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2022-09-20 Chamber of Mines Speaking Notes – Rare Earths Summit, Saskatoon

[Delivered by Don Bubar, Avalon Advanced Materials, Chamber member]

Good afternoon everyone, and thank you for the opportunity to speak to you today.

My name is Don Bubar and I am President & CEO of Avalon Advanced Materials, a leader in Canada in trying to establish new critical minerals supply chains. We are a member of the Chamber of Mines, and I have been a director for many years. Unfortunately, our Chamber Executive Director Tom Hoefer was unable to attend this event, and I offered to be his fill in.

I must state up front that I have a vested interest in the NWT, and specifically in the Nechalacho Rare Earth Project. During our work on what was originally called the Thor Lake Project, about 10 years ago, on the recommendation of the Yellowknives Dene, we re-named the project Nechalacho. Our original work was focused on a resource we called the Basal Zone, a flat-lying deposit located 150-175 metres below surface that was uniquely enriched in the heavy rare earths and zirconium. Unfortunately, after completing a positive feasibility study in 2013, China relaxed the export quotas they had imposed, prices and demand dropped and we could no longer advance the Project.

In 2018 we decided to re-activate the Project by initiating small scale production of the near-surface light rare earth rich T-Zone resource. After disclosing this plan, we attracted the interest of an Australian private company called Cheetah Resources, led by Geoff Atkins, which is now a wholly owned subsidiary of Vital Metals. At the time, Avalon was struggling with a lack of capital, so I decided to do a deal with Cheetah where we sold them the near surface resources and kept ownership of the deeper Basal Zone resource with the vision that if Cheetah could start the supply chain then we could come in behind them by developing our Basal Zone resource. So far, so good!

So with that background on Nechalacho, let me share some background on the Chamber of Mines.

The NWT & Nunavut Chamber of Mines began its work to champion for the minerals industry over 50 years ago in 1967. We have a membership comprising miners, explorers, service and suppliers and consultants, and today they include Indigenous and non-Indigenous corporations too. And we continue to advance our Mission and Vision to champion the responsible development of mineral resources for the benefit of all people in the North and Canada.

Thirty years after the Chamber's establishment, the Northwest Territories was divided and another territory was created, Nunavut. The Chamber now serves in the mineral industry in both. Collectively, this is a huge area about one third of Canada. Appreciate how big that is when you consider Canada is the second largest country in the world, and the NWT and Nunavut are one third of that. So they are bigger than most countries and almost the size of Europe.

This is an area of exceptional mineral potential being mostly underlain by the mineral-rich Canadian Shield. Annually, when industry is polled about global opportunities, the geological endowment of the NWT and Nunavut is near the top in the world. But servicing a region this large, and located in Arctic and sub-Arctic conditions, is a formidable challenge.

As a result, the region is under serviced with the infrastructure that you all take for granted, including roads, railroads, ports, and hydropower grids. Industry and governments are well aware of this deficit and there are efforts underway to make infrastructure improvements.

There is an irony, and a positive one, in that this lack of infrastructure means the North has seen very little detailed mapping. It is also under-explored for its mineral potential compared to many other places in the world.

As a result, there are great opportunities to make new world class discoveries and close to surface, especially for non-traditional critical minerals that have never been explored for with the exception of Nechalacho.

That has been the story of the north, and we might say mining here has created a history of “firsts”.

Here are a few examples.

- Mining began in the early 1930s in a very remote part of the NWT for a somewhat exotic element – radium, needed for X-rays at the time. I believe the NWT was the first place in Canada to produce radium.
- With radium demand short lived, that same mine then shifted to provide uranium to the United States, ushering in the world’s nuclear age.
- Simultaneously, gold was discovered in what would become the city of Yellowknife, which subsequently became the capital of the NWT. Those gold mines prompted the construction of the first hydro power facilities in the territory and the highway.
- Development of world class base metal deposits in the southern NWT at Pine Point leveraged its first railway and its third hydro power facility.
- With the addition of two base metal deposits discovered in the high Arctic, the NWT grew to become Canada’s third largest producer of base metals in the 1970s. In 1962, production of tungsten was initiated from the Cantung mine near the Yukon border and produced for 24 years before shutting down in 1986. Tungsten is another rare metal with growing demand in new technologies.
- The NWT hosted the most northerly mines in Canada and the world and inspired more exploration for base metals and gold deposits in the 1970’s and 80’s with the several significant discoveries but only one new mine development; the Lupin gold mine.
- With Canada’s help, those Arctic mines supported the design, construction and operations of the world’s first cargo carrying ice breaker, the MV Arctic, to take their concentrates to overseas markets. The bigger daughter of that first ship design has shown its strength by taking a load of nickel concentrate from Northern Quebec through the NW Passage to China just a few years ago. A testament to technology our industry created.
- In 1991, the Northwest Territories became the talk of the world with a surprise discovery of diamonds. So unexpected was that fantastic discovery that many people were convinced it was a scam. It was very real. Within 5 years of diamond production, the first two world class mines that emerged, Ekati and Diavik, had put Canada – and North America – into third place globally in diamond production. Who’d have thought? A scam it certainly wasn’t.
- Those diamond mines marked a global shift in hiring Indigenous northerners and spawned huge growth in brand new Indigenous mining businesses.
- Our NWT and Nunavut mines have created nearly 100,000 person years of employment and well over \$30 billion in business in just the last 25 years.
- All the mines in the NWT and Nunavut today are on this same track and are generating significant Indigenous benefits and future business opportunities where they did not exist before. These opportunities to support the emerging Indigenous economy are why we are all committed to sustainable mining. This is an important part of ESG success in the North especially if we are going to take advantage of the many diverse mineral resources in the north to support establishing new critical minerals supply chains.

- In another northern first, Nechalacho, which we are here to celebrate, has now become the first rare earth element producer in Canada. And the processing facility that we are here to see officially open today is also the first in Canada. You customers in Europe represented here today, are the first to receive the first of our firsts!
- Nechalacho is just one of four critical mineral projects advancing to mining. The NWT also hosts the NICO deposit with cobalt, bismuth, copper and gold. And two deposits – Prairie Creek and Pine Point host zinc and other precious and base metals. There are also many lithium pegmatite resources in the NWT that offer additional opportunities for Indigenous business to take advantage of and probably more potential to produce tungsten. Clearly, we have an opportunity now in the North to supply more critical minerals to the world, and hopefully to many of you customers in the audience.

Let me close by providing the Chamber's congratulations to Vital Metals for taking the lead on getting a new rare earths producer established here in Canada which can inspire further growth in rare earth production from the many undeveloped rare earth resources here in Canada. You shared Avalon's vision, and invested the capital to make it happen. Your efforts will be admired by all here today. Thank you, Vital Metals.

I also want to thank all of you who have come from so far to help recognize this great achievement.

On behalf of the NWT and Nunavut Chamber of Mines, thank you all.
