

CHARGING FORWARD AS THE LITHIUM BOOM GATHERS PACE

IN THIS REPORT

- How lithium is powering the EV revolution
- Why the price of the metal is rising
- The emerging trend towards lithium spodumene
- POW's highly attractive lithium exposure

THE PERFECT WINDOW OF OPPORTUNITY

What leads commodities to soar in value?

Dynamics such as currency movements, geopolitics, and economic growth are certainly important. But perhaps the biggest influence is the relationship between supply and demand.

Indeed, commodity prices typically rise when demand grows or supply is constrained. So, when both of these factors are in play, large price swings can occur.

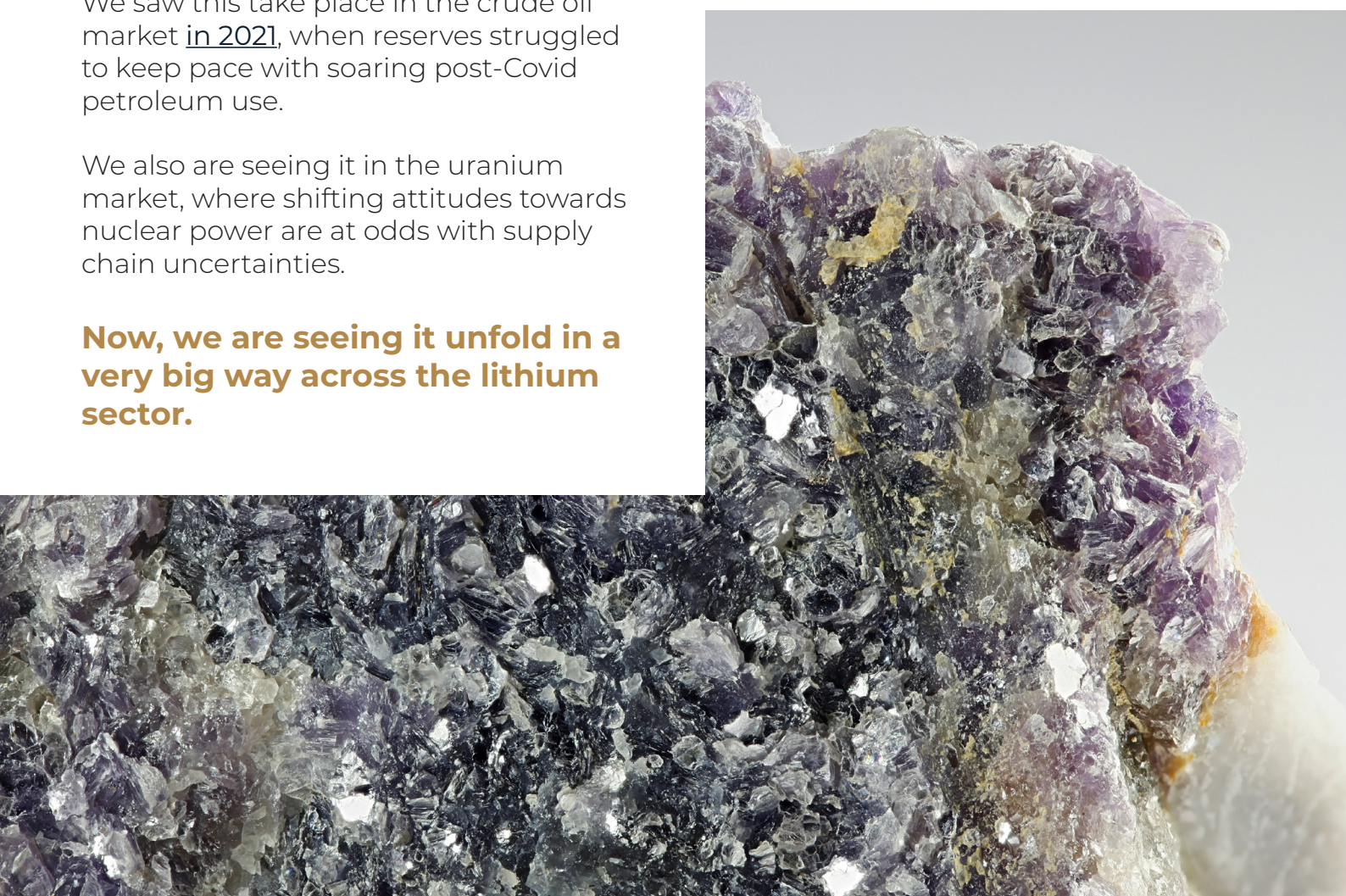
We saw this take place in the crude oil market in 2021, when reserves struggled to keep pace with soaring post-Covid petroleum use.

We also are seeing it in the uranium market, where shifting attitudes towards nuclear power are at odds with supply chain uncertainties.

Now, we are seeing it unfold in a very big way across the lithium sector.

Demand is increasing due to the metal being a critical component in the batteries powering the world's rapidly growing fleet of electric vehicles. But at the same time, supply is limited by a dearth of new producing projects after an extended period of exploration underinvestment.

It's leading prices of the metal to hit new record highs, with no signs of slowing. And the mining sector is responding by working to get exposure in the timeliest way possible.



At **Power Metal Resources**, we saw this trend coming and have worked hard to establish a considerable footing in the lithium market within our highly diversified global exploration portfolio.

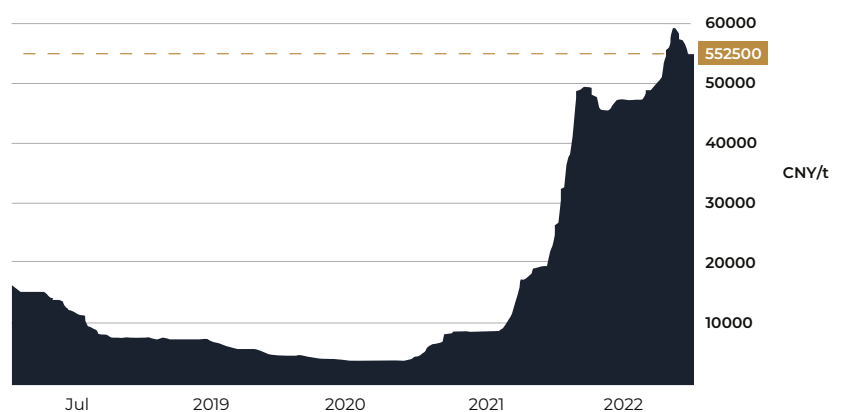
As we'll show in this report, the Authier North, North Wind, Haneti, and Selta Projects that **Power Metal** is exposed to each boast encouraging early signs of lithium mineralisation. And as exploration programmes progress across the three assets, it is clear that each could stand to create considerable shareholder value.

POWER METAL'S LITHIUM EXPLORATION PROJECTS



Five-year lithium price chart

Before we get into that, however, let's begin by taking a deeper look at why lithium prices are rising as quickly as they are...



Source: www.researchgate.net

A CRITICAL BATTERY METAL

Over the years, lithium has been used in everything from bipolar disorder medication to alloys in aircraft and high-speed trains. However, in this day and age, its greatest use by far is in lithium-ion batteries.

Why?

Well, in layman's terms, lithium is highly reactive, meaning its atomic bonds can store huge amounts of energy. This can then be discharged as electricity with great efficiency by moving lithium ions from a battery's anode to its cathode through an electrolyte.

Thanks to their market-leading battery life, charging speed, and cost, lithium-ion batteries have become ubiquitous within the green energy space since their initial introduction back in 1991.

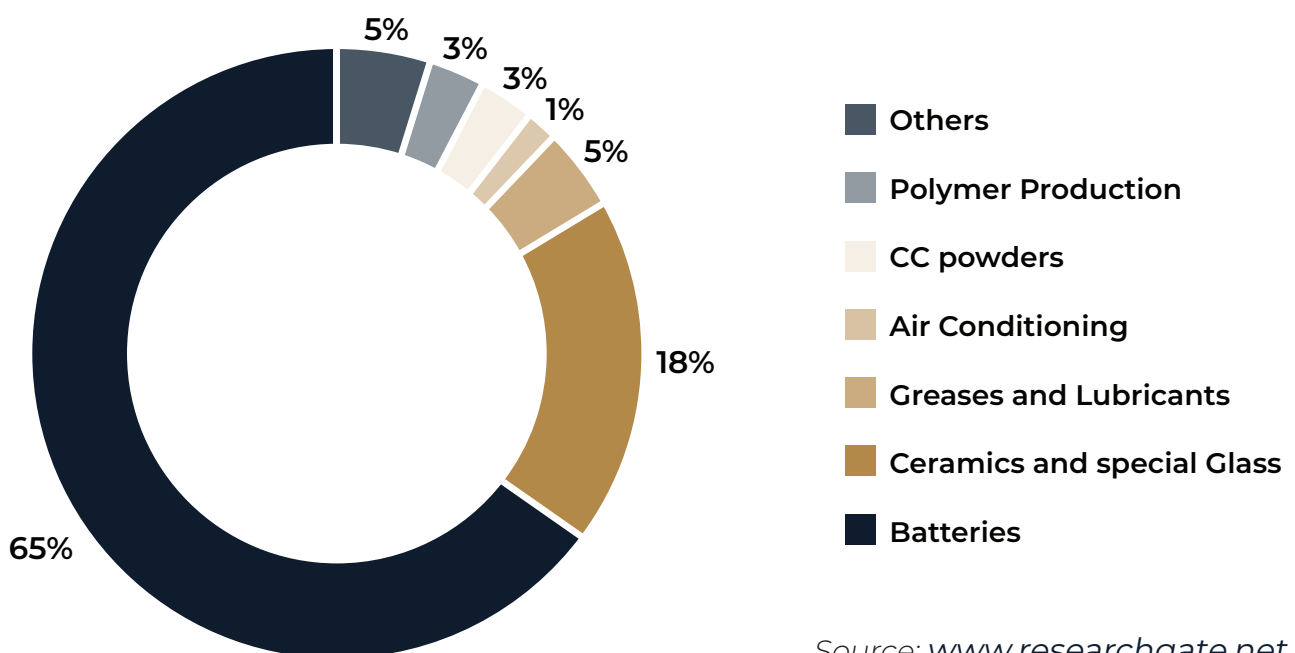
In fact, they are often credited with revolutionising electronics entirely. Just think of your smartphone – it's only because of lithium-ion batteries that these devices can last for days without charging and fit neatly in your pocket.

Today, the use of lithium-ion batteries in electronic devices alone supports a strong growth outlook for lithium. After all, global population and wealth growth show no signs of slowing any time soon.

However, the reality is that a new, complementary market for lithium-ion batteries has also emerged. And as it matures, this revolutionary space is expected to multiply demand for the metal many times over.

We're talking, of course, about **electric vehicles**.

Global lithium end-uses



Source: www.researchgate.net

POWERING THE EV REVOLUTION

The EV revolution has been adding to lithium demand ever since lithium-ion batteries were commercially introduced with the launch of the Tesla Roadster in 2010.

In fact, according to the IEA, global automakers sold a record 6.6 million EVs in 2021 from just 130,000 in 2011. This has seen global lithium output nearly triple over the same period.

Such growth has mostly come down to vast support from the EV industry itself, which has enabled batteries to become cheaper and more efficient than anyone could have previously imagined.

However, while the strong, early adoption of battery-powered vehicles is no doubt impressive, the truth is that we are likely at the foothills of a much larger trend. Indeed, UBS estimates that EV battery packs and fossil fuel-burning engines will reach price parity by 2025, potentially cutting overall vehicle costs. Likewise, the general performance and battery life of EVs is continuing to improve, making them more appealing to a wider pool of consumers. Meanwhile, governments are phasing out traditional

internal combustion car sales by way of strict environmental pledges and incentive schemes for EV purchases in the face of growing fears around climate change.

Put it all together, and analysts expect EVs to account for around 50% of all vehicles globally by 2030, up from 3-4% today. This increase, of course, is opening up a tidal wave of new lithium demand.

Lithium's global abundance and strong ESG credentials are also helping to secure its position in the EV supply chain moving forward. While some carmakers are phasing out metals like cobalt due to concerns around human rights violations and costliness, such risks are less pronounced for lithium.

In fact, Fitch Solutions believes the EV sector will account for around 80% of total lithium demand within just a decade – more than double its share today.



SUPPLY SIDE STRUGGLES

Lithium demand is clearly poised to grow as the EV revolution continues to unfold. But what adds to the attraction of this market right now is that the supply needed to power this growing fleet of new vehicles is all but guaranteed.

To understand why, we need to go back to the early 2010s.

At this time, EVs had just hit the public, and excited speculators were betting that adoption was going to soar in a very short space of time. To get exposure, they identified the materials used to make EVs, and they bet on their prices increasing.

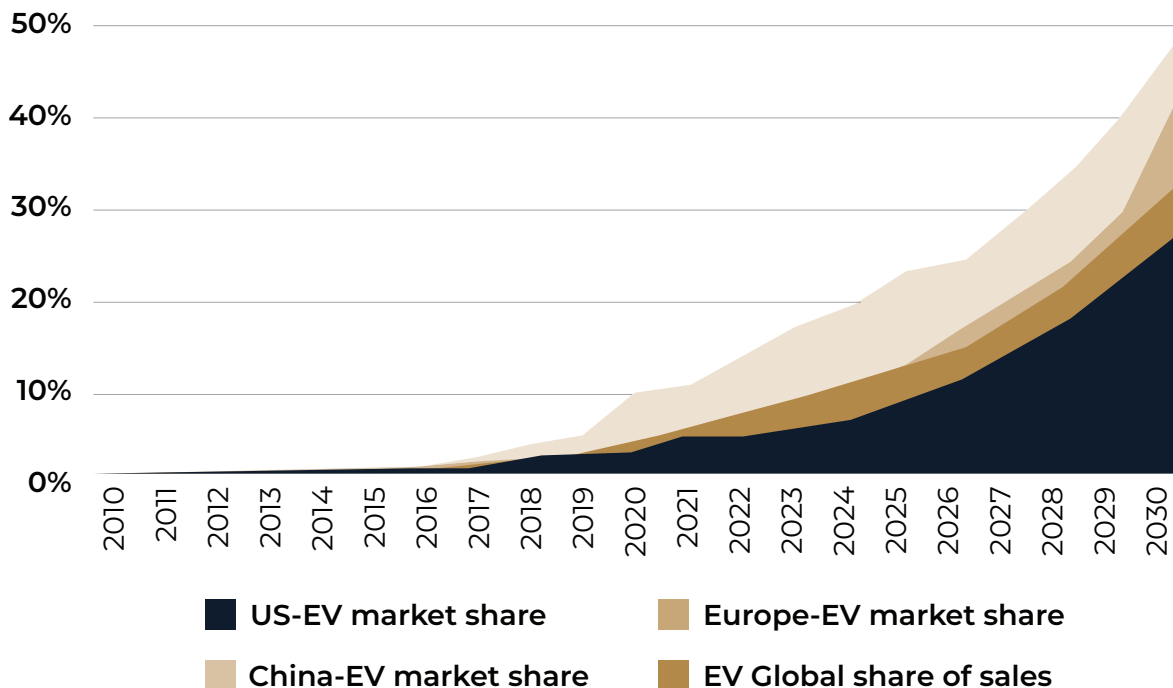
Meanwhile, miners also spotted an opportunity. Because there had been so

little investment in the lithium supply chain, there was unlikely to be enough available to keep up with demand. So, to take advantage, they pumped huge sums of cash into expanding lithium's production capacity, buying projects and processing facilities en masse.

For a while, things ticked along nicely and lithium prices rose significantly. But then, the cogs ground to a halt.

By 2018, EV sales and lithium-ion battery demand were far more tepid than expected. It became clear that speculators had jumped the gun, and, before anyone could move, the lithium market began to collapse in the face of overproduction and overinvestment.

Outlook for EV market share by major region



Source: www2.deloitte.com

Fast forward to late 2020, and the metal once known as “white gold” had become known as “white dust” as prices bottomed out below CNY40,000/t (US\$6,287/t).

It is exactly these circumstances that are responsible for the supply constraints we are witnessing today.

You see, when the lithium market collapsed in 2018, so too did investment in the lithium supply chain. After all, why would miners spend a fortune on producing a metal that, at the time, no-one wanted?

However, now that soaring sales have made it clear that the EV revolution is underway for real, the market has been somewhat caught out.

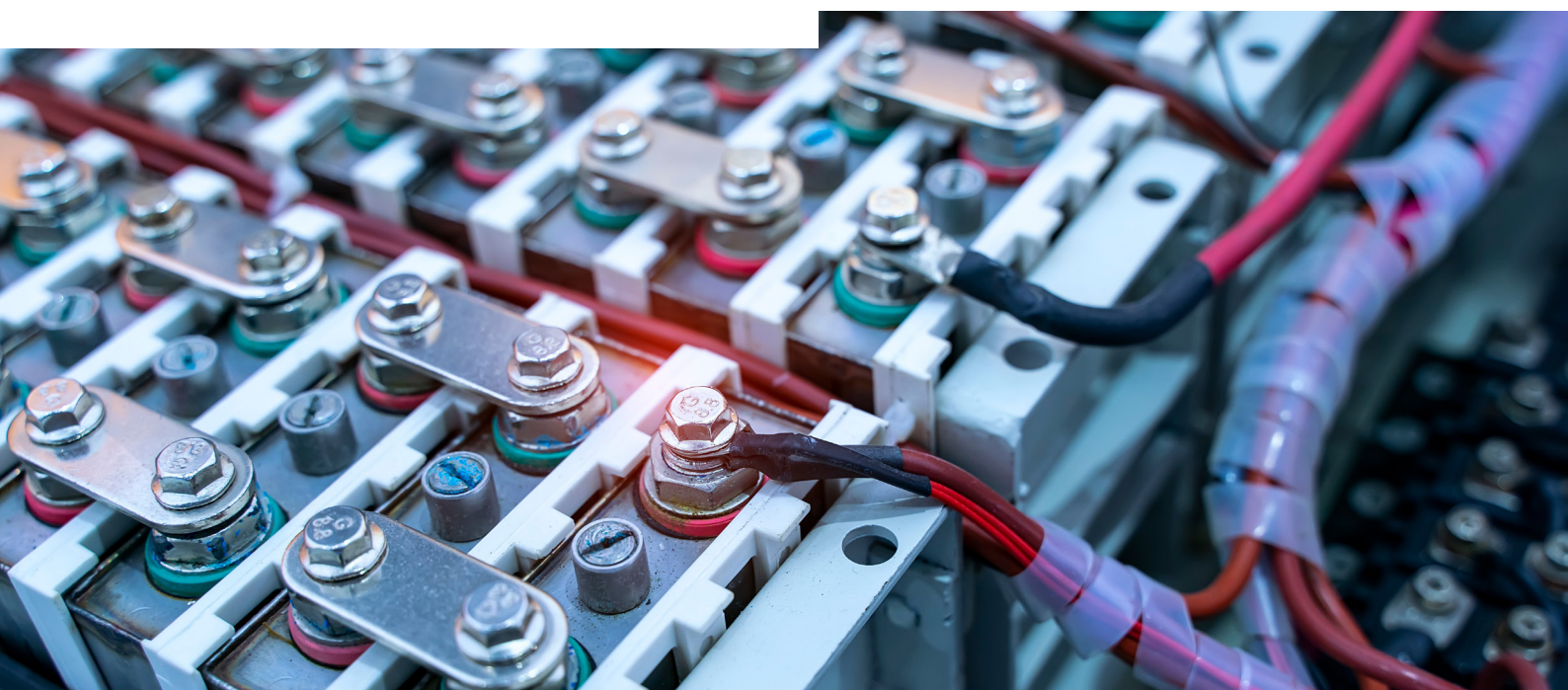
This is because it takes time and investment—not to mention overcoming plenty of red tape—to put a lithium project into production. In fact, it can take more than five years for a new operation to produce battery grade materials.

Long story short, the severe lack of investment in the lithium supply chain during the recent bear market means few new projects will come online over the short term. And the natural conclusion of that is consumption outstripping supply—also known as a *structural deficit*.

Indeed, as Fastmarkets explains, lithium production must quadruple from 345,000 tonnes to 2 million tonnes between 2020 and 2030 to meet growing demand. Similarly, Benchmark sees supply only doubling from now until 2025, despite expecting demand to triple over the same period.

It is because of this structural deficit that lithium prices are now rising. At writing, lithium carbonate was sitting at a little over CNY571,500/t (US\$82,136/t)—more than double its price one year earlier.

And it is because this structural deficit is poised to remain in place for some time that an intriguing opportunity is presenting itself to **Power Metal Resources**.



POWER METAL–BUILDING LITHIUM EXPOSURE IN THE SMARTEST WAY POSSIBLE

As you'd imagine, the lithium market's attractive long-term supply/demand dynamics mean speculators are keen to get exposure. However, the space is quite unique in the fact that—unlike oil, for example—it does not have an active futures market.

This means the main avenue for investors to wager on its price is by trading shares in lithium companies directly.

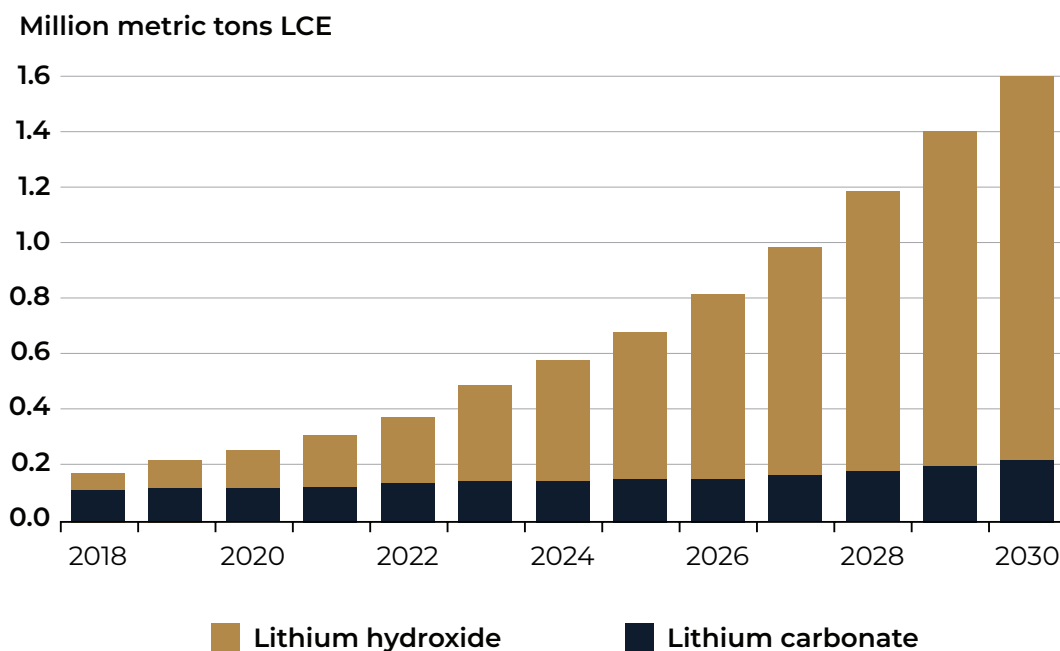
For some time, this only helped to propel an exclusive club of explorers and producers that dominated the global lithium supply chain, like Albemarle, Livent, and Lithium Americas. But today,

more and more firms are taking shrewd steps to maximise their own exposure, ensuring they and their investors get as big a slice of the opportunity on offer as possible.

Power Metal Resources has been able to do this effectively while maintaining a highly diversified portfolio across the wider battery metals space

But before we look our lithium exposure in more depth, it is important first to note that there are two types of lithium used in EVs: lithium carbonate and lithium hydroxide.

Projected demand for lithium hydroxide and lithium carbonate



Source: <https://about.bnef.com>

As it stands, lithium carbonate is the most used of the pair, accounting for a 60% market share.

However, many analysts believe this will change significantly moving forward. This is because lithium hydroxide is better suited to the latest generation of lithium-ion EV batteries containing NCM 811 cathodes. These have a higher energy density, longer lifespan, and better driving range than current alternatives and, as such, are soaring in popularity among EV manufacturers.

In fact, demand for lithium hydroxide is forecast to rise at a compound annual growth rate (CAGR) of 25% to 29% over coming years.

So, why is this important? Well, as well as there being two types of lithium that can be used in EVs, there are also two sources of lithium on offer.

The first, which is found mostly in South America, is a salty brine that is pumped out of the ground. The second, found predominantly in Australia, is

spodumene, a mineral contained in hard rocks that is mined from the ground.

The key difference here is that, while brines can only produce lithium carbonate, spodumene can produce both lithium carbonate and lithium hydroxide.

Lithium carbonate can be converted into lithium hydroxide. But the problem is that doing so requires expensive additional processing and can result in a lower quality product.

It is because of this flexibility that the lithium industry is increasingly moving away from brine production and towards hard rock mining assets.

And it is in recognition of this shift that we at Power Metal have chosen to limit our lithium exposure to projects that are highly prospective for spodumene mineralisation.

Let's take a look...



A HIGHLY ATTRACTIVE LITHIUM PORTFOLIO

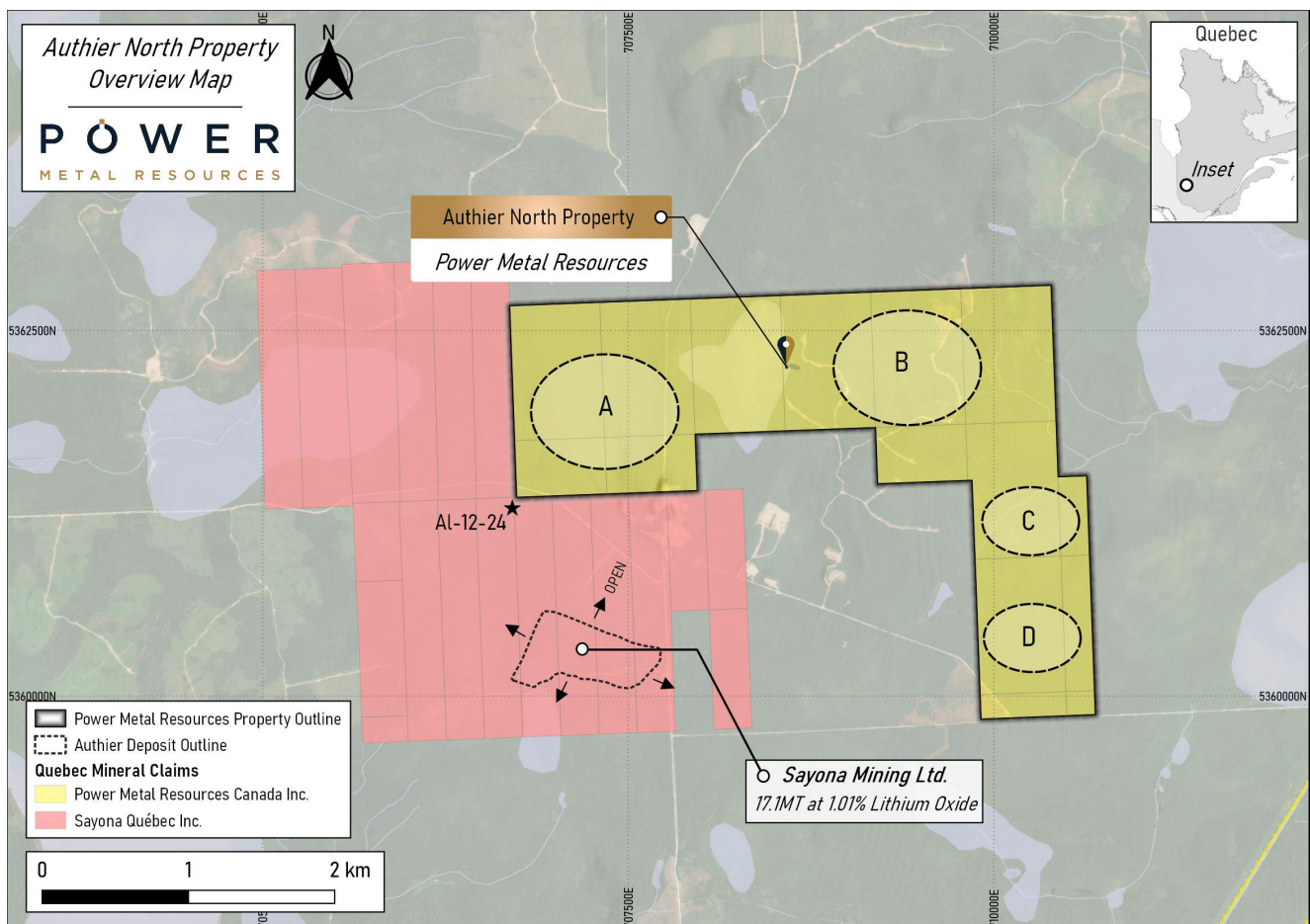
One of the most exciting areas of lithium exposure in the **Power Metal** portfolio is the [Authier North project](#).

The asset is based in Quebec, a world-leading mining jurisdiction, and sits within the renowned Val D'Or mining camp. However, aside from its location, our interest in Authier North stems chiefly from the long border it shares with Sayona Mining's flagship Authier Lithium development project.

You see, Authier Lithium hosts a large, hard rock spodumene deposit containing JORC mineral resources of 17.1 million tonnes at an average grade of 1.01% lithium dioxide. And in the weeks after revealing this updated figure, Sayona's share price rose from around A\$0.12 to highs of A\$0.38. It's market cap currently sits at more than A\$1 billion.

That's a big sum.

Power Metal's Authier North Property Map



Source: www.powermetalresources.com

So, what's particularly exciting is that the intrusion hosting Authier Lithium's mineralisation remains open and dips to the north towards Authier North.

Why's that important? Well, it opens up the possibility that the large trend Sayona has discovered and plans to begin producing from next year continues onto our own licence area.

To begin to better understand Authier North's true potential, we recently completed a mapping and soil sampling programme over several areas along strike and down dip of Sayona's mineralisation.

We are further reviewing the results achieved from this work and will update the market in due course with our next planned steps. But the bottom line is, if Authier North is found to share the prospectivity of its neighbouring project, then it could hold the key to vast amounts of shareholder value.

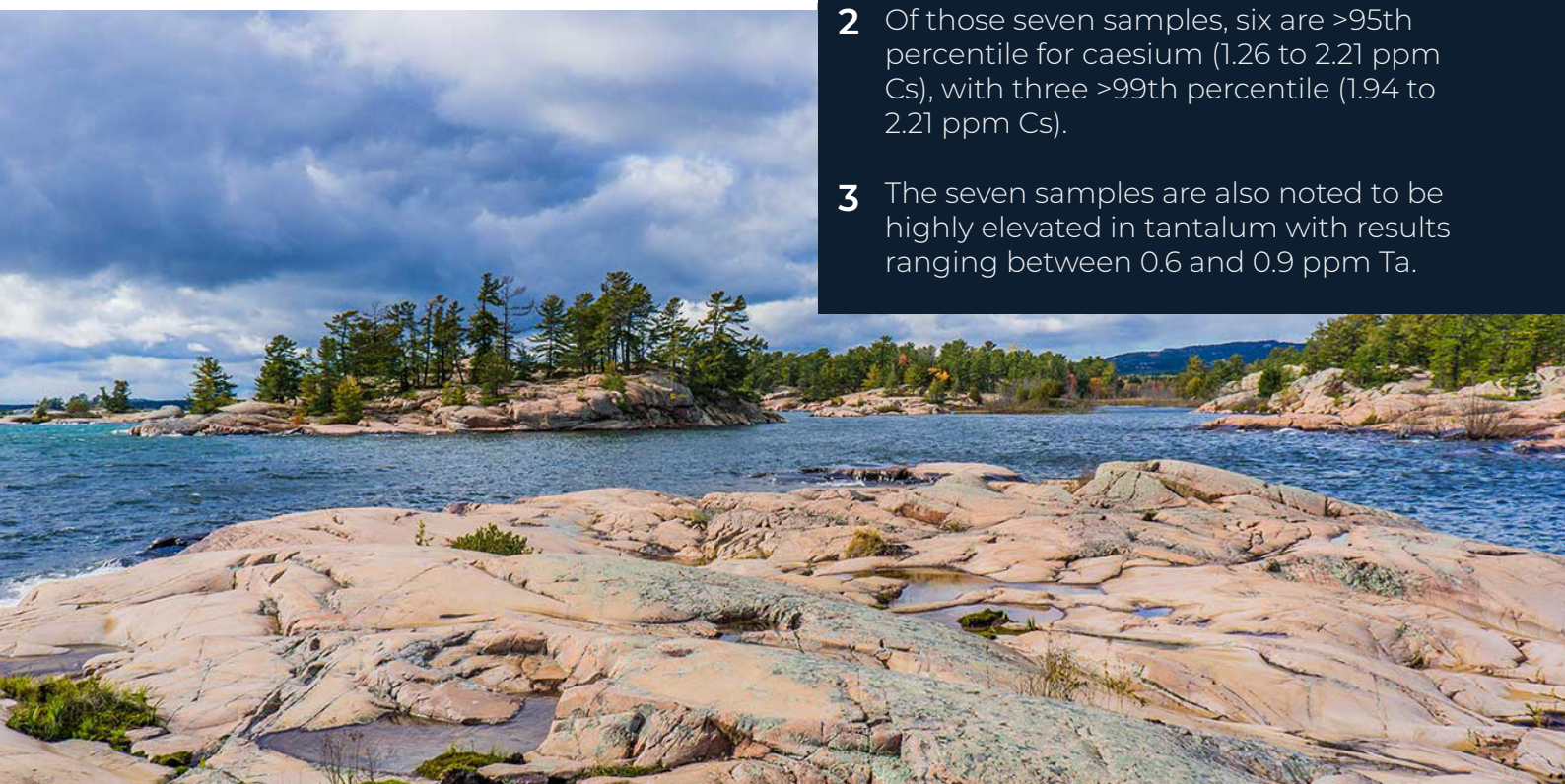
Alongside Authier North, our second 100%-owned lithium project is North Wind.

Based in the pro-mining territory of Ontario, Canada, and crisscrossed by multiple access roads, the asset covers a 16km-long trend of anomalous lithium-in-lake sediment results.

These suggest that a zoned LCT pegmatite system—the main source of hard rock lithium worldwide—may be present but has never been investigated.

Among the most promising data points collected were:

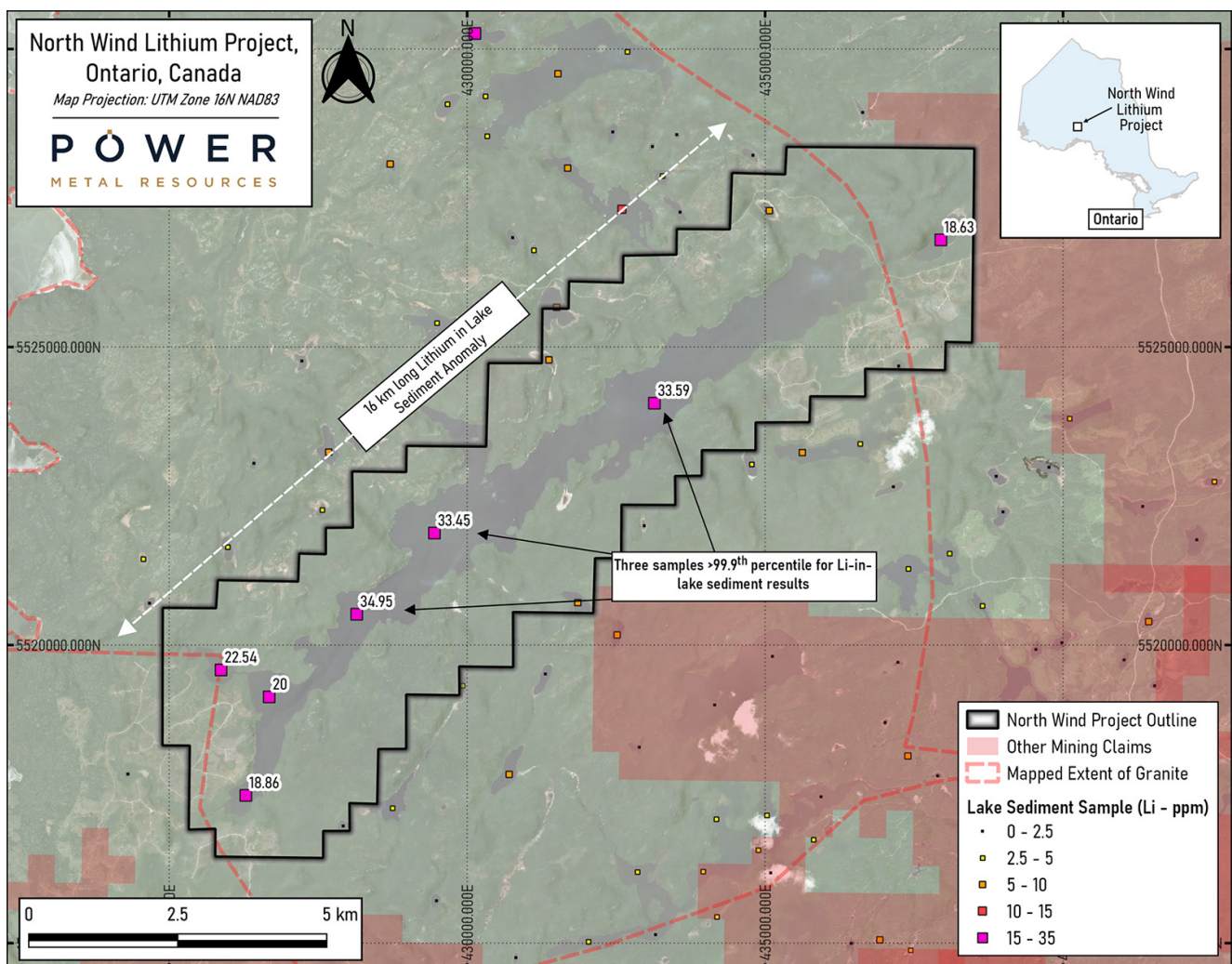
- 1** Seven instances of >99th percentile (with respect to regional data) Li-in-lake sediment results (ranging from 18.63 to 34.95 ppm Li) with 34.95 ppm representing the 99.95th percentile result.
- 2** Of those seven samples, six are >95th percentile for caesium (1.26 to 2.21 ppm Cs), with three >99th percentile (1.94 to 2.21 ppm Cs).
- 3** The seven samples are also noted to be highly elevated in tantalum with results ranging between 0.6 and 0.9 ppm Ta.



This potential is made all the more encouraging by the nearby presence of several other quality lithium projects in the region surrounding North Wind. These include Imagine Lithium's Jackpot project, which has a reported historical non-compliant resource of 2Mts at 1.09% lithium dioxide. Likewise, Green Technology Metals' flagship Seymour project, which hosts a JORC-compliant mineral resource of 9.9Mt at 1.04% lithium dioxide sits 65km to the northwest.

Given we only staked North Wind in November, our work is currently in its early stages. However, desktop analysis is underway with a comprehensive Phase I field sampling programme planned for early next year.

Map of North Wind Lithium Project



Source: www.powermetalresources.com

Moving on, and another **Power Metal** project with considerable lithium potential is [Haneti](#).

Alongside operator Katoro Gold, our primary focus at this Tanzania-based asset is magmatic sulphide-hosted nickel, copper, and PGM mineralisation. In fact, a three-hole drilling programme was recently completed at two primary targets called Mihanza and Mwaka Hill.

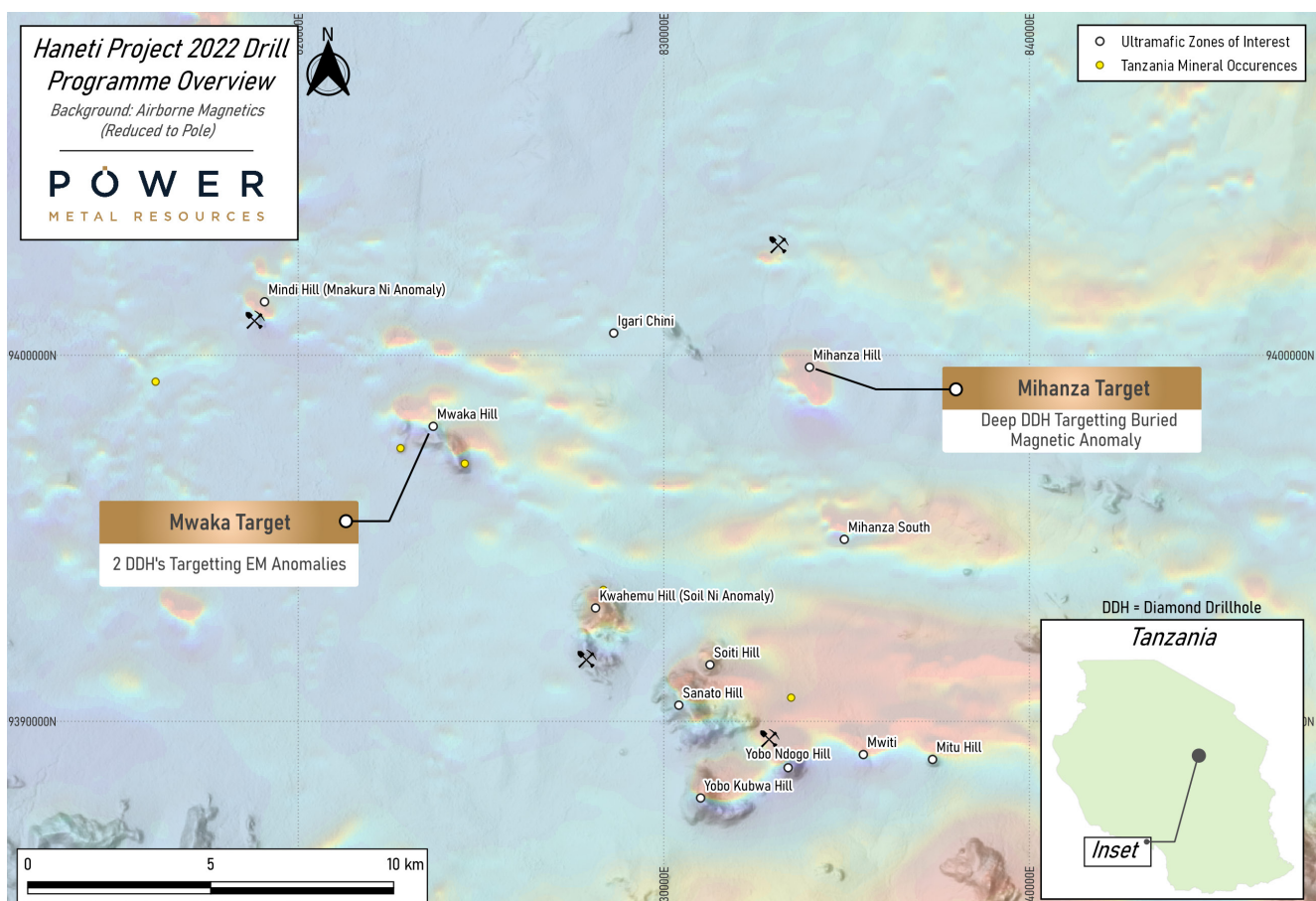
But alongside its district-scale potential for these exciting metals, we have also identified several pegmatite outcrops within two abandoned artisanal pits at

Haneti. And critically, these pegmatites contain a mineral called lepidolite, which often holds significant amounts of lithium-containing spodumene.

To investigate, we have extended Haneti's footprint around the two pits considerably and have now begun to explore this area –known as Babayu–for lithium-bearing minerals.

In fact, at the end of May 2022, we revealed that rock sampling had highlighted significant lithium and tantalum potential with lithium-caesium-tantalum pegmatite mineralisation outlined over a 600m strike-length.

Power Metal and Katoro Gold's Haneti Property Map



Source: www.powermetalresources.com

As we pointed out at the time, the chip sample results (up to >10,000 parts per million (“ppm”) lithium and 2,680ppm tantalum) and strike length, combined with the perceived shallow dip of the main pegmatite body, show the potential for a significant near-surface mineralised body that warrants further assessment and evaluation.

The fourth project **Power Metal** is exposed to with the potential to host large amounts of lithium is Selta, which is owned and operated by our 58.59%-owned subsidiary First Development Resources.

The primary targets at this asset—which is based in an underexplored area of Australia’s renowned Northern Territory—are rare-earth element and uranium mineralisation. Indeed, the project is proximal to, and has geological similarities to, Arafura Resources’ Nolans rare earth element project—one of the largest of its kind in the world.

But upon completing an extensive data review to pinpoint key target areas for drilling earlier this year, First Development Resources also stumbled upon something unexpected—the potential for lithium.

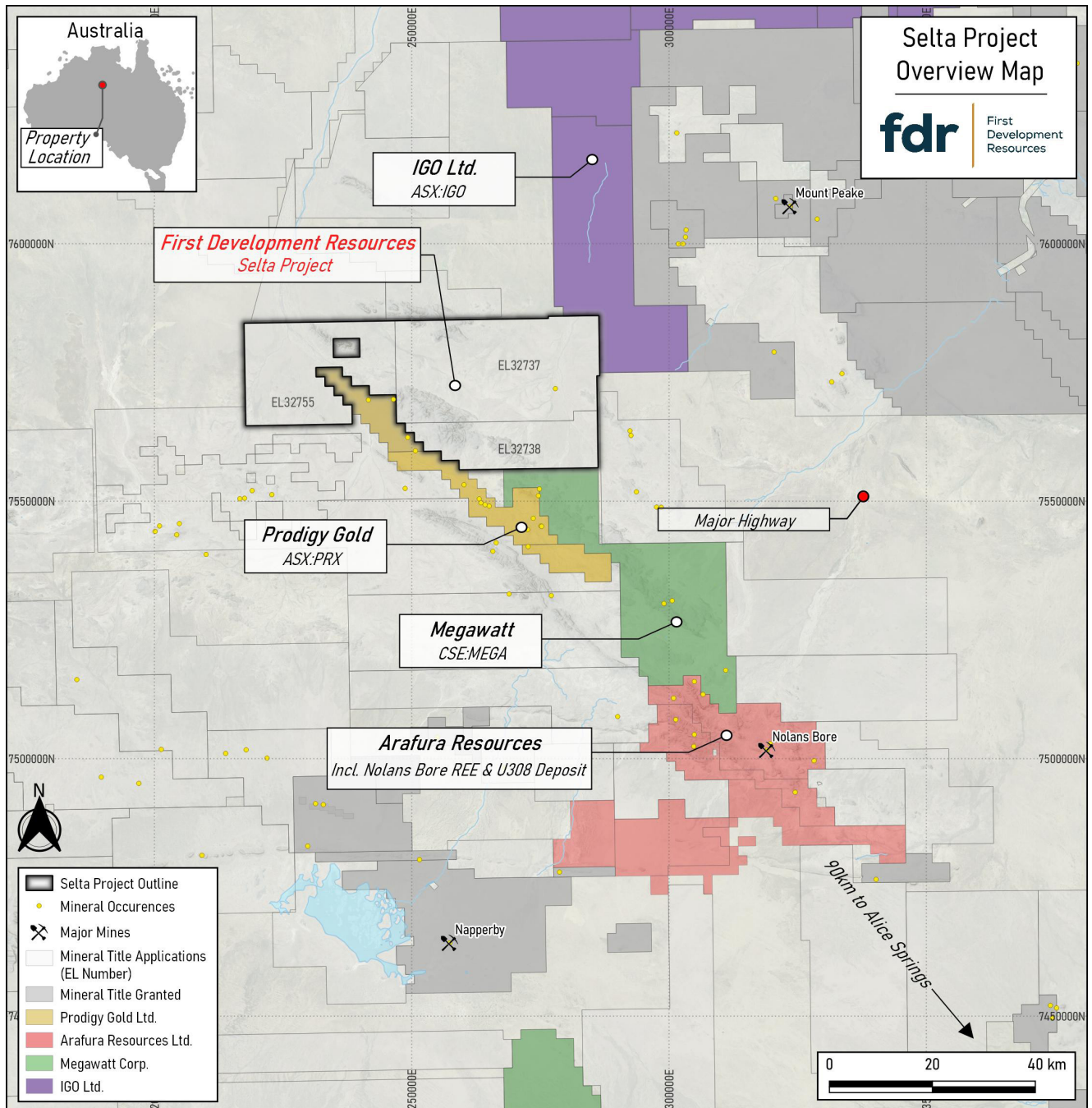
First, the company’s desktop work highlighted strong indicators of lithium-caesium-tantalum, bearing pegmatites. These, in turn, can host vast quantities of lithium mineralisation in hard-rock pegmatite fields elsewhere across the local region and Australia as a whole.

Then, in early June 2022, First Development Resources revealed that a lithium specific review had identified several hundreds of coincident anomalies potentially indicative of pegmatite geology—65 of which have been selected for further investigation through mapping and surface sampling.

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First
Development
Resources

First Development Resources' Selta Property Map



Source: www.powermetalresources.com

THE PATH TO SHAREHOLDER VALUE

Rounding up, and **Power Metal's** plan here is simple.

The demand for lithium is growing as Tesla and other automakers increase sales of electric vehicles.

Reserves will be constrained for some time after an extended period of supply chain underinvestment.

And a projected long-term price rise has set off a race to secure lithium exposure in the mining sector.

In fact, lithium deal making is already well underway, with the likes of Koch, Lithium Americas, and Rio Tinto all making commitments to the sector worth billions of dollars.

So, given the value advanced lithium projects are now courting, **Power Metal** has accrued extensive exposure to the metal from which we are working to derive long-term shareholder value.

Indeed, as we and our partners continue to explore Authier North, North Wind Haneti, and Selta, we stand to establish a greater picture of each project's potential for lithium mineralisation. That could then generate an increasing amount of interest among third parties looking to advance projects with establish lithium resources towards production.

Naturally, this is all contingent on exploration success. But with an expert team behind the wheel, a strong balance sheet, and unparalleled diversification across a variety of other metal markets in our wider project portfolio...

We at Power Metal are extremely excited to continue pushing forward in the lithium space from here.





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