

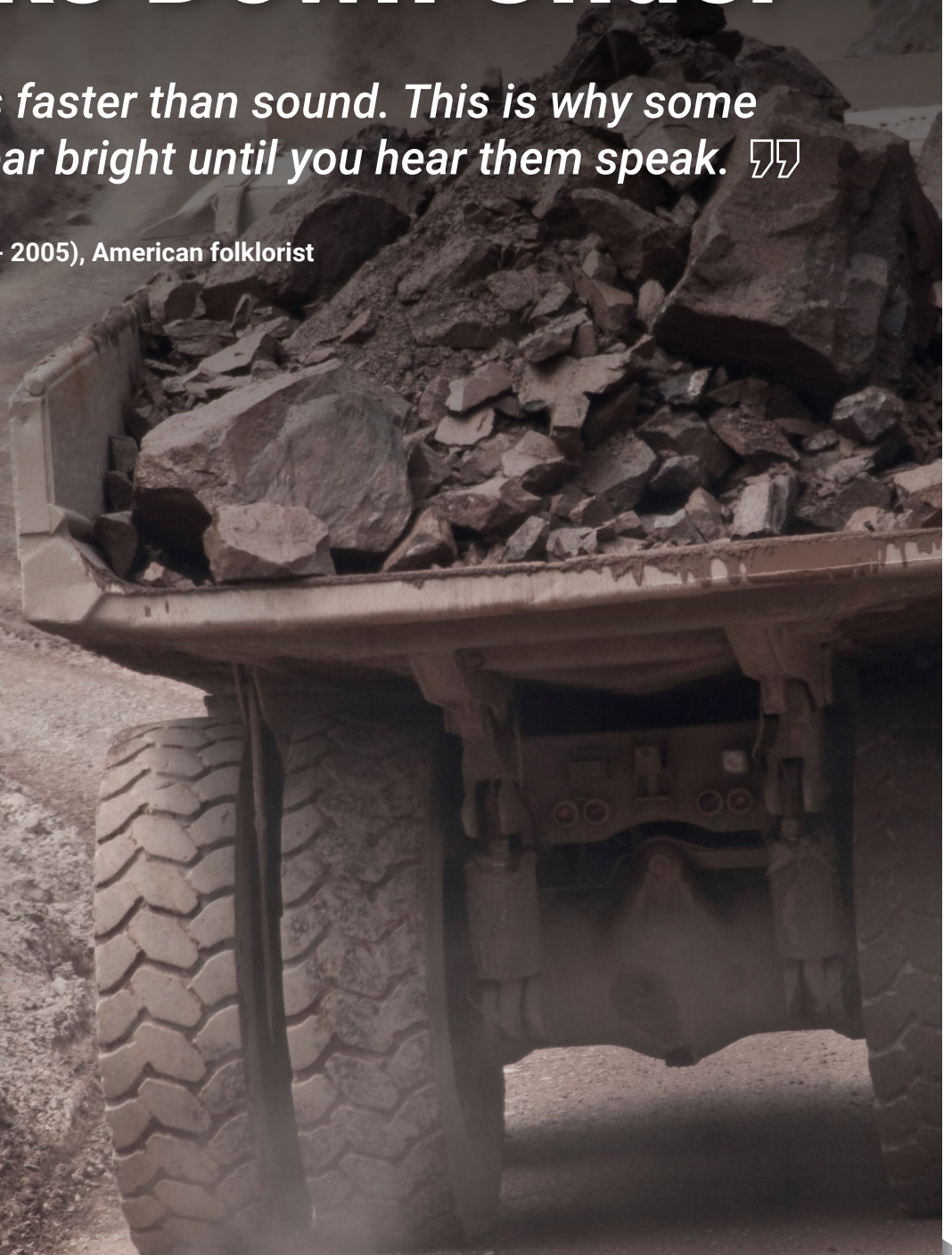


Resources

Stocks Down Under

🗨️ *Light travels faster than sound. This is why some people appear bright until you hear them speak.* 🗨️

- Alan Dundes (1934 - 2005), American folklorist



VITAL METALS

Bringing two worlds together

XANADU MINES

Going after the billion tonne resource

RAREX

A deal is a deal

VITAL METALS

Bringing two worlds together

Stocks Down Under rating: ★★★★★

ASX: VML
Market cap: A\$ 285M

52-week range: A\$0.006 / A\$0.09
Share price: A\$ 0.067

Vital Metals is about to set a landmark in Canada's economic history as the first rare earths producer in that country. Having spent the opening months of 2021 organising the start of pit mining, infill drilling, ore sorting and processing, and bulk samples for offtake agreements, the company is set to start first processing in the second quarter. But there's been a lot of build-up to this point. With significant community support behind the Nechalacho Rare Earth Project, the impetus now will be to secure enough funds to grow the project and add to the growing rare earth chain.

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RareX is working to make its flagship Cummins Range Rare Earth Project in WA the next Mt Weld on the back of rising rare earth prices. While the company has already received significant investor support, the project has caught the attention of Shenghe Resources, a big player in rare earths but, being Chinese, a controversial one from a Western world perspective. The pair have made a non-binding MoU at a time when Australia, the US and others are trying to break free of China's rare earth dominance. RareX, however, sees the agreement as just the beginning of its supply chain ambitions.

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Share price chart



Source: Tradingview

If you want to find Vital Metal's Nechalacho project on the map of Canada, you can't linger near the groovy places you know, like Vancouver or Toronto. Go to the frozen top of the page. There's a big lake up in the sparsely populated Northwest Territories called the Great Slave Lake. At the top of that lake is the territorial capital of Yellowknife, latitude 62.5° degrees North. Now trudge about 100 km southeast to another point near the lake, and you've found Nechalacho, which fittingly means 'the point where you can almost dock' in one of the First Nations languages you'll hear up there. The neighbourhood is called Thor Lake. Turns out that the point where you can almost dock allows Canada to dock into the lucrative rare earths trade.

Very high grades

Thor Lake sits on a substantial, heavy rare earth element deposit with six distinct zones, including the North T and Lake Zones. The project hosts a mineral resource of 94.7 million tonnes at 1.46% rare earth oxides (REO), but the North T zone is the star with a high-grade resource of 101,000 tonnes at 9.01% light rare earth oxides. That's right, 9%. North T will be the Stage 1 starter pit site leading to an estimated production of 5,000 tonnes of contained REO by 2025.

In order to fulfil that production target, Vital began its mining and stockpiling program at North T in February, which in true local fashion will be overseen by Det'on Cho Nahanni Construction, a company 51% owned by the Yellowknives Dene First Nation. First ore sorting work is scheduled to begin as soon as the second quarter of calendar 2021. Vital recently sent the first bulk sample of its mixed rare earth carbonate (MREC) to its offtake partner, REETec.

Local knowledge always helps a lot

Without discounting Vital's work, a lot of time, effort and money (over US\$100m) has been spent to get Nechalacho to this point, not only by the project's previous owner, Avalon Rare Metals, but also by the traditional owners in the Dene Nation. When those parties agreed to rename the project 'Nechalacho' in 2009, it was more than acknowledging the past – it was also an agreement to progress a highly valuable project in a mineral-rich, but extremely isolated place for the benefit of everyone. Much of that \$100m has gone to permitting and project development to make Nechalacho, with its rocky shoreline and steep cliffs, a little more accessible. Infrastructure is limited to barge (in the summer), ice-road access (in the winter) and an airstrip. The agreement with Det'on Cho Nahanni Construction builds on the previous work in a practical way by bringing the company's local knowledge and industry to build a bigger project whilst keeping local regulations in mind.

While Stage 1 site and mining works are now underway, Vital Metals has also begun a separate infill drilling program to define a mine plan for Stage 2, which revolves around the potential expansion of the North T, South T and S Zone targets to scale-up the project. Sales revenue from its mixed rare earth carbonate product is crucial to funding (and fast-tracking) development in the Tardiff zone, but it's also crucial to upselling the project in the eyes of battery makers and similar producers. MREC is higher in grade and value with a broad range of applications, but in the end we all know it's going to end up in permanent magnets, which have an 8% annual growth rate by 2030 to suit global demand.

Nechalacho is just the start

The implementation of Stage 2 has another purpose other than long-term, scalable production at Nechalacho, which is to fund a second rare earth project at Wigu Hill, north of Kisasi in Tanzania. As Walkabout Resources or Peak Resources followers will know, confusion over changes in the country's mining legislation is beginning to subside. And Wigu Hill has its own potential to become a world-class resource with 3.3 million tonnes at 2.6% REO and similar mineralisation amenable to ore sorting. In the end, the development of both projects contributes to Vital's goal of creating a rare earth stream outside of China.

Vital Metals has made good use of its agreements with local industry to become Canada's first rare earth producer, but in an effort to remain one of the lowest-cost producers – and stay far away from Avalon's DFS capital cost of US\$1.6bn – the company will focus on improving its concentrate (35%+) for future offtake partners. By starting with the small but very high-grade North T and keeping ore sorting and processing local, the company has managed to maintain a relatively low-cost operation with plenty of cash (\$6.1m), but that may change in the second quarter when production starts. Vital gets four stars from us for integrating so well into Canada and four stars for the progress it has made on finding the big money at Nechalacho.

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Source: Tradingview

Can you guess where Xanadu Mines got its name from? No, it's not that 1980 American musical starring Olivia Newton-John. Back in 1816, when old Coleridge told us that Xanadu was where Kubla Khan decreed his stately pleasure-dome, he was talking about the man who used to run Mongolia. Xanadu Mines reckons that its Kharmagtai porphyry copper-gold project in Mongolia could potentially more than fund the stateliest of pleasure domes. We think it's a Tier 1 company-maker.

Big yak and big copper country

At Stocks Down Under we are bullish about the resource potential of Mongolia. This sparsely populated, but vast landlocked country in central Asia not only has a lot of copper and gold, but also coal. Therefore, it could potentially also have a lot of coalbed methane, which is good for Elixir Energy (ASX: EXR) that we wrote about in our 31 December 2020 edition. If that's not enough it also has molybdenum, fluorospar, uranium, tin and tungsten. Mongolia is mining friendly, with all the expertise you'd want and the right fiscal and legal regimes.

And, importantly, Mongolia has Oyu Tolgoi, which, if you haven't heard by now, is one of the largest known copper and gold deposits in the world. Rio Tinto may have struggled in recent years to reap the benefits of

its massive investment here due to disagreements with the Mongolian government over fiscal and other matters, but in the grand scheme of things that's no big deal because Oyu Tolgoi is so big that it might just be producing a century from now. The search for the 'Next Oyu Tolgoi' in the world-class Southern Gobi Copper Belt has been on for years. And we believe one of the contenders is Kharmagtai.

Like Cadia, but in a desert

To find Oyu Tolgoi and Kharmagtai on the map of Mongolia, go to the very bottom, a long way from the capital city of Ulaanbaatar. Once you find Dalanzadgad, you're in South Gobi province, which, as the name suggests, means you're in the Gobi Desert. It's the sixth largest in the world and not far from the border with China. Oyu Tolgoi is 235 km to the southeast of Dalanzadgad, Kharmagtai about 100 km to the northeast.

Xanadu has a granted 30-year Mining License over the project area and the neighbourhood has all the infrastructure you'd want if you were developing a new mine. As porphyry coppers go Kharmagtai is a midget compared to Oyu Tolgoi at maybe one-twentieth the size, but as at October 2018 that still meant a JORC 2012 compliant resource of 1.9 million tonnes of copper and 4.3 million ounces of gold at the indicated and inferred level. And there's more where that came from, because the diamond drill rigs have been running hard lately and given the intersections coming back there's a good chance of a much higher resource estimate in the coming months.

When people talk about Kharmagtai they like to compare it to Cadia, the magnificent copper-gold mine in western NSW that has been the gift that keeps on giving for Newcrest Mining (ASX: NCM). Like Cadia, Kharmagtai is a large porphyry intrusive complex. And like Cadia there are clusters of porphyry centres that are vertically extensive. However, the reason Cadia works so well is that it is huge and therefore has the economics. The current management team at Xanadu under Chairman Colin Moorhead, a Newcrest veteran, decided last year that Xanadu wouldn't cut it at a resource of only 600 million tonnes at 0.4% copper equivalent. They decreed a more statelier 1 billion tonne resource goal at 0.5% copper equivalent and mobilised the drill rigs to go after it as systematically as Genghis Khan planning a conquest.

Ask Dr Drill

We predict Xanadu will win this campaign, because that 600 million tonnes was just the White Hill, Stockwork Hill and Copper Hill prospects in the western part of the project area. There's another four prospects to the east that are now being worked up while the company believes it has found a structural repeat of mineralisation below the current resource at Stockwork Hill. 23,000 metres of diamond drillholes in a Phase 1 programme defined the new zones and this year Phase 2 will better define the high grade zones. It's reasonable to expect good announcements like that of 24 March when the company announced that a hole at Stockwork Hill had gone through 181.41 metres at 0.68% copper and 1.78 g/t gold from 648.6 metres.

Mind you, Kharmagtai is still some years away from being a mine. We probably won't have a Preliminary Feasibility Study for a couple of years. However, in the near term we'll likely get some more decent drill results and a resource upgrade.

The beautiful thing about this campaign right now is that it coincides with great times for the red metal itself. Copper was only US\$2 a pound coming out of the Corona Crash, but it's since been above US\$4 a pound thanks to robust demand from China. Xanadu is therefore attractive to investors as the company with largest copper deposit on ASX that just happens to be located not far away from the world's biggest consumer. Four stars from us.



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Share price chart



Source: Tradingview

A second Mt Weld

Cummins Range, 130 km southwest of Halls Creek in the Kimberley region of Western Australia, was acquired from Element 25 (ASX:E25) in late 2019 with a mineral resource estimate (MRE) of 13 million tonnes at 1.13% total rare earth oxides (TREO). RareX's maiden infill and extensional drilling program in mid-2020 helped to confirm the project's high-grade mineralisation, which will inform this quarter's updated MRE. Cummins Range has a sizeable resource (22%) of light rare earth elements neodymium and praseodymium, which are critical for permanent magnets. The assay results also revealed significant amounts of niobium, another critical mineral used in alloys. The project is one of two carbonatite-hosted rare earth element (REE) deposits in Australia – the other being Mt Weld, creator of billions in shareholder value for Lynas rare Earths (ASX: LYC).

The company believes that Cummins Range is a company maker and it seems like other companies are taking a similar view. RareX now has a potential partner in leading rare earths producer Shenghe Resources after the signing of a non-binding Memorandum of Understanding (MoU) in February. Arguably one of the most powerful rare earths producers globally with a market cap of US\$4.6bn, Shenghe already has a stake in another promising Australian producer in Greenland Minerals (ASX:GGG). So, this is a particular point of

confidence for RareX. The key terms of the deal include establishing an alliance via the creation of a jointly-owned Rare Earths Trading Company (RET Co), which would find and explore rare earth concentrates everywhere (excluding China) to process at Shenghe's refining plants (also outside China).

Who's winning in this scenario?

For all the rhetoric around breaking free of China's rare earth dominance, the initial agreement between RareX and Shenghe is not much of a surprise. Now that the US is taking steps to build its own rare earths chain and reduce its dependence on China, Shenghe Resources is at the centre of a plan to build global partnerships to find a stable supply of rare earths, especially now that China's deposits are vastly used up. Shenghe is more than a little controversial – it's a partially-state owned company with ties to China's ministry of natural resources and the CNNC (China National Nuclear Corporation). And this latest agreement with RareX will likely get some side-eye, with some critics pointing out that Shenghe is positioning itself to gain further access to the lucrative REE concentrate train. Under the current non-binding deal, the proposed joint trading company could get rights to all of RareX's production once mining starts.

For a junior like RareX, the potential benefits outweigh bigger geopolitical concerns. The company is hoping for significant investment on Shenghe's part for Cummins Range now that a new drilling program is set to build on the last round of successful exploration. But the kicker is the opportunity to invest in existing or proposed rare earth refineries, which would give RareX a few more growth options.

As the company's long-term strategy is to sell its monazite concentrate (the reddish-brown mineral containing rare earth elements) to refineries worldwide, the ambition to move into the Asian market is underpinned by both Shenghe and a separate A\$2.75m investment deal with Simon Lee - the man behind established mineral companies like Great Victoria Gold. The latter will also strengthen its cash position to \$11.25m. The disconnect between RareX and the Australian government's attitude toward Chinese investment will probably trigger a lot of debate, but right now RareX looks like the immediate winner.

Everybody wins

It's a fortuitous time for any ambitious rare earths company with rare earths pricing having surged in recent days. But as the pressing focus for RareX is the re-commencement of drilling for the MRE and pending Prefeasibility Study, the cash injection by Mr Lee and other investors – including a successful capital raise of \$3m in November – will enable those tasks to go ahead with cash left over for other endeavours.

Interestingly, RareX has done some headhunting of its own: in late December, the company put in an option to acquire a 12.5% stake in the boringly named Canada Rare Earths Company (CREC), which would give it yet another avenue into non-Chinese refineries in Thailand and Laos. As CREC has its own track record in the trade of rare earth monazite concentrates, we believe it's a good fit for RareX. But most importantly it's one more opportunity for the company to look for a mutually beneficial partnership.

Obviously, it's still early days for RareX so we'll have a better idea how valuable Cummins Range is later this year. For now, we think the favourable environment for rare earths and the Shenghe relationship will continue to attract investor interest in the near term. For investors knowledgeable about the risks and with a bit of patience this one is four stars.

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