand the location.

Q There was also a question -- I believe it was Commissioner Hilton wondered if we had a photograph of the headframe.

So can you just describe the two photographs that

have been provided?

A Of course. So there are -- I believe, the two first photographs -- Maye, have you got them? The two first photographs are examples of headframes. So, actually, the headframe photographs may be at the end. So this is an example of a nearby headframe. This is actually the Caribou mine. And just to describe it, a little bit.

It's a tall building, in this case 120 feet tall. The two wheels at the top of the headframe are just pulleys. There's ropes that goes over those pulleys and vertically down into a shaft connected to buckets, essentially, called skips. And those --

Q And then the second headframe example?

A So this is -- this is another example of a headframe. This is actually a tourist attraction. And it's again a similar type of building, it's just a tall structure. The sheaves or the pulleys at the top of it are hidden by a -- by a top of the building in this image, but this is another example of a headframe.

Q And then I -- go ahead.

MS. HILTON: Can I ask just a quick question. So is there lighting on this?

MR. OUELLETTE: So the lighting that you would

see in these headframes are typically around the entrances, the doors, around the bottom and they're downward-facing lighting.

In our case, we would do the same. So, like, the entrances are only -- they would only have lighting where needed for, you know, pedestrian traffic. And they would only be used as needed.

MS. HILTON: So FAA doesn't require lighting at the top; is that correct?

MR. OUELLETTE: So we actually had a review of the FAA requirements and it's typically, I guess --

MS. HILTON: 200 feet maybe?

MR. OUELLETTE: Yeah, 200 feet is the -- is the limit there. And they're 120.

MS. HILTON: Okay. All right.

BY MS. BROWNE:

Q I think also there was a question about, you know, just a picture of what the mine might look like.

So can you comment on the photographs that were provided and just what they are?

And I'm just -- in the interest of time, just describe -- just identify what these photographs are, and if we have time at the end we can walk you through the facilities.

A Great. So this first picture, this is sort of an

overview of the Halfmile Mine that was -- or that is in -- outside of Miramichi, New Brunswick. And if you scroll to the second picture, this is just a zoomed-in image. The Halfmile Mine was broken up into two segments. This is a zoomed-in image of the water management area.

And if you go to the third image, this is a zoomed in image of the actual mining area which is inclusive of a portal ore storage pad, waste rock storage pad and then some infrastructure.

MS. BROWNE: Thank you. And we'll be happy, if there's time at the end, to -- to talk in greater detail about that.

Doug, I wanted to turn to you for a minute.

REDIRECT-EXAMINATION OF: DOUG STEWART

BY MS. BROWNE:

Q There have been some questions on the -- if we have any information on the pH of the surrounding water bodies.

Can you comment on that?

A Sure. Yes, we do. There's been to date 11 surface water samples taken from places like Pickett Mountain Pond, Pleasant Lake, the west branch of the Mattawamkeag. Some of those water bodies have more than one sample. And the results are the range of pH

is 6.3 to 7 with the average being 6.7.
Q Thank you. And then we've also heard from the last -- Intervenor 2's last witness panel about concerns about sort of a catastrophic impact to the surrounding, for example, Pickett Mountain Pond and Pleasant Lake.
Can you talk about what further analysis will be done in connection with that risk?
A Sure. My understanding is under Chapter 200 a detailed evaluation of a potential catastrophic risk would need to take place under a scenario -- in this case possible impacts to the surface water bodies such as Pickett Mountain Pond. And a scenario would be developed as far as water quality impacts, potential other ecological impacts and what those would be and a cost estimate would be developed.
Q And what type of data goes into that analysis?
A A lot of data. Anywhere from climatic data, what the circumstances are when the event happens, soil chemistry data, surface water -- or water data from the actual impacted water, and then the water -- water quality within, say, Pickett Mountain Pond and then any impact -- data from impacts to things like fish species, so on.
Q And would there be the potential to impact Pleasant

Lake?
A There could be, but I think that would be pretty far extreme and probably not within the scope of a catastrophic event at Pickett Mountain Mine.
Q And does that have anything to do with where the watershed divide is?
A It does. The water shed divide runs across the -- the site. The storage ponds and the ore storage is all on the Pickett Mountain Pond side of the drainage. So if there were an event, everything would go in that direction.

MS. BROWNE: Thank you. I want to return to Dr. Finley for a moment.

REDIRECT-EXAMINATION OF: JIM FINLEY

BY MS. BROWNE:
Q I think from the number of commissioners' questions on, are there any examples of mines that have been successful and are not contaminating surrounding resources -- could you comment on just whether there are some examples that -- that you're aware of?
A Sure. I have two for you. One is an open pit mine. And, remember, I spent a lot of time talking about the fact that an open pit mine is not comparable. But for purposes of talking about successful mining operations, this is a good example.

It is the Fort Knox mine, which is in Alaska. And it's a very large mine. I think they run upwards of 16,000 tons of ore processed per day. Again, it's a very large open pit, so they have waste rock piles, they have a wet tailing impoundment. It's a very long tailing impoundment. The -- the dam is probably 100 to 200 feet high. So it's a very large feature.

And they are located kind of in a headwaters of the catchment where -- where they are mining ore. So it's a comparable from that perspective. They have not had any environmental issues over the course of their mining operation, which has been for tens of years.

The other example is a small underground mine in Quebec called Louvicourt. And as I mentioned, it is an underground -- well, was an underground mine that operated --

MS. BEYER: Dr. Finley, could you -- could you repeat the name of that mine for me, please?

MR. FINLEY: Yeah, I know. It's Louvicourt.

MS. BROWNE: Do you want to spell it?

MR. FINLEY: Sure. Go ahead, Jeremy.

MR. OUELLETTE: It's L-o-u-v-e-c --

MR. LITTLE: L-o-u --

MS. BROWNE: Oh, you turned off the mic.

MR. LITTLE: I feel like it's a spelling bee. L-o-u-v-i-c-r-o-u-t (sic) -- Louvicourt.

MS. BROWNE: Could you use it in a sentence? Continue, Dr. Finley.

A Okay. So underground mine operated from 1994 to 2005. It is closed. They used backfilling techniques there as well. But they also have a wet tailing impoundment. And it's a sulfide deposit, similar to Pickett Mountain.

And what they've used for their wet tailing to control it in closure is actually to put a water cover over the top of it. And if you remember my triangle, or Dr. Maest's equation, oxygen is one of the main components for sulfide oxidation.

So by placing a water cover over the tailing -- even though it's a wet tailing impoundment, if you have a water cover, that prevents oxygen from interacting with the materials. And it's been proven to be very effective for long-term management and control at prevention of acid mine drainage.

So, again, a small underground mine that has been closed successfully. They don't have any measurable environmental impact.

MR. LITTLE: The surface stuff. The surface stuff.

MR. FINLEY: Right. Yes. So they do -- they didn't put all the material back underground. And that is a difference with Pickett Mountain. So they do have waste rock that's stored on surface and they have to manage that. So they have had acid mine -- or acid rock drainage form with those. It has not discharged to the environment. They've been able to manage the seepage.

And as part of their closure activities they're actually consolidating all of those in one location and -- and placing a proper cover over it.

REDIRECT-EXAMINATION OF: RON LITTLE

BY MS. BROWNE:

Q Thank you. Mr. Little, there were some questions and there might have been some confusion about Wolfden's Manitoba projects.

Can you just describe what those are?

A Yeah, thank you for that. I think the clarification is about what's an operation versus an exploration project.

So Wolfden is an explorer/developer and all of our properties are considered exploration development properties, but they're -- none of them are operating mines. So don't be confused with operating versus an exploration property.

Q Thank you. And could you describe the next phase of work that Wolfden would do -- and in particular, there were some comments about why hasn't Wolfden done the additional analyses that, for example, Dr. Finley and Dr. Maest have both discussed and that would need to be done to fully characterize the site, fully evaluate the risks of acid mine drainage?

A Yeah, good question. I think I'll break that into two. So far after buying the property we've spent at least 8 million doing all the work that has led up to the PEA. So that includes about 17 to 20,000 meters of drilling, we've done all this engineering and detailed work that goes into the PEA.

And all of that, you know, came to a conclusion -- you know, the PEA is an independent document that we need in Canada as a way to qualify the work we've done for investors. And all of that work has told us we're very comfortable now to go on to the mining stage. And that's the very nature of a preliminary assessment.

And the reason why you spend this 8 to 10 million to get to that point is because the next part of the study work is what we'd call a full feasibility study, which includes all this baseline work, it includes all this rock characterization, the

hydrogeology, all the work that Doug is going to do on the background of the baseline of work, the flora, the fauna. That is going to be 15 to $20,000,000.

And regardless of Maine, you wouldn't go do that full feasibility until you've done the PEA. So I know there's been questions about the resources being inferred or indicated. We've done enough drilling, we know we're going to convert that inferred and indicated. It's just a matter of more drilling.

And that additional 15 to 20 million is going to include about another 17,000 meters of drilling within the orebody we've already outlined just to confirm that it's there before we do our mine plan.

So it's a two-step approach, but it's a considerable amount of money, which is why we're here on this -- this Commission is to let -- you know, now we want to go to proceed to do all that work. And, coincidentally, that just falls under the Chapter 200 format.

Q And there were questions about -- and you just mentioned the inferred versus indicated resources. I think it's 50 percent inferred, 50 percent indicated in the PEA.

Is that typical, unusual for a PEA level study?

A No, actually, it -- like, the basis of an inferred --

again, this is a Canadian regulation. It all stemmed out of a previous, you know, fraud within the mining industry. So we've got an extremely tight regulation of what we can call ore.

And the nature of a PEA is you can have 100 percent inferred. We've got 50 percent indicated and we've got a type of orebody that's very continuous. You know, this -- not -- not every orebody is the same and some require very tight drill density, others require less.

And the 50 percent inferred is only -- can be upgraded by just tightening up the drill density. So that's why we put more holes in between the other holes to qualify that the level of confidence is still there.

MS. BROWNE: Thank you. I think that's all I have unless you want Mr. Ouellette to provide any additional detail on the Halfmile photographs if that would be helpful.

MR. WORCESTER: Leo.

MR. TRUDEL: Thank you. I understand -- yesterday it seemed like there was some sort of a discourse as it pertained to the samplings between Dr. Maest and what you had presented.

Could you possibly explain that further as it

pertains to the number of samplings, where they were taken, how -- essentially, it's the research method, correct?

MR. FINLEY: It's -- it's -- well, the answer is, yes, I'll do that. It's a matter of I think everyone in the room and certainly on Wolfden's side acknowledge that -- well, that ore will be PAG, that will be the characteristic of that material.

So does that mean we will not sample it? No. We will sample it and we'll confirm that. We'll confirm its geochemical characteristics.

The -- the point of the discussion with Dr. Maest and -- you know, I agree with her in general in terms of --

MS. BROWNE: I'm just -- can I just interrupt for one minute --

MR. FINLEY: Yeah, sure.

MS. BROWNE: -- and just clarify? I believe you're asking about the seven acid-based tests that were conducted. And Dr. Maest noted that they didn't conduct them within the ore, but they conducted them outside of the ore.

MR. TRUDEL: Actually, to -- to the best of my recollection it had to do more with the number of samples --

MR. FINLEY: Yeah.

MR. TRUDEL: -- the core drillings that were taken as it pertains to the number that were tested.

MS. BROWNE: Thank you.

MR. FINLEY: And -- and I was heading that direction, but thank you --

MS. BEYER: You're ahead of me.

MR. FINLEY: -- for the clarification.

So one of the requirements as a geochemical characterization is that you, in fact, collect samples and analyze of all categories of mine rock that may occur. So ore, waste rock, tailing -- well, those are the main categories, actually.

So it's important to -- to also do that in the context of the geology that exists. And Dr. Maest described the different colors of the cross section. Each of those different colors represents a different type of rock. And Mr. Dudek had samples of a few of those.

So the -- the question of how many samples do you have of each rock type is also tied to the mine plan, which is to say if there's rock Type A, and there will only be a very small amount of that material excavated during the mining activity, you don't need as many samples to characterize it. Whereas, rock

Type B, which may comprise most of the waste rock, you need to have more samples. And there are guidelines for the number of samples appropriate to the amount of rock that's -- that's taken.

Okay. So that's just fundamentally how the geochemical characterization and thinking about representativeness, right, we talked a lot about modeling and making projections and, you know, Yogi Bear said it best, it's -- prediction is hard, especially about the future. But, I mean, that -- we -- that is something we have to do necessarily.

So the number of samples -- the focus of the initial program is -- and those seven samples was, again, not to look at the ore, because we know what the ore is right now and we're fairly confident about that. What we really need to understand better is the rock that's outside the ore zone because we'll have to go through some of that material.

The number of samples that have been collected to date, seven, is a start. It's an indicative measure of what the geochemical properties of the rock are. That in conjunction with a much larger dataset that Mr. Dudek has, plus his geological observations of the core -- because they look at every inch of the core in terms of mineralogy and -- and properties of

the -- of the -- of the core -- provide the basis for the statements currently made with regard to the geochemical characteristics of the different lithologies.

Again, I -- all of that will have to be confirmed with the appropriate amount of samples relative to the amount of different rock types that are removed.

MR. LITTLE: Can I just add something to that? Sir, just for further clarification, when we drill through the orebody, you know, as an explorer we take a sample and send it to the lab. At the exploration stage we're not looking at ARD or anything like that.

Just to run that sample for metals is roughly 35 to $40 per sample. So we don't start to do the ARD until -- once we decided to go into the PEA, then we decided where those seven samples were. And because we've drilled, let's call it, 200 holes through the rock, we see hole by hole that the rock is quite consistent. So once you see that piece of core and you've taken an ARD sample, you can now look at the other 200 holes and say, We've got that in another 80 holes, it's the same rock.

So at the early stages of a PEA you don't have to take a hundred samples of the rock that you already see is the same. So it's -- that's part of the

nature of the PEA. Once you've confirmed it's -- it's in your liking, then you go on and do the more detailed work and the feasibility study with -- with the more characterization.

MR. TRUDEL: Thank you. That helps a lot.

MR. WORCESTER: Gwen.

MS. HILTON: On a totally different topic, are we -- a question to ask Mr. Ouellette there. Is that okay to move on to something totally different?

MS. BROWNE: This is all your time now.

MS. HILTON: Okay.

MS. BROWNE: I'm done.

MS. HILTON: So how many years will Wolfden actually be a presence in this area? And I'd say, you know, doing the -- the Pickett Mountain Mine project? And when they will actually be employing a fair number of people? How many years are we talking? I know you had a schedule there, but I guess I need clarification on that.

MR. OUELLETTE: Great. Thank you. So to clarify, is it how long until we anticipate to start employing majority of the workforce?

MS. HILTON: Yeah. I mean, you -- you talk about all these jobs you're going to be -- you're going to need and I'm just kind of wondering what span of time

is that? And I know this is maybe an estimate, but --

MR. OUELLETTE: Yeah, so our --

MS. HILTON: -- the majority of those.

MR. OUELLETTE: -- our best estimate so far with relation to the work that's required under, you know, rezoning and -- and the duration of that and then the duration of work required to theoretically get a mine permit, assuming everything is, you know, favorable is between the four- to five-year kind of timeframe.

And certainly leading up to the -- to the latter end of that is when we'd be hoping to be, you know, training and recruiting and that sort of activities. So that during the construction phase there's that two-year period of construction of the -- the asset. Those would be, you know, via local contracts of skill sets that exist here.

And then after that construction phase is when we would be ramping up. And to that -- that -- where I summarize sort of the -- the types of employment that would be happening over the steady state tenure operation. At which point it would be -- you know, in this particular case at the mine we're estimating around 233 people.

And I had mentioned as well roughly a -- sort of

a two-year ramp up period of starting with an existing skill set somewhere, you know, throughout the state to come out and work with our trainees, let's call them, and increase the experience and skill set locally. And then ultimately transitioning that directly to local workforce.

MS. HILTON: And then you've got closure --

MR. OUELLETTE: Yep.

MS. HILTON: -- which is how many years?

MR. OUELLETTE: Between two or three years of reclamation, which would also be done using local contracts, train -- local workforce. Because, again, you're dismantling steel buildings, you're pulling up foundations, redoing earthworks and then revegetating the site. So those are all skill sets that exist here as well.

MS. HILTON: So what -- after closure, I mean, there's monitoring that continues and I assume that's a much reduced number of people involved in that?

MR. OUELLETTE: Yeah, so that, you know, perpetual monitoring will be done, you know, on a frequency that's decided and approved by the DEP. But once that schedule is established, then, obviously, the workforce to support that is established as well.

And -- but, yeah, it's certainly minimized relative to the 233 people that would be working at the operation during the operating period.

MS. HILTON: So I'm just -- I'm trying to put together the socioeconomic impacts in the area. And based on the -- the length of time that -- where you're going to be actually providing a lot of employment and a lot of other activity going on.

And it sounds like -- so you have the ten years and then you're -- working backwards, we're 10, 11, 12 -- I mean, what are we talking when you add all that up?

MR. OUELLETTE: So 14 or 15 years --

MS. HILTON: 14 or 15 years?

MR. OUELLETTE: -- all in -- yeah. And I think in the -- in Michael LeVert's testimony it was 14 -- 14 years. Yeah.

MS. HILTON: Okay. And within that time period it's possible that another company may come in and -- I don't know what the right terminology is, but buy out or become a manager for this facility. And that's correct, isn't it?

MR. LITTLE: Let me answer that. Moving into my territory. Great question. I'm glad you asked that.

I'll just -- I'll just add one more thing to the

14-year period. What -- there is lots of potential in Maine for more deposits. I think you've heard of the lithium deposit down near Newry as well. So we intend to take the funds that we're making out of Pickett Mountain and to continue to explore.

When you develop a workforce in a new jurisdiction with as much potential as Maine has for more ore bodies, we hope to parlay that into finding more projects. And right now there probably would be more companies exploring in Maine if the permitting process was a little more simple.

So I think companies are watching us to see how we get through this process of first the -- the Commission now, then how we would deal with Chapter 200. It won't be until only after that -- or at least I don't anticipate any corporate transaction until we get through the DEP process. Because this has been, to be honest, quite an elaborate affair that's a bit unusual in the mining industry.

And -- and I think, you know, having the video, people are going to be watching and saying, That's quite a remarkable thing. You know, you guys are on the path to perhaps success; we're going to wait until you get through the next phase, too. So I don't think we're going to see any corporate

transaction until we get through those two things.

And I -- and I think knowing a bit about Chapter 200, if somebody were to acquire Wolfden, they have to absolutely commit to all the things that we have committed to. So if we sign a permit and we do all of our commitments, essentially under a corporate transaction, that company absorbs Wolfden as a subsidiary and effectively I could see Wolfden carrying on as the operator in -- in the state even though it's a subsidiary of another company.

So all of the requirements that we have to follow for operating are still going to be, you know, a requirement of whoever steps in behind us as a -- as a partner.

MS. HILTON: I see. Do you consider your company primarily involved in development and less involved in the actual operation?

MR. LITTLE: It's been my quest in my career -- since we're sort of focused in on such a small group -- is to build mines. But I am at the mercy of a public market.

And as you go to a new jurisdiction and you develop a great project, that's usually when a bigger company comes along and says, Thanks for all the good work and all the effort, but here's an offer to buy

you out. And because I don't personally own the company, the shareholders do, they basically put out an offer. And then if the shareholders accept it, there has to be a transaction.

But myself, Jeremy, I mean, we've got a track record of -- of operating and building mines and we would love to turn Wolfden into a much larger company that can continue to keep exploring in this state because we love the potential, we like the people, we've spent five years getting to know the local people.

You know, these things take a lot of time, but you get quite involved and endeared with the community. So our passion is to stay here.

MS. HILTON: Okay. I guess I have a -- just a question for staff. It is my understanding -- and this is a little confusing, I think, sometimes -- that LUPC -- this issue of socioeconomic impacts is looked at LUPC as -- and DEP does not really -- that's not really something that they get into; is that correct?

MS. BEYER: That's correct.

MS. HILTON: So, I mean, I -- do you want to clarify that?

MS. BEYER: Sorry, I've got to keep pushing mine

down. We definitely have standards in Chapter 12 that address socioeconomic concerns. And typically DEP doesn't address those things, but what I want to clarify is I don't have a strong understanding of all of the -- the standards in Chapter 200, which is a little different than some of the other -- the rules that DEP administers.

So I'd have to want -- want to clarify that for you in terms of whether they pulled in any socioeconomic standards of Chapter 200.

MS. HILTON: Okay. Thank you. I guess my point here is that there are certain things that our agency, organization, looks at that the -- the DEP Chapter 200 rules probably do not address. And so when we say that, you know, we'll pass it on to the next agency because they have all these strong rules, there are certain things that we as an agency have to look at.

Am I -- how am I sounding? Am I getting out of line there, counsel?

Okay. And I guess that's the point I really wanted to make. So this discussion is -- is very important to us; not that they all aren't. Thank you.

MR. LITTLE: Can I beg to add to your commentary

on that? I'd only go back to the comment on -- because of your question about the takeover because we're heard from, particularly the opposition, about how small we are and that we're a Canadian company and we're trying to become Mainers.

But I think, you know, if a transaction were to happen, it's likely going to be by a much bigger company. It might actually make, you know, people more comfortable with the bigger balance sheet, a bigger track record. And, of course, to me that only adds to the socioeconomic benefits, perhaps, or the comfort level thereof.

So I think that's -- that's all part of your upside in allowing us to get through to the next stage is that there will be other companies looking to come to Maine, which to me is attractive for this whole region.

MR. WORCESTER: Leo, did you have a comment?

MR. TRUDEL: Yes. I have another question. Since we're talking about projections and current market conditions as well as -- and you brought it up -- the balance sheet, I did not see anything that pertained to your financial viability as it pertains to your financial statements.

And I was wondering if that is something that you

could actually bring to the table at some point? You -- you're traded publicly, so I'm assuming that you have audited financial statements.

And, basically -- again, I see where your projections are more of a mark-to-market type of accounting as opposed -- and it's based upon what the future might be and what the future will bring as opposed to what you are now.

And your book valve is something, I think -- again, you brought it up -- a firm with a larger balance sheet would maybe add more credibility. I don't -- I don't mean that in a negative way, but it's certainly presents a comfortability level for, I believe, everyone.

MR. LITTLE: Yeah. So there's -- there's a couple of things I want to address here. First, we are public and all of our financials are -- you know, our annual statements are audited. The quarters are not reviewed at this stage because we're a small cap company. But they're filed on CDARS, there's also on our website so you can see all of our financials.

There's a statement in there that the opposition has used that related to the going concern. We put in there, not our auditors, that, you know, there is a risk that we can't raise money next year because

all of the money we've raised is typical -- you know, most of it except for our timber revenue is raised by issuing shares. And that -- that is done by, you know, the attractiveness of our properties in the company.

So Pickett Mountain is our, what we call, the flagship. And so the value of that, much like our investor related to, is there's a great comfort level that the asset is very real, it can be a mine. Now we're at a stage is, can you get a permit?

So if we were to get through rezoning, I expect our stock price to go up. And that allows us to raise the 15 to 20 million do the execution.

Behind us is a major company, Kinross, the Fort Knox mine that was mentioned is one of our biggest shareholders. They're looking at us saying, This is an attractive asset, it's an attractive belt; we'll support you with your efforts because we're the guys down here on the ground trying to get through the permitting in a new jurisdiction.

ALTIUS is an intermediate size company, they're also a financial backer. So we've got really 40 percent of our investors in -- you know, Mr. Fieler who was here is 20, let's call it, Kinross is close to 10 and ALTIUS about 10. So they're our

cornerstone investors to see that we progress.

And it's not until we get to the -- close to the final permit -- and, if fact, what we would expect is the DEP would say, Okay, you've -- you're -- we're going to give -- you know, we've reached through to the permit approval, but you can't start until you put all the money upfront as part of the assurance bond. At that point in time we're ready to fully finance. And that's when the funding comes in to do all the work.

So it's -- it is a progression to get there and -- and we expect our market cap to improve as we get through each mile stone.

And then -- sorry, just before I forget. You'd made -- I think you were alluding to our projections. Whether it's the PEA or the full feasibility, it's all based on the same metal price assumption. So you'd heard we used a three-year running metal average. You do that in the PEA and you do that in the feasibility because you can't really predict the future.

And so all the revenues are based that way, but then you put in all the assumptions on your costs and your recoveries. I mean, there's quite a bit of information. We'd love to show you a spreadsheet on

how we do it, but there's many different tabs for all the different costs. And even in the PEA we used, you know, real quotes. You know, A to Z Mining went out and got real quotes for many of the capital-priced items. You know, the big ticket items they were quoted for. And then he also researched the current labor rates in the U.S.A.

So I know he referred to it as a pretty good guess, but I'd beg to differ. There was a lot of work that went into that PEA.

MR. TRUDEL: I would look forward to that -- to the report and -- and what -- what you're willing to share.

MR. LITTLE: Okay.

MR. TRUDEL: Thank you.

MR. LITTLE: Thank you.

MS. BROWNE: So just so I'm clear, do you want us to -- I mean, the financial statements are public.

Do you want us to actually provide a copy of the most recent audited financial statement so that it's in the record?

MR. WORCESTER: You're on.

MR. ELWELL: Yeah, I think if -- to the extent Commissioner Trudel would like to see that, I think it should be part of the record.

MS. BROWNE: Okay. We'll do --

MR. ELWELL: I think --

MS. BEYER: -- that as follow-up to the hearing.

And are you also asking for the financial model that was -- went into the PEA, the spreadsheet that Mr. Little referred to?

MR. TRUDEL: If -- if you're willing to -- to -- yes.

MS. BROWNE: Yes. So we'll follow up with that as well. So two --

MR. TRUDEL: That will be great.

MS. BEYER: -- two follow-up items. Thank you.

MR. TRUDEL: Thank you.

MR. LITTLE: I'll just add, the -- because it's going to the record, it won't be the working Excel spreadsheet. You know, you'll see all the numbers, but you won't be able to work it.

MR. TRUDEL: To --

MR. LITTLE: Yeah. Well, it's actually proprietary as well. The mining companies kind of keep their working sheet to themselves to a certain degree because you develop this over time with a lot of experience. Yeah.

MR. TRUDEL: Understood.

MR. WORCESTER: Let me give you a history lessen.

Back in the day the LUPC made all the decisions in the unorganized territory on every project. As time progressed and projects got more complex, things changed.

The LUPC has 25 employees to do -- and we zone and permit 10.4 million acres with 25 people. And we make all these decisions about development within the unorganized territory with 25 people.

Well, the legislature said, Things are getting too complicated. So they started out with large scale developments. So if we have some developments that are over -- how many lots?

MS. BROWNE: 30 acres.

MS. BEYER: Residential it's 15 lots and 30 acres.

MR. WORCESTER: -- okay, 15 lots and 30 acres, it's bumped over to the DEP. They've got 300 or so employees. They've got a lot more expertise.

Then all of a sudden there's some interest in mining, we've got the same situation. We've got 25 people who don't know anything about mining. They've got over 300 and a lot of them are specialists in a lot of areas.

So the legislature passed Chapter 200 or whatever it is. So we're kind of in a bind with some of these

dual project improvement situations. They leave us to say, Yes, you -- you need to rezone this in order for, for example, Wolfden to progress to the DEP. But we have all these regulations as well, socioeconomic and -- and environmental issues and all this.

And so we're in a quandary sometimes ourselves. How in depth do we need to have information to rezone when we know under Chapter 200 all of these things we wished we had we'll have in hindsight because you'll have to develop it for them?

So it's not -- it's complicated to -- and I brought this up yesterday. Where is the line when enough is enough for rezoning versus enough is enough for the real deal?

So that's -- that's my spiel before I have my ending spiel. All right.

MR. LITTLE: Juliette, on that note am I allowed to say thank you to the Commission?

MS. BROWNE: Yeah.

MR. BLOOM: We're going to take a break and have potential questioning.

MR. WORCESTER: Yes. I forgot.

MS. BROWNE: Do you want to break first or --

MR. BLOOM: Can we have, like, ten minutes to

just discuss --

MR. WORCESTER: Okay.

MR. BLOOM: -- and figure out --

MR. WORCESTER: I think that's fair.

MS. BEYER: And if you don't mind, I have two or three questions I could ask --

MR. WORCESTER: Okay. Tracy has -- I mean, Stacie has some questions as well. Go ahead with yours, Stacie, and then you folks can come up.

MS. BEYER: Thank you. Dr. Maest in her testimony seemed to indicate that most mines use dewatering wells.

Dr. Finley, is there -- do you have an example of a modern mine that doesn't use dewatering wells and are successful?

MR. FINLEY: It depends on the type of mine. Most underground mines do not use dewatering wells. And I believe Louvicourt did not, but I would have to check that. Most -- almost every single open-pit mine uses dewatering wells.

MS. BEYER: Thank you for that.

MR. FINLEY: Sure.

MS. BEYER: And you mentioned in -- in the redirect that if there's additional neutralization needed when you're backfilling that the waste rock

could be amended.

Could you explain how that would happen?

MR. FINLEY: Sure. I talked about this a little bit in my testimony, but it's possible to enhance the neutralizing capacity of backfill material beyond what may be naturally there by adding amendments such as lime. So lime -- again, we talked about that. I won't go into it again.

But that is a method that's commonly used in the mining industry.

MS. BEYER: Thank you. And last one: Are there any other effective or emerging best management practices that would prevent or mitigate for acid mine drainage in the mine that we haven't mentioned yet in this hearing?

MR. FINLEY: I think some of the other people testifying have eluded to several things that are kind of in the works. There are people who have spent their entire career looking for ways to manage bacteria, for example.

And it turns out that there actually are ways to do it. So I'll just tell you that if you spray sour milk on -- on the rock, it will kill the bacteria.

So the trick is -- as in many large mining operations -- and that's where it becomes very

important. If you have hundreds of thousands of tons of material you're managing, how do you do that?

So a smaller operation has a better potential to think about doing something like that. So -- so that's managing the bacteria part of the triangle that actually has four parts to it.

There's ways to limit precipitation interaction with the rock. So to, essentially, keep it dry or to limit the amount of water that can migrate, filtrate through the rock.

So, for example, a mine in Peru that I was at, a very large gold mine, has a -- and, again, different operation, different process, but fundamentally they're managing rainfall input -- and this is where having workforce comes in handy -- by actually spreading plastic over this gigantic heap leach pad that's got to be a half a mile long and -- and on a very steep slope.

So they have people actually hauling plastic out over this heap leach pad to limit the amount of precip they get in their system. So there are other ways to do that by adding sealants to the surface, for example, of a waste rock pile to, again, prevent or limit the amount of water going into it.

So some of those are -- are, you know, things

that are great ideas, but are not practical in large operations. Some of them are -- just need some additional test work to implement. But the target is -- and Dr. Maest mentioned it -- prevent it in the first place, that's the -- the best measure.

Then you have a list of mitigation measures. You don't walk into any of these programs with a single mitigation, you have -- you have a playbook of mitigation measures that -- that you're ready to implement if conditions warrant.

MS. BEYER: Thank you.

MR. FINLEY: Sure.

MR. WORCESTER: Leo.

MR. TRUDEL: Just one more. I want to say everybody -- every commissioner has had a farm here, so -- or farmed at some point. And where I'm going with this is we've all used lime, probably purchased it.

MR. FINLEY: Yeah.

MR. TRUDEL: And it's heavy and -- and my question is, I'm assuming that you have not included the amount of lime that would be needed in order to continue with the processing if you were to go down that road? How much lime are you talking about and how many truckloads are you looking at on a

consistent basis?

And I -- and I realize that it's going to vary based upon --

MR. FINLEY: Well, it just --

MR. TRUDEL: -- parameter --

MR. FINLEY: And if I could, sorry, ask you a question back. I realize that doesn't happen, but just for clarification.

Are you talking about lime that could be used as an amendment as part of an ARD metal leaching plan or for the operation side?

MR. TRUDEL: I guess both, but -- but I was -- I was thinking more in terms of the ARD.

MR. FINLEY: Yeah.

MR. TRUDEL: But, I guess, both because if -- it's additional trucking, right?

MR. FINLEY: It is, sure. Yeah, well, let me -- let me start and then I'll hand it off to -- to Ron. He -- he has thoughts on this. And it's important that he speak to it, actually, because I can speak to it from the standpoint that this goes into the characterization program and something that has to be known beforehand, right, because you can't just find yourself all of a sudden going, Boy, we need lime, but you haven't set up the infrastructure and

contracts, et cetera, to eat again it, right? So that's where the characterization program comes in.

And through that they'll develop a -- or we will develop an understanding of how much potential there is for there to be a need for lime. At which point then you put pencil to paper and, basically, do the hand calculation to -- to decide. So I can't answer you specifically.

MR. TRUDEL: Well -- and you can -- you make all kinds of projections. It seems to me like this is a worthy projection, even if it's only an industry standard.

MR. FINLEY: Right.

MR. OUELLETTE: Of course, so -- so lime, you know, treatment of the wall rocks is sort of one of those components that Dr. Finley described as part of an overall toolbox along with the sour milk and, you know, that sort of stuff.

But in terms -- in terms of the operation, you know, we de describe a portion of our backfill as cemented backfill and, obviously -- sort of like cement is a neutralizing agent as well, which would be, you know, another part of that toolbox, not specifically described as the -- you know, the ARD management isn't specifically described as the

purpose for cemented rockfill, but it is a good biproduct of cemented rockfill.

And in the case of our operation, that is described as roughly 50 percent of the backfill that's used for, you know, the mine excavations. And that is built into sort of our cost model. Yep.

MR. TRUDEL: Thank you.

MS. FITZGERALD: Can I go a little further?

MR. WORCESTER: Yeah, please.

MS. FITZGERALD: Let's talk about cement for a minute. You've mentioned it on a number of occasions that, you know, we'll put -- do you mean cement as in I'm going to build a foundation cement?

MR. OUELLETTE: Yeah, it's typically Type 10 Portland cement.

MS. FITZGERALD: Okay. And so what happens, if I understand you correctly, is that you, basically, take the cement down there and you cement everything together that's left over so that nothing happens and it just sits there inertly as a lump?

MR. OUELLETTE: Yeah. And so I mentioned the -- the neutralizing potential by the cement is sort of a biproduct of the original plan for using it. And the way that we apply the cement is -- I mentioned the stopes or the mining blocks, they happen in sequence

to one another. And in order to excavate adjacent to one of the, call it, primary mining blocks, you consolidate it. And to do that you use cement.

And, essentially, that's what we're doing is we're creating a concrete block. And by doing that now you can mine adjacent to it and not impact, sort of, the backfill that was there. Because otherwise, obviously, the backfill would just run into the stope that you're trying to -- to mine out.

So it's a -- it's a mechanical, you know, structural management technique. Yeah.

MS. FITZGERALD: All right. Thank you.

MR. OUELLETTE: You're welcome.

MS. BEYER: Can we have --

MR. WORCESTER: You're up.

MR. BLOOM: Can we have our ten minutes to discuss what -- what we want to ask?

MR. WORCESTER: You need ten minutes to discuss what you want to ask? Yes.

MR. BLOOM: Yes.

MR. WORCESTER: Take a break, people.

(Whereupon a recess was held at 10:53 a.m., and the hearing was resumed at 11:03 a.m. this date.)

MR. BLOOM: So we'll split the questioning, because there are multiple witnesses, between me --

who -- the witnesses that I sort of handled and Peter for the witnesses that he had prepared to handle.

MR. WORCESTER: That's fine.

MR. BLOOM: Thank you.

RECROSS-EXAMINATION OF: RON FINLEY

BY MR. BLOOM:

Q So, Mr. Finley, are you aware that since that -- that in 2021 -- in February of 2021 the LUPC staff asked Wolfden to provide an example of comparable mines that could accomplish what -- what Wolfden is -- is proposing to accomplish here?

A Sorry, is that -- that was a question?

Q Yes.

A Am I aware of that?

Q Yes.

A No.

Q Okay. And in -- in 2020 were you aware that -- that the Maine Geological Survey sent a letter requesting examples of mines that were comparable that could accomplish that Wolfden is proposing to accomplish today?

A No.

Q Okay. And so, you know, you've provided some examples today, which -- but those examples were not in -- listed in the application materials, correct?

A Correct.
Q And not in your prefiled testimony, correct?
A Correct.
Q And so, you know, we may have more we have to say, we can't, you know, research these mines in -- in ten minutes. I just have a quick question about -- about Fort Knox you mentioned.

That's in Alaska?

A It is.
Q And -- and that's a gold mine, correct?
A Yes.
Q And -- and that gold mine, according to the U.S. Geological Survey, has low sulfide content -- the deposit, correct?
A I don't know the exact.
Q Okay. So in my ten minutes I -- I'll say that the U.S. Geological Survey website for that says low -- low sulfide content.

Low sulfide content -- and sulfide is typically what is the -- produces acid -- or what could produce acid mine drainage, correct?

A Yes. And I -- and I think it's important to distinguish when we talk high sulfide, low sulfide, that's specific to the ore. That is not talking about the sulfide halo or alteration halo that

surrounds the deposit.

So in -- whether you're in Fort Knox or Pickett, the ore is what's going to be extracted and removed. It's -- the acid rock drainage probability is as much associated with what the sulfide alteration halo looks like.

So I can tell you right now that in many kinds of hard rocks a sulfide content of one weight percent, which I would consider a relatively small number, could actually cause acid rock drainage. So, you know, whether the ore deposit itself is high sulfide or low sulfide to me is -- it is important in the overall story, but it's the sulfide alteration halo around the orebody that is equally important.

Q And -- and that's something you said needs further study, correct?

A Correct.

Q Now, when -- just speaking quickly about Louvicourt, that has -- that has been closed since 2005, correct?

A Yes.

Q And -- and it was your testimony that a lot has changed since 2005 and you're actually relying on a lot of new technologies or -- or techniques since 2005, correct?

A Yes.

MR. BLOOM: Okay. I'm going to hand it over to counsel to ask questions.

MS. BROWNE: Could I just clarify that Dr. Finley's testimony of those two mines were just in response, I think, to Commissioner Hilton's question about are there mines that are successful. We're not saying that those mines are, you know, doing exactly what Pickett would do.

RECROSS-EXAMINATION OF: RON LITTLE

BY MR. BRANN:

Q I'm going to -- Mr. Little, and let me just start -- to follow up on Commissioner Trudel's questions.

The -- there are audited financial statements and then you have unaudited financial statements, correct?

A We -- every year our statements are audited on an annual basis. And some quarters could be reviewed for other companies, but as a small company we don't review the quarters.

Q And you submit on the -- for the Canadian Securities folks you submit -- you've submitted documents which are quarterlies that are unaudited, correct?

A Correct. Yeah.

Q And you've also submitted statements having to do specifically with this project, right?

A Yeah, every quarter we --
Q Okay.
A -- talk about our projects.
Q It's okay. And then you also have what's called the -- the management discussion of that and that's -- all of those are submitted to the Canadian Securities authorities and -- and discussing what's going on with -- with regard to the company, correct?
A Those -- those are filed on SEDAR.
Q Correct.
A That's not necessarily the securities commission, but they're filed like every other public company.
Q It would be the equivalent on filing on EDGAR in the United States for -- under -- under the SCC?
A Like a -- a Q-10.
Q Let me just suggest -- and we'll -- to -- that one of the things that we can supplement the record with were some of those unaudited statements, statements about the project, all of which were just filed with that just to --
A Yeah --
Q -- to put this aside?
A -- I'd also qualify that our -- there's no difference from what we say in an unaudited quarter versus the annual.

Q Oh, absolutely.
A Yeah.
Q Oh, I understand. But further information that would be helpful to the LUPC as they make decisions under their criteria, one of which has to do with the financial capability of the -- of the company?
A Yeah. I mean, the statements clearly show what our balance sheet is --
Q Understood. I --
A -- and where we have spent our money --
Q I'm going to cut you off because I have limited time --
A Sure.
Q -- if you don't remember.
A No problem.
Q You said there's no -- your likely takeover possibility or takeover premium would occur once you can get yourself through -- through the permitting process.

And -- and at that point one of the folks who might be able to take you over might be one of these large mining companies, correct?
A A larger company who's interested in the project.
Q And one of your strategic partners who you described as a larger company was -- is Kinross, correct?

A It is.
Q And so -- and so Kinross is -- and so -- and one of the things would be whether or not they have the same values or the same promises that Wolfden has made to -- in this -- in this application, correct?
A Yeah. My -- my simple thought on Kinross is they are the same or -- as we are the same, kind of --
Q And when you say it's the same --
A -- commitment.
Q -- so that would -- the Commission could take into consideration that they had, according to prefiled exhibits, over 3,000 violations of their mine in the state of Washington, correct?
A This -- you're referring to the Buckhorn Mine?
Q Yeah. That is part of the history, right?
A This is their own issue, not our issue.
Q Absolutely.
A And the 3,000 plus violations are a day -- my understanding is for every day that --
Q It's not --
A -- something --
Q -- whether or not --
A -- has gone by that --
(The reporter interrupts.)
BY MR. BRANN:

Q And so one of the things that -- they could also take into account -- which we have in -- Hearing Exhibit No. 35 -- is that there were a $45,000,000 payment on a superfund site on a mine that they did in Colorado; are you aware of that?
A No.
Q Okay. Are you aware of -- in Hearing Exhibit No. 34 that they ended up paying $950,000 in civil penalties for violations of the Foreign Corrupt Practices Act for their dealings with mining in Africa; are you aware of that?
A No, but it's not a given that they're actually going to take us over. So what does their record have to do with us?
MS. BROWNE: Could I just clarify? Are those exhibits -- have they been -- are they in the record or is this the first --
MR. BRANN: I just identified them for it to be put into the record.
MS. BROWNE: Well -- okay. In all fairness, I think you need to provide the exhibit to the witness and let the witness just comment on the exhibit.
MR. BRANN: He said he wasn't familiar with it.
BY MR. BRANN:
Q So in -- in terms of -- you talked a little bit about

what a good orebody this is. You talked -- and one of the -- but you do recognize that under the -- the requirements for a PEA under the Canadian Securities laws that by definition inferred -- all of the inferred re -- all mineral that is listed as inferred is deemed to be too speculative to be considered as an economic resource, correct?

A You're -- you're misleading people here because that is a definition within a PEA so that people don't get confused between a PEA and a feasibility study.

So the fact that we have used "inferred," you have to qualify that these don't qualify as reserves in other levels. So it's a -- it's a qualifying statement that's in every PEA.

Q And the qualifying statement appears in the PEA for this particular project on Page 517?

A I don't know what page it's on, but it's -- again, it's -- it's in every PEA.

Q And lastly --

MR. WORCESTER: Excuse me. Is 517 on the record?

MR. BRANN: Yes, it's part of the application.

MR. WORCESTER: Okay.

MR. BRANN: Yep.

MR. WORCESTER: And your time is getting short.

BY MR. BRANN:

Q I -- I totally recognize that. And with regard lastly to the jobs.

There's no guarantee -- there's no written guarantee that Wolfden or somebody else would actually provide any of these jobs, correct?

A I disagree. If this mine gets built, there will be jobs. You can't build and run a mine without the set jobs that we have. And I'd say it's a pretty good estimate for the size that we've predicted plus or minus 15 percent.

Q Although the PEA says 40 percent?

A Sure.

MR. BLOOM: I'm going to just hand those exhibits to the --

BY MR. BRANN:

Q As the time has -- is expired --

MR. BLOOM: -- the witness in case he wants to --

BY MR. BRANN:

Q -- the -- but you do recognize that in 2020 in one of -- one of these statements that went to the -- the Canadian folks that it was -- in hearing Exhibit 14 that they said it was a total of 60 jobs that would come out of this project?

MS. BROWNE: What's hearing Exhibit 14?

MR. BRANN: It's a -- that is the --

A I think I --

MR. BRANN: -- it's a management discussion of the results.

A Yeah, I think he know what you're getting at. You're talking to the first application.

BY MR. BRANN:

Q Okay.

A And the 60 jobs was not an error, by the way. Thank you for the question, it's great to clarify.

MR. WORCESTER: Let's not -- let's not add any more exhibits here.

A And so back to the question. Counsel is alluding to our first PEA where 60 jobs were mentioned and we did have to clarify that with -- with questions from LUPC staff.

That was one shift only, it wasn't including a cross shift which needed to be doubled. And I think in the document -- or in our correspondence we qualified that. But you might as well stick to the current application is where I think we should be.

BY MR. BRANN:

Q You would agree with me that if you go from the original exhibit -- hearing Exhibit 14 in which you're discussing about this mine, it was a prediction of the 60 jobs, it goes to 100 and it goes

to --

A No --

Q -- 233 today?

A No, it was mis -- you're misinterpreting the 60 --

Q Okay.

A -- as it did not include the second shift. We described it as one shift and people somehow have misinterpreted the second shift.

MR. BRANN: We'll, obviously, defer -- leave it to the LUPC to sort out who's reading the document right.

MR. LITTLE: Thank you very much for your questions.

MR. WORCESTER: Thank you, people. You people are excused.

MR. LITTLE: I guess on that note I'd like to lighten it up and thank all of you for having us and all of your questions. We really have kind of been looking forward to this for five years to tell you about the project, tell you about what we want to do.

And, you know, Tim and Stacie and the staff have been terrific to work with. And, of course, we would have loved to have you all up to the property to show you the property because I think that would help to see the local area and the woods. And I would

encourage you to go up there at your leisure, the door is always open, there's no gate.

So thank you to the staff, thank you to the -- to the AV department for putting this together and even thanks to trying to be civil with the rest of the opposition and we appreciate the -- the opportunity. Thank you.

MR. WORCESTER: Thank you.

MR. ELWELL: Well, I hate to end on a more boring procedural note, but, MS. BROWNE, did you intend to object to any of those exhibits that were mentioned? I think we've largely been operating off an admitted-it-not-objected-to framework.

MS. BROWNE: I guess my -- this leads to what can be submitted after today. If there's an opportunity for us just to respond to these exhibits as part of the post-hearing submissions, then I don't object.

If there's -- I mean, my understanding is the record will be left open and the parties are allowed to provide information responsive just to the issues that came up in the hearing or the public comment session. And if I'm accurate in that assumption, then I'm okay with these in the record.

MR. ELWELL: Well, the parties provided a timeline for briefing. I guess I don't know that we

directly addressed whether or not they could also submit additional materials in the time when it's open for -- for public comment.

MR. WORCESTER: I -- that wasn't my understanding. My understanding was if you haven't submitted it by now, it's over.

MS. BROWNE: Then -- then I object to these exhibits.

MR. BLOOM: Well, if -- if Mr. Little wants to take a look at them and respond -- you know, there were questions based on them given the short time period that we had. If he wants to just take a look at them now and then he can respond if -- if he has anything.

MR. WORCESTER: Well, if -- if MS. BROWNE has objected, I think that's suffice.

MR. ELWELL: Yeah, we haven't had much of a chance to review these exhibits. I think maybe what would make the most sense is we could address that objection in a procedure order after we've had a chance to look at them more fully.

MR. WORCESTER: Okay. That sounds good to me.

MR. MAHONEY: If I could -- if I could just clarify. An objection has to be sustained. And so we'd want an opportunity to respond to the objection.

So what the -- if the basis of the objection is it's irrelevant or --

MR. WORCESTER: I -- I think what happened here was I went beyond where I should have gone letting one side, which was on the record, and then letting you folks back in because they agreed to it.

So at that point I think we thought -- I thought anyway we were dealing with what was already on the record. And all of a sudden we had several more documents that were mentioned, but not in the context of, I'd like to submit this document and ask questions about it.

MR. MAHONEY: I understand that and -- chairman. But part of this was in the nature of cross-examination. You don't know what you're going to use until you hear the direct testimony of the witnesses. So most of the material that we used was in the record. There were some things that were used as part of the cross-examination, which came from public records.

And if we wanted to, we could go through a full evidentiary process of, here's the basis for it, here's why it's relevant, and then the objection could be it's irrelevant or it's -- or some other basis for that. But we haven't done that.

And I think as Caleb said we were working under the understanding that, you know, we provided materials ahead of time last week that we would both -- we were planning on using, especially if they were new materials, we identified them, but we weren't sure if we were going to use all of them so we didn't enter all of them into evidence at the time.

So I think that's where if there are documents now that Wolfden or Haynes objects to --

MR. BEAUPAIN: If I could see them, it would help a lot.

MR. MAHONEY: -- understood -- object to we could respond to the objections and then you could make a ruling as to whether or not they'd go into the -- the record or not.

MR. WORCESTER: Do you want to deal with this?

MR. ELWELL: Okay. Here's what I would --

MR. MAHONEY: And just --

MR. ELWELL: -- propose, I guess, is we'll give a limited period of time for both parties to state the basis for their objection and then we'll issue a procedural order and that will determine the -- the exhibits.

And if you also wouldn't mind providing a -- a

list of the exhibits that were introduced during this cross-section that were a subject of the objection. I'm not sure I followed all of them.

MR. MAHONEY: We have that and -- and we -- we prepared something like that. And -- and we can add the few that came in just now. And appreciate that.

And I also appreciate, Chairman, your ability to overrule yourself if you'd -- if you'd like.

MS. BROWNE: So we -- we object to this on multiple grounds. Throughout this hearing Intervenor 2 has flashed up exhibits, hasn't asked the witness questions or allowed the witnesses an opportunity to discuss the exhibit or put it into context.

So -- and -- and to do the same thing on, you know, recross on redirect is fundamentally unfair. And these are not new issues. If they wanted to question Mr. Little about Kinross, they had ample opportunity to do so during the hearing.

So I think it both goes beyond the scope of the limited redirect and is unfair because, consistent with a number of their exhibits that they've introduced, it's just a -- you know, here's an exhibit and then move on and there's no opportunity for meaningful discussion of it.

MR. ELWELL: Well, I think you -- you'll be able to make that objection -- we provided an opportunity for the parties to submit in writing their objection to those and then we'll rule on them following the hearing rather than all looking at them right now and coming to that conclusion. That would be my proposal.

MR. MAHONEY: It's a relatively small universe of documents and I think we could do that in short order.

MR. ELWELL: Are you indicating that you'd like to object to additional ones that were introduced in earlier session or is it still limited to the ones --

MS. BROWNE: I was limiting it to this. I candidly, in the spirit of just trying to be cooperative, I have haven't objected every single time they've done this, but I do find it problematic and it's particularly problematic to do it on recross on redirect at the end of the hearing.

MR. ELWELL: Let's say five days you can submit an offer of proof of why they are -- should be admitted and you can provide your objections and the basis within five days.

MR. MAHONEY: Thank you.

MR. WORCESTER: Thank you, folks. I wish to

remind everyone that the record will remain open with written public comments until Thursday, November the 5th, 2023 and for an additional week until Thursday, November 9, 2023 for rebuttal testimony in response to the written public comments.

Except for post-hearing briefs for the parties and including this five-day submission, which are due on November 21, 2023, no additional evidence or testimony will be allowed into the record after November 9.

I hereby close the technical session of the public hearing on the Land Use Planning Commission's ZP 779A. This hearing will be continued with a public comment section at 6:30 p.m. on October 23 at the Cross Insurance Center in Bangor.

Thank you all. It's been an interesting two and a half days and two evenings.

MR. BRANN: One clarification, though.

MR. WORCESTER: Yes.

MR. BRANN: There was some back-and-forth with Commissioner Trudel and MS. BROWNE which we concurred on having to do with some other corporate documents that might be submitted. And I was under the impression that, first of all, we all -- we both agreed and I think the commissioner asked for it,

which had to do with -- these are publicly filed financials or other documents that are from the -- the whatchamacallit, the -- the SEDAR -- they call it SEDAR in Canada.

And so -- and I -- I thought -- so that would be a -- other than that, the record would be closed was my understanding, that that was what the -- was actually agreed upon in response to the commissioner's question.

It's relatively small universe. I -- I can think of about five or six of those.

MS. BROWNE: I have a hard time hearing you.

MR. BRANN: Oh, I'm sorry. Let me try it again. Yeah, I need to get closer.

Commissioner Trudel asked about getting some other additional corporate docs, some of which are not the -- the not audited -- and which Mr. Little alluded -- described for us.

And there are also some additional court -- documents filed with the Canadian security in their thing, SEDAR, which are about the project. And I thought that MS. BROWNE asked that she could -- could she submit a -- he wanted them, we would like -- we're in favor of that. So it would be a few more things.

MS. BROWNE: Yeah. So I guess we were going to just provide the most recent annual audited statement. If you want more, we'll provide more.

And then the second document was the spreadsheet in support of the economic analysis. We would also provide that. And we could provide both those documents certainly within a week.

MR. BRANN: The -- I will just point out the audited financial for 2022 is already in the record, that was previously submitted, as is -- was the corporate's -- the filing for first quarter, which is the only one available as of -- at least as of yesterday for the company.

So there's a -- but there are -- the management statements about the financials as well as some of the other specific documents subject to the Canadian Securities was filed about this project, which are -- that's --

MR. WORCESTER: I -- I'm going to restrict it to the two documents.

MS. BEYER: That was my recollection.

(Concluded this hearing at 11:29 a.m. this date.)

CERTIFICATE

I, Angella D. Clukey, a Notary Public in and for the State of Maine, hereby certify that this hearing was stenographically reported by me to the best of my ability and later reduced to typewritten form with the aid of Computer-Aided Transcription, and the foregoing is a full and true record of the hearing to the best of my ability.

I further certify that I am a disinterested person in the event or outcome of the above-named cause of action.

IN WITNESS WHEREOF, I subscribe my hand and affix my seal this 27th day of October 2023.

_____

ANGELLA D. CLUKEY, NOTARY PUBLIC
Court Reporter

My commission expires March 17, 2024

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