

# First Class Metals: Leveraging the global metals supply crunch

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A plethora  
of mineral  
discovery  
opportunities  
in Ontario

# Generating **value** in the metals revolution

A photograph of three people in safety gear (hard hats, high-visibility vests) standing in a forest. They are holding a large, fallen tree branch. The background is a dense forest with green trees.

**T**here's no way around it; we're in the midst of a metal consumption crisis.

Whether it's the niche battery metals powering the electric vehicle revolution...

The industrial metals supporting worldwide urbanisation and population growth...

Or even the precious metals sought out as safe havens amid escalating volatility...

The quantities we're consuming are set to rise long in to the future.

Take nickel as an example – mining giant Vale expects<sup>1</sup> global demand to grow by 44% in less than a decade.

The issue is the world wasn't ready for this. At all.

No, developed nations underestimated the scale of this revolution considerably.

And as a result, we're being forced to depend increasingly on less-than-

ideal international partners for our metal supplies.

This includes nations like China, where our collective over-reliance is creating<sup>2</sup> due diligence, environmental, and energy security concerns.

But it also includes less economically developed nations like the DRC where mining is associated<sup>3</sup> with human rights violations.

Something clearly needs to be done.

And as we'll show in this report, with our portfolio of highly prospective metal exploration projects in mining friendly Ontario, Canada...

**First Class Metals offers investors the perfect opportunity to help while potentially generating considerable financial returns in the process.**

# A tidal wave of global metal demand

Did you know the average electric vehicle contains<sup>4</sup> 29kg of nickel, 20kg of copper, and 10kg of lithium?

That might be quite hard to put into context at first glance.

But when you consider that this is a use case for all three metals that didn't even exist several years ago....

And when you consider that the total number of EVs on the world's roads is expected to rise from 30 million in 2022 to around 240 million by 2030...

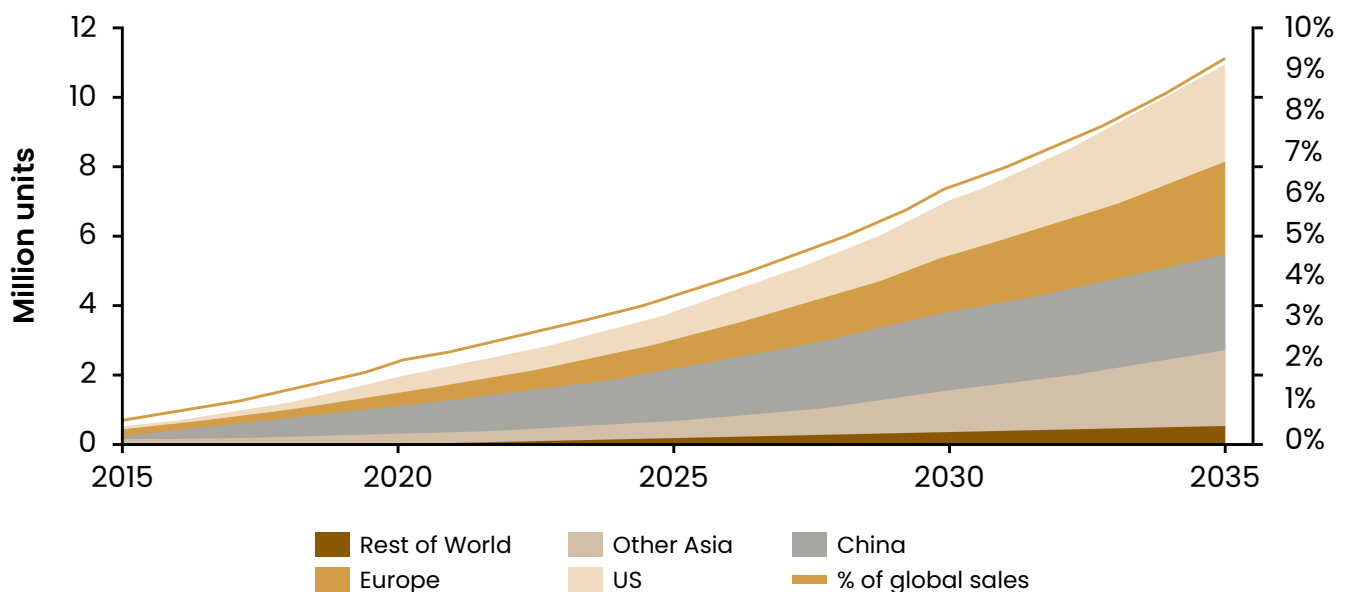
You can quickly see why electrification – the global effort to phase out fossil fuel use – is having such a considerable impact on the demand for many metals.

Take lithium.

It's used in almost every rechargeable battery powering the wider electrification trend – not just those in EVs but also in renewable energy sources.

And as a result, demand is expected<sup>5</sup> to surpass 2Mts by 2030 – more than double its forecast for 2025.

## Sales of electric vehicles to 2035



Source: Wood Mackenzie, Product Markets Service

## A TIDAL WAVE OF GLOBAL METAL DEMAND

This trend underpins demand for several of the metals we're exploring for at **First Class Metals**.

But alongside this, another demand driver we're exposed to is global consumption.

Yes, not only will there be more of us around in the years ahead, with the global population on track<sup>6</sup> to reach 9.7 billion by 2050...

But we're also on track<sup>7</sup> to be considerably richer, with PWC forecasting that the world economy could more than double in size in under 30 years.

## What, exactly, does this have to do with mining?

Well, more people and more wealth leads to more homes, transport, and infrastructure.

And the reality is, all of these require enormous amounts of certain metals.

The best example is perhaps copper.

This metal is, again, key to the electrification trend mentioned above.

But it is most well-known for its use in construction.

This is why, as global infrastructure continues to expand, the market for copper is expected<sup>8</sup> to reach US\$343,900 million by 2030.





That's from US\$241,780 million in 2022.

Finally, the third key trend we're exposed to lies in another area of the commodity market entirely: precious metals.

As you've probably noticed, geopolitical tensions, trade conflicts, and financial market volatility are extremely elevated at the moment.

That looks to remain the case for some time, too.

As a result, more investors are seeking out greater quantities of gold due to its historical use as a hedge against inflation and currency devaluation.

And while it not be quite as dramatic as some of the other forecasts mentioned here...

An anticipated<sup>9</sup> increase in annual gold demand from 4,000ts in 2022 to 6,300ts in 2030 is certainly nothing to be sniffed at.

**Indeed, all of all of these bullish demand outlooks are creating excellent opportunities for us at First Class Metals.**

## A TIDAL WAVE OF GLOBAL METAL DEMAND

The metals we're exploring for in a nutshell...

### Nickel



#### What is it?

A versatile, corrosion-resistant metal used in stainless steel production, batteries, and electronics

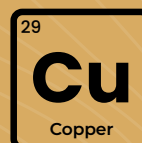
#### Why is demand growing?

It plays a crucial role in the lithium-ion batteries used in electric vehicles and renewable energy storage systems

#### How much is demand growing by?

Expected<sup>10</sup> to increase by 44% globally between 2022 and 2030.

### Copper



#### What is it?

A malleable, conductive metal widely used in wiring, electronics, and construction

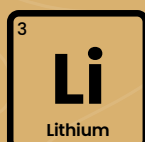
#### Why is demand growing?

It plays a vital role in expanding infrastructure amid global wealth/population growth as well as renewable energy, EVs, and electronic devices

#### How much is demand growing by?

Market expected<sup>12</sup> to be valued at US\$343,900 million by 2030 from US\$241,780 in 2022.

### Lithium



#### What is it?

A lightweight, energy dense metal used in rechargeable batteries

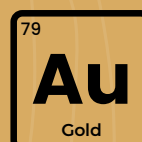
#### Why is demand growing?

It is vital to the global shift towards sustainable energy solution, driving adoption of EVs and energy storage systems

#### How much is demand growing by?

Expected<sup>11</sup> to surpass 2Mts by 2030, more than doubling 2025 demand forecast.

### Gold



#### What is it?

A precious metal known as a store of value due to limited supply and historical role as medium of exchange

#### Why is demand growing?

More and more investors using to it to protect them against ongoing volatility in financial markets

#### How much is demand growing by?

Expected<sup>13</sup> to increase from 4,000ts in 2022 to 6,300ts in 2030.

# A glaring **lack of** domestic metal supply

In an ideal world, developed nations would be able to meet growing metal demand using a combination of domestic supplies and those sourced from their allies.

This would minimise the risk of disruptions caused by geological tension, conflict, or sudden policy change.

It would also encourage adherence to rigorous environmental and labour standards and mitigate trade barriers and tariffs.

But this is not an ideal world.

The growth many metal markets are expected to experience (or are already experiencing) is simply overwhelming.

Many developed nations and their allies just haven't invested enough to secure the supplies needed to keep up.

Not to mention the fact that "*fixing*" the shortfall is far from an overnight task – developing new mines or even expanding existing ones usually takes years.

It means we now have a situation where the tide is going out and it is becoming clearer that many developed nations were swimming naked the whole time.

The show, however, must go on – it's not as if trends like electrification and global population growth can be put on pause until everything is sorted.

So, developed countries are increasingly being forced to fill their supply gaps by turning to alternative jurisdictions.

This, of course, is not a problem in and of itself.

The issue is that many of the jurisdictions they are turning to – in any other circumstances – would be far from the top of their lists of preferred partners.

Russia is one example. But the most significant is China.

The nation dominates the market for producing and processing a wide variety of metals, forcing many Western countries to rely on it for their supplies.



## A GLARING LACK OF DOMESTIC METAL SUPPLY

However, its relationship with many of these nations – most notably the US – is also somewhat fractured.

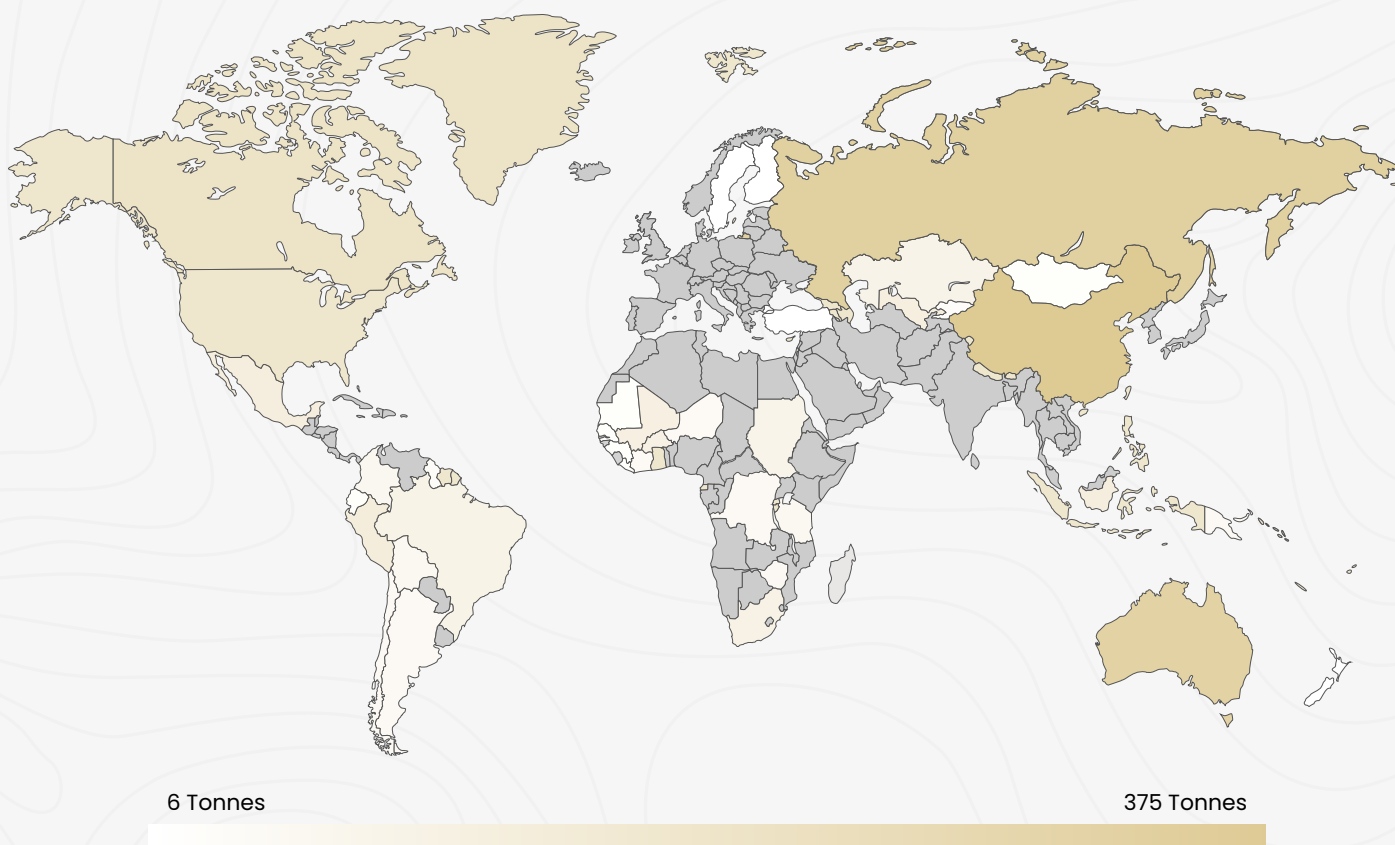
These geopolitical tensions really increase the risk of sudden policy changes and sanctions.

And these, in turn, amp up the risk of supply shortages, market manipulation, and price volatility.

Just look at the country's recent decision to ban completely the export of gallium and germanium – two rare metals with a variety of technical applications.

Given it is responsible for around<sup>14</sup> 80% and 60% of global production of both metals respectively, the move is squeezing supplies considerably over the short term.

## Gold Mining Production Volumes



Source: World Gold Council





## A GLARING LACK OF DOMESTIC METAL SUPPLY

Alongside industrial behemoths like China, developed nations are also being forced to rely on less economically developed nations for the supply of some vital metals.

Again, this is not a problem in itself.

In fact, it offers an important economic lifeline to many of these nations.

The problem lies in the elevated supply chain vulnerabilities often presented in the form of political unrest, regulatory changes, and inadequate infrastructure.

There's also a whole host of environmental and social concerns that can sit firmly at odds with the values of many developed nations and their end users.

Take the DRC, for example.

It is an extremely important source of metals such as cobalt and copper at the centre of the electric vehicle revolution.

However, a growing list of EV manufacturers are refusing<sup>15</sup> to use supplies from the nation due to the extensive human rights violations known to exist across its mining industry.

As we'll show in the next section, it is at this intersection between growing demand and insufficient stable supply that we are pursuing a huge opportunity...

## A GLARING LACK OF DOMESTIC METAL SUPPLY

Global distribution of the metals we're exploring for...

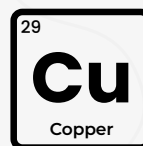
### Nickel



1. **Indonesia**  
1.6 million Mt

2. Philippines – 330,000Mt
3. Russia – 220,000Mt
4. New Caledonia – 190,000Mt
5. Australia – 160,000 Mt

### Copper



1. **Chile**  
5.6Mts

2. Peru – 2.2Mts
3. China – 1.8Mts
4. DRC – 1.8Mts
5. US – 1.2Mts

### Lithium



1. **Australia**  
40Kt

2. Chile – 20.6Kt
3. China – 14Kt
4. Argentina – 6.2Kt
5. Brazil – 1.9Kt

### Gold



1. **China**  
375ts

2. Russia – 324ts
3. Australia – 324ts
4. Canada – 194.5ts
5. US – 172ts

# Canada – **leading** the developed market metals revolution

**T**he good news is, developed nations know they are facing metal supply issues.

And now, many of them are doing more than ever to address them as quickly as possible.

One key strategy is the promotion of metal recycling and the circular economy to extract valuable metals from discarded products and waste.

But the more significant and more relevant solution for us is the incentivisation of the exploration and development of domestic metal deposits.

This can take the form of tax breaks encouraging investment into modern mining technologies, sustainable practices, and infrastructure...

But it can also take the form of direct investments into, and strategic partnerships alongside, explorers searching for and developing domestic metal deposits.

Among the biggest proponents of this approach is Canada.

After all, aside from its favourable location in the North American market and its geopolitically stability...

Canada is a global mining powerhouse producing<sup>16</sup> 60 types of metals and minerals with extensive mining expertise and a firm commitment to ESG standards.

It all makes the nation one of the most obvious candidates for helping developed nations cut their reliance on countries like China and the DRC for metal supplies.

And as has become apparent, its government fully intends on seizing as much of this potential as possible.

Most notably, Canada is **investing** \$4 billion into a Critical Minerals Strategy to boost the supply of critical minerals to grow domestic and global value chains for the green and digital economies.



## CANADA – LEADING THE DEVELOPED MARKET METALS REVOLUTION

On a more local level<sup>17</sup>, meanwhile, many territories offer mineral resources development funds to support exploration activities and make economic discoveries.

*So, what does all this mean from an investment perspective?*

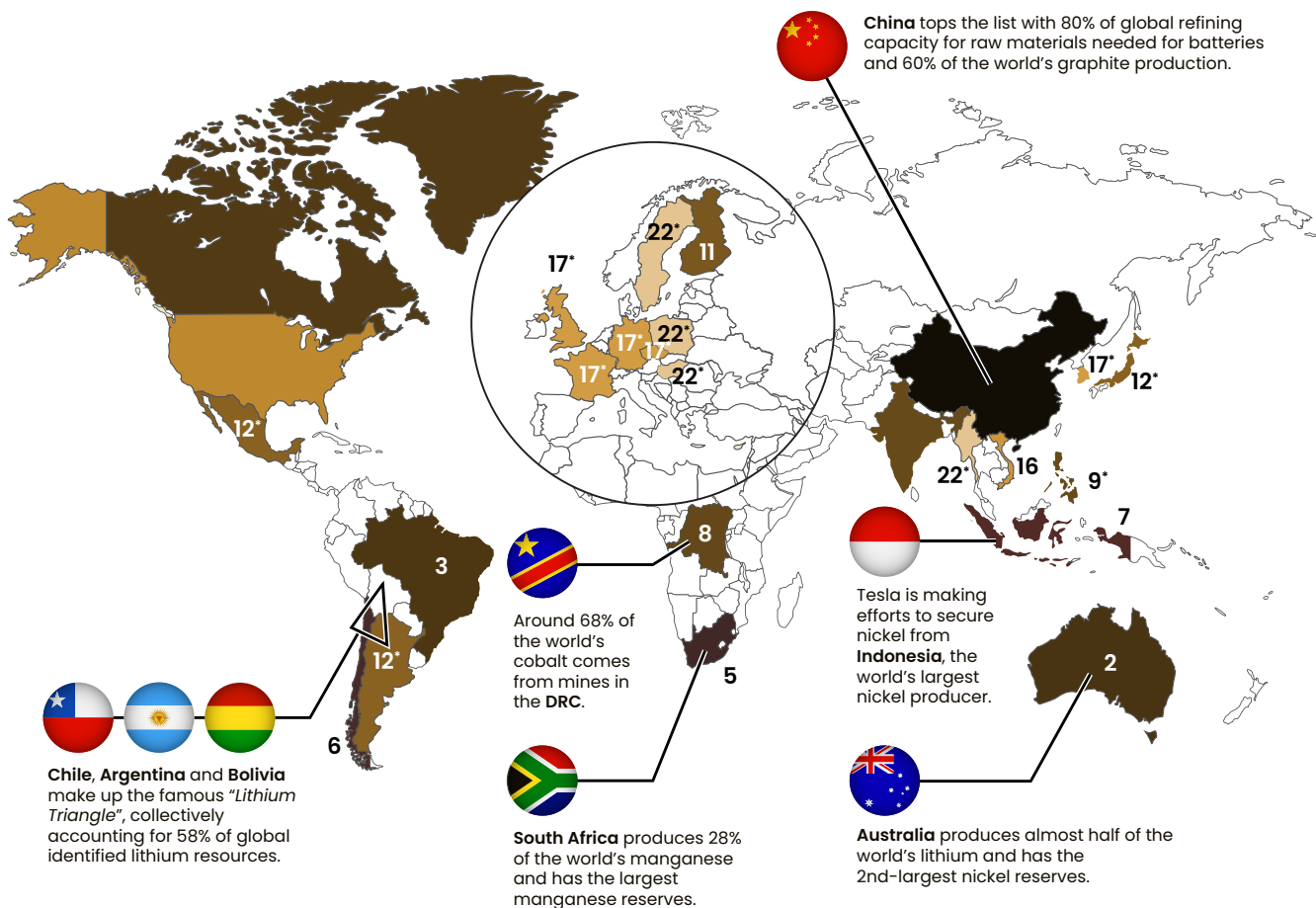
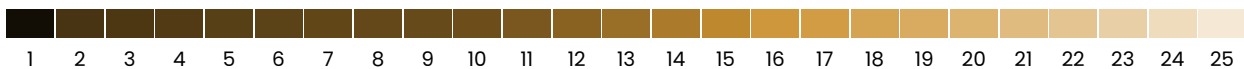
Well...

Global demand for new metal discoveries in general is clearly growing.

However, the discoveries that will be in the greatest demand of all will be those in stable, developed, pro-mining jurisdictions. After all, these discoveries will be the easiest to develop into a mine and will produce the highest-value metals due to their ESG credentials.

This is exactly where we come in at **First Class Metals**.

## Li-Ion Battery Raw Material Supply Rankings



\*represents countries that are tied

Source: BloombergNEF, Reuters, USGS Mineral Commodity Summaries (2021)

## CANADA – LEADING THE DEVELOPED MARKET METALS REVOLUTION

You see, we've not only secured a portfolio of highly prospective metals exploration projects in Canada, but we've secured them in Ontario – one of the nation's most stable and pro-mining jurisdictions.

In fact, the territory is already home to 41 active mining operations producing more gold and nickel than anywhere else in Canada.

We're confident that any discovery we make across our projects will be among the most sought after and valuable of its kind.

And on the subject of making discoveries, the results of our exploration to date have already been very encouraging...



# A plethora of mineral discovery **opportunities** in Ontario

**A**fter a busy year consolidating and improving our understanding of our Ontario land package...

We're now very much focused on moving into drilling.

First, there's our four priority projects, each an opportunity to uncover economic mineralisation in markets experiencing growing demand and limited secure supply:

## **North Hemlo & Esa**

These two projects are located in Ontario's Hemlo-Schreiber greenstone belt.

The region is renowned for hosting Barrick's Hemlo mine, which has produced more than 21Moz of gold over three decades and remains active to this day.

However, it remains noticeably underexplored – something we are now addressing.

North Hemlo is underpinned by two Hemlo lookalike shears where we've now identified a number of gold and base metal showings.

These include West Pickle Lake, which is located on claims to the east of North Hemlo we hold alongside Palladium One and already boasts grades of up to 12.8% **nickel** and 2.5% **copper**.

As the strike length of this zone grows with each round of drilling Palladium One completes, so too does the potential for it to cross onto our own licences.

Meanwhile, our work at Esa is increasingly supporting our belief that the project is dissected by a Hemlo-style shear zone boasting considerable gold potential.

## A PLETHORA OF MINERAL DISCOVERY OPPORTUNITIES IN ONTARIO

### Zigzag

This project is located in a proven hard-rock lithium area and hosts a known pegmatite that is 800m long and up to 18m thick, but open in all directions.

Pegmatites are highly promising for lithium exploration due to their unique geological formation, which often results in high concentrations of minerals rich in the metal.

In fact, historical surface samples have already identified both lithium dioxide and tantalum mineralisation along the entire length of the pegmatite.

### Sunbeam

This contains a historical high-grade gold mine (along with associated tailings) that was shuttered in the early 19th Century and has barely been explored since.

We are using modern exploration methods to examine the true extent of the mineralisation at the mine – a similar approach to the one used at the Fosterville project in Victoria, Australia with great success.

Along with this, we are also examining 30km of mineralised trends across the wider Sunbeam project area where a number of promising gold showings have already been identified.



## A PLETHORA OF MINERAL DISCOVERY OPPORTUNITIES IN ONTARIO

Alongside these properties, we are also advancing a number of earlier-stage assets that also present the potential for valuable mineral discoveries:

### McKellar

- Adjacent to Generation Mining's Marathon palladium project
- Numerous historical gold, silver, and base metal showings
- Anomalous Rare Earth Element levels reported in underexplored diatreme

### Enable

- Inferred dissection by important regional geological feature
- Historical gold and silver showings confirmed and expanded
- Additional sampling underway and drilling planned

### Magical

- Surrounded by land held by Barrick
- Anomalous quantities of gold, silver, zinc, and lead reported
- Volcanic unit interpreted across property

### Sugar Cube

- Second-largest property in our portfolio
- Located near Silver Lake's large Sugar Zone gold mine
- New greenstone belt interpreted on licence area

### Coco East

- 8km east of Metallum's Superior Lake Zinc project
- Contains eastern extension of Big Duck Lake porphyry
- Big Birch showing returns gold and silver





# Transformational investor upside

**W**hen you take the outlook for a massive increase in demand for many metals over the coming decades...

And combine it with an emerging over-reliance on potentially unreliable sources of those metals...

The drive to establish domestic critical metal supplies that can be shared among developed nations in the western world is clear and very much underway.

We're seeing it in Australia, which recently unveiled<sup>18</sup> a landmark strategy to work with investors and international partners to build a processing industry for its massive stores of raw and processed critical minerals...

We're seeing it in the US, where the Department of Energy has [developed](#) a strategy to ensure a "assured and resilient" supply of critical materials...

And as mentioned, we're seeing it in Canada.

As the country's government itself put it<sup>19</sup> when it launched its critical minerals strategy: *"This is a generational opportunity for [Canada's] workers, economy, and net-zero future"*.

Herein lies what we see as an obvious opportunity:

We know domestic metal discoveries will fetch a premium valuation as the need to diversify supply chains intensifies... So why not leverage the government support on offer right now to make just such a discovery?

It's why we've consolidated our large portfolio of underexplored exploration projects in ultra-mining friendly Ontario, Canada.

And it's why we're currently accelerating our flagship North Hemlo, Esa, Sunbeam, and Zigzag projects towards drill-ready status while also advancing our earlier stage projects.

Should we make a discovery at any of our projects, then we truly believe it will create a great deal of value for our investors.

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