

The original footprint was about 16 to 18 square miles. How do we bring that down and make people comfortable? Well we said 'Ok, number one let's not use cyanide.'

Let's keep cyanide out of the region. But that costs us in our gold recovery. We recover 10 percent less gold because we don't use cyanide.

Doesn't impact the footprint, but it impacts the perception.

We then said 'Ok, let's see if we can reduce the size of the project overall and still have a reasonable economic.'

So we reduced the size of the processing plant to 160,000 metric tons per day. And then we said 'Let's just have a 20-year mine life.'

And one of the reasons was, I mean this entire deposit, 10 billion tons, it can be mined by open pit, but it might at some point be more reasonable to do what's called a high-volume large scale

underground mining block caving, or panel caving, but for sure the first 20 years is gonna be open pit, and during that 20 years you'll make a decision on how you will go forward.

Will it be open pit only? Block cave only? Or a combination of the two? It'll be a combination of the two, I'm pretty sure. So we said 'Let's only have a 20-year mine life'

and so that's how we kept the footprint down to five-and-a-half square miles. Is slightly smaller throughput and a 20-year mine life.

But during that 20 years, you're gonna make the application to continue for another 20. So we do have all the studies that go through all of this,

and to increase the size of the mill from 160,000 metric tons per day we can go to 220, we can go to 320. Again, some of these things you'll have to go through permitting again,

but when you've got 2,000 people working making \$100,000 a year, and the state's collecting money—the area that we're in, the Lake and Penn Borough,

which is the municipality, you have to understand there's hardly any people living in Western Alaska. In 50,000 square miles there's 7,500 people.

And 80% of them are on the coast anywhere from 120 to 500 miles away from us. The nearest two villages, both 20 miles away, are 100 people each.

You know when you look at four or five hundred square miles around Pebble there's maybe 500 people.

Investigator: So, you mean that essentially once we are in, once the mine is starting producing employment, development, after that nobody's gonna stop it?

Ronald Thiessen: No. Correct. And then those numbers from 2011-
Investigator: Do you think it's gonna be unstoppable?

Yes.

Well who's gonna stop a mine that has 180- at a 160,000 metric tons per day, the first deposit that we've discovered at Pebble - and there will be more - but the first one lasts 180 years.

now we could start Pebble at say 35,000 tons and grow over a 30-40 year period. No, we're gonna start it at 160,000 tons per day.

And maybe it grows to either 260 or 320 over the next 20-30 years.

No. No in America there's not a single major mine, and there certainly isn't a major oilfield,

that didn't start out small, smaller than it has grown. And there have been constant expansions that have been suggested and approved. And that's what would happen here.

This is a well-worn path that we're following to build something that allows us to show the community and the state that we can do it, we can do it well, that it's not dangerous

and then we'll come in at some point in the future and request an extension of the time and probably an expansion of how much we are producing on a daily basis.

Well you know to some extent it's political. We probably want to file it when there's a republican administration instead of a democratic administration. You know, those kinds of things.

But frankly I'm not aware, certainly I'm not aware of a project in Alaska, where an expansion has ever been turned down. And off the top of my head I can't think of one in America.

But I know that's the case in Alaska and that's because - look we built all this infrastructure. And remember it's not just money coming to us, it's money going into the state.

I bet you that the state's going to be pounding on us to do an

expansion before we're ready to do the expansion because they want the revenue.

Investigator: So the likelihood is pretty much 100 percent almost?

Tom Collier: Yes

Yes we'll need to get a federal permit and a state permit. We'll need to go through those processes, but the processes will not be as intense nor as long as this process

because you can build on what we've already done.

Well I'm just saying that based on a 180,000 short tons a day of processing capacity, and we have 10 billion tons, that's 180-year mine life.

And we know that there's more ore there so it's probably gonna be more than 200 years.

When you look at mines like Bingham Canyon in, outside Salt Lake City, that mine has been operating since the 1880s.

When you look at Chuquicamata in Chile, 1880s 1890s when those mines started up. I mean they started obviously much smaller. The biggest mine in the world is Escondida.

And Escondida started operating in the late 1980s at a 35,000 ton per day concentrator. Today it's more than ten times that size, 360,000 tons per day concentrate.

And it's the biggest copper producer in the world, that mine. It's owned by BHP, Rio, Mitsubishi, and Chile.

Investigator: And so that's very likely to be the path forward for Pebble?

RT: Yes.

Once you have something like this in production why would you want to stop? And even, at the end of the day its footprint is so tiny. If we mined the whole valley it's 25 square miles.

And the land area up there is 40-50,000 square miles. And when the mines all done, finished, it fills with water and it's just another lake. And in fact, it'd be a tiny lake.

There's a lake nearby us called Six Mile Lake because it's six miles long. And Alaskans say that shouldn't really qualify as a lake, it's not big enough.

Investigator: So mining the valley would be really natural.

Ronald Thiessen: Yes.

The northern corridor infrastructure part will handle the expansion. When that expansion comes on, you know because the PEA talks about effectively a 220,000 ton per day concentrator

and what we're building in the first stage is a 180,000 ton per day concentrator. In all likelihood the expansion mainly involves just increasing the crushing and grinding capacity,

probably one secondary, one additional line of secondary mills – not sure that we would even need a new line of SAG mills, probably just increase motor size on existing SAG mills,

but the northern corridor will handle the expansion of Pebble.

Investigator: So all is already contained, all the expansion, all the key elements of the expansion are already contained in the current project.

Ronald Thiessen: Yes

Investigator: And that's the plan? That's really the objective?

Ronald Thiessen: That is the plan, and that's because the northern corridor plan that was submitted

as part of the Pebble permitting process really came out of effectively the work that was done to accommodate the PEA, so it already has that capacity in it.

How locked are we into, you, into thinking or planning to go beyond 20 years, 180 years or so?

Ronald Thiessen: Well it's absolutely because the ore is there. We've drilled it.

We've engineered it. All the work's been done for it.

The only thing that we have to do additionally is determine will there be more open pit exclusively or will we also do some underground mining like bulk underground mining, block-caving,

in which case we need to sink a shaft and do some underground work. That itself will probably be two to three hundred million dollars, but that will be carried out through that 20-year period

and then we'll make application for another 20 or maybe 40 years of mine life.

And it's not unusual that mines, you know in fact you're better off

asking

for a permit for 20 years than asking for a permit for 60 years

because we don't know what kind of mine operation we will have after 20 years.

We don't know that yet.

So when they ask us what the environmental footprint is of that expansion,

we can't tell them today. We'll only be able to tell them in say year 12 or year 15.

See this project ultimately will look a lot like the Mongolian project Oyu Tolgoi.

You know where there's an open pit and there's underground.