

Ep.3.11 - Matt Johnson

Fri, Apr 21, 2023 3:00PM 23:41

SUMMARY KEYWORDS

mining, eagle, work, michigan, nickel, battery, sustainability, copper, years, operations, esg, upper peninsula, marquette, world, tech, schools, metal, ecuador, supply chains, company

SPEAKERS

Ed Clemente, Announcer, Matt Johnson

- A** Announcer 00:01
Welcome to The Michigan Opportunity, an economic development podcast featuring candid conversations with business leaders across Michigan. You'll hear firsthand accounts from Michigan business leaders and innovators about how the state is driving job growth and business investment, supporting a thriving entrepreneurial ecosystem, building vibrant communities and helping to attract and retain one of the most diverse and significant workforces in the nation.
- E** Ed Clemente 00:29
Hello, I'm Ed Clemente, your host and today we're fortunate to have Matt Johnson. He's the manager of external relations for Eagle Mine. Welcome to the show, Matt.
- M** Matt Johnson 00:38
Thank you, Ed. Glad to be here.
- E** Ed Clemente 00:40
And obviously, this is you're famous to speaking I'm sure because you've had a lot of careers and what exactly do you do for Eagle Mine? And then tell us a little bit what Eagle Mine is.
- M** Matt Johnson 00:52
Absolutely. So I'm the external affairs manager for Eagle Mine, responsible for the managing, one of the managers here at Eagle Mine. So issues inside the fence line and lots of different issues outside the fence line.

E

Ed Clemente 01:06

In fact, a friend of yours said you were the wizard of the outdoor rec. economy for the UP. That was Marty Fittante, who was a previous guest by the way.

M

Matt Johnson 01:16

Yes, my good friend Marty likes to give me a hard time. But with Eagle Mine being a very responsible mining company. Just a little bit about Eagle, we redefine mining here at Eagle Mine, right here in the state of Michigan. And so if we want an example of what modern mining looks like in the world, Eagle Mine is that. We have people from across the country, at times from other countries come to see why Eagle Mine is so successful and why it defines what modern mining is. And part of that is, we take our business very seriously inside the fence line, but also what our social and community impact is outside the fence line. And so we work with the community on different challenges the community has that might be unrelated to mining, but we want to help the community with their future economic benefit. The health and well being of the community, and to find sustainable solutions that really helps the UP thrive into the future, even after Eagle Mind exists. This is why Marty has given me the title of outdoor recreation wizard. We are heavily involved in trail sustainability, green space sustainability, and conservation easements.

E

Ed Clemente 02:38

And that background doesn't come lightly to you because you had a lot of previous experience. I want to get back to the mine. But I want to talk about you a little bit. You, I think originally, I don't know your full lineage. But you worked for a congressperson at one point, too, right?

M

Matt Johnson 02:55

Yeah. So you know, growing up in Grand Haven, it was a beautiful place to grow up, I had a lot of opportunity to spend time on the water in Lake Michigan and in the woods. So going to Northern Michigan University was a natural fit for me. I had no idea what I wanted to do. So I just studied biology and chemistry, ended up with a public policy degree and learned about natural resource economies and became an expert in logging and mining policy. That led me to working for the US Congress for 10 years. US Congressman Bart Stupak, incredible individual. I learned a lot from him early in my career. And that led to an opportunity to work for Jennifer Granholm when she was first elected. I spent six years with the governor. And then I did a natural progression into the private industry and now work for a global mining company. I've had the opportunity to travel the world as you have as well, I see. And we have operations in Portugal, Sweden, many operations in South America. And it's an incredible opportunity to live in the Upper Peninsula, yet work for a global company.

E

Ed Clemente 04:06

Well, why don't I just, jumping back to Granholm, because you and I had talked previously that

our times overlapped when I was in the legislature, but you were Northern. So what was the definition of Northern as the governor's representative at that time? Like where did the line start? What did you have?

M Matt Johnson 04:23

Yeah. So if you if you live in the up, Yoopers are going to be very specific about what Northern Michigan means. Yeah, that means it's kind of a line between Traverse City and Bay City on up. That's Northern Michigan, and then the Upper Peninsula is the Upper Peninsula.

E Ed Clemente 04:39

Yeah, I used to get into that with the legislators, like we're not, the UP is not Northern. We're the UP, right?

M Matt Johnson 04:47

When somebody says they're going up north, that does not mean the UP.

E Ed Clemente 04:52

Yes, there's a lot of people that need to understand that definition. And I should mention too, you've mentioned a lot of people coming there. You're actually a relatively new mine, like people know that copper has obviously been historically huge. And could you walk us through a little bit of the mining industry historically a little bit? And then how you guys got started sort of, if that makes sense?

M Matt Johnson 05:14

Yeah, absolutely. I think most people in Michigan know the rich history of mining in the Upper Peninsula, especially copper and iron ore mining. The Keweenaw peninsula was essentially founded on copper mining, it was the melting pot of the Midwest, back in the day, with different nationalities coming from all over the world. And iron ore mining still exists today. Cleveland-Cliffs has been mining iron ore here for 150 years. This mining directly fed the auto industry in Detroit. And at one point in the late 1970s, a Ford Mustang, 90% of the metal in that Ford Mustang would have come from the UP. And then that tradition continues, even with new mining, such as nickel and copper mining that we're doing now. It's a high grade, underground, nickel and copper mine that started in 2014. And with the critical minerals that we're now mining, for the energy transition for batteries, for electric vehicles, we are now going to be contributing, just like we did historically from the Upper Peninsula.

E Ed Clemente 06:18

Yeah, and I mean, I would imagine there's probably different grades of copper around the world. But I would imagine the copper up there must be pretty good to all of a sudden be

world. But I would imagine the copper up there must be pretty good to all of a sudden be because I think you mentioned on our pre-call, if you're not the only one, there's hardly anyone else mining copper in the US is there or is it the other one you're producing? Is it nickel? Or what's the other one?

M

Matt Johnson 06:41

Yes, nickel is our primary metal that we produce. And we are the only company in the United States, the only domestically produced nickel in the United States. Unfortunately, we export 100% of that nickel. And you know, who would have imagined a couple years ago, the attention that Eagle Mine gets today, from automakers, from battery manufacturers, from federal agencies, even the White House called last year to learn more about Eagle's operations being the only nickel mine. And everyone's pretty disappointed to learn that we do export 100% of what we mine. And that is because the United States simply doesn't have the infrastructure to process the nickel past what we can do here in the UP. So it must go to a smelter and into a refinery. And there's no smelter refinery capacity in the US. And this is where the US is behind. And it shows pretty clearly now that the supply chains have been scarce and interrupted because of the EV markets. Yeah, and I think that we've had quite a few battery companies either on the show, or obviously they're, you know, they're always, I shouldn't say aging, but they're really sort of evolving more so that they're constantly looking for new sort of chemistries to go into batteries. Because they do, and I think if you boil down, you're probably more of an expert to me, but there's just a few products are gonna have to consistently be in batteries. I know they're looking to try to do iron, but they're still probably going to need copper and nickel, no matter whatever they do, right? Yeah, I mean, copper, not so much for the battery. But for the electric car itself. Nickel absolutely for the battery, no matter what other chemistries you're going to try to use. And I think with technology development, when you have a scarce resource, you're going to create new technologies to get away from those, to be less reliant on the scarce resources, especially if they're coming from unstable geopolitical regions in the world. And this is the exciting opportunity really for the United States and for the resources we have here such as here at Eagle is that we can create new technologies where we don't need to export our nickel for smelting, refining, we can build new technologies to turn nickel concentrates in the battery-grade material, keep that metal right in the US, feed the battery manufacturers in the state of Michigan. And Eagle Mine is helping to promote this concept by a new partnership that we have with Michigan Tech University, and an \$8 million Department of Energy grant that we just received late last year to help prove out that technology to go from that lab scale to a bench scale to maybe a small manufacturing scale to show that these new technologies can help feed critical minerals domestically.

E

Ed Clemente 09:38

And so I don't know how much the mine gets directly involved, but are you constantly working with the downstream processing? Because I think you've even got like a vision of when you want this mine to be, getting back to your sustainability discussion, could you kind of touch on that a little bit? Because I would imagine there is a certain peak trend or whatever you're gonna have to do with the mine.

M

Matt Johnson 10:11

Yeah, I mean, every mine is going to have an end date, right? And so right now, Eagle Mine is a short-term mine, high-grade short-life mine. 2027 is our closure date that could be extended as we continue to explore. What we're finding, especially with the new markets for nickel, for battery components, is that there is potential commercial viability to mine our tails. So our waste product is our tails. Every mine has a tailings facility where you perpetually store your waste material, that waste material we can now define as a byproduct, we could process those tails which still contain 1%, nickel, and other minerals required for battery manufacturing. And we are potentially looking at starting a new company, spin-off company, that is called Redex Metals. And more information will be available on Redex Metals simply by looking online. And what we want to do is change the traditional way we process metal, change the traditional way we make pure nickel from concentrates. And that would allow us to be more sustainable, it uses less energy, there's less waste product, and we no longer would need to transport that new metal around the world to other manufacturing facilities. So we can keep that right here in the US.

E

Ed Clemente 11:38

So you're talking more like alloys and things like that, where you could mix it with something else to give it longer viability with less concentration?

M

Matt Johnson 11:47

Not necessarily. So what happens today to make battery-grade nickel is the battery manufacturers will go right to a metal market for example, and buy pure nickel, 99.9% pure nickel. And then they break that metal back down into a powdered form. So we are over-processing nickel for a battery. We can short circuit that traditional process by creating a hydromat facility that creates a powdered form of nickel required by a battery manufacturer, no longer needing to go to a smelter or refinery. And it's less expensive, it's more sustainable. It's more cost effective. So these are new technologies, new commercial opportunities that need to be proved out. Tesla is looking at this technology, Redmond Materials, Lifecycle, Battery Solution. So there's many other companies and universities around the country looking at the same concept.

E

Ed Clemente 12:50

Speaking of that, do you have any partners you work with that either in research and we can get a little bit more about what you're doing for the outdoor side of things.

M

Matt Johnson 13:01

Yeah, our primary partner right now for the research is our partnership that we have with Michigan Tech University. They've been an incredible partner to help us understand what opportunities we have here at Eagle Mine beyond the traditional way we process our ore. And we look forward to the next couple of years proving those technologies out.

E

Ed Clemente 13:24

And I'm going to ask a naive question, but because I know you're on the Michigan Tech Board of Trustees, but that school was originally, my friend from down here went up there to get a metallurgy degree. The school is primarily started mainly for mining. Is that kind of the reason that schools up there? Or was it is that something that sort of just gradually happened just over time, I don't know how it started.

M

Matt Johnson 13:50

The creation of Michigan Tech University was directly related to the mining economy that was in the copper country. And so the original concept of Michigan Tech was a mining school. In fact, that was the actual title of the university. And then it changed and grew over time. Now their mining curriculum that they have is relatively small compared to the other opportunities, degree opportunities at Michigan Tech. Although what we're finding now is that we don't have enough mining schools in the US and we don't have enough students interested in going into mining fields. And this is something we're trying to promote. Even now there's a bill pending in Congress, a \$10 million grant program that is specifically earmarked for mining schools in the US to promote opportunities for high school kids to go into mining careers and get those technical degrees that we require.

E

Ed Clemente 14:52

I would imagine that's being coupled especially because you're very concerned about the environment, is it's tied into sustainability, too, which probably didn't exist in any of those curriculums, you know, 10-15 years ago.

M

Matt Johnson 15:06

Absolutely. And so today, when you design the mine, you design that mine for closure, you don't design that mine to be a cost effective mining operation to extract ore. You design it to protect the environment, to protect the community, and to be safe for the employees working in that operation. And that's what the definition of sustainability is in mining. Mining will open and close. We'll run out of ore someday so that piece is not sustainable. But the legacy we leave behind is absolutely sustainable.

E

Ed Clemente 15:38

Yeah, and it's funny because I know ESG, I can't remember what the acronym stands for.

M

Matt Johnson 15:46

Environment, social and governance, right.



E

Ed Clemente 15:49

And that sort of ties into what you're just talking about, because your company is obviously very concerned about doing the right things. And I know from our previous calls, and Quenton Messer, I should mention, put a plug in. He's the one that said I should interview you and the mine is because he was really impressed because I think you had him up there for something.

M

Matt Johnson 16:10

We had the opportunity to bring Quenton underground. Although I have an old title, External affairs titles are now considered old. What I actually do here at Eagle Mine and for Lundin Mining for our global operations is ESG. So I'm responsible for sustainability. I am the sustainability champion. And that is just a remarkable world to work in when here just in the rural Upper Peninsula, we work on international best practices in what we do.

A

Announcer 16:43

You're listening to The Michigan Opportunity, featuring candid conversations with Michigan business leaders on what makes Michigan the leading state to live, work and play. Listen to more episodes at michiganbusiness.org/podcast.

E

Ed Clemente 16:59

And you said you have people come from around the world just to see how you guys are doing things. And it's just not your partners. It's just other people who are running into the same sort of challenges and how they can do a better job at it.

M

Matt Johnson 17:13

And when we move into a new country that may not know Lundin Mining, we invite them to come to our other operations. We've had a presidential advisor of Ecuador was here many years ago, looking at Eagle Mine because we wanted to build a commercial level gold mine in Ecuador. In fact, I just got back from reviewing that mine called Lundin Gold down in southern Ecuador.

E

Ed Clemente 17:39

I'm hoping you went during the middle of winter.

M

Matt Johnson 17:42

I did. I did. Yeah. It was very nice down there. Both so Eagle can be used as a demonstration project as well. And Michigan should be very proud of that.

E

Ed Clemente 17:52

Yeah. And one last thing for Michigan Tech, you said your son is graduating, he goes to Marquette high school? [Yeah.] I don't know how many schools are market. But if there's only one.

M

Matt Johnson 18:02

There's one major high school in Marquette. Yes.

E

Ed Clemente 18:04

And he's thinking about Tech? He's just up there looking at it now.

M

Matt Johnson 18:07

Yeah, he's torn between Michigan State University and Michigan Technological University. He cannot decide. And I said you need to decide because the time's coming up. And so he's doing a full day tour of Tech today. And then we'll be soon visiting Michigan State University as well.

E

Ed Clemente 18:25

And that actually ties into your next question, one of your questions. You sound like you had a path like mine, where you really weren't sure what to do. What advice would you give your 17-year-old self today? Because it's easier to give yourself advice versus like just telling your son something, right?

M

Matt Johnson 18:47

Exactly. So this is what I would say, first of all, I'm gonna say, Go get a mining engineering degree. Come work for Eagle Mine. Come work for a modern best-practiced operation that has a global and culturally diverse workforce. If you don't want to be a mining engineer, environment engineer works, electrician, any skilled trade, water treatment plant operator, mining needs people. And hey, we have free health care and high-paying jobs. So that's my plug for the mining industry. But this is what I would say, you know, beyond the fact I tell my kids, figure out how expensive your hobbies are and then get a job that pays for those hobbies. The one thing I would say is that you should study what you're interested in, and the job will follow. But perhaps what I've seen very recently, that I think is my most important advice. And it's based on a skill that I think has been lost during COVID is to reach out, build relationships, meet new people, build trust with those new people. Be curious, be a lifelong learner, and always do what you have committed to do. And that's my advice to high school seniors or college college students.

E

Ed Clemente 18:58

E Ed Clemente 20:09

Well, and one other thing that probably didn't exist till more recently, but both millennials and Gen Z, and probably the generation following them, if they're alpha, whatever they're gonna call themselves, but ESG is critical to them as to where they want to work. So what you're doing is actually sort of an HR thing too, isn't it.

M Matt Johnson 20:31

Yeah, I mean, absolutely. But it's also bringing awareness to relationship building besides just through video conferences. And so one thing I purposely do, especially with the younger generation that I work with, I'll do cold calls, so I'll call them on their phone without being scheduled. And they always tell me, it just throws them for a loop when I do that.

E Ed Clemente 20:54

Every generation has their own method of communications. So is there anything else? I think you've covered most of your points for trends. But is there anything else in trends or the future you see for your industry?

M Matt Johnson 21:06

Yeah, so I think the trends that you know, if we want to be less reliant on other countries and really secure the critical mineral supply chain, we need to work together, we need to work together with state and federal governments, and primarily the federal government needs to ensure that environmental regulators have appropriate funding, skilled staff, that can actually then work with companies on regulatory permits. So it's really about funding up regulatory teams, both on the federal and state level.

E Ed Clemente 21:42

I wouldn't even say, maybe you could disagree with me, but even our NAFTA partners, I mean, if we're worried about supply chains, there's no shorter supply chains than say, Mexico and Canada, right? And the better we work with them, I think it'd be better for everybody as we can all work to help reduce some of that carbon footprint of working closer with our close neighbors to sometimes,

M Matt Johnson 22:10

Yeah, there's no easy button to push in this situation. It's going to take time, and it's going to take good relationships with other countries as well.

E Ed Clemente 22:18

I don't know if I should ask you the last question. But what do you like best about living in

Michigan? Because I don't know what your answer is going to be.

M Matt Johnson 22:27

Its access to trails and water. It has been since I was a child growing up in Grand Haven. The green space that's available in Michigan is why I continue to live in Michigan, I've had many opportunities to move elsewhere and never found another country or another state I'd rather live in. But with working for Eagle Mine and working and living in Marquette, it creates the opportunity for me to help protect those resources for future generations through initiatives that Eagle Mind sponsors.

E Ed Clemente 22:56

Well, your time is up, as you might imagine, but once again, our guest was Matt Johnson, he's the manager of external relations, and ESG for Eagle Mine. Thanks again. You're a lot of fun. I appreciate you doing the podcast today.

M Matt Johnson 23:11

Thank you. I appreciate the opportunity.

E Ed Clemente 23:13

Join us this coming Monday for President and CEO of SBAM, Brian Kelly, former Lieutenant Governor of Michigan for Michigan Small Business Week.

A Announcer 23:25

The Michigan Opportunity is brought to you by the Michigan Economic Development Corporation. Join us and make your mark where it matters. Visit michiganbusiness.org/radio to put your plans in motion.