The top billionaires are now chasing the critical magnet rare earths — Part 2 of 2

written by Matt Bohlsen | December 15, 2022

In part 1 we looked at a growing trend where billionaires have started investing or taken a strong interest in rare earths companies, mines, and/or projects around the world. In particular, the story focused on James Litinski's rise to fame at MP Materials Corp. (NYSE: MP), as well as the recent billionaire moves of KoBold Metals (Jeff Bezos, Michael Bloomberg, Bill Gates) chasing rare earths in Greenland and Gina Rinehart buying into Arafura Rare Earths Limited (ASX: ARU).

Here in Part 2 of this series will take a look at more billionaires chasing rare earths such as Andrew 'Twiggy" Forrest, Chris Ellison, and Elon Musk.

Andrew Forrest's Wyloo Metals and Hastings Technology Metals Ltd.

As <u>announced</u> on August 26, 2022, Australian billionaire Andrew Forrest's private company Wyloo Metals has agreed to an A\$150 million <u>cornerstone investment</u> in Hastings Technology Metals Ltd. (ASX: HAS), through the issuance of secured, redeemable, exchangeable notes. Even more interesting was that Hastings intends to use the A\$150 million proceeds to acquire a 22.1% strategic shareholding in Canada's <u>Neo Performance Materials Inc.</u> (TSX: NEO). Neo uses rare earths to make magnetic powders and magnets, which can later be used in the permanent magnet electric motors used in most quality EVs and wind turbines.

Hastings controls two rare earth projects in Western Australia,

the <u>Yangibana Project</u> (more advanced) and the <u>Brockman Project</u>. At the Yangibana Project, Hastings plans to build a mine and beneficiation plant and a hydrometallurgical plant nearby in Onslow, to produce 8,500 tpa TREO production and <u>3,400tpa NdPr</u>.

It was also <u>revealed</u> in November 2022 that Andrew Forrest's Fortescue Metals Group Ltd. (ASX: FMG) has signaled the company hopes to open up a business mining and refining rare earths.

Chris Ellison and rare earths junior VHM Limited

Mineral Resources Limited (ASX: MIN) CEO Chris Ellison has been an early leader in the lithium boom, yet now he has also turned his attention to rare earths. Ellison has backed rare earths junior VHM Limited which is set to IPO on the ASX in January 2023. VHM Limited state they have "one of the world's largest, highest-grade rare earth deposits" at their Goschen Rare Earths and Mineral Sands Project in Victoria, aiming to begin production by H1, 2025. The rare earths in the Goschen Project include neodymium, praseodymium, dysprosium and terbium.

Elon Musk's insatiable demand for rare earths to feed Tesla's vehicles

In 2018 it was reported by Reuters that "Tesla's shift to a magnetic motor using neodymium in its Model 3 Long Range car adds to pressure on already strained supplies of a rare earth metal....." Musk and Tesla (NASDAQ: TSLA) had come to learn that by using the most powerful and lightweight permanent magnet electric motors they were able to save weight and improve efficiency, which improves both performance and range as well as cost (a smaller battery is needed to achieve the same range). Permanent magnet motors are currently the smallest and lightest electric motors you can buy. The only catch is they require the magnet rare earths. So this is now Tesla's current problem. How to source the magnet rare earths in the volumes they need now

and in future years as they scale to 20 million electric cars per year by 2030. Tesla's chair Robyn Denholm gave investors a huge clue during a speech in Canberra to mining industry leaders in 2021, when she predicted that Tesla could soon consume more than \$1 billion a year in Australian produced lithium, nickel, rare earths, and other battery metals. Then again in October 2022, Denholm strongly advocated that Australia can do so much more to support the EV supply chain. Tesla chairman suggested Australia is capable to do mining, refining, battery cells production, and even make electric vehicles. She said Australia has the raw materials, including lithium, cobalt, copper, and rare earths.

I would add that Canada also has this very <u>same potential</u> and is now focused to build up an EV supply chain, notably in Ontario and Quebec. The Canadian government has allocated C\$3.8 billion of financial support for critical minerals in its 2022 budget.

Tesla's electric cars have shifted towards using more permanent magnet motors that use the magnet rare earths



Hong Kong — August 13, 2021 : People walk past the Tesla official showroom in Queens Road East, Wan Chai, Hong Kong.

Source: <u>iStock</u>

Closing remarks

This "billionaires chasing the critical magnet rare earths" series has exposed a relatively new trend where several of the richest and most powerful billionaires in the world have turned their attention to the magnet rare earths, namely neodymium (Nd), praseodymium (Pr), and dysprosium (Dy). Billionaires now involved in rare earths include James Litinsky, Jeff Bezos, Michael Bloomberg, Bill Gates, Gina Rinehart, Andrew Forrest, Chris Ellison and indirectly Elon Musk via Tesla.

The reason for this unprecedented interest in the magnet rare earths sector is simple. The most powerful and efficient

electric motors need the most powerful magnets, and these are made from the magnet rare earths Nd, Pr, and Dy. Also, they typically use Boron (B). Electric motors are replacing the internal combustion engine and are now central to most modern day technology especially green technology such as electrification of our transport network and renewable energy generation.

Reaching net zero carbon emissions means the next 2-3 decades will rely heavily on switching to electric motors and that will require a secure source of the critical rare earths.

Investors can also learn from these leading billionaires and invest in the magnet metal rare earths while we are still in the early stages of what looks likely to be a decade long boom.

For more information you can visit InvestorIntel's page "Critical Minerals & Rare Earths".

The top billionaires are now chasing the critical magnet rare earths — Part 1 of 2

written by Matt Bohlsen | December 15, 2022

In this two part series we look at a growing trend where billionaires have started investing or taken a strong interest in rare earths companies, mines, and/or projects around the world. The significance is that these billionaires are very well known and followed. Plus it now appears they have their targets set on the 'magnet' rare earths sector, which many analysts

forecast to go into deficit this decade, driven by the shift to renewable energy and electric vehicles. The magnet rare earths mostly refers to neodymium and praseodymium (NdPr), the world's most sought after rare earths. Dysprosium (Dy) is the third key rare earth used in magnets. It is also used in control rods for nuclear reactors.

One can argue that this trend all started back when, now billionaire, James Litinsky bought a mine in California from bankrupt Molycorp and subsequently turned the mine into USA's largest producing rare earths mine, with the company MP Materials Corp. (NYSE: MP) now valued at US\$5.48 billion. As Wikipedia states: "In June 2017, the Mountain Pass mine was purchased at auction for \$20.5 million by a new entity called MP Mine Operations LLC (MPMO). MPMO was a consortium formed principally by JHL Capital Group, a Chicago-based investment firm led by James Litinsky." Litinsky recognized, well before others, that the most powerful magnetic electric motors need rare earths, and that these motors would become essential to modern life technology, especially in the green revolution. Litinsky and his partner's move buying a mine for just US\$20.5m that is now worth 200X or more today was pure genius!

The world's most powerful electric motors are used today in wind turbines and electric vehicles. They rely on the critical and valuable magnet rare earths (Nd, Pr, Dy)



Source: <u>iStock photo</u>

Jeff Bezos, Michael Bloomberg, Bill Gates & others are looking towards Greenland for rare earths

As reported by InvestorIntel in September 2022, Jeff Bezos, Michael Bloomberg, Bill Gates & others (via their company KoBold Metals) are looking towards Greenland as a source of rare earths and other critical metals. KoBold Metals is partnered with Bluejay Mining PLC to find the rare and precious metals in Greenland. An August 2022 article by CNN quoted: "Billionaires are funding a massive treasure hunt in Greenland as ice vanishes......Greenland could be a hot spot for coal, copper, gold, rare-earth elements and zinc, according to the Geological Survey of Denmark and Greenland." While there are challenges in Greenland the fact that billionaires who made their money in online shopping, financial services/media, and software are now scouring the globe for rare earths speaks to their importance and value in modern society.

Gina Rinehart buys into Arafura Rare Earths Limited

Gina Rinehart, the world's richest woman, recently bought A\$60 million worth of Arafura Rare Earths Limited (ASX: ARU) shares via her private company Hancock Prospecting, as part of an A\$121 million capital raising by Arafura. Arafura's news release on December 5, stated: "Hancock Prospecting Pty Ltd acted as a cornerstone investor, committing to invest \$60 million which will result in a post-completion interest of ~10%.....Funds raised will be applied towards orders for long lead items, commencement of fabrication in readiness for main plant construction and early works."

Europe and the global auto manufacturers are also chasing the critical magnet rare earths

In September 2022 The European Commission <u>stated</u>: "Lithium and rare earths will soon be more important than oil and gas. Our demand for rare earths alone will increase fivefold by 2030. [...] We must avoid becoming dependent again, as we did with oil and gas." The European Critical Raw Materials Act is due for release in Q1, 2023.

European Critical Raw Materials Act — securing the new gas & oil at the heart of our economy (red underline by the author)

"Lithium and rare earths will soon be more important than oil and gas. Our demand for rare earths alone will increase fivefold by 2030.

[...] We must avoid becoming dependent again, as we did with oil and gas. [...] We will identify strategic projects all along the supply chain, from extraction to refining, from processing to recycling. And we will build up strategic reserves where supply is at risk. This is why today I am announcing a European Critical Raw Materials Act."

Source: <u>Blog of Commissioner Thierry Breton</u>

2023 will likely see more urgency from countries and EV and wind turbine companies regarding sourcing the magnet rare earths.

Part 2 of this series will take a look at Andrew 'Twiggy" Forrest's rare earths foray, as well as some other companies and billionaire's rare earths dependency and challenges to secure enough supply, including Tesla's CEO Elon Musk.

Arafura Resources Gavin Lockyer on the U.S. growing interest in magnet metals

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"We are developing a project in Central Australia so in terms of political risk we represent a very low-risk jurisdiction. Our process is to mine, develop and process rare earth materials in Central Australia and then export neodymium-praseodymium oxides to the metal and magnet manufacturing industry, which typically sits offshore in places like Japan to a lesser extent Korea, predominantly China. The U.S. is definitely getting a growing interest in this as it is a strategic metal that feeds into high-performance magnets as you have rightly alluded to, which drive electric motors and also a range of defense applications." States Gavin Lockyer, Managing Director of Arafura Resources Ltd. (ASX: ARU), in an interview with InvestorIntel Corp. CEO Tracy Weslosky.

Tracy Weslosky: I will be honest with you; I am very excited

about this interview. I mean, we have a lot going on in the news right now between China and the United States, and now Canada and China. That is making the world look to you for neodymium and praseodymium in Australia. Is that correct or am I jumping to the wrong conclusions?

Gavin Lockyer: It is starting. We are starting to see some movement in that space. Geopolitical issues typically reflect into an increase in the neodymium-praseodymium prices. We hope to see that in the near future. What we are seeing is that there is a slight increase from North American investors and manufacturers in particular, starting to look up their procurement supply chains to see where are the critical metals being sourced from and what can they do to minimize their risk of supply disruption.

Tracy Weslosky: For those of you out there who may not be familiar with how exciting the magnetic material market actually is, the critical material market is, I am going to ask you Gavin, if you do not mind, just to give us a quick overview and re-review of who Arafura is in this market.

Gavin Lockyer: Sure. We are developing a project in Central Australia so in terms of political risk we represent a very low-risk jurisdiction. Our process is to mine, develop and process rare earth materials in Central Australia and then export neodymium-praseodymium oxides to the metal and magnet manufacturing industry, which typically sits offshore in places like Japan to a lesser extent Korea, predominantly China. The U.S. is definitely getting a growing interest in this as it is a strategic metal that feeds into high-performance magnets as you have rightly alluded to, which drive electric motors and also a range of defense applications.

Tracy Weslosky: Gavin what you have just alluded to, we did a

piece about how the U.S. Defense law has market eyeing raw materials sources in Australia. Have you seen any additional phone calls from any military sources, of course, here in the last month? What can you talk about?

Gavin Lockyer: There is not a lot I can talk about. What I can say is that there is certainly interest coming from both sides of the Pacific to be honest. The Australian government obviously has made a range of public announcements in which it endorses Australian resource and critical metals and materials for its allies and, of course, the U.S. is an important ally, as is Canada. We would expect, while we have had some discussions at Canberra and at Washington level, what I would really like to see is some of those industries that are reliant on the NdPr for their businesses actually start to come and talk to us a little bit more in a little bit more meaningful capacity because as you are well aware Tracy, the NdPr market is not a commodity market. There is not a LME on which it is traded and so for us to get our projects up and running we need offtake contracts which are defendable or are bankable basically...to access the complete interview, click here

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Arafura's Brescianini on the growing demand for magnet

metals

written by InvestorNews | December 15, 2022

"We are dealing in a sector that is really starting to grow in the magnet space. Of course our rare earths go into magnets. With all of the changes that are going on in the technology space, we are very well positioned to be able to feed that particular sector. As you know we are completing our definitive feasibility study. That will be out in the next couple of months. I guess investors would really start to understand the value proposition that Arafura offers." States Richard Brescianini, General Manager of Exploration & Development at Arafura Resources Ltd. (ASX: ARU), in an interview with InvestorIntel Corp. CEO Tracy Weslosky.

Tracy Weslosky: Richard this is extremely timely that we are speaking to you with all of the current conflict between the U.S. and China and now with the Chinese conflict with the Canadians, everyone is looking to Australia for magnet metals. Would you agree?

Richard Brescianini: I would agree. We are a very, very stable country. We have been saying that for many, many years now. I guess what we are seeing play out in the geopolitical sphere really begins to reinforce that fact.

Tracy Weslosky: We just did a piece actually on how the U.S. Defense law has everyone also looking at Australia. We have got investors around the world looking at you. Would you not say now is the time to be looking at a company like Arafura?

Richard Brescianini: I think it is. We are dealing in a sector that is really starting to grow in the magnet space. Of course our rare earths go into magnets. With all of the changes that are going on in the technology space, we are very well

positioned to be able to feed that particular sector. As you know we are completing our definitive feasibility study. That will be out in the next couple of months. I guess investors would really start to understand the value proposition that Arafura offers.

Tracy Weslosky: For those of you out there in InvestorIntel land and you are going, what are these rare earths? What are these metal magnets? I will tell you what they are. They are currently controlled by the Chinese and especially with the processing aspect. Of course, Arafura is well on your way with your processing techniques. Is that correct?

Richard Brescianini: That is correct. Just recently we put a statement out there that told the market that our entire processing operation will be located in Australia. We are not mucking about with having it in multiple countries or anything like that. We really want to be able to focus our operations in Australia for stability purposes. I guess your hearers or your listeners will know about some of the things that are playing out in Malaysia right now, which really reinforces our decision to keep it all in Australia....to access the complete interview, click here

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Arafura's Gavin Lockyer on the

rising rare earths market

written by InvestorNews | December 15, 2022
May 17, 2018 — "What I will say about this slide though is that our project is one of only 12 in Australia that has been granted major project status by both the federal government and our local Northern Territory government. I think that reflects the strategic importance of rare earths, in particular, to Australia and its export partners." states Gavin Lockyer, Managing Director of Arafura Resources Ltd. (ASX: ARU), in a recent presentation at the 7th Annual InvestorIntel Summit — Buds, Batteries & Blockchain 2018.

Gavin Lockyer: My name is Gavin Lockyer. I am Managing Director of Arafura Resources. I have been with the company for around 12 years now. I commenced as CFO and company Secretary and stepped into the managing director role about $3\frac{1}{2}$ years ago. Also, traveling with me is our General Manager for Business Development and Exploration, Mr. Richard Brescianini, who is standing over to the side there. If you have any technical questions about the project later on please feel free to seek out Richard or myself. Richard has also got some little toys which we can pass around because we all talk about these magnets, but not all of us have seen them all, been able to feel how strong they actually are. Richard has got a couple of toys there to play with. As you heard earlier if you were around when I was on the panel, we are developing the Nolans Bore Project, which sits in the middle of Australia. It is enriched in the rare earths in particular NdPr or neodymium, praseodymium. These are the key feed materials for these high-strength magnets. I will not bore you with all the standard details. What I like to do in these presentations is to talk a little bit about the market, about what we are experiencing at the moment so perhaps it might not correlate with the slides that are on the screen. I

think you are all educated enough to jump on the website and download a standard presentation. I think it is probably more beneficial if we have some interaction around what we are actually seeing in the real world from our discussions with magnet producers, both in China, Japan, etc. What I will say about this slide though is that our project is one of only 12 in Australia that has been granted major project status by both the federal government and our local Northern Territory government. I think that reflects the strategic importance of rare earths, in particular, to Australia and its export partners. What this means really it just gives us a dedicated case officer in Canberra and also in Darwin, the capital of the Northern Territory where we can coordinate relationships through government and, not fast-track, but supposedly grease our way through the wheels of bureaucracy. I will touch on some of our permitting stuff a bit later on. As we have all heard, the NdPr market is critical to the high-performance magnets. We are seeing renewed interest in capital markets in particular around the fact that a lot of these guys have made money out of the battery metals. A lot of the fund managers, etc, we are speaking to now have all made money in graphite, cobalt, lithium. They are starting to think, well, what is the next technology metal that is going to take off? Inevitably the battery technology has been the key enabler around the electrification of transportation fleets. Those batteries have to drive something. Inevitably it is an electric motor. Those electric motors, as we have heard from Nick from Alkane earlier, if you want that motor to be lighter and more efficient it will have NdPr magnets in it...to access the complete presentation, click here

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