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PLANES, TRAINS, AND AUTOMOBILES VOL. 3

QUANTIFYING GREEN METAL CONSUMPTION IN THE TRANSPORTATION SYSTEMS OF THE FUTURE

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PUBLISHED BY THE PROSPECTOR NEWS

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PUBLISHER
Michael Fox
editor@theprospectornews.com

SOCIAL MEDIA MANAGER
Parm Walia PW Communications

GRAPHIC DESIGN
George Pitaru
george.pitaru@gmail.com

CONTRIBUTORS
Ryan Blanchette
Ted Butler
Jeff Clark
Christian Elferink
Wayne Harris
Peter Krauth
Rick Mills
David Morgan
Lynner Reinson
Nick Tartaglia
Chris Temple

THE PROSPECTOR NEWS
Telephone: 604-639-5495
sales@theprospectornews.com

ABORIGINAL MINER
Dr. John Belhumer
Founder and Co-Publisher
AboriginalMiner@TheProspectorNews.com

PLANES, TRAINS, AND AUTOMOBILES VOL. 3

QUANTIFYING GREEN METAL CONSUMPTION IN THE TRANSPORTATION SYSTEMS OF THE FUTURE

By Ted Butler

Having already covered planes and trains in previous editions, the following article sees us switch gears to automobiles - the third and arguably most important transportation method in this Prospector News series.

Accounting for 10-12% of global CO2 emissions, cars collectively produce over 5 times the emissions of the aviation industry, as well as more than 30 times the direct CO2 emissions produced by rail.

Unsurprisingly then, cars are the overwhelming focus of the green energy transition – a herculean undertaking that will drive significant demand increases for critical minerals such as lithium and copper.

As for exactly how much green metal will be consumed, we will be the first to say that all estimates should be taken with a pinch of salt, due to the likelihood of thrifting and substitution from here on in.

However, as we remain undeterred by this challenge, the logical place to start is with research firms like the IEA, who are funded by governments of OECD countries to create accurate datapoints for topics such as EVs.

To this point, the IEA's Executive Director, Fatih Birol, stated in April that "1/4 of the cars sold in the world this year will be an electric car", later adding ***"by 2035, every second car sold globally will be an electric car".***

Notwithstanding the optimistic nature of this 2024 forecast, our objective is to quantify metal consumption of the future. As such, we will focus on the 2035 EV sales projections, for which the IEA provides 2 scenarios.

Starting with their more conservative "STEPS" scenario, the IEA's forecasts for 2035 are characterized by 51 million units of BEV sales, 5.5 million units of PHEV sales, and 200,000 units of FCEV sales.

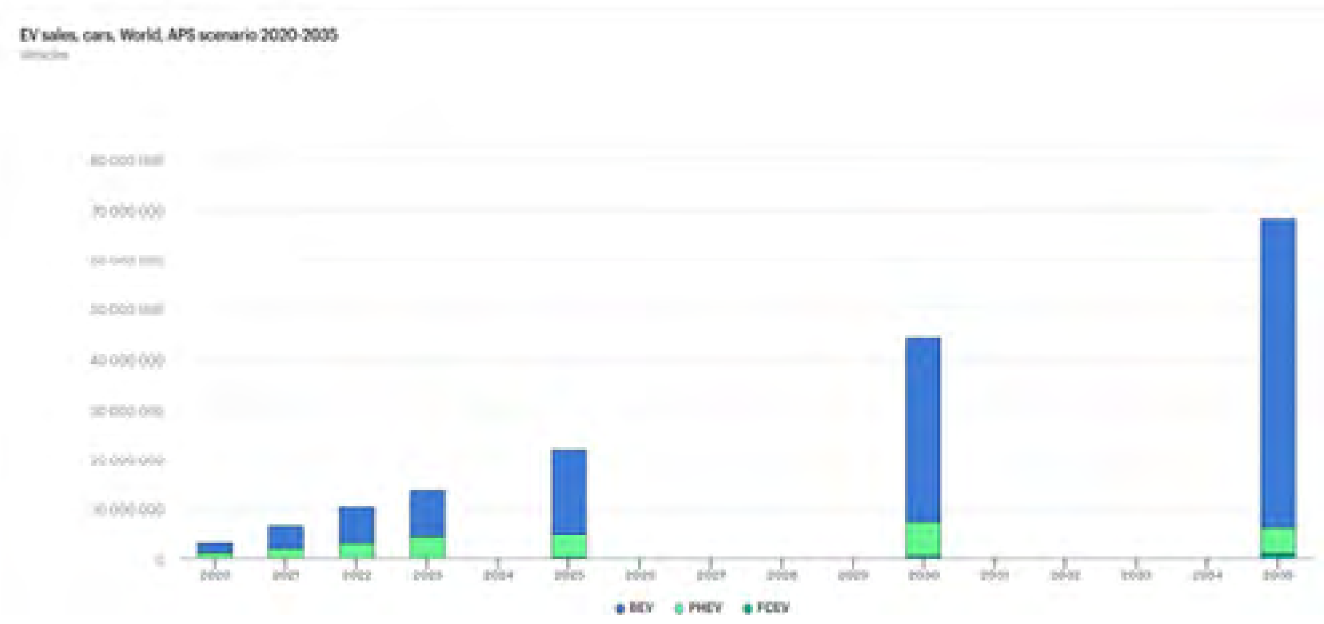
Given that 2023 saw BEV sales of 9.5 million and PHEV sales of 4.3 million, this means that BEV and PHEV sales would need to increase by 437% and 27% respectively in less than 12 years to meet the STEPS scenario.

With that being said, the IEA also has a second - more optimistic - scenario called the "APS" scenario. This is based on assumptions of a faster pace of EV adoption than the STEPS scenario.

As part of this, the IEA forecasts 62 million BEV sales by 2035, along with 5.5 million PHEV sales, and 890,000 FCEV sales. In this scenario, BEV sales would need to increase by 552% from 2023 to 2035.

From here, if we take the median BEV sales estimate from both scenarios (56.5 million in 2035), then BEV sales would need to rise by 3.92 million p/a (or 41.23% year on year) assuming linear growth from 2023-2035.

Whilst we have our reservations, it is not impossible for the IEA's estimates to come to fruition; BEV sales grew at a faster rate than above on a percentage basis between 2018 and 2023, with a 52.19% increase year on year.



https://www.iea.org/data-and-statistics/data-tools/global-ev-data-explorer

Moreover, if we operate on the basis of the IEA's more conservative estimates (i.e. the STEPS scenario), and apply it to the bestselling EV models, then we can start to get an idea of future green metal consumption.

For example, 2023's bestselling car (let alone EV) was the Tesla Model Y with 1.23 million units sold – a show of dominance that continued into Q1 2024, when the Model Y accounted for 1/3 of total U.S EV sales.

Of course, newer models will arrive on the market in the meantime. But hypothetically, the Model Y would have 6.61 million units of sales in 2035, if we apply the same 437% growth rate from the IEA's STEPS scenario.

Therefore, based on the fact that Model Y LFP batteries use 30kg of lithium (75kWh x 0.4kg/kWh), we can estimate that the Model Y's sold in 2035 would have consumed ~198,300,000 kg of lithium in batteries alone. For context, this 198,300 tonnes of lithium equates to roughly 1/5 of total global lithium production in 2023, which was estimated to be around 1 million metric tonnes of lithium carbonate equivalent.

In fact, the Model Y only has a ~10% market share of global EV sales. Therefore, in a world where the Model Y had a 100% market share, lithium demand for EVs in 2035 would be double the 2023 global lithium production.

Of course, numbers would change depending on the battery chemistry

Country	Region	2023E Production (Million tonnes)
Chile	South America	5.0
Peru	South America	2.6
Congo (Kinshasa)	Africa	2.5
China	Asia	1.7
United States	North America	1.1
Russia	Europe/Asia	0.9
Australia	Oceania	0.8
Indonesia	Asia	0.8
Zambia	Africa	0.8
Mexico	North America	0.7
Kazakhstan	Asia	0.6
Canada	North America	0.5
Poland	Europe	0.4
Rest of World	–	3.1
World total (rounded)	–	21.5

https://www.visualcapitalist.com/visualizing-copper-production-by-country-in-2023/#google_vignette you select as inputs. However, given that Musk is shifting away from NCA batteries, and is moving towards LFPs produced by CATL, we opted for LFPs. Elon Musk: *"I think probably there is a long-term shift more in the direction of iron-based lithium-ion cells rather over nickel. And this is actually good because there's plenty of iron in the world. But nickel... there's much less nickel, and there's way less cobalt."*

Nonetheless, that is not to say that lithium is the only metal whose supply will be exploited by EV demand. This is clear with silver, whose usage in Samsung's pioneering solid state battery could be as high as 1kg per EV. Importantly, metal consumption in EVs goes beyond the battery too. For example, the relatively less popular (compared to Teslas) Honda Accord EV uses 200 lbs of copper - 5 times more than the ICE model's 40 lbs.

With this in mind, if we hypothetically assumed that every BEV sold in the IEA's STEPS scenario consumed 200lbs of copper, then we'd be looking at 4,626,638 metric tonnes of annual copper consumption in 2035.

https://tradingeconomics.com/china/inflation-cpi

Rows of Xiaomi's new Su7 electric cars are seen at its delivery and service center in Shenzhen, Guangdong Province, China.

Of course, not every EV sold will be a Honda accord. However, this 4.6m tonnes is a good ballpark figure for EVs across the board, and it staggeringly amounts to 1/5 of 2023 global copper production.

With all this being said, the current macroeconomic and geopolitical milieu provides us with serious reason to believe that the IEA's sales estimates – and therefore our metal consumption estimates – are too high too soon.

For one, China accounted for 60% of global EV sales in 2023. However, its economy is faltering due to an unresolved real estate bubble, and the gravitational pull of a potential deflationary spiral has not yet subsided.

This combination could not only put a serious dent in domestic demand for Chinese EVs, but also for its EV exports, especially in light of President Xi's renewed focus on becoming a self-sufficient "fortress economy".

Jimmy Goodrich, IGCC: ***"China's leadership, under Xi Jinping, has initiated a significant strategic shift toward a "fortress economy"... the CCP's perception of an increasingly hostile international environment (is) prompting a paradigm shift that prioritizes national security and economic self-reliance."***

Similarly, Canada's imposition of a 100% surtax on Chinese EVs also serves as evidence of this growing trend of deglobalization, which comes as an extension to the EU's tariffs imposed on BYD and SAIC earlier this year.

In response to this protectionist move from Trudeau, China has lodged a complaint with the WTO. And yet, the U.S' 10% share of the global EV sales could also see shrinkage if Trump decides to unravel Biden's 2022 IRA.

Nonetheless, legacy car manufacturers are still attempting to change perceptions towards EV, as was the case with Ford CEO, Jim Farley, and his recently published article: "Confessions from a lifelong Petrol Head."

Ford CEO, Jim Farley: ***"I love electric vehicles, and it has nothing to do with politics... For me, and for millions of Americans, electric vehicles are removing daily hassles and reminding us why we love to drive."***

That said, Jim's best efforts may not be enough to shift the anti-EV sentiment that prevails in the U.S. This is evidenced by a 2023 poll by PBS, where *47% of U.S adults* said it would not be likely for them to buy an EV.

For these reasons and the geopolitical ones outlined above, we at the Prospector News believe that the IEA's estimates for BEV adoption are overly optimistic, given the nature of the obstructions that stand in the way.

Instead, what we see as far more likely in the near to medium term is an increased adoption of hybrid vehicles - a solution which (by virtue of its title) would gradually bridge the gap between ICE vehicles and EVs.

SCANDIUM: THE METAL OF THE FUTURE

By Christian Elferink

Scandium is emerging as a critical mineral, increasingly recognized for its unique properties and potential applications. Currently produced primarily as a byproduct, scandium is gaining importance in various industries and has been classified as a critical metal by several countries, including Canada and the United States. One of the most promising primary sources of this metal is the Crater Lake Project, which could significantly enhance the production of scandium-aluminum alloys.

Scandium possesses remarkable characteristics that make it highly desirable in manufacturing. It is incredibly lightweight, akin to aluminum, but boasts a much higher melting point. This combination makes it ideal for applications that require both strength and minimal weight. Furthermore, scandium's relative softness facilitates easy shaping during the manufacturing process.

The true potential of scandium is realized when it is alloyed with aluminum. These scandium-aluminum alloys provide an exceptional blend of lightness, high strength, and excellent corrosion resistance. Additionally, they are effective conductors of heat and electricity, further expanding their versatility across various applications.

Despite its promising attributes, the limited availability of scandium has hindered its widespread adoption. However, projects like the Crater Lake initiative are poised to change this dynamic. With reliable primary sources becoming available, the market for scandium-aluminum alloys is expected to grow significantly.

Scandium Canada Ltd. (TSX-V:SCD); (OTC:SCDCF) established in 2018, is at the forefront of this movement with its Crater Lake Project located 200 kilometers northeast of Schefferville in Québec. The project encompasses 96 contiguous claims over an area of 47 square kilometers and aims to position Canada as a global leader in scandium production. On June 13, 2022, Scandium Canada released a positive Preliminary Economic Assessment (PEA) for the Crater Lake Project. The assessment highlighted significant economic potential with projected gross metal revenues totaling $15.2 billion over the initial 25 years life of the operation. After-tax earnings are estimated at $6.25 billion, with a pre-tax net present value (NPV) of $2.97 billion and an after-tax NPV of $1.72 billion using a 10% discount rate. The project also boasts a pre-tax internal rate of return (IRR) of 42.9% and an after-tax IRR of 32.8%. Annual net revenues are expected to average $608 million from high-purity scandium oxide (Sc_2O_3), scandium-aluminum master alloy (ScAl), and rare earth element (REE) hydroxide concentrate.

The Crater Lake Project also features a compliant Mineral Resource Estimate under NI 43-101 regulation with an indicated resource of 11.8 million tonnes grading 276 grams per tonne Sc_2O_3 and an inferred resource of 15.9 million tonnes grading 268 grams per tonne Sc_2O_3 for the Northern Lobe of the TG Zone. Notably, mineralization remains open in several directions.

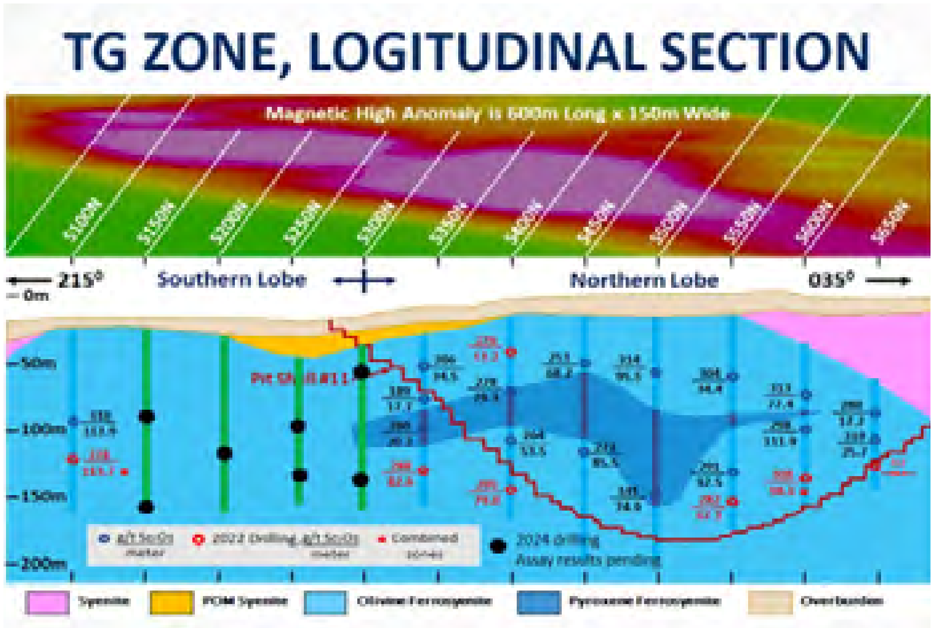
FIRST NATIONS ENGAGEMENT

On April 22, 2024 the company signed a pre-development agreement with the Naskapi Nation of Kawawachikamach. This agreement establishes a framework for conducting all pre-development activities with mutual respect and understanding. The pre-development agreement is a crucial first step, paving the way for further collaboration as the project progresses. We believe this sets a positive precedent for responsible mining practices that prioritize the well-being of First Nations communities.

Former Naskapi Chief Theresa Chemaganish was then quoted saying *"The Pre-Development Agreement between the Naskapi Nation and Scandium Canada demonstrates that reciprocity is a core value and is reflected in their intent to include the Naskapi Nation in all steps of the development of the Project, while also offering the Naskapi Nation the opportunity to determine if the Project will go ahead. That is the true spirit of partnership, where both parties plan, decide and benefit together."*

THE FUTURE OF SCANDIUM CANADA

The company just completed 2,854 m of diamond drilling on its Crater Lake project and that it is currently demobilizing the drilling equipment. The drilling campaign had two main objectives. The first one was to complete geomechanical drilling to determine the optimal angles of the slopes of the proposed open pit design for the pre-feasibility study. It totaled 1,669 m in 6 holes.



The second objective was to confirm the potential extension of the TG Zone for an additional 250m length. Currently the Preliminary Economic Assessment ("PEA"), originally filed in July 2022, takes into consideration an initial mineralized zone of 350m in length. The focus of the additional drilling completed this summer was around extending that zone (TG Zone North Lobe). The Company is pleased to report that mineralization is present in all holes. In total, 1,185 m in 7 holes have been drilled on the southern extension.

On September 23rd the company disclosed that it had filed a provisional patent for aluminum-scandium alloys and their powders designed for additive manufacturing applications. This development, in collaboration with McMaster University, represents a significant advancement in the company's intellectual property portfolio. The move aligns with Scandium Canada's goal to establish itself as a leader in the scandium market, both through its mining project and by developing innovative applications for the metal.

As Scandium Canada prepares to undertake its Pre-Feasibility Study in the near term with completion targeted for 2025, it stands on the brink of unlocking significant opportunities within the burgeoning market for scandium-aluminum alloys—a crucial step toward advancing sustainable technologies across various industries.

TARTISAN NICKEL CORP.: MAKING INROADS AT THE KENBRIDGE NICKEL-COPPER DEPOSIT, NORTHWESTERN ONTARIO

By Lynnel Reinson Communications

Tartisan Nickel Corp. (CSE:TN) (OTC:TTSRF) (FSE:8TA) is a Canadian mining exploration and development company focused on battery metals headquartered in Toronto, Ontario. Tartisan's flagship project is the wholly-owned Kenbridge Nickel-Copper Deposit, located in the Kenora Mining District of northwestern Ontario. The company's portfolio also includes two polymetallic projects in Ontario, the Sill Lake Lead-Silver Project and Turtle Pond Night Danger Nickel Project. Tartisan Nickel is poised to help deliver the critical metals necessary for the North American supply chain and the global transition to clean energy.

President and CEO Mark Appleby describes how the company saw the opportunity in 2018 to reposition Tartisan upon acquiring their flagship Kenbridge Project as part of the Canadian Arrow Mines Limited deal: ***"We saw the need for battery metals and the looming adaptation of electric vehicles."*** (*Northern Miner*). Since acquiring the Kenbridge Project, Tartisan Nickel Corp. has directed its focus towards the three critical metals— nickel, copper, and cobalt—in advancing work on their Kenbridge Project.

Tartisan Nickel Corp. has updated the mineral resource estimate and completed a preliminary economic assessment and is now looking to get permits in place and further defining and expanding the mineral resource, which is open at depth and along strike. Definition drilling to bring the inferred ore deposits into the indicated category is a near term goal as one million tonnes plus could move into the indicated resource calculation.

Tartisan benefits from existing infrastructure such as the 622 meter, three-compartment shaft sunk by Falconbridge in 1954 that remains in good condition. Access is game-changing when attempting to develop a mining project; atop the benefit of this existing shaft, the Kenbridge road is being refurbished and developed to allow all-season access to the main deposit.

Dean MacEachern, Tartisan's geological advisor for the Kenbridge project, was a part of both Falconbridge and Canadian Arrow Mines during the periods they each held the asset, prior to the global adoption of large batteries and electric vehicles that began driving the significantly increased demand for nickel. He describes the asset and major advantage it presents: ***"At the top of the Kenbridge deposit, it's more disseminated and as you go deeper into the zones, it gets more semi-massive and massive. It gets narrower but the grade gets better."*** (*Northern Miner*).

This variable grading in the deposit will allow Tartisan to more readily accommodate price variations for nickel, and with the pre-existing shaft, Mr. MacEachern says that the expected capital expenditure will be substantially lower than other similar projects. ***"It's under $140 million to get started. That compares with a lot of large low-grade deposits that will take $2 billion to get going."*** (*Northern Miner*). The asset has undergone extensive drilling and surveying since 1937 with 100,000 plus meters of surface and underground drilling conducted, including 11,700 meters drilled by Tartisan in 2021. The results of the drilling are a measured and indicated resource of 117 million pounds of nickel (Ni), 66 million pounds of copper (Cu), and a million pounds of cobalt (Co).

Necessary next steps for the project are refurbishing and upgrading the road to the main deposit; Tartisan has retained Northwest Solutions Inc. to build out this all-season access to the Kenbridge project. Northwest Solutions is an Ontario-based services company offering forestry, mining, and environmental services, as well as training, project management support, and communications consulting services (*Newsfile*). A family owned-and-operated business since 2014, Northwest Solutions has designed an all-season access solution and now provides support to Tartisan Nickel including permitting and project management assistance. Brandi Shorthouse is the road project's finance and communications manager, and Kevin Shorthouse is the road project's design and road permitting project manager, bringing unique expertise to the endeavour as well as their connection to the local area, which Tartisan CEO, Mark Appleby believes will provide tremendous value to the Kenbridge project.

When attempting to refurbish and put in an all-season road, as well as potentially building out the larger project as a whole, local community and First Nations support are key to the success of any project. CEO Appleby first addressed how much he and the company value the relationships that they have built in the area. In support of these relationships, Tartisan Nickel named Greg Edwards as the overall project manager for Kenbridge, and as the company's First Nations liaison. Mr. Edwards has been consistent in his desire to work with, build, and support good relationships with the First Nations near the project: Naotkamegwanning First Nation, formerly known as the Whitefish Bay First Nation, Northwest Angle #33 First Nation, and Northwest Angle #37 First Nation. Since 2007, the company has been engaged with Treaty #3 and recognized the First Nations' rights to lands, seeking their consent, agreement, and continuing to engage all First Nations in our area of influence.

As part of Tartisan's ongoing practises ongoing community relations, the Kenbridge project received a blessing in an October 2021 ceremony conducted by an elder from one of the First Nations. With current road upgrades underway, Tartisan will be a part of the next ceremonial blessing occurring this autumn. Working with First Nations and engaging local companies for the Tartisan project, Tartisan intends to continue advancing project goals and hiring local First Nations personnel whenever possible. Looking at 2024-25, Mr. Appleby says *"There are multiple, on-going initiatives coming together. Alignment with Indigenous communities, summation of the baseline studies for project permitting, and the commencement of all-season access construction"*. Appleby states, *"These, combined with new geophysical initiatives and a drill program, will lead to expansion of the Kenbridge Resource Estimate and support a substantially higher enterprise value. "Our efforts should prove to have a profound impact on increasing shareholder value and make for exciting times over the next twenty-four months*," Appleby concludes.

POWER PIVOT TO POLYMETALLIC AT POWER NICKEL

By Lynnel Reinson Communications

The world's most valuable mineral deposits are polymetallic. The Norlisk polymetallic mine alone is estimated to have in situ values in excess of a trillion dollars. Now **Power Nickel (TSX-V:PNPN) (OTC:PNPNF) (FRA:IW)** may have discovered the next major polymetallic play at their flagship Nisk project near James Bay in Quebec, Canada. Investors are starting to pay attention.

According to CEO Terry Lynch, drill results announced in May have pushed the project "beyond just nickel" with 15.4 m at 0.44 grams per tonne of gold, 22.02 grams silver, 5.06% copper, 13.12 grams palladium, 3.35 grams platinum and 0.015% nickel in hole PN-24-055. That's just one of the 15 out of 16 winter drill holes that hit mineralization at Nisk's Lion zone.

In a soft global market for nickel, the polymetallic breakthrough at Nisk means the company can leverage copper, gold and silver, and platinum group elements mineralization. They also benefit from high grades, and attractive mine economics from their unique metal blend.

The discovery is so unusual it has attracted interest from high profile investors including Rob McEwen and Robert Friedland. They participated alongside sophisticated mining funds in Power Nickel's recent $20 M round of financing in June this year.

The executive team and board is filled out with long time mining veterans, led by CEO Terry Lynch. Their newest board member Dr. Steve Beresford adds world class geological expertise in polymetallic mining, and is helping coordinate the exploration program. In that effort he is employing approaches he used successfully as Chief Geologist at First Quantum and MMG and Chief Scientific Officer at IGO.

Beresford describes the geological systems at Nisk as a "Goldilocks zone" in which they can get value from all the metals in systems that are "very high grade" with "a very small footprint."

Now Power Nickel is being rewarded by the market with their stock price nearly quadrupling from $0.23 to highs above $0.85, on the back of their winter drilling assays.

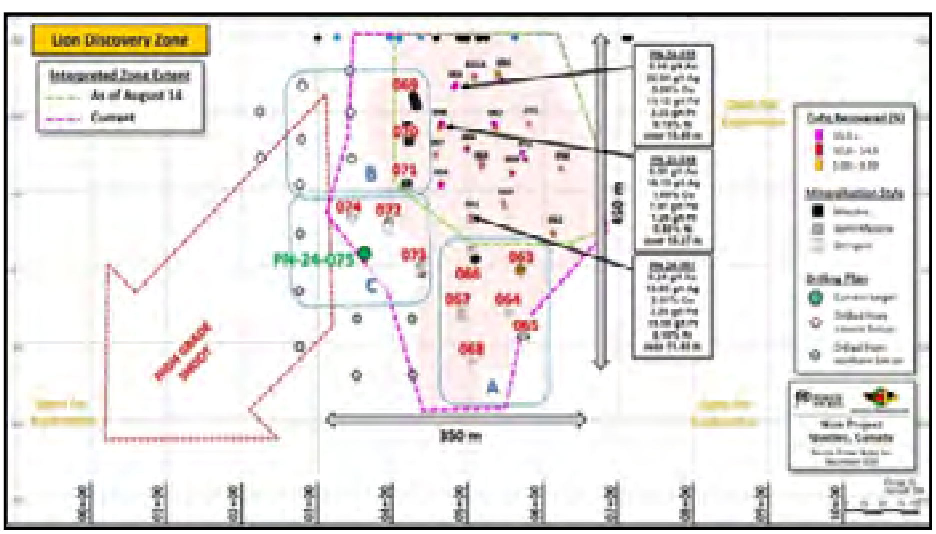
Summer 2024 proved a productive season for Power Nickel, with 10 of the 12 new holes drilled at the Lion Zone 5.5 km east northeast of Nisk Main, hitting sulfide mineralization. Lynch praised the results of the summer drill program, expressing optimism based on the success and future potential of the Nisk project.

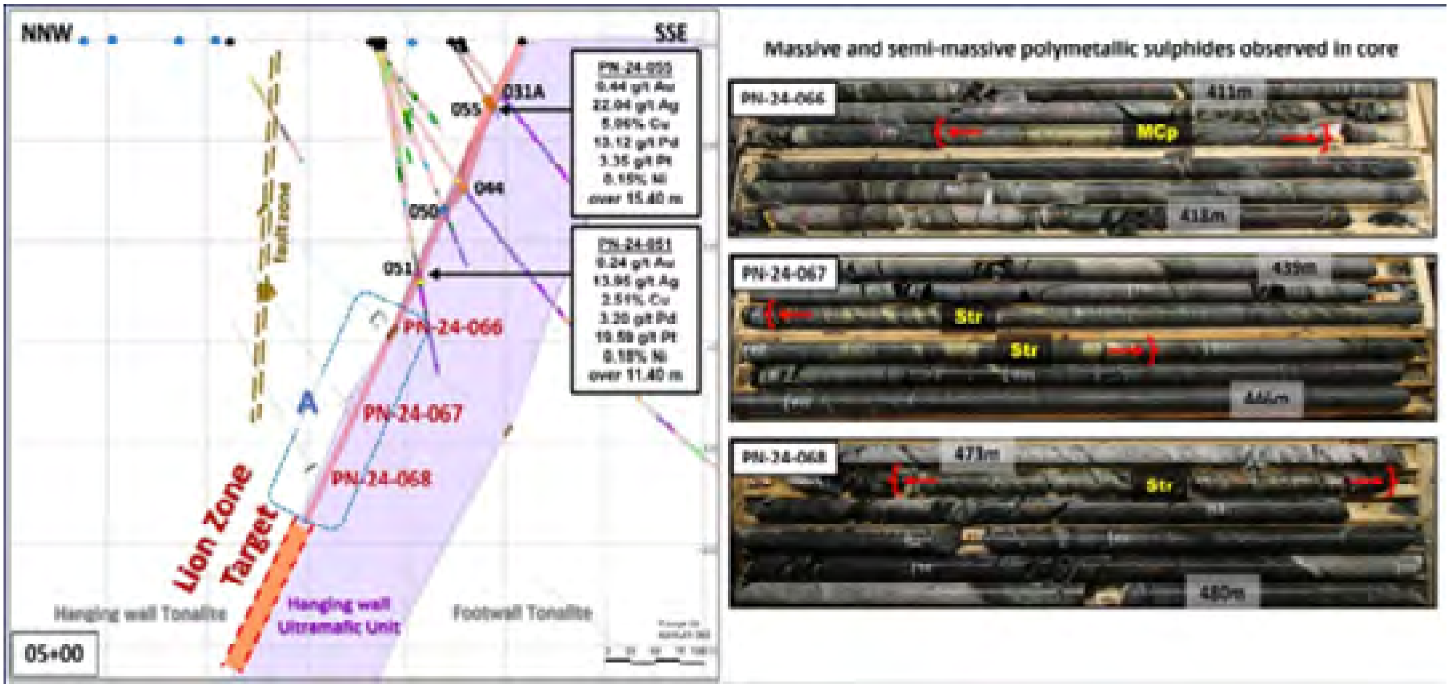
Their summer program had two objectives:

(1) Growing the Lion Zone

(2) Establishing the process designed by Dr. Steve Beresford to maximize their ability to systematically explore the project.

Lynch notes ***"I am very pleased to report success in accomplishing these objectives"***. The Lion Zone growth is evident in the picture above, and the second is their fully funded 30,000 m winter drill program. The Lion Zone, and indeed Nisk overall, is taking shape as what they believe will be a world-class polymetallic discovery. (*Sept 10, 2024 Release*.)





CEO Terry Lynch remarked *"This has become a polymetallic project. They're super rare and they're super valuable."* (*Northern Miner*) Along with Power Nickel's innovation focused approach, the magnitude of the discoveries in the Lion Zone are driving investor confidence. The key message Lynch has for investors: this isn't a simple nickel play anymore.

The *"big revelation from a business perspective is the transformation from nickel sulphide to polymetallic the market has not really figured this out yet and this makes now an excellent time for investors to do their homework on Nisk...we think they will like what they find."*

GEOPOLITICAL PRESSURES HIGHLIGHT NIOBAY'S FOOTHILLS TITANIUM PROJECT SIGNIFICANCE

By Nick Tartaglia

NioBay (TSX-V: NBY) (OTCQB: NBYCF) is a public company currently working on the development of 3 critical minerals projects in Canada:

1) the world-class James Bay Niobium project,
2) the Crevier Niobium project and
3) the Foothills project.

With projects in both Quebec and Ontario, NioBay offers investors an interesting opportunity supported by its geo-political and critical metals thesis. We will further elaborate on these points as we explain the main projects in development.

FOOTHILLS

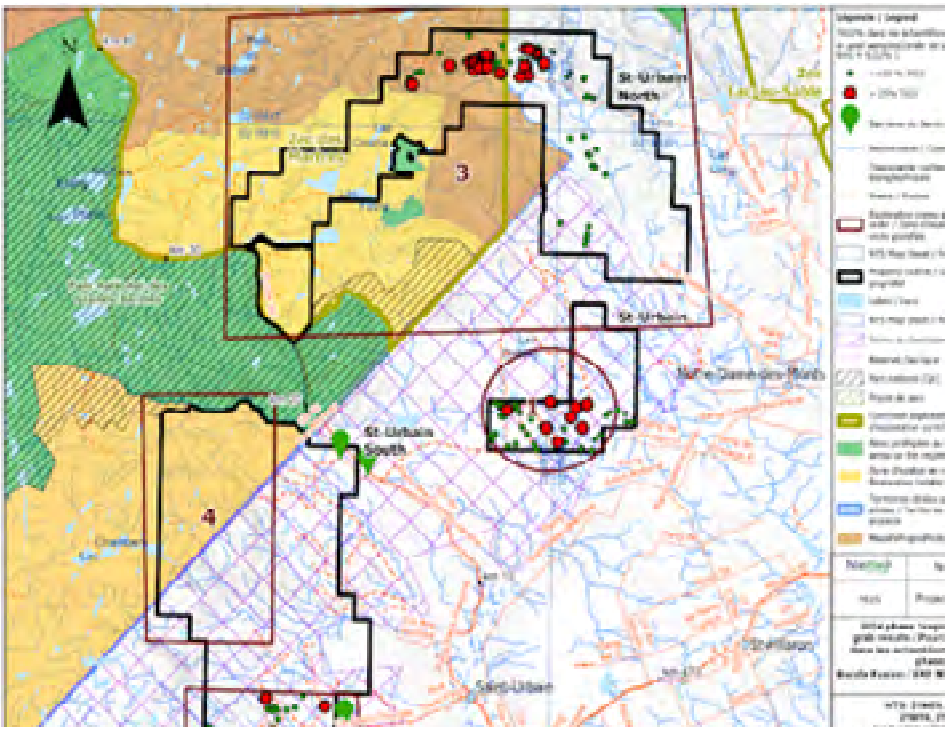
The Foothills project has gained attention since NioBay announced, in its press release of August 7th, the *"Presence of High Titanium Content in the Northern Sector of the Foothills Property"*:

"NioBay Metals Inc. ("NioBay" or the "Company") (TSX-V: NBY) (OTCQB: NBYCF) is pleased to announce that the receipt of the second set of laboratory results on the Foothills Project confirm the presence of high TiO2 (titanium) grades in rock outcrops located in the northern section of the property. This is massive ilmenite. The Foothills Project is located north of Saint-Urbain, 100 km north of Québec City and 90 km south of Saguenay (La Baie region), Québec. The project covers an area of approximately 285 km2 and is comprised of five separate claim blocks."

The promise demonstrated by the Summer 2024 exploration campaign, which showed outcrops with a TiO_2 value greater than 30%, has led the Company to devote more attention and resources to the project that had been anticipated. NioBay is now authorized and is laying the preparations for a 2,500-meter drilling campaign to verify/confirm the geophysics, the results of which will then be used to further expand into a much larger drilling campaign. While the Foothills property remains under option from Vior Inc., NioBay has full control of the area to explore and define the opportunities in this area.

Why Foothills? Why now? According to CEO Jean-Sébastien David, the potential for titanium at Foothills makes a compelling argument for exploration, as it is a critical mineral that has a number of significant industrial applications:

"Titanium is as strong as steel but much less dense. It is therefore important as an alloying agent with many metals including aluminium, molybdenum and iron. These alloys are mainly used in aircraft, spacecraft and missiles because of their low density and ability to withstand extremes of temperature. They are also used in golf clubs, laptops, bicycles and crutches. Power plant condensers use titanium pipes because of their resistance to corrosion. Because titanium has excellent resistance to corrosion in seawater, it is used in desalination plants and to protect the hulls of ships, submarines and other structures exposed to seawater." - *Titanium - Element information, properties and uses | Periodic Table (rsc.org)*



99.9% fine titanium

Understanding the key players in the production of Titanium Sponge is also important:

"Titanium minerals are used to make titanium sponge, which is turned into metal for industrial applications. China is the world's top producer of titanium sponge, accounting for 57% of global output at 210,000 tonnes last year, according to U.S. Geological Survey (USGS). USGS data shows Japan comes next with nearly 17%, followed by Russia with nearly 13% of the market. Kazakhstan produced 16,000 tonnes and Ukraine 3,700 tonnes." - *The importance of Russian titanium to global industry - MINING.COM*

The titanium firm in Russia, VSMPO-AVISMA, has a monopoly on the production of this titanium sponge, which creates difficulties for countries that have imposed sanctions on Russia, such as Canada and Ukraine. However, because Canadian aviation companies depend on this firm's production, the Liberal Government of Canada has given exemptions to firms like Airbus and Bombardier to obtain supplies from this Russian firm. - *(1) Bombardier, Airbus get exemptions from Canadian sanctions on Russian titanium | Globalnews.ca*

After placing the sanction back in 2022, Airbus CEO Guillaume Faury *told reporters* ***"we think sanctioning titanium from Russia would be sanctioning ourselves."***

As this metal is of critical value, especially in its aviation and military applications, Canada has been forced to "hold its nose" and permit the procurement of titanium sponge from this Russian firm. In the long term, however, the West needs to develop a secure, domestic supply, which is why NioBay feels it is important to explore for and develop titanium at Foothills.

The other area of focus for NioBay is niobium, another critical mineral that is present at the sites of its two other projects, James Bay Niobium and Crevier. Niobium is a critical metal recognized by 3 major western economies: the USA, Canada and the EU. There is clear intention from Western nations to fund and fuel domestic supplies in order to ensure access to these critical metals. The West has gone far too long without supporting domestic supplies.

A quick look at use cases of Niobium:

"Niobium is used in alloys including stainless steel. It improves the strength of the alloys, particularly at low temperatures. Alloys containing niobium are used in jet engines and rockets, beams and girders for buildings and oil rigs, and oil and gas pipelines. This element also has superconducting properties. It is used in superconducting magnets for particle accelerators, MRI scanners and NMR equipment." - *Niobium - Element information, properties and uses | Periodic Table (rsc.org)*

CREVIER

The Crevier Project is based on the deposit discovered in 1974 by SOQUEM. NioBay Metals acquired it in 2008 and may just become the only producer of niobium oxide and tantalum in North America. There is currently an MRE:

- Measured & indicated: 25.4 Mt at 0.20% Nb_2O_5 for 49,700t and 234 ppm Ta_2O_5 for 5,900t
- Inferred 15.4 Mt at 0.17% Nb_2O_5 for 26,200t and 252 ppm Ta_2O_5 for 3,900t

They received a $500,000 research and development grant by the 'Consortium de Recherche et D'innovation en Transformation Métallique (CRITM)' and the 'Ministère des Ressources Naturelles et des Forêts (MRNF)' to demonstration the pilot-scale niobium-tantalum concentration process and the production of niobium and tantalum oxides.

It seems they already have a potential client knocking at their door to secure supplies if all tests go well from the pilot plant.

JAMES BAY

The property was acquired in 2016 and is 100% owned by NioBay Metals. The project is in the Moose Cree Traditional Territory of the James Bay Lowlands in Ontario, Canada covering 2,530 hectares. The project is now entering advanced exploration and development stages and are currently in discussions with MCFN and the Ontario government to get back in the field and to finish drill program no.2.

Some key developments to date:

James Bay Resource			
Classification (cut-off 0.3%Nb2O5)	Tonnes (Mt)	Grade (%Nb2O5)	Contained Nb2O5 (M kg)
Indicated	29.7	0.53	158
Inferred	33.8	0.52	177
Crown Pillar	7.2	0.50	36

NSR Valued: $184/t

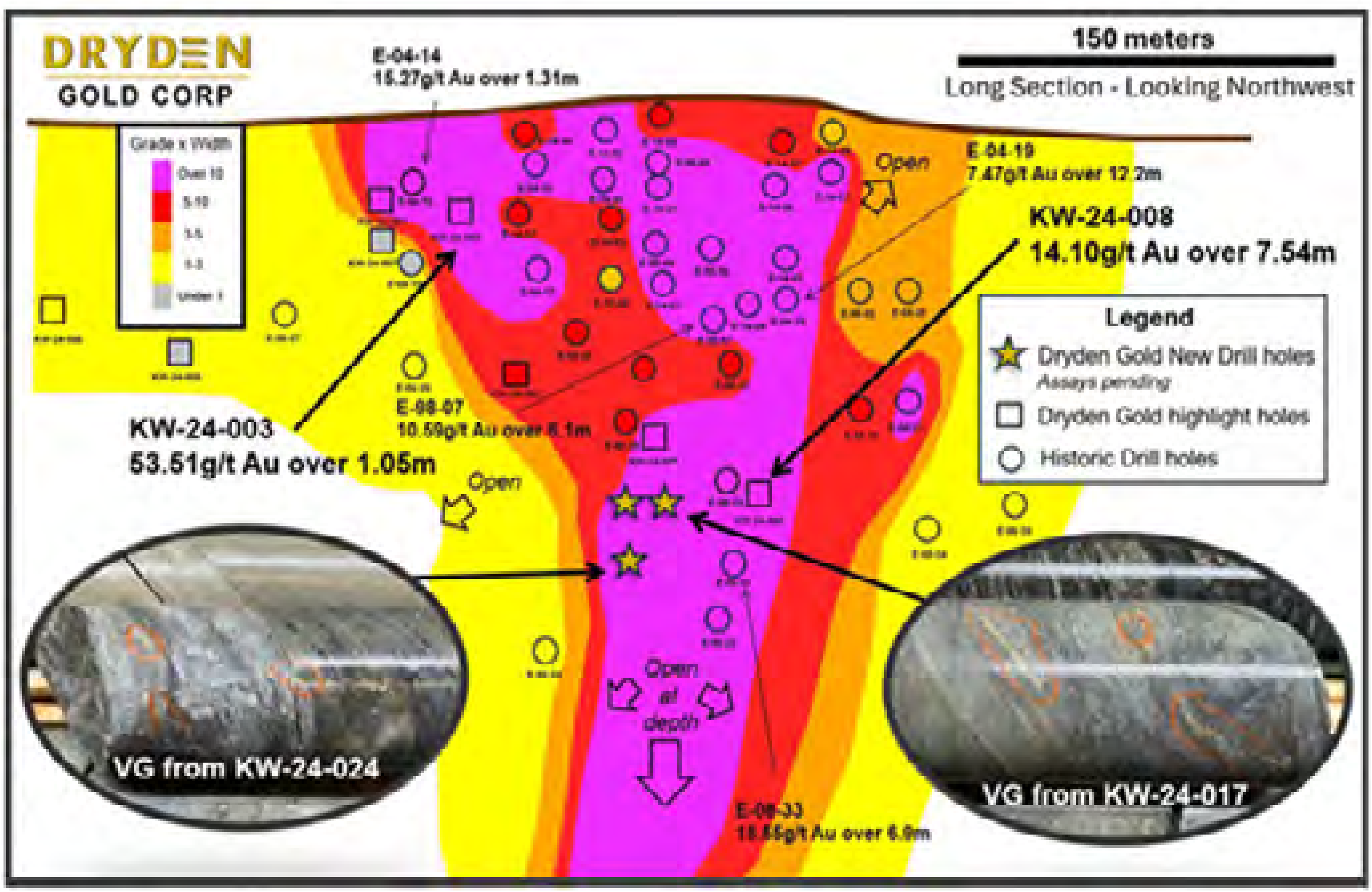
Source: April 2024 PRESENTATION (niobaymetals.com)

PEA Highlight

NioBay Metals is keeping busy with these 3 projects, and you can expect to see news flow to be coming throughout 2025 as these projects continue to develop and produce results.

Production limited to <5% world demand

Scenario	Mine Life	Nb Production	Post-Tax NPV$_{8\%}$	Post-Tax IRR
Open pit	30 Years	5,470 tpa	C$1,008 M	27.5%
Open pit & underground	23 years	6,213 tpa	C$856 M	27.0%
Underground	23 years	6,283 tpa	C$733 M	21.6%



TRUMP WATER FAUCET COMMENTS AND THE COLUMBIA RIVER TREATY

By Rick Mills

Donald Trump has once again waded into an issue he doesn't understand — this time over diverting Canadian fresh water south for irrigating drought-affected areas.

The Republican presidential nominee announced an idea to help alleviate California water shortages involving British Columbia.

"So you have millions of gallons of water pouring down from the north with the snow caps in Canada and all pouring down and they have essentially a very large faucet," Trump said last Friday.

"And you turn the faucet and it takes one day to turn it. It's massive. It's as big as the wall of that building right there behind you. You turn that, and all of that water aimlessly goes into the Pacific (Ocean), and if you turned that back, all of that water would come right down here and into Los Angeles," he said.

Informed Canadians reacted immediately to Trump's facile idea.

"It's not that simple. To me, it's an uninformed opinion. It's somebody that doesn't fully understand how water works and doesn't understand the intricacies of allocating water not only between two countries but also for the environment," Tricia Stadnyk, an environmental engineering professor at the University of Calgary, *told CTV TV in Calgary*.

The faucet Trump is talking about is the Columbia River, which begins in southeastern British Columbia and flows south to Oregon, where it empties into the Pacific Ocean near Astoria.

The Columbia River Treaty regulates how much water is flowing across the border and what it's going to be used for. The treaty originally required Canada to provide 15.5 million acre-feet of water storage by building three dams: Duncan, Hugh Keenleyside and Mica.

First signed in 1961 by Canadian Prime Minister John Diefenbaker and US President Dwight Eisenhower, the treaty was recently renegotiated and there is nothing in it about diverting limited water in US states like Idaho to California. *Read more on the history*

An agreement-in-principle signed in July enables officials to update the treaty to ensure continued flood-risk management and co-operation on hydro power on the river, *CTV News reported*.

US EYES CANADIAN WATER

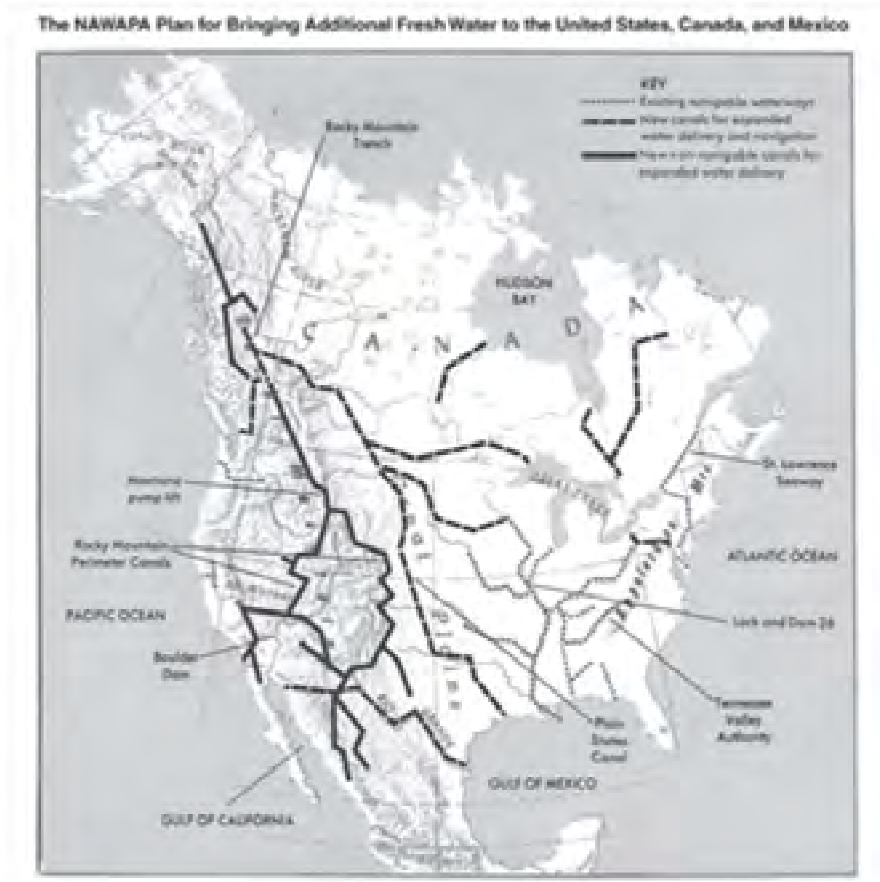
It's not the first time that California and Nevada have looked north to get more water, states an *article published* in the Idaho Capital Sun.

Water — the next US-Canada trade irritant — Richard Mills

Columnist Rocky Barker reminds readers that in 1990, Los Angeles County Supervisor Kenneth Hahn won the unanimous vote of his colleagues on the Board of Supervisors to study transferring water from the Columbia River and the Snake River, its largest tributary.

An aqueduct system would start near Hagerman, Idaho, where river water would be pumped about 6,500 feet above sea level to Jackpot, Nevada. From there, the water would flow downhill to Lake Mead, where it would turn turbines to generate electricity at the Hoover Dam.

While the idea eventually died, Barker writes that Donald Trump has resurrected it. He also notes the US



Senate must approve the re-negotiated Columbia River Treaty before it's finalized, and asks whether, if Trump is re-elected, he will try to rewrite the treaty so it diverts Columbia-Snake River water to California.

Stadnyk, the environmental engineering professor, says the US doesn't get to decide how much water goes across the border and how much stays.

"There is not a lot of water in any system just sitting there to be had. We are over-allocated in almost all our systems, for the increases in population that we have and the demands and uses of our water supply, both in Canada and the U.S." she said.

Moreover, a diversion project would cost billions and the consequences would have everlasting effects on the ecosystem.

"We can't just be taking water and diverting it and sending it somewhere else. Besides that, every time that we're asked to do that, it's a sign that we're living outside of our means," she said.

Werner Antweiler with the University of British Columbia Sauder School of Business said that there is no limitless supply of water in Canada as claimed by Trump.

"In fact, we've actually had less water because of climate change that's going south," he told Global News. *"And so there has to be some adjustments made. But also the water is used for hydro dams. It's used for maintaining the fisheries in the Columbia River all the way to the coast, all the way through Oregon primarily. And so there is just no spare water here, frankly, shipping it anywhere."*

Antweiler said B.C. and Canada needs its own water and there is no more to reroute in bulk to other countries.

"It's unrealistic for ecological reasons as well as commercial reasons. And it would actually require a treaty and we would not negotiate a treaty that would be to the detriment of Canada. We would only want to negotiate a treaty that would be beneficial to us," Antweiler said.

"In fact, that is exactly what the Columbia Treaty is doing."

Trump said that if B.C. would turn the faucet then *"farmers would have all the water they needed."*

Antweiler said it's best to take comments like this one with a grain of salt.

"I'm sure Mr. Trump has never studied hydrology or the economics of water management and the actual, the needs of California, because what California needs is mostly local water," he said.

"They need to actually manage their own water much better. They actually have water, but they're mismanaging it for a number of reasons."

Antweiler added that there is a lot that California can and should do to manage their water sources, including the use of water in agriculture.

California, whose nearly 40 million population is greater than Canada's, **is North America's biggest supplier of fruits, nuts and vegetables. Not being able to properly irrigate its 43 million acres used for farming is their sole motivation to look elsewhere for a reliable source of H_2O.**

In fact, Canadians may be surprised to learn that plans have been on the books since the 1950s to divert a large amount of water from Canada, state-side.

The North American Water and Power Alliance (NAWAPA) proposed to use nuclear explosions to blast canals and channel water from the north-flowing Yukon, Liard, and Peace rivers, southward to water-deprived US agricultural regions and cities. A 2015 column *posted on Radio Canada International* notes that NAWAPA is still very much alive, with detailed proposals and analysis made in 2010 and 2012.

Another scheme, called the Grand Canal, would dam the top of James Bay, turning it into a huge reservoir, and cut a massive trench through northern Ontario that would bring fresh water to the Great Lakes, from where Americans could siphon however much water they need for farms, towns and cities impacted by climate change.

Abhorrent as these ideas seem, some Canadian politicians have advocated selling Canadian water down the river. Former Prime Minister Brian Mulroney introduced a bill that would have allowed exports by tanker and small-scale land diversion. Ex-NDP leader Thomas Mulcair wanted to explore the concept of bulk water exports while he was Quebec's environment minister.

The Montreal Economic Institute *reportedly argued that water exports would be a huge boon to heavily indebted Quebec*, pointing out the province could earn as much as $65 billion annually by exporting around 10% of its fresh water supply.

Of course a large amount of Canadian water was shipped out of the country by Swiss consumer products giant Nestle, which sucked up vast amounts of groundwater for its bottling plant in Ontario, before *selling its Canadian water business in 2020*.

Columnist Lloyd Alter, in his piece '*Canada has water. The US wants it*', claims that 3,200 cubic feet per second is pumped from Lake Michigan and sent south through the Chicago River and into the Mississippi, through deals made between Canadian and US industries.

The federal government's Bill C-383 bans inter-basin transfers into international rivers but the legislation does not cover non-boundary waters or water resources in the north, *states the Council of Canadians*.

A further loophole in the act, is it narrows the definition of water removal to 50,000 liters or more, and exempts water used to make beverages.

CONCLUSION

Canadian politicians should be wary of any overtures the United States makes toward us for our water, not only because we may need all we can get, as drought conditions migrate north, but given how poorly our southern neighbour and supposed friend has treated us lately.

Consider how former President Trump decided the first country he would visit after inauguration in January 2017 was Saudi Arabia. Most incoming US presidents prioritize a visit with Canada, arguably its greatest ally, friend, and neighbor. The snub is not easily forgotten.

In 2018 Canada was surprisingly included among countries subject to Trump's tariffs on imported aluminum and steel.

Then there was the fight over NAFTA.

In renegotiating the trilateral agreement between Canada, the US and Mexico, Trump railed against Canadian dairy farmers, calling tariffs on milk, cheese and butter coming from the United States "a disgrace" and threatened to slap a 25% duty on Canadian-made cars."

After Trump lost the election to Joe Biden many in Canada hoped the tense relationship between the two countries would become¬¬ more cordial, but Biden was quick to throw sand in the face of that notion. On his first day in office, Biden *announced the Keystone XL pipeline expansion project would be scrapped*.

It took a trade war with China for the US to realize how easily it can be held ransom over rare earths, cobalt, graphite, manganese or any other of the 35 minerals the US Geological Survey considers critical to US economic and national security.

Realizing that Canada supplies 13 of these minerals, and is America's leading supplier of indium, potash, aluminum and tellurium, its second-largest supplier of tungsten, manganese and niobium, and ships roughly a quarter of US uranium supply, suddenly all previous acrimony was forgotten amid the new threat posed by China's monopoly over much of the world's critical minerals supply chain.

In January 2020, the two nations agreed to a Joint Action Plan on Critical Minerals Collaboration aimed at improving critical minerals security.

That was followed in 2021 with an agreement between Biden and Trudeau to build a US-Canada electric vehicle supply chain.

In March 2023, President Biden and Prime Minister Trudeau launched the one-year Canada-US Energy Transformation Task Force (ETTF) to accelerate cooperation on critical clean energy opportunities and supply chains. The ETTF *was extended for another year this past May*.

What gets me, though, is how bad Canadian politicians are at negotiating. Here we finally have a resource that should give us significant leverage in dealing with our largest trading partner. In return for offering our minerals and our mining expertise, what are we asking for in return? I've yet to discover anything in print.

Our best friend and ally's reaction? To increasingly view Canada as a kind of *"51st State" for mineral supply purposes* (quoting here from Reuters).

Excuse me? A 51st State? What happened to Canadian sovereignty over it's natural resources? Where's the contrition in treating little brother Canada like a punching bag over our oil? Our minerals? Our lumber? Our dairy products? And now our water?

If we can't even stand up for ourselves over mining, an area of national expertise since well before the United States asked for our help, what hope do we have in maintaining Canadian sovereignty over fresh water?

METALS SECURITY OF SUPPLY DEPENDS ON JUNIOR RESOURCE COMPANIES

By Rick Mills

A junior resource company's place in the food chain is to acquire projects, make discoveries and hopefully advance them to the point when a larger mining company takes it over. Discoveries won't be made if juniors don't have boots on the ground, if they aren't out in the bush poking around and breaking rocks.

Few exploration companies have the money or technical expertise to "go mining". For many, the goal is to find a deposit that's good enough to attract a major who will acquire the asset. Another pathway is for the junior to partner with a larger company. An option or joint venture (JV) agreement is a way for juniors to gain access to the financial and technical resources needed to build the mine.

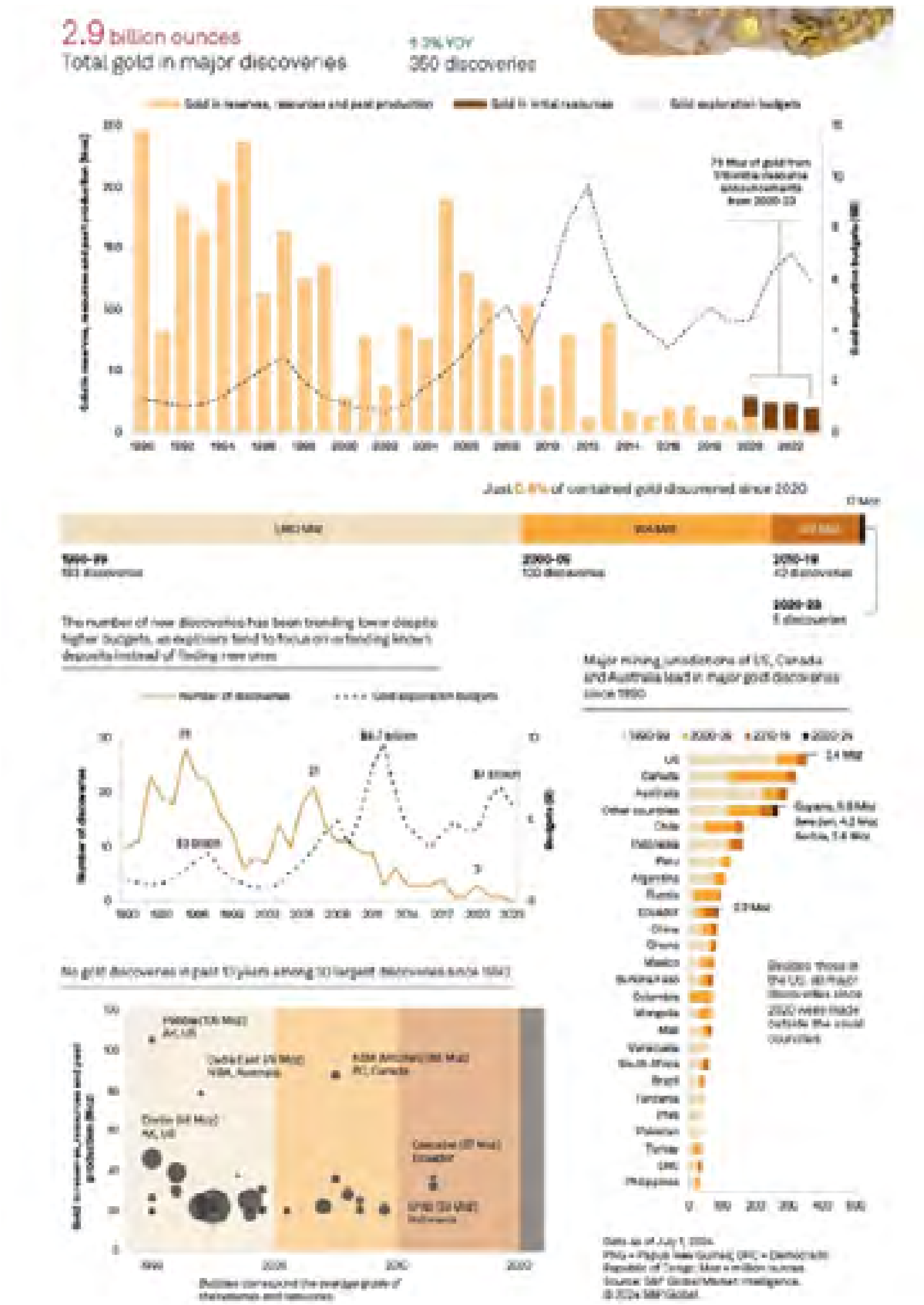
Juniors are extremely important to major mining companies because they are the firms finding the deposits that will become the next mines. In this way, juniors help the majors to replace the ore that they are constantly depleting in their operating mines. Put another way, juniors find the resources for majors to turn into mineable reserves.

'Indispensable' mining and juniors' place in the food chain

FINANCINGS/ CAPEX DRYING UP

One source points out that senior miners have been allocating a relatively small portion of their revenues to exploration spending, with most expenditures invested in developing existing mines and measures to reduce operating costs.

If the seniors aren't exploring, and when was the last time you heard of a major mining company making a greenfields discovery, it falls to the juniors. But junior mining financing has pretty much dried up; global exploration budgets in 2021 were half of what they were in 2012.



Source: S&P Global

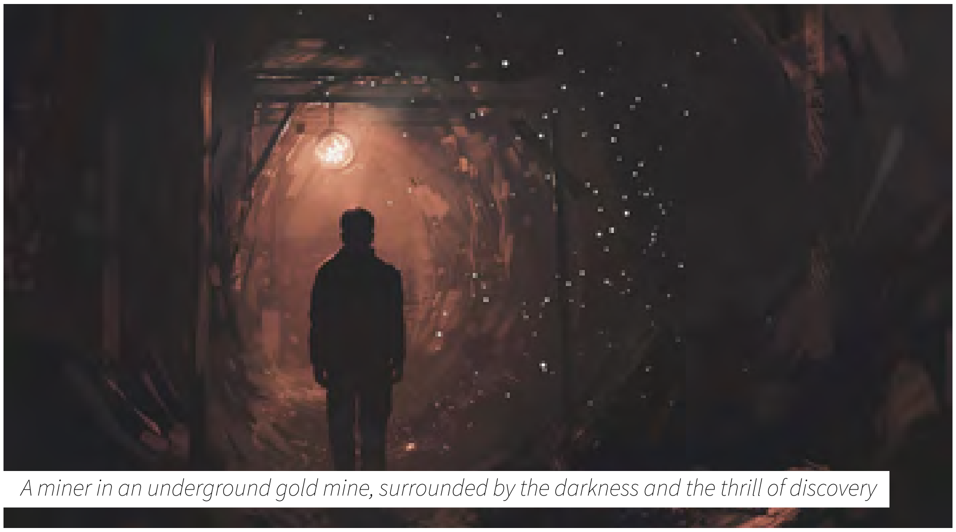
Capital expenditures in mining fell from approximately $260 billion in 2012 to $130 billion in 2020 (corresponding to 15% and 8% of industry revenues, respectively), McKinsey & Company found.

According to Natural Resources Canada, in 2023 exploration spending by juniors declined to $2 billion, down 19% from $2.5 billion in 2022.

But it gets worse, much worse.

According to a recent analysis by S&P Global, gold discoveries around the world have become more scarce and smaller, dampening the outlook for future supply of the metal.

"Only 78, or 44% of these announcements are from greenfield assets while the rest are from newly discovered deposits within existing projects, demonstrating the industry's preference for exploring known assets."



A miner in an underground gold mine, surrounded by the darkness and the thrill of discovery

The report via Mining.com found there have only been five major gold discoveries since 2020 adding about 17 million ounces. A major gold discovery was defined as containing 2 million ounces in reserves, resources and past production.

However, S&P's report noted that ***while the number of discoveries and amount of gold continue to grow each year, most of the assets were discovered decades ago….***

It also pointed out that ***the average size of the recent gold discoveries has shrank, at about 3.5 million ounces compared with 5.5 million ounces during 2010-2019. In fact, none of the discoveries made over the past 10 years entered the list of the 30 largest gold discoveries.***

One of the graphs above contains an important statement. It says "The number of discoveries has been trending lower despite higher budgets, as explorers tend to focus on extending old deposits instead of finding new ones."

The S&P report says, *"In addition to analyzing past discoveries, we have examined prospects using our data on initial resource announcements, which we track monthly… we identified 176 initial resource announcements with a total of 79Moz of contained gold."*

And then this:

"While not all of these assets will become major discoveries, the increasing number of announcements in recent years brings much needed optimism to an industry that has experienced fewer and smaller discoveries. Since 2017 annual gold exploration budgets have more than doubled, reaching a peak of $7 billion in 2022 after a low of $3.3 billion in 2016. Although budgets fell in 2023 due to tighter financing commissions, they remain elevated compared to previous years. This trend is likely to continue as long as gold prices remain high.

"The higher exploration budgets since 2017 have contributed to more and initial larger resource announcements. From 2017 to 2023, there was an average of 42 announcements with an average of 24Moz of gold each year compared to an average of 30 announcements and 13Moz of gold when gold budgets were declining."

Let's decipher what S&P Global is really saying in its report, because either knowingly or unintentionally, it fails to state the obvious: that there is no money for the juniors!

The report ballyhoos the fact that, despite there being a lack of new discoveries in the past decade, increasing gold budgets *"brings a tad of optimism for the future of gold supply, as the number of initial resource announcements continues to grow in size and number."*

Optimism for whom? Certainly not junior resource companies.

As for being optimistic on future gold supply, S&P research analyst Paul Manalo said the data supports the firm's long-held view that the industry's focus on older and known deposits limits the chances of finding huge gold discoveries in early-stage prospects. No kidding.

"The lack of quality discoveries in the recent decade does not bode well for the gold supply," said Manalo.

"Based on the latest monthly Gold Commodity Briefing Service, we expect gold supply to peak in 2026 at 110 million ounces, driven by increased production Australia, Canada and the US — countries that also account for the most discovered gold."

He added that gold supply is expected to fall to 103 million ounces in 2028, resulting from a decline in supply from these countries.

Why would supply decline from these countries? In Canada and the United States, it can take up to two decades to build a mine from discovery to production. Any new mines that started on the development path from 2008 onwards likely won't add to the gold supply by 2028, because they won't yet be operational. With few mines in the pipeline in these jurisdictions, mine production must come from existing, increasingly depleted mines.

As for peak gold, it's already here.

In a world of resource depletion, it falls to gold exploration companies to fill the gap with new deposits that can deliver the kind of production required to meet gold demand, which is currently out-running supply.

The gold market continues to experience tightness due to difficulties expanding existing deposits, and a pronounced lack of large discoveries in recent years.

In 2023, 4,448 tonnes of gold demand minus 3,644t of gold mine production left a deficit of 804t. Only by recycling 1,237t of gold jewelry could the demand be met. (The World Gold Council: 'Gold Demand Trends Full Year 2023')

Tonnes	2022	2023	Y/y % change
Total supply	4,751.9	4,898.8 ▲	3
Mine production	3,624.8	3,644.4 ▲	1
Net producer hedging	-13.1	17.0 ▲	-
Recycled gold	1,140.1	1,237.3 ▲	9

Source: Metals Focus, World Gold Council

This is our definition of *peak gold*. Will the gold mining industry be able to produce, or discover, enough gold, so that it's able to meet demand without having to recycle jewelry? If the numbers reflect that, peak gold would be debunked. We've been tracking it since 2019, and it hasn't happened yet.

In the second quarter of 2024, gold demand reached its highest second quarter on record, but supply still failed to keep pace. Mine production of 929.1 tonnes fell short of total gold demand of 1,258.2 tonnes. Only by recycling 335.4 tonnes could Q2 gold supply meet Q2 demand.

It isn't only gold projects that juniors are having trouble getting financed, leading to fears that a paucity of new deposits will lead to commodity shortages. We see this particularly with critical minerals.

Kai Hoffman, the CEO of Soar Financial, *told Kitco Mining* in May that despite higher precious metal and copper prices, the generalist investor is missing from resource stocks and "there is no euphoria."

In terms of financings, Hoffman said the market is trending back to gold and silver, despite $180 million raised in the uranium space in the first three months. ***"But it's all later-stage projects,"*** Hoffman said, affirming the conclusions reached by the S&P report.

	Q2'23	Q3'23	Q4'23	Q1'24	Q2'24	y/y % change
Supply						
Mine production	899.7	937.3	954.6	859.1	929.1 ▲	3
Net producer hedging	-15.7	23.8	23.0	-24.5	-6.3 -	-
Recycled gold	324.0	290.1	313.5	348.5	335.4 ▲	4
Total Supply	**1,207.9**	**1,251.2**	**1,291.1**	**1,183.1**	**1,258.2** ▲	**4**
Demand						
Jewellery fabrication	494.1	581.0	583.4	534.4	410.6 ▼	-17
Jewellery consumption	479.4	520.0	623.4	479.1	390.6 ▼	-19
Jewellery inventory	14.7	61.0	-40.0	55.2	20.0 ▲	36
Technology	72.8	77.3	82.2	80.5	81.1 ▲	11
Electronics	59.1	63.4	67.6	66.4	67.6 ▲	14
Other Industrial	11.3	11.6	12.2	11.8	11.3 ▼	0
Dentistry	2.4	2.3	2.3	2.3	2.3 ▼	-5
Investment	252.6	155.9	257.4	200.4	253.9 ▲	1
Total bar and coin	273.7	295.0	312.8	313.4	261.0 ▼	-5
Bars	164.0	206.8	220.7	223.3	183.6 ▲	12
Official coins	85.3	54.3	60.3	66.0	52.7 ▼	-38
Medals/Imitation coins	24.4	34.0	31.9	24.1	24.8 ▲	2
ETFs & similar products	-21.1	-139.1	-55.4	-113.0	-7.2 -	-
Central banks & other inst.	173.6	359.4	211.1	299.9	183.4 ▲	6
Gold demand	**993.1**	**1,173.7**	**1,134.1**	**1,115.2**	**929.0** ▼	**-6**
OTC and other	214.9	77.5	156.9	67.9	329.2 ▲	53
Total Demand	**1,207.9**	**1,251.2**	**1,291.1**	**1,183.1**	**1,258.2** ▲	**4**
LBMA Gold Price (US$/oz)	1,975.9	1,928.5	1,971.5	2,069.8	2,338.2 ▲	18

Source: ICE Benchmark Administration, Metals Focus, World Gold Council

An *article earlier this year from Investing News Network* tackled the problem of junior financing. The issue was a theme both at the Vancouver Resource Investment Conference in January, and the annual PDAC event in March in Toronto.

INN quoted Pierre Lassonde, co-founder and chair emeritus at Franco-Nevada (TSX:FNV) as saying that retail investors have stayed away from the resource sector in favor of the quick money and flashy profiles associated with big tech firms.

According to Lassonde, the tech stocks known as the "Magnificent 7" together represent US$13.1 trillion in market cap, close to the estimated US$15 trillion in gold that has been mined through history, and more than 50 times the US$250 billion combined market cap of all gold equities, including royalty companies.

"(Of the US$250 billion), half of that is six companies, and then the other half, US$125 billion, is about 150 to 300 companies — in the scheme of things for investors, they become irrelevant," he said.

Lassonde added that asset and fund managers are steering clear of gold due to factors such as disasters, capital costs and bad execution of mergers. He provided the example of Newmont (TSX:NGT), whose share price reached nearly US$90 in April 2022, but as of the end of February had fallen as low as $30 following its merger with Newcrest. It currently trades for $53.11.

Jacqui Murray, partner with Resource Capital Funds, said there's been a generational shift among private equity funds, with younger managers choosing not to invest in mining for environmental and ethical reasons, especially with the new buzzword, ESG.

In a section entitled 'Explorers and developers left out to dry', INN wrote:

Bringing new mines online is a long process. ***It takes 10 to 20 years to move an asset from discovery to production***, and the vast majority of discoveries don't even make it to the production stage.

This makes funding at the exploration stage critical for the industry to ensure long-term viability and growth. However, ***while exploration is vitally important, it's also the most challenging and risky point for investment***.

"I took a 10 year span from '83 to '93, and I looked at 3,000 exploration companies and what happened to them," Lassonde said. *"Of those 3,000, only five actually delivered mines that opened and made money. So the ratio is appalling, and it got worse in the last 20 years because there hasn't been the kind of discovery that we saw in the '80s and '90s."*

Source: World Gold Council

These kinds of results don't instill confidence. For Lassonde, sifting through companies is part of his day-to-day life. But for regular investors, doing due diligence on the vast array of available stocks can be daunting.

Lassonde also pointed to another fundamental shift within the industry, saying that **a steady loss of senior companies in Canada — including Alcan, Falconbridge, Inco and Noranda — over the past 20 years has had a *considerable impact* on juniors**. *"These companies not only did research and development, but out of the C$100 million to C$200 million budget they had for exploration, they shepherded probably 50 to 100 companies each at the junior level, because they understood that 50 percent of all discoveries are made by juniors,"* he explained.

Despite this top-down loss in investment capital and geological expertise, the number of junior companies is still considerable, and they're all competing with each other for what funding is available.

A *Globe and Mail article* published in November 2023 noted the disconnect between the critical minerals needed to drive the next phase of the global economy, such as graphite, nickel, copper and lithium, and the fact that most of the junior mining companies that are hunting for them are barely treading water, unable to finance the next phases of their exploration.

The industry is completely different compared to two decades ago, when Canadian companies with domestic projects were the envy of the mining industry. Vale's $19-billion acquisition of Inco in 2006 helped seed a junior mining ecosystem centered in Vancouver and Toronto.

So much of it has vanished – the bankers, the investors and the enthusiasm. *In 2010, the mining sector made up 25 per cent of the total value of the Toronto Stock Exchange and the TSX Venture Exchange, more than any other industry. That year, junior miners on the Venture Exchange were able to raise $5.3-billion to fund their exploration and development projects. As of October, they had raised less than half of that, and the sector's composition of the total TSX has fallen to 13 per cent.*

While financings for all sectors are slow this year because investors are recalibrating after the COVID-19 pandemic tech bubble popped, mining has lost its lustre in the Canadian market. *There are fewer investment banks providing research coverage of up-and-coming mining companies, and fewer investment advisers paying attention to the sector. When a junior company tries to raise money, there just aren't as many people willing to listen to the sales pitch.*

The struggle to finance terrifies politicians and diplomats because Canada and the United States are losing *the global critical minerals war. "Simply put, we don't have enough of these minerals today to meet the world's – and our own – growing demand,"* David Cohen, the U.S. ambassador to Canada, said in an October speech.

Canada's most critical minerals for economic growth

Of the 31 minerals Ottawa has designated as critical, the six below are considered to have the most potential for the economy

MINERAL	VALUE CHAINS	MAJOR APPLICATIONS
Lithium	Clean technologies and defence and security technologies	Batteries, glassware, ceramics
Graphite	Clean technologies	Batteries, fuel cells for EVs
Nickel	Clean technologies and advanced manufacturing	Stainless steel, solar panels, batteries, aerospace and defence applications
Cobalt	Clean technologies	Batteries
Copper	Clean technologies and advanced manufacturing	Electrical and electronics products
Rare earth elements	Zero-emission vehicles	Permanent magnets for electricity generators and motors

SOURCE: CANADA.CA

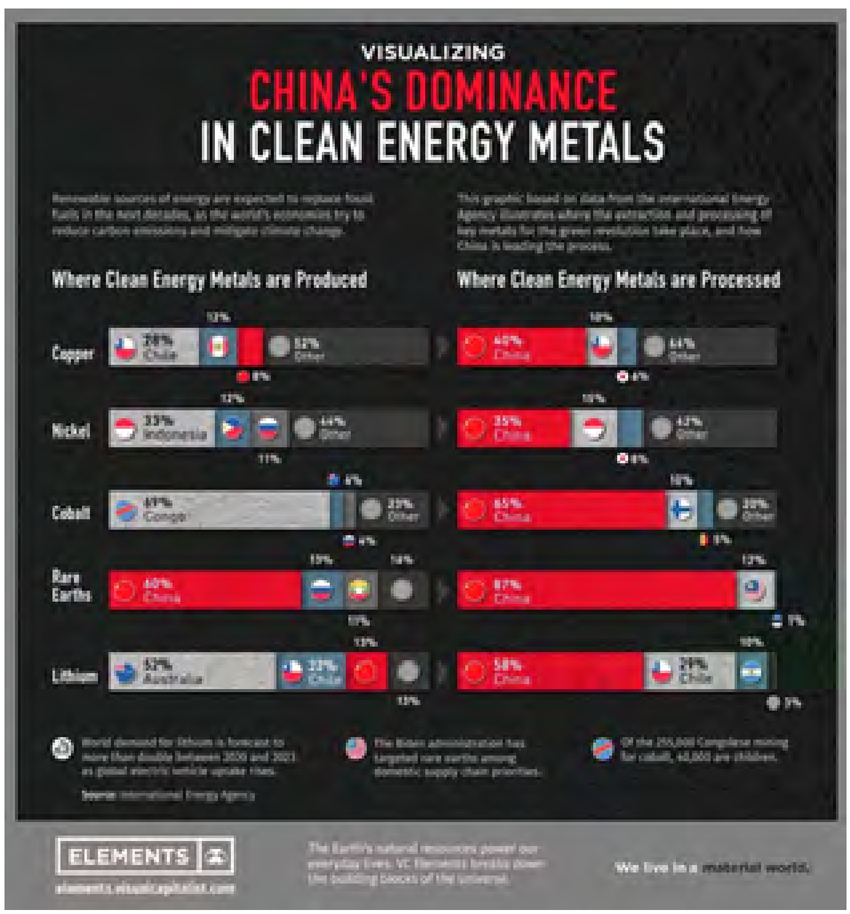
The worry is that China is hoovering up critical minerals and will use them against the West in a geopolitical provocation, the same way Russia held its natural gas supply over Europe's head when it attacked Ukraine. Currently, China refines more than half of all nickel, lithium and cobalt worldwide.

CHINA THREAT

The motive behind the United States trade strategy is well-documented — to shed itself of dependence on China while loosening the grip its main rival has on the global supply chain of critical minerals.

When it comes to raw materials for the electric vehicle industry, China is undisputedly the most dominant force on the planet.

For example, almost every metal used in EV batteries today likely comes from there, either mined or processed. Thanks to its technological prowess in refining, China has established itself as the across-the-board leader in the battery metals processing business (see →).



According to the *International Energy Agency*, the country accounted for roughly 60% of the world's lithium chemical supply in 2022, as well as producing three-quarters of all lithium-ion batteries.

It also has a tight grip over the world's supply of cobalt through its mining operations in the Democratic Republic of the Congo. Over the next two years, China's share of cobalt production is expected to reach half of global output, up from 44% at present, according to UK-based cobalt trader *Darton Commodities*.

IEA estimates that China's share of refining is around 50-70% for lithium and cobalt, 35% for nickel, and 95% for manganese, despite being directly involved in only a small fraction of the mine production.

The nation is also responsible for nearly 90% of rare earth elements, which are essential raw materials for permanent magnets used in wind turbines and EV motors, as well as 100% of graphite, the anode material in EV batteries.

A report by Rice University's Baker Institute for Public Policy reveals that China now controls roughly 60% of the world's production of these minerals which are considered crucial to the global energy transition.

For the US, this poses a great security risk, as China could easily decide to weaponize its market dominance, essentially locking America out of the critical minerals supply chain.

Of the estimated 120 million tons of rare earth deposits worldwide, the bulk of those at 44 million tons are found in China. The nation now accounts for 60% of rare earth mining, 85% of rare earth processing and 90% of high-strength rare earth permanent magnet manufacturing.

China cutting off rare earths could prove catastrophic for the US, whose high-tech sectors imported 78% of their rare earth metals from China between 2017 and 2020, according to the US *Geological Survey*.

The Biden administration's *national security strategy*, published in October 2022, identified rare earth supply chains as a major issue. A 2021 Defense Department review also concluded that overreliance on China "creates risk of disruption and of politicized trade practices" that would hit commercial sectors particularly hard.

China previously suspended exports of rare earths to Japan following tensions in 2010 surrounding the Senkaku Islands, which also alarmed those in Washington.

The US has since moved to bolster its domestic rare earth supply chain, with a degree of success. USGS data shows that China's share of all rare earths produced globally dropped to roughly 70% last year from about 90% a decade earlier.

Nevertheless, China still has a firm hold on the processing of rare earths. This past June, Beijing unveiled a list of rare earth regulations aimed at protecting supplies in the name of national security, laying out rules on the mining, smelting and trade in the critical materials used to make products from magnets in electric vehicles to consumer electronics, *Reuters reported*.

That news was followed by the imposition of export limits on antimony and related elements in August. Last year China accounted for nearly half of all mined output of the metal, used in military applications such as ammunition, infrared missiles, nuclear weapons and night vision goggles, as well as in batteries and photovoltaic equipment.

CNN quoted rare earths analysts at China Securities saying that increasing demand for arms and ammunition due to wars and geopolitical tensions was likely to see tightening control and stockpiling of antimony ore.

Last December, China banned the export of technology to make rare earth magnets. Beijing has also tightened exports of some graphite products, and imposed restrictions on exports of gallium and germanium products widely used in semiconductors, CNN stated.

Industry Week gave six reasons why China's threat to ban critical minerals exports is not a bluff, listed below with light editing:

- China has previously implemented export restrictions and bans. China *blocked rare earth exports* to Japan in 2010 and *banned exports of rare earth processing technology* in 2023.
- China could benefit from imposing mineral export bans. Export bans on select minerals would demonstrate that China can *retaliate* against *U.S. efforts* to curb technology exports to China—and possibly deter the United States from further restrictions, enabling China to stock up on U.S. technology.

- Chinese mineral producers could likely find alternative customers to the United States. Some developing regions like Southeast Asia have *increasing mineral demand* from their growing manufacturing sectors that China's mineral producers could tap into.

- China's dominance of the critical mineral industry is far greater than Russia's influence on the natural gas industry. Thus, the consequences of China cutting off critical mineral exports to the United States are likely broader and more severe than Europe dropping Russian natural gas exports.

- The United States and its partner countries likely cannot quickly produce enough minerals to fully replace imports from China.

- The United States would struggle to incentivize enough mineral production in resource-rich countries outside China.

To mitigate the risks of potential Chinese export bans, Industry Week suggests the US government should increase stockpiling, noting the National Defense Stockpile is only around 1% of its 1962 value.

The NDS only has 836 tons of nickel, less than 5% of the Department of Defense's annual nickel usage, and it currently does not contain any of the four minerals used mostly by the DoD: aluminum, copper, lead and fluorspar.

In addition to stockpiling, Industry Week suggests the US government could offer low-cost financing to US companies to secure offtake agreements with trusted providers, i.e., the "friend-shoring" we previously wrote about. The article notes US automakers are already pursuing offtake agreements for lithium, used in EV batteries.

'Friend-shoring threatens Western metal supplies

The government should also increase funding for mineral exploration. While we at AOTH are leery of government funding, preferring to raise funds on the market or through private placements, a taxpayer-funded boost to mining wouldn't come wrong, either. Industry Week states:

Exploration is key for increasing the U.S. mineral supply and decreasing reliance on China. Under Title III of the Defense Production Act (DPA), the U.S. Department of Defense is funding some mineral exploration efforts, including *nickel exploration* in Minnesota and *cobalt exploration* in Idaho. Title III also allows the department to fund mineral exploration in Canada, Australia and the United Kingdom, as those countries are considered "*domestic sources*."

China's bans on the export of critical minerals processing technology and on exports of certain critical minerals over the past few months has been met with tough talk from politicians in Canada and the US.

Earlier this month, *the Globe and Mail reported* that Canada has begun the process to impose tariffs on Chinese batteries and critical minerals. In

August, the country hiked tariffs on Chinese-made vehicles from 6% to 106%, effective Oct. 1.

The move puts Canada in line with the United States, which announced plans to increase tariffs on similar items in the spring.

Tariffs of 25% will be applied to some steel and aluminum products made in China on Oct. 15, the Globe stated.

According to CNN, the Biden administration last week finalized tariff hikes on certain Chinese-made products first announced in May.

The tariff rate will go up to 100% on electric vehicles, to 50% on solar cells and to 25% on electrical vehicle batteries, critical minerals, steel, aluminum, face masks and ship-to-shore cranes beginning September 27, according to the US Trade Representative's Office.

Tariff hikes on other products, including semiconductor chips, are set to take effect over the next two years.

Former President Trump now running for a second term, and Vice President Kamala Harris, have both mentioned tariffs while campaigning. Trump implemented tariffs on about $300 billion of Chinese-made products while in office 2016-20.

President Biden has kept those tariffs in place and decided to increase some of the rates on about $15B of Chinese imports. If elected, Trump has pledged to significantly increase the tariffs the US has on imports from all over the world. He is calling for up to 20% tariffs on every foreign import and has called for an additional tariff up to 60% on Chinese imports. He would also impose a 100% tariff on countries that stop using the US dollar.

Harris has not given many details on her tariff policy other than to attack her opponent's tariff proposals as a "Trump sales tax".

Studies have found that American consumers have borne almost the entire cost of Trump's tariffs on Chinese products, CNN said.

China has launched a complaint at the World Trade Organization over Canada's EV tariffs, and is already figuring out ways to skirt US tariffs. BYD, China's largest EV automaker, is *reportedly reviewing potential locations for a plant in Mexico* that would allow it to bring its cheaper electric vehicles into the United States tariff-free, under the United States-Mexico-Canada Agreement (formerly NAFTA). At least *a dozen Chinese electric-car component suppliers have also announced* new

factories or added to their existing investments in Mexico in recent years, according to the Wall Street Journal.

CONCLUSION

If the United States and Canada are to lessen the grip that China currently has over our critical mineral supplies, we are playing a dangerous game — poking the bear with a large stick without having a back-up plan as to what happens if the stick doesn't prevent the bear from charging and ripping out our throats.

By that I mean we currently mine precious few of the critical minerals needed to build an electrified economy, and we lack the smelters for processing them and the technical know-how to do so.

By pissing off China with tariffs, are we not cutting our nose to spite our face? We don't want to see an influx of cheap

Chinese-made products dumped on North American markets, but surely the solution is to mine, process and manufacture the products that we need at home, rather than stopping them at the border.

The situation is dire and it starts with mining. The S&P report is misleading in that it shows that major mining companies are exploring for more gold, but they are doing it on their own properties, sometimes mining around the edges of deposits discovered decades ago.

They are doing nothing to go out and find new mines, but that has never been a major's job. It's the job of juniors to discover new mineral deposits but they are not being financed; they literally have no money and are conducting financings at 5-10 cents, thus blowing out their share structures.

Or doing bought-deal financings to institutional minded investors who are only too willing to sell their immediately saleable (no 4 month hold) shares and ride the warrants till exercise.

If North America doesn't have the metals it needs. that China has locked up, and then China turns around and says we're not selling them to you, what are we going to do? Right now the industry's solution is to go poking around their own brownfield projects to find more metal to mine. It's a far cry from what we are going to need.

It is elemental to the mining industry that the juniors are well financed, deposits have a shortened path to production, say five years like in Scandinavia, versus up to 28 in the US. Juniors need to be out in the bush making discoveries.

Because only with the help of juniors can mining solve its existential problem of getting the resources that are currently owned by its adversaries. Junior resource companies find the resources miners then buy and turn into their mineable reserves.

In fact, I don't think it's much of a stretch to say that without financed juniors, without a safe and secure supply of metals, without security of supply, without refineries and smelters, and without the technological knowledge to manufacture magnets and anodes for example the developed economies of the western world are very much at risk if supplies of these critical metals, and associated technologies, come from our competitors.

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DAWN OF A NEW COLD WAR: THE FIGHT OVER GLOBAL RESOURCES & MONETARY PIVOTS

Part I: Old Foes, New Motivations

By Ryan Blanchette

During the final phase of World War II, it became apparent that Allied powers of the West and East needed to reach conclusive agreements about what would become of a mangled European continent. All partners were keen on restoration but also determined to ensure another massive global conflict did not originate in the same place for a third time. However, both sides had different views on how to accomplish this goal, and distrust of competing political viewpoints became apparent even before the war had ended. The East, led by the Soviet Union, demanded reparations from the defeated Axis powers similar to the punishment handed out in the Treaty of Versailles that finalized the First World War. The Soviets also felt an undeniable ideological sting emanating from the heart of Germany, as Adolf Hitler and the Nazi Party's number one political enemy during his run to power and tyranny were communist groups whose foundation were Marxist principles that Hitler had deemed natural sin. Soviet Russia's victory over Nazi Germany, which had cost the country 27 million military and civilian casualties, set the table for revenge against fascism by installing communist regimes throughout post-WWII Soviet controlled territory, ensuring its continuation in the very halls it had once been outlawed in - namely the capital of Berlin, securing the ultimate comeuppance against the vanquished German nation.

Source: History On The Net

The West wanted to establish principles of their own, but much of this came in the form of capitalism which emanated from the fountain of liberal democracy most duly represented by the United States whose victory over the King of England had ushered in a new phase of political history with its Declaration of Independence and Constitution. Capitalist ideology upheld private and corporate ownership with an emphasis on profit as the ultimate display of success; in contrast to the Soviet's stipulation for war reparations, the West saw an opportunity to rebuild Europe under their conditions. The objective was two-fold; one, a successful rebuild using capitalist principles with close Western guidance would establish long term financial stability and profit; two, success would promulgate the spread of democracy throughout Europe and the world as other second or third world nations would look to match Europe's prosperity and firmly object to communist ideals.

This was the ideological knife edge that began nearly 45 years of global tension was based on that included espionage, embargoes, technological competitions, proxy wars, deep culture divides, and a military-nuclear arms race that put humans on the edge of mass extinction during several anxious and tumultuous flashpoint moments like never before.

The outcome is well known. The Berlin Wall, which had served as the ultimate symbol of the East-West divide, came down in November 1989. The once powerful communist USSR was formally dissolved the day after Christmas in 1991 and marooned a litany of dependent satellite states in its wake, swaying like unanchored ships in a storm of fate unknown and leaving them vulnerable to their own dissolution, rebellious political revolutions, or doomed to decades of financial and societal stagnation stuck in national purgatory. Capitalism had endured, and communism was dealt a huge blow. But like any idea which only needs to live in the mind of a few to survive, it could never be wiped out entirely; nor could the memories be erased of those nations who suffered defeat at the hands of the West - namely former Soviet Russia and China. The aftereffects of the Cold War echo to this day, and the old philosophical battle lines still influence sociopolitical decision making worldwide as leaders of the new world lived through those years of conflict and no doubt were shaped by the ideologies they grew up under.

It's natural human psychology to want a rematch after a loss. But it's 2024, and much has changed since those winter

days in '91. We know that Russia wants to reclaim its dominance, and that China aspires to be the world's newest superpower. We also know that history doesn't repeat but it often rhymes, and that in the modern age as political beliefs become more intertwined and less homogeneous, those former battle cries would be outmoded and obsolete. A new arena must be assembled for a second bout to occur, and that arena is forming in real time in front of us.

From October 22-24 the 16th BRICS summit will take place in Kazan, Russia. For Iran, Egypt, Ethiopia, and the United Arab Emirates - newest members of the intergovernmental organization - it will be their first. Officially, the group was established in 2009 to support the emerging markets of large second-world countries with massive future GDP potential, who were under-represented in global capital markets - Brazil and India. Spearheaded by Russia and China, this was seen as a repeal of old communist values and the embracement of capitalism in the old Marxist stomping grounds of Moscow and Beijing. Fast forward to the current day, and BRICS is much more well-known for something else. In the fallout of the March 2022 Russian invasion of Ukraine, President Vladimir Putin denounced Western sanctions and its 'hegemonic' use of the singular world's reserve currency US Dollar as a weapon against his country and firmly proclaimed that any nation could fall under the same punishment at a moment's notice if they suddenly became unpopular with the United States and its G7 allies. Putin used the BRICS platform to envision a shared multinational currency that would rival the USD and be completely free from Western control, backed by a basket of natural commodities and hard assets like gold. At the October summit, this 'Unit' will be discussed formally for the first time and could potentially be put in place as early as 2025.

If one wonders how the goal of BRICS changed from supporting emerging semi-capital Westernized markets to a possible schism of global currency, payment systems, and commodity control, it's possible the goalposts never moved at all. The think-tank progenitor of BRICS emerged in the late 1990's as RIC (Russia-India-China) and was formulated by then-Russian Prime Minister Yevgeny Primakov. Under the umbrella of Primakov's doctrine, the 'Strategic Triangle' of RIC would have been the East's counter to unipolar world order commanded by the United States. Prior to his ministry appointment, he served as Russia's foreign intelligence chief and opposed NATO's expansion into former Warsaw Pact nations; he also advocated against American global hegemony and supported Eastern multilateralist endeavors. Putin was a young KGB intelligence officer in the 80's and held administrative positions in Moscow during Primakov's stint as intel chief and would have been familiar with his work. Primakov later served as State Commission Chairman under Putin's presidency regarding the Moldovan border conflict, and during this time most likely fostered Putin's opposition to Western unilateralism. All along, the entire reason behind BRICS creation could have simply been a pretense for renewed Russian preeminence with the help of traditional communist party ally China. Using key principles of capitalist market successes, they could harness the power of populous emerging nations rich in natural resources and commodities to oppose the consumer-driven United States and its Western contemporaries. Knowing full well the disastrous history and inevitable deterioration of fiat currency debasement, while at the same time creating new alliances with under-developed, under-represented, resource-abundant third and second world countries, they could create

Yevgeny Primakov and Vladimir Putin. Source: Reuters a formidable pact that in due time would represent a huge threat to the West via resource control.

The gradual decay of American industry at large over the past 60 years and an over-reliance on imports from those same second and third world countries has been well documented. And in the current age of digitization, where zeros can be added at will to currency amounts on a computer screen, this threat is even more clear. You cannot print aluminum, you cannot print silver, you cannot print nickel, you cannot print tin - these are materials that need to be painstakingly pulled from the earth, something the West (especially the United States) has been increasingly apprehensive to do in the last few decades mainly for environmental reasons. Those environmental reasons also play a large

the burgeoning minerals race sorely benefits the East and asset-driven BRICS member nations. A vast number of minerals have been deemed critical by the United States and its allies, minerals that are not only key parts of a green renewable energy future but

Iran and its research of nuclear weapons and their military presence in Syria, Israel's renewed offensives into Palestine, Red Sea shipping disruptions by Iran-backed Houthi rebels and Eastern-backed African military takeovers, all of which add

Source: Amvest Capital

part in the West's push towards green energy, a monumental task requiring far more metals and minerals than are currently available to Western shores. It is doubtful that all the way back in the late 90's Russia and China predicted this green movement and that the West would need mountains of untapped resources, but if they did, they are prescient beyond belief. In any case, this 'Green New Deal' has thrown a huge wrench into geopolitics as a whole and also minerals not readily available to them, with some minerals existing only in parts of the world that are currently occupied by nations with unfavorable Western views or are outright hostile.

All of this sits in the backdrop of Russian hostilities in Ukraine and the severe breakdown of Russo-American relations, continued Chinese aggression against Taiwan and in the South China Sea, new BRICS member an incredible mix of geopolitical factors not seen since the early 1960's and paint an intense portrait of global instability that could shape our world for decades to come. The foes may be similar, but the aims are different. Paradigms are shifting and leverage is increasing in ways not seen in the first Cold War. This is the dawn of the Second Cold War.

Next Issue: Part II: Battlegrounds

HOW WILL POWELL'S "RECALIBRATION" HELP COMMODITIES?

By Chris Temple

Fed Chairman Jerome Powell and his merry band somewhat surprised markets following their most recent policy-setting meeting on September 18, cutting the official short-term (federal funds) rate by 50 basis points rather than 25.

Some took this as a sign that the U.S. central bank is worried that, under the surface, the American economy is weakening more than commonly believed by investors (*it is, by the way!*) But for the most part—and *for now*—such worries are secondary to the primal knee-jerk instinct to BUY, BUY, BUY! most everything with an "easing" Fed.

This publication's Editor and I recently discussed all this as we always do post-F.O.M.C. and provided numerous thoughts as to what this initial half-percentage point rate cut means (and *doesn't*.) You need to listen to this recording at *https://www.youtube.com/watch?v=kMBNCCdNdIA&t=1s*; much of what follows will be based on our mutual observations and the evolving landscape.

Likewise, I have been and will be continuing to provide a "road map" of sorts to our audience at The National Investor for how to navigate markets given not only the Fed but numerous other macro and geopolitical facts of life, *many of those unprecedented*. Visit our web site to sign up if you are not in our audience already. Here too, I'll be further unpackaging a lot of the fairly quick takes below on various commodity sectors in the weeks ahead.

In short—and notwithstanding the initial, post-rate cut bounces for most everything, save for *long-term* Treasury securities (the reasons for that and for long-term yields to inexorably move HIGHER are discussed in the above-linked podcast)—**it's not necessarily going to be a one size fits all melt-up from here.** As Mike and I discussed in our podcast, the underlying economy faces further and broadening weakness in the quarters immediately ahead. And even if that does not lead to a deep recession, various trade, policy, currency and other challenges we discussed are going to result in very disparate behaviors among commodities (for present purposes we'll be sticking with energy and metals/critical materials.)

The most obvious winner among precious metals and otherwise is going to *continue* to be gold. Except for the relatively minor example of Japan, every major central bank in the world is now in "recalibration" mode—now finally joined by the Fed—if not *outright panic* money-printing in the case of China as that country attempts to forestall full-on *deflation* (**NOTE:** More on the very latest from China further along.) Gold wins in that environment hands-down; so, too, as everyone continues to run gargantuan budget deficits that will only rise in recession.

Though almost all of gold's rise to present record levels north of US$2,600/ounce came about without much participation from "western" investors, that seems to have started changing. **And that in turn argues that the best and most explosive days of the renewed gold market are still ahead of us**. Net buying has finally been enjoyed by gold-oriented ETFs over the last couple months or so.

And there are signs that long-suffering gold-related equities are set to enjoy broader health; they have infamously been woeful laggards despite gold's own move. As you see just below, their bottoming process versus the gold price appears to have concluded and an upturn started.

But even here, a little care must be taken. Keep in mind that without a significant further rally in the gold price itself, gold-related equities, generally speaking, may not prove completely impervious to a long-overdue correction in the broader stock market. Make no mistake: I am uber-bullish *long-term*. But it's not clear sailing quite yet.

Also, bear in mind the market perceptions if I am correct (again, Mike and I spoke of this) in that 1. Longer-term yields begin *rising* anew and 2. That and/or additional factors slow down the pace of Fed rate cuts into next year. That will take some of the starch out of even gold, quite possibly; and certainly gold-related equities.

Moving on, **silver** has also been infamous in its inability to keep pace with its *more monetary-oriented* sibling. As I am writing this, silver—seemingly ready to break above its prior 2024 high just a few days back—has instead been nastily rebuffed the beginning of the week of September 23, in sympathy with other precious and base metals' renewed weakness. So I guess the silver breakout many have been pining for will *still* have to wait a spell. Here too, though, I think time will show that silver will be dragged higher with gold, even if the "industrial" case is still being tarnished somewhat by both economic and policy uncertainties.

Platinum and palladium have been basket cases. Weak demand and trade issues have pushed each to under US$1,000/ ounce. The recent announcement by Sibanye-Stillwater that it is shuttering its money-losing Stillwater West Mine in Montana serves as a poster child for a LOT of things: from the inability of western mines to compete head-to-head with lower cost foreign production, to policy mistakes by the U.S., to economic uncertainty and more.

As is being discussed elsewhere, there is now talk of some effort to "protect" U.S. sources like Stillwater West from foreign "dumping." Montana's Senators— Republican Steve Daines and Democrat Jon Tester, above—are seeking to ban Russian palladium imports especially.

PGM's are cheap long-term; but they are *not* going to be getting any help from Fed rate cuts, as there are deeper issues involved.

Moving on, copper epitomizes the plight of the PGMs and most other industrial, critical metals more broadly.

In its case—as opposed to the mixed picture for the PGM's—copper's well-known longer-term fundamentals are solid. Well beyond increased demand from new "green" energy industries and products, broader infrastructure and other demands the world over are set to undergird demand for the red metal that will *well* exceed present or contemplated supply.

It was that epiphany of copper's bona fides that helped drive it to a nominal all-time high well over US$5.00/pound in the late spring. But almost as quickly the rally fell apart due to fears of coming global weakness generally and China's economic downturn specifically; and this *despite* optimism that a Fed rate cutting gambit was dead ahead.

Now—notwithstanding its own knee-jerk rally on the Fed cutting by 50 bps rather than 25—copper is going to be hostage for a while to

economic expectations and the pace of the Fed's "recalibration."

Much the same is going to be true, too, where most other metals/minerals are concerned. The Fed taking interest rates a bit lower to a more "neutral" area is not going to be enough to overcome policy mistakes (especially where Electric Vehicles and their inputs are concerned), continued inability to compete with cheaper foreign production, etc. So in many of these areas we need to pick our spots company-by-company; and otherwise, bide our time until 2025 gets here and **1.** We know how bad a recession is going to be (or not) and **2.** We know what the political makeup of the U.S. government especially is going to mean for the metals specifically and economic/industrial policy generally.

I'll be following and commenting on all this in the weeks and months ahead, of course, as there will be many moving objects *and some potential policy surprises*. Even recently—though I don't see anything being done before the election—**the Biden Administration has interestingly floated the idea of subsidies for U.S. metals/mine production *as a first matter*** (this as opposed to subsidizing the cost of an E.V. itself.) The next Administration will have a host of decisions to make!

There are, of course, some unique and even "one-off" individual commodity stories so strong/unique that they are attractive no matter what the Fed/ economic outcomes.

Think barite…titanium…tungsten… *some* rare earth elements… antimony…helium…and others.

And lest I forget, **uranium** for reasons I am explaining separately these days, after consolidating its prior monstrous gains this year, is set soon to embark on the next big leg of its own bull market.

Finally, "old energy" is somewhat of a mixed bag, with Yours truly overwhelmingly favoring natural gas over crude oil right now. Here again—as you see above—crude received a little relief following the Fed's rate cut. Yet sentiment has turned bearish in recent months (a significant overreaction as I presently see it) due to China's *present* economic malaise and worries that America will slowly join in the funk. To be sure, supply/demand stats of late do not support the level of bearishness that has caused oil to bounce down to multi-year lows that haven't been seen since the worst days of the COVID Plannedemic. *But here we are none the less.*

Natural gas has already bottomed and, in my view, is set for several months of a "recalibration" itself for a host of reasons. Here, too, the Fed's rate cutting trajectory will not be the main story: resetting the nat gas price to a more realistic level *will* be.

LATE BREAKING "ADDITION"

– Overnight on Monday the 23rd into Tuesday morning the 24th, news came of a much more massive stimulus gambit on the part of China. *Something* had been rumored for several days; what markets have now been greeted with are several borderline panic moves as the country's leaders attempt to arrest the "Japanification" process China has been devolving into.

Among the measures:

> Official policy interest rates have again been cut, with the promise of more to come.
>
> By fiat, some US$5 trillion worth of mortgages in China have had their contractual interest rates cut.
>
> Second-home purchase rules have been eased, as (of all things) China's leaders see a way to "save" the globe-leading, debt-choked real estate sector is to again *allow* all manner of buying.
>
> Banks' reserve ratios have again been lowered, helping to ease the profit hits some will take due to lower mortgage rates.
>
> Direct support for the moribund Chinese stock market was announced, together with a pledge that a "stabilization fund" for stocks is being "studied." *By the way, Japan did most all of this along the way, too, in their three-plus decades of deflation.*

For present purposes, China's move is now juicing commodity rallies further especially. **We'll know how durable this sentiment will be by watching yields on *long-term* Chinese debt, which just hit fresh record lows**; see *https://www.bloomberg.com/news/articles/2024-09-24/china-s-10-year-bond-yield-falls-to-2-for-first-time-on-record?sref=AqatjHHy*. If markets really believe this broad set of "Inflate or Die" moves will work, the knee-jerk reaction higher in stocks and commodities will continue and long-term bond yields will reverse course and move *higher*.

Again, we'll be all over this in the days ahead and advising our audience at *The National Investor* what moves to be making!

The National Investor
https://www.nationalinvestor.com/
Contact
chris@nationalinvestor.com

WINNING CONDITIONS AT CERRO DE PASCO: MINING WITHOUT BLASTING OR DIGGING

By Lynnel Reinson Communications

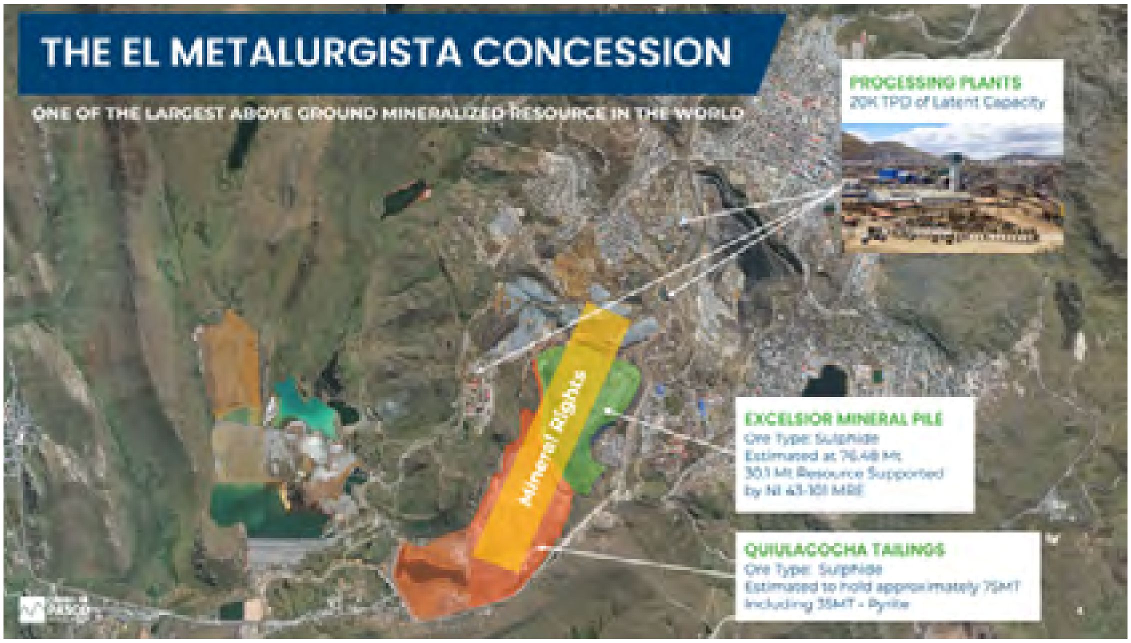
Cerro de Pasco Resources (CSE:CDPR (OTC Pink:GPPRF) is a Canadian mining company whose wholly-owned, flagship asset is located in Central Peru. Cerro de Pasco Resources is an intriguing company with its primary asset being an above-ground, polymetallic tailings and mineral pile with rich silver mineralization. Collectively referred to as the "El Metalurgista Concession", the Quiulacocha Tailings and Excelsior Mineral Pile contain approximately 150 Mt of sulphide ore with a combination of gold, silver, copper, zinc, and lead metals present. In order to capture the scope of the current project, it is necessary to understand the scale and history of the mine which operated for the majority of the 20th century, and the opportunity Cerro de Pasco now presents as described by CEO Guy Goulet, who numerates the "winning conditions" created by their plan- social, environmental, and for the shareholders, in a truly circular style of turning problems into solutions.

The original Cerro de Pasco Corporation ran many mining operations in the region from 1902, until nationalized by the Peruvian government in 1973. The region has been known and prized for its incredibly pure silver since 1630, when the Spanish were mining. As new metals came into demand, such as copper, lead, and zinc, a group of American investors, including JP Morgan and the Vanderbilts, created the Cerro de Pasco Corporation to capitalize on the growing demand for metals that were found in abundance in the region. Despite the length of time the region has already been mined, it continues to be a significant producer to this day; though rather than seeking unearthed deposits, Cerro de Pasco Resources is taking a new approach, and instead, 'unearthing' value left behind by the original Cerro de Pasco Corporation and previous operators in the region. Reprocessing the tailings left by one of the most prolific mining companies of the 20th century, employing modern technology and a 21st century understanding of tailings and the potential hazards of them, enables Cerro de Pasco Resources to create substantial value for the city of Cerro de Pasco and the company's shareholders who will be benefitting from the increased value of the leftover metals that were either too difficult or costly to extract in the past.

Of primary importance to CEO Guy Goulet , who emphasizes that although they did not create "the mess, we will be the ones to clean it up", and they plan to do so profitably. The acidic tailings pond will be remediated, protecting the environment from contamination and sending the slurry for extraction processing at the existing facilities. As they work to extract the remaining metals from Quiulacocha, Cerro de Pasco will be able to clean up the project and handle the work with updated safety and environmental standards.

In a recent interview with Arne Lutsch, Guy Goulet, Cerro de Pasco's CEO, emphasized the opportunity of extracting the mineral content of El Metalurgista where all the material is already aboveground; as Mr. Goulet pointed out around ***"40% of a mineral's cost is getting it out of the ground, and that's done already"*** (*Battery Commodity*) Additionally, Cerro de Pasco has achieved multiple crucial milestones in the permitting and legal processes of the project; including the land easement granted in the spring and the exploration permit granted at the end of August. Regarding the exploration permit, CEO Guy Goulet notes, ***"This is the first ever drilling authorization granted for a new mining exploration project over tailings in the history of Peru, not related to a beneficiation concession. It is also a very exciting stage for CDPR as we will finally discover the true value of the QT tailings and be able to produce a Master Plan for the entire Quiulacocha tailings resource."*** (*Aug 27, 2024 Release*) Benefitting from many factors such as the history of the project allowing for an uncommonly high certainty of what the resource contains; established permitting and land agreements; reduced mineral extraction cost; and investment from well-known magnate, Eric Sprott; Cerro de Pasco and their shareholders are in a strong position to benefit from the strength of the precious metals markets seen in the last five years, with both gold and silver are trading nearly 70% higher than in September 2019.

In their latest news release, Cerro de Pasco announced the sale of its Santander Mine to a Peruvian private equity firm for a variable price of up to 10 million dollars. CEO Guy Goulet noted, ***"The sale of the Santander Mine aligns with our strategy to focus on***



Reasons for optimism about Cerro de Pasco are many. Their work stands to tremendously benefit not only their shareholders but also the local people in the city of Cerro de Pasco, generating increased economic activity and prosperity while simultaneously dealing with the major environmental hazard posed by the current state of the Quiulacocha tailings. This project is poised to truly embody the goals of sustainability by operating in step with the needs of both people and environment while tapping into the value left behind in historic operations. Their plan for flowing cash through to develop their operation further should attract the attention of investors informed about and excited by the possibilities offered in a more circular economy.

reducing corporate debt." (*Sept 3, 2024 Release*) This sale, in addition to the recent investment from Eric Sprott and other financing, put Cerro de Pasco in position to direct their efforts more fully toward the reprocessing of the Quiulacocha tailings and their 2024 40-hole drilling program to verify historic drill results and advance toward the corporate goal of creating a master plan for the resource, which includes upgrading it to an NI 43-101-compliant resource. Mr. Goulet indicates they are planning to complete a preliminary economic assessment for the first quarter of the new year.

DEMAND FOR DRYDEN GOLD MORE THAN DOUBLES VALUE OF THEIR LATEST FINANCING ROUND

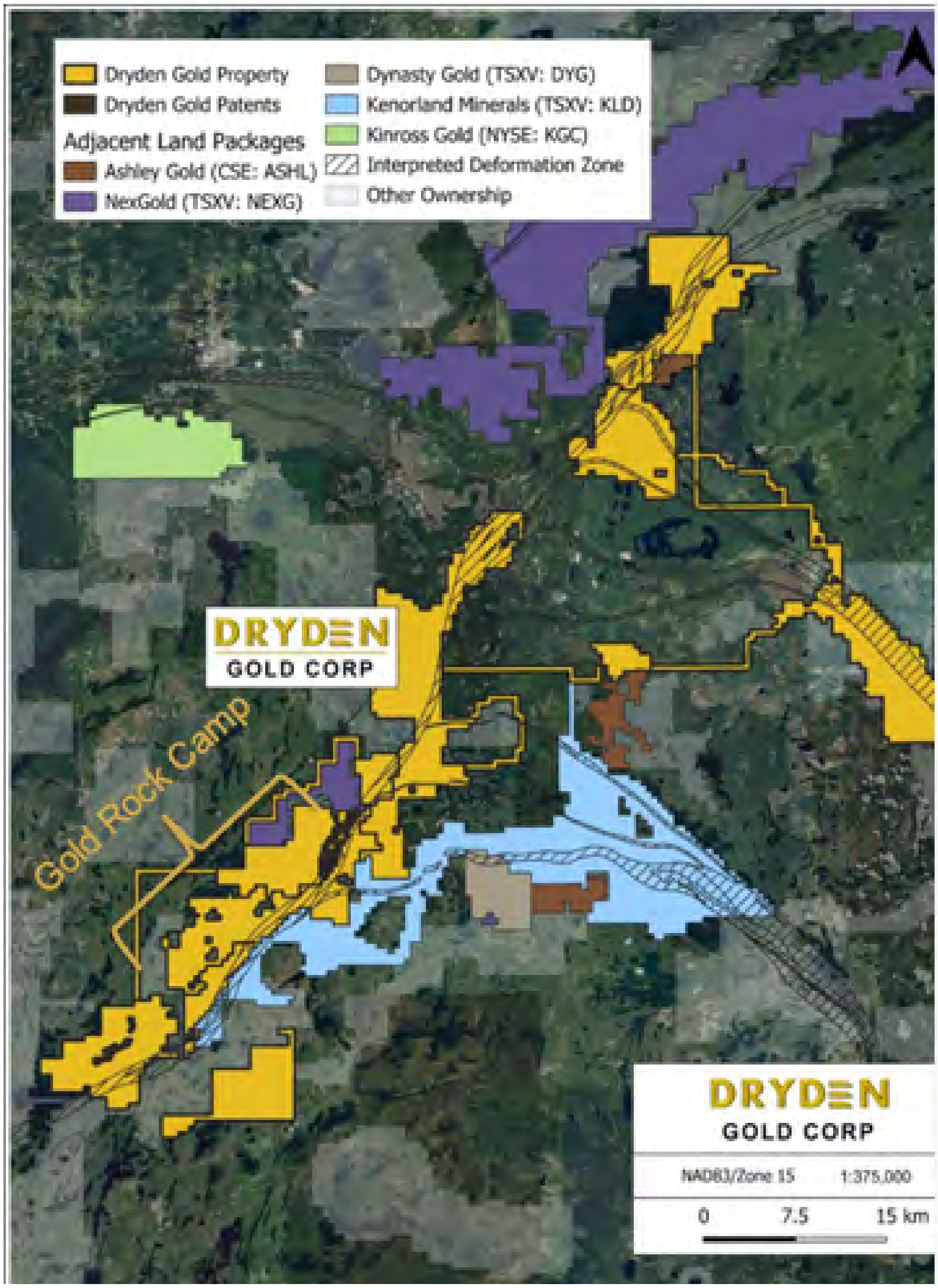
By Lynnel Reinson Communications

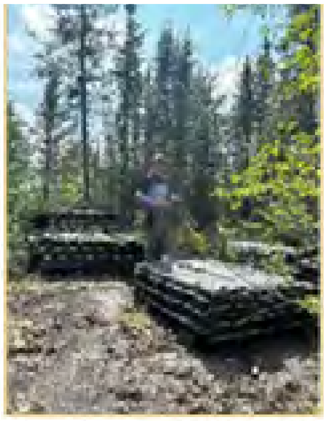
Dryden Gold Corp. (TSX-V: DRY) (OYCQB: DRYGF) is a Canadian junior mining exploration company holding offices in Vancouver, BC, and Dryden, ON, with multiple land claims in the namesake Dryden region of southwestern Ontario. To their delight, the company's claims are all proximal to infrastructure including major highways and access to Ontario's power grid. The claims also cover the majority of the geological structure expected to host significant gold mineralization. The Tremblay, Lower Manitou, and Gold Rock projects make up Dryden Gold's 50 km of contiguous claims along the Manitou-Dinorwic deformation zone – an area that saw historic mining by many operators who only just scratched the surface of the potential resource.

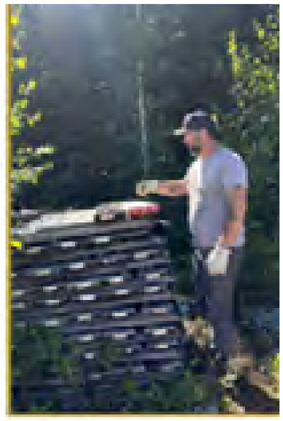
The Archean geological structures are known to run hundreds of meters deeper than any of the historic mines reached. The company is particularly confident as the known geology indicates potential akin to the Red Lake Mine- one of Canada's highest-grade gold operations. Dryden Gold is a relatively young company, founded in 2022, and has been public since their listing on the TSX Venture Exchange in January 2024 after putting together their strong land package. Key in the assembly of this set of land claims is Dryden Gold's executive team; CEO and director, Trey Wasser; President, Maura Kolb; CFO and director, Scott Kelly; and VP Exploration, Anna Hicken. While speaking with CEO Trey Wasser and President Maura Kolb, the team's particular aptitude for exploring in the region became especially apparent.

Mr. Wasser was effusive in his praise of Ms. Kolb and Ms. Hicken, as each had notable success leading the exploration team at Red Lake with Goldcorp (now owned by Evolution Mining). While working at Red Lake, Ms. Kolb and Ms. Hicken became incredibly familiar the same geological setting present at Dryden Gold's projects. CEO Wasser also values their approach as beneficial to the company, stating: *"We are so lucky to have Maura and Anna leading this exploration effort; because of their experience they are doing things smartly. They know what to do but, also what not to do, avoiding what might be a waste of money".*

President Maura Kolb further emphasized the importance of the systematic drilling program they have developed and implemented that allows them to adapt the exploration model as they go, making the most of investor dollars along the way. In addition to their technical expertise, Ms. Kolb and Ms. Hicken have both lived and worked in the area for







years and have local connections with First Nations, contractors, and service providers, adding further efficiency to Dryden's exploration programs. Bringing together a dominate land package, promising geology, proximity to infrastructure, and a team that brings all the right experience and talent to the table, Dryden Gold is well positioned to take the junior mining market by storm.

Dryden Gold's potential has investors getting on board in a hurry; despite only beginning to trade publicly in January, the company has already drawn significant interest from well-known groups and investors. Figures include Eric Sprott, a prolific and successful precious metals investor; Rob McEwen, the founder of Goldcorp; Delbrook Capital, a Vancouver metals and mining focused investment firm; Alamos Gold, a Canadian gold producer with two operating mines in Ontario and another in Mexico; and Peter Schiff's EuroPac Gold Fund, a precious metals investment fund worth over $260 million. Further investor confidence is apparent in the company's recent round of financing efforts which expanded three times due to incredible demand.

On the heels of their successful drilling campaign at the Gold Rock Camp, which intercepted potentially significant gold mineralization as well as visible gold in the cores, Dryden Gold announced an equity financing offering, seeking investment of up to $2 million dollars. CEO Trey Wasser commented at the time of the August 26th announcement ***"We are excited about the initial results of our drilling at the Gold Rock Camp"*** (*Dryden*). Clearly, investors were excited as well; on September 6th Dryden increased the offering, seeking up to $3.5 million; when only 3 days later more visible gold was discovered in the latest phase of the drill program and with those results investor demand led the company to upsize the financing once again, now up to $5.1 million.

The promising summer drill results that lead to the wildly successful

HIGH GRADE VEINS IN BRITISH COLUMBIA

By Christian Elferink

Equity Metals Corporation (TSX-V: EQTY) is a dynamic junior exploration company dedicated to maximizing shareholder value through the advancement of its flagship asset, the wholly-owned Silver Queen Gold-Silver Property in British Columbia, Canada. As a member of the Manex Resource Group, Equity Metals benefits from comprehensive exploration, administrative, and corporate development support for its key mineral assets.

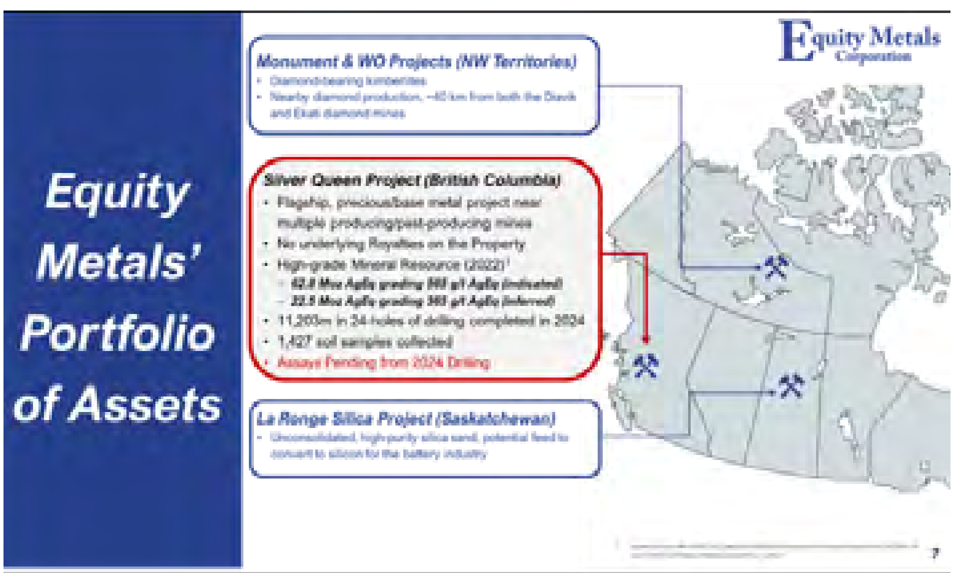
The Company's portfolio is anchored by the Silver Queen Project, a 100% owned property free from underlying royalties, situated in the Omineca Mining Division along the Skeena Arch. This promising site hosts high-grade precious and base-metal veins associated with a partially delineated buried porphyry system, offering significant exploration potential. In addition to Silver Queen, Equity Metals holds a majority stake (57.49%) in the Monument Diamond project in the Northwest Territories, strategically positioned within 40 km of the renowned Ekati and Diavik Diamond Mines. The company serves as the operator for this joint venture, shared with Chris and Jeanne Jennings (22.11%) and Archon Minerals Ltd. (20.4%).

The company also has full control of the La Ronge Silica Project in central Saskatchewan. This historical sand quarry, located approximately 60 kilometers south-southeast of La Ronge and 210 kilometers west of Flin Flon, Manitoba, shows promise for development into a profitable, low-cost mining and washing operation. Preliminary studies suggest the potential to produce high-purity silica (>98% SiO_2), a valuable commodity for the emerging electric vehicle battery industry.

THE SILVER QUEEN PROJECT

Equity Metals Corporation's flagship asset, occupies a strategic position within the prolific Skeena Arch, a region renowned for its mineral wealth. Surrounded by active mines and advanced exploration projects operated by major mining companies, the property benefits from an established infrastructure and a rich mining heritage, enhancing its potential for significant discoveries and development.

Spanning 18,871 hectares in the Omineca Mining Division, south of Houston, British Columbia, the Silver Queen property comprises 17 crown-granted and 46 tenure claims. Its accessibility is a key advantage, with an all-season maintained road connecting it to the nearby Huckleberry mine at Owen Lake, just 43 km south of Houston. The project has inherited substantial mining infrastructure from previous operators, including two historic declines into the No. 3 Vein, camp facilities, and a maintained Tailings Facility, which could potentially expedite future development efforts.



The property's exploration history dates back to 1912, with over a century of cumulative work including more than 500 drill holes and in excess of 9 kilometers of underground workings. This extensive exploration and development history, representing an investment of over $20 million, has yielded valuable geological insights and demonstrated the property's mineral potential. Historical production from the underground workings totals approximately 200,000 tonnes of material, resulting in the extraction of 3,000 oz Au, 400,000 oz Ag, 0.9 Mlbs Cu, 1.5 Mlbs Pb, and 11 Mlbs Zn.

Metallurgical studies from 1988 and 2022 have further validated the project's economic potential. Pilot plant testing achieved impressive metal recoveries, producing zinc, copper-lead, and Au-Ag-pyrite concentrates with total recoveries of up to 83% Au, 95% Ag, 93% Cu, 91% Pb, and 98% Zn. The epithermal vein system, which was the first mineralization discovered on the property, remains the primary focus of exploration efforts, suggesting significant untapped potential within this historically productive and geologically prospective area.

In 2022 the company announced an updated Mineral Resource Estimate for the Silver Queen Project. Over 78 new drill holes (totalling 25,659 metres) have been incorporated in the new resource estimate making for a significant increase over the 2019 resource estimate. The updated resource estimate shows the following numbers:

- Indicated 62.8 Moz AgEq @ 565 g/t AgEq (+187%)
- Inferred: 22.5 Moz AgEq @ 365 g/t AgEq (+30%)
- Current drilling is targeted to add an additional 2.5Mt of additional resources from several targets.

The immediate focus is on a comprehensive analysis of the now complete 10,000-meter drilling program, followed by additional drilling on other priority targets. This data will be instrumental in shaping the direction of future exploration efforts and potentially lead to further resource expansions. The company's well-funded position, with $5 million in the treasury, provides a solid financial foundation for executing its near-term exploration plans without the immediate need for additional financing.

2024 EXPLORATION

Equity Metals 2024 10,000-meter drilling program was completed in August with 24 core holes totalling 10,543 meters of drilling completed. Assays of 15 holes have been received as well as partial assays from four holes in the Camp and Camp North targets.Assays from a further 9 holes are pending. Additional drilling is planned for 2024 which will target the northwestern extension of the No. 3 Vein. Drilling highlights from the current program are as follows showing two of the thickest mineralized intervals to date as well as additional bonanza silver assays from the Camp Vein:

SQ24-105: 8.8 metres averaging 324g/t AgEq; inc 1.2 metres grading 1189g/t AgEq
SQ24-105: 9.1 metres averaging 321g/t AgEq; inc 1.6 metres grading 802g/t AgEq
SQ24-107: 2.7 metres averaging 265g/t AgEq
SQ24-113: 0.4 metres grading 4512g/t AgEq
SQ24-124: 3.5 metres averaging 1,901g/t AgEq inc. 0.7 metres grading 7,532g/t AgEq

HIGH GRADE SILVER IN MEXICO

By Christian Elferink

Southern Silver Exploration Corp. (TSX-V: SSV) (OTCQX: SSVFF) is making waves in the North American precious metals exploration sector, with a primary focus on silver-lead-zinc-copper-gold polymetallic projects. The Vancouver-based junior explorer has positioned itself strategically to capitalize on the growing demand for silver and base metals, particularly through its flagship Cerro Las Minitas project in Durango, Mexico, while maintaining two promising secondary assets in New Mexico, USA.

The crown jewel of Southern Silver's portfolio, the Cerro Las Minitas project, is situated in the renowned Faja de Plata (Belt of Silver) of northern Mexico. Covering over 27,500 hectares, Cerro Las Minitas has demonstrated impressive potential, with recent drilling campaigns expanding known mineralization zones and identifying new targets. The project's substantial mineral resource estimate places it among the world's largest undeveloped silver-based projects, attracting attention from larger mining entities and positioning it as a potential acquisition target.

Beyond Cerro Las Minitas, the company's Oro project in New Mexico offers exploration upside and geographic diversification. Targeting epithermal gold-silver, CRD silver-lead-zinc, and copper-gold porphyry mineralization, Oro complements the silver-focused Cerro Las Minitas project. From a financial standpoint, Southern Silver has shown resilience in raising capital during challenging market conditions, maintaining a tight share structure with significant insider ownership.

CERRO LAS MINITAS - UPDATED ECONOMICS

The Cerro Las Minitas project is located about 70 kilometres to the northeast of the city of Durango in Durango State, Mexico, and is accessed easily by road. The property comprises 26 concessions, totalling approximately 27,548 hectares, and lies within heart of the Faja de Plata (Belt of Silver) of north central Mexico. The belt is one of the most significant silver producing regions in the world, with current reserves/resources and historic production in excess of 3 billion ounces of silver.

The deposit contains one of the largest undeveloped silver resources globally, with over 300 million ounces of silver equivalent in all resource categories. The project remains open for expansion, particularly at depth in the South Skarn and La Bocona-North Felsite areas.

Southern Silver Exploration recently update the Preliminary Economic Assessment (PEA) for the Cerro Las Minitas project silver-lead-zinc project located in Durango, Mexico. This updated PEA represents the culmination of 18 months of technical improvements over the previous economic assessment.

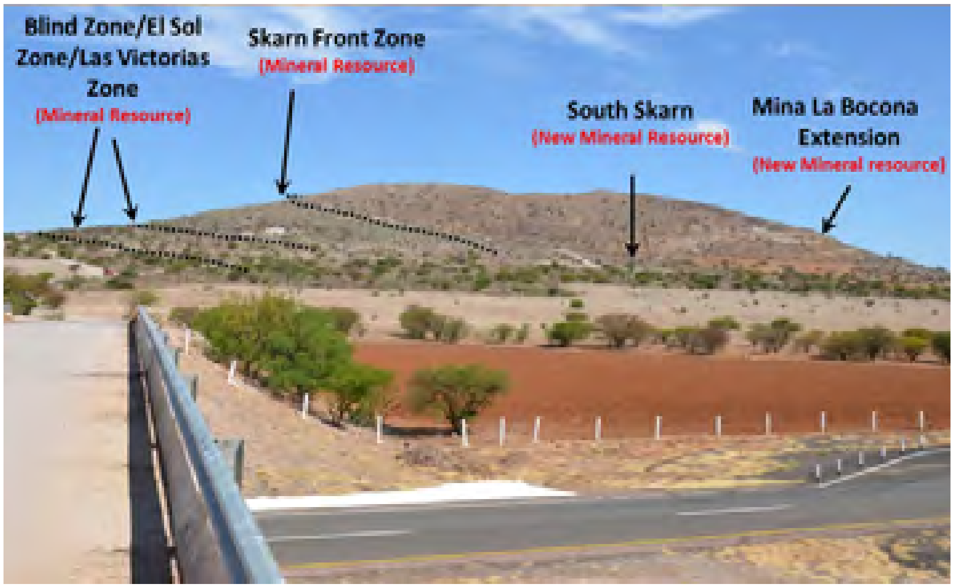
Key highlights of the updated PEA include:

- An increase in Life of Mine (LOM) production by 5 million tonnes, representing a 20% increase
- An increase in daily mine production capacity to 5,300 tonnes per day, an 18% increase
- An extension of the mine life by 2.6 years
- An increase in LOM Revenue by $765 million, a 17% increase
- A 45% increase in after-tax NPV5% to $501 million
- An increase in post-tax IRR to 21.2%, up 3.3%

The project now envisions a 5,300 tpd underground mining operation producing an average of 14.3 million ounces of silver equivalent annually over a 17-year mine life. This represents a significant improvement over the previous PEA.

Lawrence Page, K. C. President, said, *"This latest economic update of Cerro Las Minitas represents a new milestone in the ongoing evolution and development of the project which is the culmination of a number of smaller technical improvements, developed over the last 18 months, which together result in a significant increase in the value of the Cerro Las Minitas asset. This includes the addition of new mineral resources from the North Felsite zone as first reported in March 2023; the standardization of the metallurgical recoveries and charges across each of the deposits, including the addition of gold revenues into the project cash-flow; improvements in the mine scheduling; and optimization both the Operating and Capital costs of the project."*

"Since acquisition of the property in 2010 and subsequent identification of the mineral resources, a very profitable and valuable mine has been modelled in the results of the PEA disclosed today. Total acquisition, exploration and development costs are approximately US$28 million and significantly, the property is not burdened with royalties, presenting potential financing opportunities for additional drilling and development



work on the property. This presentation of the results of the PEA marks a significant milestone in the development of the property and the best is yet to come."

While some concerns exist around mining permitting in Mexico, Cerro Las Minitas is an underground project in the mining-friendly state of Durango, which should mitigate permitting risks compared to open-pit proposals.

POTENTIAL RESOURCE EXPANSION

The company has identified a comprehensive 25,000-meter drilling campaign aimed at resource expansion in the Eastern and Northern Deposits. This drilling program is strategically designed to be implemented in stages:

1. The initial phase involves 5,000 meters of drilling, focusing on shallow targets in the vicinity of the eastern and northern deposits.

2. The subsequent phase, comprising up to 20,000 meters of drilling, will target the down-dip projections of the South Skarn and Bocona deposits.

The company has set an exploration target of 4 to 8 million tonnes of additional mineralization through this drilling program. This range represents a conservative estimate based on geological modeling and the results of previous drilling campaigns. A key near-term milestone for Southern Silver is to increase the total resources of the project to 45 million tonnes. This ambitious goal underscores the company's confidence in the geological potential of the Cerro Las Minitas property and its commitment to growing the resource base.

REVITALIZING CANADA'S MINING LEGACY WITH PAST-PRODUCING COPPER AND ZINC PROJECTS

By Nick Tartaglia

Osisko Metals (TSX.V: OM) (OTCQX: OMZNF) is currently working on the redevelopment of 2 of Canada's premier past-producing brownfield assets:

1) the Gaspe Copper Mine in Murdochville, Quebec
2) the Pine Point Mining Camp in Northwest Territories

With the purpose of redeveloping past producing assets that have been identified as critical for decarbonization – zinc and copper – Osisko Metals is moving to take advantage of the market opportunity. Moving in the same direction as the EU, Japan, India, Canada and China, the US Department of Energy finally added copper to its critical minerals list about a year ago. Zinc was already on the list prior to copper. This means that both Osisko Metals' projects can benefit from key advantages that governments have announced to prioritize, support, and streamline the permitting for critical minerals projects.

Below is chart from US Department of Energy: Medium-term (2025-2035) Criticality Matrix

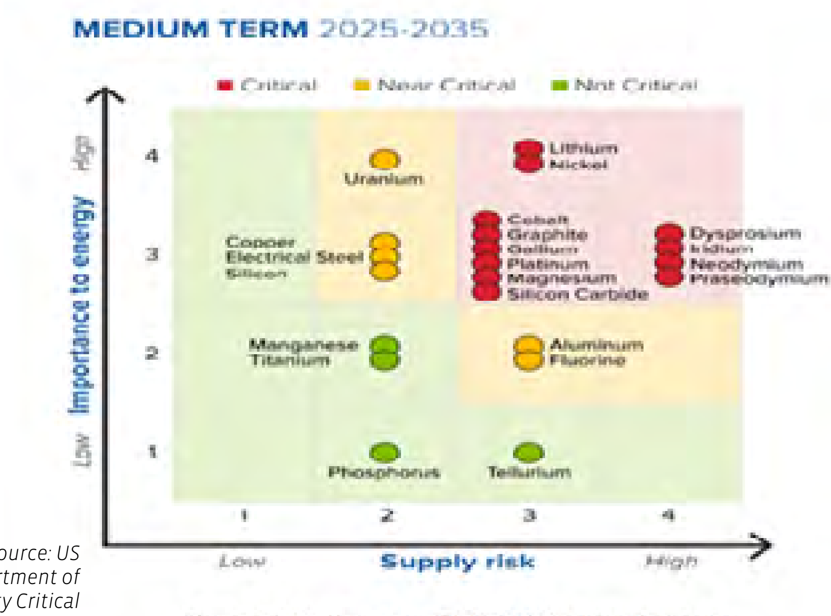


Figure 3.2 Medium-term (2025–2035) criticality matrix

Source: US Department of Energy Critical Materials Assessment, 2023

"Critical minerals, and the clean technology and energy sources they enable, present a generational economic opportunity for Canada. Canada's Critical Minerals List is a key resource in determining where to focus Canadian efforts related to sustainable mining exploration and extraction, advanced manufacturing, clean technology, as well as information and communications technologies and semiconductors. Critical minerals are the building blocks for the green and digital economy and demand for them will only grow throughout the global energy transition."
- Government of Canada Releases Updated Critical Minerals List

The Honourable Jonathan Wilkinson, Minister of Energy and Natural Resources stated "By updating Canada's Critical Minerals List, we are taking a proactive step to ensure that Canada's efforts to seize the generational economic opportunity presented by our critical minerals wealth is well informed by the most accurate market trends, geopolitical factors and science. Investments in critical minerals projects create good jobs for workers, more avenues for Canadian innovation and lower emissions across the country — all of which form an important part of our plan to build a cleaner Canada and a prosperous, sustainable economy."

The global market for Zinc was estimated at 18.4 million tons in 2023 and is projected to reach 21.7 million tons by 2030, growing at a CAGR of 2.4% from 2023 to 2030 according to the "Zinc – Global Strategic Business Report."

Source: Global Zinc Strategic Industry Report 2023-2030: Increasing Demand in Galvanization and Coating Applications, Rising Adoption in Automotive and Transportation Sectors (yahoo.com)

Zinc with its many applications is the fourth most used metal in the world behind iron, aluminum and copper. Known as the "galvanizing metal", zinc strengthens infrastructure and alloys, from steel-frame buildings and bridges to furniture and automotive body parts. This process allows steel to be stronger, durable and more corrosion-resistance, accounting for nearly 50% of its total annual demand. There is also the health relevance of Zinc as it is an essential nutrient to fight infections and enhance memory and thinking. Also, a great micronutrient for plants, yielding more productivity and resilience in crops. It even has a place in batteries with Zinc-air batteries.

Source: *Zinc: The Essential, Sustainable, and Versatile Metal (visualcapitalist.com)*

"When it comes to conducting electricity, copper is second only to silver. This property makes it an indispensable building block for multiple energy technologies, including:

- **Electric vehicles:** *On average, a typical electric car contains 53kg of copper, primarily found in the wirings and car components.*
- **Solar power:** *Solar panels use 2.8 tonnes of copper per megawatt (MW) of installed capacity, mainly for heat exchangers, wiring, and cabling.*
- **Wind energy:** *Onshore wind turbines contain 2.9 tonnes of copper per MW of capacity. Offshore wind turbines, which typically use copper in undersea cables, use 8 tonnes per MW.*
- **Power grids:** *Copper, alongside aluminum, is the preferred choice for electric transmission and distribution networks due to its reliability and efficiency."*

The table below compares annual copper demand from clean energy, in tonnes, in 2020 vs. 2030:

Year	Power Grids	EV batteries	Wind	Solar	EV charging	Total (tonnes)
2020	1,700,000	210,000	165,000	83,000	4,200	**2,162,200**
2030 P	2,000,000	1,800,000	352,000	104,000	47,100	**4,303,100**

Source: Copper and Nickel: The Key Metals for Energy Utopia (visualcapitalist.com)

Osisko Metals' strategy is to focus on the global transition to a decarbonized economy, and both of these raw materials – zinc and copper - are absolutely necessary to transport and store clean energy. The transmission and distribution of clean energy is far more critical to the global baseline infrastructure for this ideal energy future. With copper demand projected to outpace supply by 2026, Osisko Metals has selected Gaspé Copper as its flagship project in the near term. Although Gaspé Copper is a Tier 2 asset, it is the largest untapped copper deposit in Eastern North America and the scarcity of new tier 1 copper assets has made the opportunity for tier 2 assets in the West more important than ever before.

GASPE COPPER ASSET - CORE ASSET

This asset was previously owned by Glencore Canada and acquired by Osisko Metals in July 2023. As part of the agreement, Glencore retains 100% of the commercial offtake from the mine's eventual production. Gaspé Copper is the former past-producing Gaspé Copper Mine, which has a historical production of 44 years between 1955 - 1999 having produced 142 Mt @ 0.9% Cu. This asset already has infrastructure, with highway access to deep-sea port, rail and airport, hydroelectricity on-site, and green wind farms generating power close to the mine site. The location also benefits from the local community, many of whom worked at the mine before it closed and have significant expertise and a strong desire to see the economic benefits and opportunities that the mine provides return to the region. The project also benefits from 100 kms of pre-existing mine haul roads from the original mining operations, providing access to most of the deposits in the 2024 MRE. The region has mining history in its blood, and so many of the necessary variables to bring this project back to life are already in place, bringing the finish line closer than most tier 2 assets being worked on.

To date, nearly 40,000 meters of drilling has been completed, with a few thousand meters left to drill to establish the parameters of the mine capacity. Their drill rig is currently located in the Copper Mountain pit for a 4,500-meter drilling program. This program is aimed at better defining resources in the enriched core of the Copper Mountain deposit in 2025 to further expand the MRE and produce a Preliminary Economic Assessment (PEA), a comprehensive review of the economic viability of the project, which is expected for Q1 2025.

There are over 3.2 billion pounds of contained copper to date established in the Indicated Resource category, and the results from the remaining drilling will be used to help upgrade the bulk of the deposit to the Measured & Indicated Resource categories.

With copper prices holding well above $4/USD per pound, the long trend of copper prices sustaining between $4.50 and $5 is not unrealistic, especially as demand continues to put pressure on prices. But keep in mind - even as prices go higher, it

Class	Copper Cut-Off (%)	Tonnes (Mt)	Cu Eq (%)	Cu (%)	Mo (%)	Ag (g/t)	Cu metal (M lbs)	Cu metal (kt)	Mo metal (M lbs)	Mo metal (kt)	Ag metal (koz)
Indicated	0.15	495	0.37	0.30	0.016	1.75	3,248	1,473	175	79.5	27,911
Inferred	0.15	6.3	0.37	0.28	0.019	1.44	39	18	3	1	291

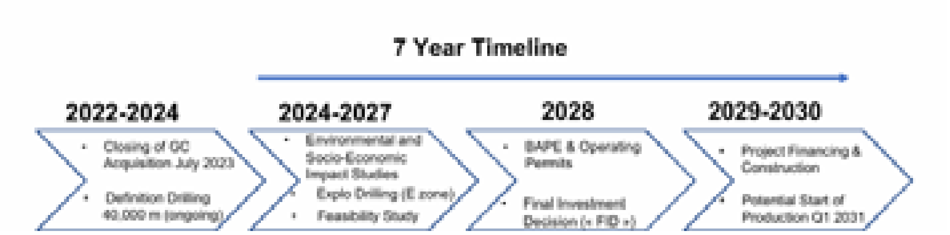
Source: PowerPoint Presentation (osiskometals.com), Pg.2

Source: PowerPoint Presentation (osiskometals.com), Pg.18

will take time to increase the copper supply, as the process of building out a mine is no quick task. Osisko Metals is moving to advance the Gaspé Copper project as it becomes poised to take advantage of this market gap.

Source: copper prices - Google Search

Other than the upcoming PEA, their other objectives to reach the final stages to produce are laid out in the following timeline provided in their investor deck.



Souce: PowerPoint Presentation (osiskometals.com)

On the social and environmental front of this project, social support is moving well and in the right direction, benefiting from its support from the local town of Murdochville and other nearby communities. They are currently conducting their environmental studies to prepare for the permitting process.

One step that must be undertaken in order to properly assess the resource is to drain the water from the existing pit from the previous mine operations, called the dewatering process. To address concern from some about potential impacts on the local rivers of this dewatering process, Osisko Metal's has established a dewatering committee of local biologists from different NGOs from the Gaspé peninsula to gain local insights on the dewatering process and ensure that the community is kept informed of project developments.

PINE POINT ZINC ASSET

The Pine Point Mining project, located in Canada's Northwest Territories, has the potential to become one of the world's largest zinc and lead mines.

As of Feb 21, 2023, Pine Point is being developed in a joint venture (JV) with Appian Natural Resources Fund III based on a $100M CAD investment agreement. This includes $75.3M CAD for project funding for the following 4 years, expected by 2028 to bring Pine Point to a 'Final Investment Decision' (FID). The funding in place allows Pine Point to complete a detailed feasibility study (FS), which is currently underway, as well as environmental assessments and permitting, set to be completed in 2028. If the decision is made to go ahead with the mine, construction would begin at that point, and the mine could be in production in 2030. As we stand, this asset does not require any funding for a few more years.

Like Gaspé Copper, Pine Point operated as a mine in the past, from 1963 to 1988. The site benefits from the significant infrastructure it already has in place, which includes power from the Taltson Hydroelectric dam on site, paved highway access, and 100 kilometres of viable haulage roads. These benefits provide access to most of the deposits in the 2024 MRE.

The Pine Point Project also yielded a positive 2022 PEA with an after-tax NPV of C$602M, IRR of 25% and payback period of 3.8 years. Previous metallurgical test work described in the 2022 PEA (press release August 29, 2022) highlighted Pine Point as a potential producer of among the cleanest, high-grade zinc and lead concentrates globally. There is also the opportunity to enhance the PEA laterally along open pit-constrained boundaries of deposits and the hydrogeological studies with the intent to reduce de-watering estimates & cost.

The 2024 updated MRE highlighted:

- Indicated Mineral Resources of 49.5Mt grading 4.22% zinc and 1.49% lead (5.52% Zinc Equivalent ("ZnEq")) containing approximately 4.6 billion pounds of zinc and 1.6 billion pounds of lead in situ (undiluted).
- Inferred Mineral Resources of 8.3Mt grading 4.18% zinc and 1.69% lead (5.64% Zinc Equivalent ("ZnEq")) containing approximately 0.7 billion pounds of zinc and 0.3 billion pounds of lead in situ (undiluted).
- 2024 MRE used variable cut-off grades between 1.41% and 1.51% ZnEq for open pit resources and between 4.10% and 4.40% ZnEq for underground resources.

With a critical metals crunch coming our way, Osisko Metals has taken the strategic step of taking on and developing assets with history and infrastructure in good jurisdictions that can meet the growing needs of the green transition market.

[HED] NAVIGATING COMPLEX CHALLENGES: THE SUCCESSFUL REMEDIATION OF THE LORADO URANIUM MINE

By Wayne Harris

[Dek] Discover how Milestone Environmental Contractors and PBN Nuna Contracting tackled the intricate environmental, logistical, and radiation-related hurdles in the remote region of Northern Saskatchewan to restore a former uranium mill site, offering valuable insights and strategies for successful mine site reclamation.

Operational challenges in mining and environmental reclamation are often complex and multifaceted. The Lorado Former Uranium Mill Remediation project in Northern Saskatchewan exemplifies how strategic collaboration and meticulous planning can successfully address these challenges.

Milestone Environmental Contracting Inc., based in Langley, B.C., led the restoration of the Lorado Former Uranium Mill in collaboration with PBN Nuna Contracting.

"The project involved addressing substantial tailings material with key components, including installing an earthen cover system over existing tailings to mitigate environmental impact and operating a water treatment system to cleanse contaminated water. The remediation covered an 18-hectare tailings area and addressed 10 nearby contaminated satellite sites, including efforts to neutralize a local lake's pH levels," explained Wayne Harris, the Lorado Former Uranium Mill Remediation project manager, for Milestone Environmental Contracting Inc.

The project demanded rigorous planning and coordination to ensure efficiency and compliance with environmental health and safety standards. As the project progressed, diverse and unconventional transportation methods were critical to mobilizing resources in such a remote location. Milestone rebuilt transportation routes, including ice roads, air transport, and lake barges, and the team thoroughly cleaned the site to finalize the remediation efforts.

24-HOUR OPERATIONS

Continuous water treatment operations required 24-hour staffing, which posed additional logistical challenges. Ensuring the site was staffed 24/7 meant meticulous planning to manage shift crossovers and ensure every team member was ready to take over without disruptions.

Emergency readiness was a concern throughout night operations, as maintaining emergency readiness in the dark hours required open and effective communication lines. Safety was a priority around the clock.

RADIATION CONCERNS

The site's history with uranium processing introduced radiation-related complexities. Milestone developed a Radiation Protection Plan (RPP) that was compliant with Radiation Protection Regulations and the Nuclear Safety and Control Act. This plan included comprehensive training programs, continuous radiation monitoring, and environmental contamination controls.

"Field workers received training on radiation safety measures, and we monitored radiation levels to ensure exposure remained within safe limits," Harris explained, *"we kept detailed records of radiation protection procedures, dose records, and survey results to ensure compliance and safety throughout the project."*

ENVIRONMENTAL STEWARDSHIP

Milestone and PBN Nuna Contracting prioritized environmental stewardship throughout the project and developed an Environmental Procedures Manual, identifying potential health and environmental hazards, particularly for spill management. They established clear procedures for stopping, containing, and cleaning up hazardous material spills, ensuring quick response to minimize environmental impact.

Personnel were trained and equipped to handle hazardous materials safely, with comprehensive training programs and access to Material Safety Data Sheets (MSDS). These measures ensured operations were completed responsibly and in compliance with environmental regulations.

LOGISTICAL HURDLES

Remote northern Saskatchewan posed significant logistical challenges. Access was limited to ice roads, barges, and fixed-wing aircraft, requiring meticulous planning for transporting labour, materials, and equipment. Milestone Environmental Contracting systematically mobilized resources to the site by setting up a staging area in Stony Rapids, Saskatchewan.

"Tackling the challenges of working in such a remote location meant making sure that, even in the far reaches of Northern Saskatchewan, we had everything we needed right where we needed it," said Harris.

Collaborating closely with local Athabasca Basin personnel and businesses was central to overcoming these logistical challenges. By actively engaging with Uranium City and Fond-du-Lac communities, Milestone Environmental Contracting and PBN Nuna Contracting secured essential resources and fostered a mutually beneficial relationship. Local suppliers and contractors brought specialized knowledge of the region's terrain and climate, ensuring that logistical operations ran smoothly and efficiently and enriching project outcomes.

Connect with Milestone Environmental Contracting here for more insights and information on their mine remediation projects.

WHAT DO YOU MEAN IT IS *NOT* MY MONEY?

By David Morgan

Now that the Federal Reserve has started to lower interest rates in September 2024 the markets have started to respond. The general feeling is that lower interest rates will help the economy, and perhaps good times are just around the corner. This writer totally disagrees.

The U.S. Federal Reserve decided to let the dollar destroy itself by signaling that future value of a dollar is moving back toward zero. Remember, an interest rate forecasts many things, one being what the future value will be. If the interest rate is nothing, then there is no point in saving them, you should spend everything you can NOW! This is basically what happened during the ZIRP (Zero Interest Rate Policy) timeframe.

As the global recession deepens and threatens to morph into a full-scale economic depression, central banks face a difficult dilemma: either combat the soaring core consumer inflation by pausing the interest rate cuts or raising them again, yet sadly the central banks most likely will see a deflation of national economic production. The US Federal Reserve lacks the tools to effectively tackle both issues simultaneously. It can save the dollar or try and save the economy. The choice was made to try and save the economy, but the contraction in retail enterprise, commercial real estate and inflation well above the contrived stated rate, proved that production on a global scale is contracting and cannot be controlled by interest rate manipulation.

This puts bank depositors in a precarious position. The value of the dollar is moving lower and major banks are forecasting economic turmoil. Alarmingly, these institutions are even more over-leveraged with derivatives than they were during the 2008 Great Recession, when the collapse of the housing market caused widespread financial chaos. Today, derivative exposure spans nearly all financial sectors, making depositors vulnerable. Again, the commercial real estate fiasco threatens the commercial banking sector in ways far greater than the 2008 financial crisis. It's crucial for you to understand that in the event of a bank failure, you are not the priority. In fact, depositors rank third in line to reclaim their funds, trailing behind other creditors.

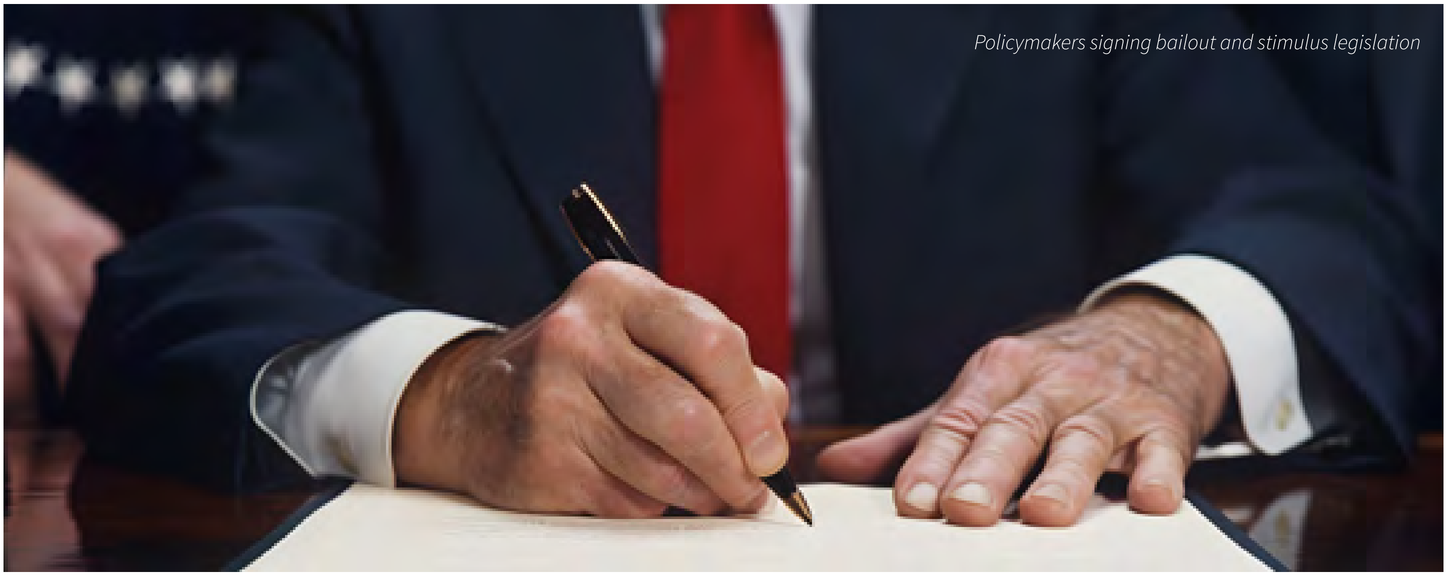
Since 2008, the concept of "too big to fail" has allowed banks to consolidate and grow larger, gaining even more financial and political influence. For years, investment mogul Warren Buffett warned that derivatives are "financial time bombs," with the potential to devastate economies and everyday lives. It is worth noting that Buffett has sold off a massive amount of stock and is now sitting in a record cash position. In fact, we tweeted out recently that Buffet's cash position would buy the World's silver production for nearly ten years.

Former Federal Reserve Chairman Paul Volcker also recognized the dangers, resigning from President Obama's Economic Recovery Advisory Board in 2011, frustrated by the continuation of unchecked derivatives practices. As much of the establishment as Volcker is, even he sees the writing on the wall.

The roots of the current economic crisis lie in the aftermath of the 2008 crash. In response, the US government's Troubled Asset Relief Program (TARP) spent $426.4 billion to stabilize the financial system by purchasing worthless mortgage-backed securities and failing bank stocks. TARP also ushered in new legislation like the 2010 Dodd-Frank Wall Street Reform and Consumer Protection Act, which claimed to end taxpayer-funded bailouts. However, the financial law firm Davis Polk estimates that the Dodd-Frank legislation spans more than 30,000 pages, and banks poured millions into lobbying efforts to protect their interests.

The result? Ordinary taxpayers lost out. Pension funds collapsed, businesses shed long-term retirement obligations, and families faced financial insecurity. Meanwhile, Dodd-Frank introduced a new mechanism to handle failing banks: "bail-ins," which placed the burden on depositors rather than the government or the banks themselves. Under this new system, depositors became unsecured creditors, meaning that their cash deposits are no longer protected in the event of a bank failure. Instead, derivatives and other high-risk ventures are prioritized over depositor savings.

We have seen bank failures since these provisions were put into law. What



Policymakers signing bailout and stimulus legislation

happened? Well the law was ignored and depositors were made whole. Let this sink in as it is the most important part of this missive. The bail-ins were accomplished because of WHO the depositors were. They were mostly Silicon Valley businesses. This means Banking Elite can and will play favorites. Be forewarned, this is NO Guarantee that your bank will be bailed out, in fact it is far more likely it will be bailed in.

Even, the UK's 2012 Prudential Regulation Authority (PRA) reform followed a similar trajectory, ensuring that in the case of bank failures, derivatives would be paid off first, with depositor funds being used to cover the losses. The Bank of England, which requires banks to hold an 18% reserve of cash deposits, does not apply this reserve to derivatives, leaving depositors exposed.

In both the UK and US, banks hold trillions in personal savings deposits, yet the resources available to protect these deposits are woefully inadequate. The FDIC in the US has a total fund of just $25 billion, while the Bank of England's liabilities in derivatives exceed £5 trillion. Both countries have made it clear that in the event of a failure, depositors could be compensated not with cash, but with bank stock—an unsettling prospect given the volatility of such assets.

This scenario played out in the aftermath of the 2008 crisis in countries like Cyprus, Greece, and Spain, where depositors were forced to accept stock in exchange for their savings. The value of these stocks plummeted, leaving many with only a fraction of what they had originally deposited.

Today, the situation is more dire than ever, as banks' exposure to derivatives has ballooned to more than one quadrillion dollars globally, affecting nearly every sector of the economy. Despite warnings from experts and regulators, little has been done to rein in the risks posed by derivatives.

In 2012, the Bank of England and the FDIC released a joint strategy paper outlining a plan to resolve failing financial institutions without putting public funds at risk. However, the fine print reveals that depositors are the ones bearing the brunt of these failures.

In China, where debt-fueled growth has reached its limits, depositors are experiencing similar pain. Over 400,000 depositors across five regional banks in Henan province were blocked from withdrawing their funds. The government's response has been to offer repayment in stock, echoing the troubling trend seen in Western nations. The Chinese have given up on the real estate market, even the banking system, and are moving into gold and silver.

As the world braces for the full impact of this global downturn—with rising unemployment, skyrocketing prices, and the collapse of currencies- depositors should take heed of two critical lessons already learned in China: never trust a banker, and when your bank fails, have money not currency in hand.

Bio: *Seduced by silver at the tender age of 11, started investing in the stock market while still a teenager. A precious metals aficionado armed with degrees in finance and economics as well as engineering, he created the Silver-Investor.com website and originated The Morgan Report, a monthly that covers economic news, overall financial health of the global economy, currency problems ahead and reasons for investing in precious metals.*

David considers himself a big-picture macroeconomist whose main job as education—educating people about honest money and the benefits of a sound financial system—and his second job as teaching people to be patient and have conviction in their investment holdings.

A dynamic, much-in-demand speaker all over the globe, David's educational mission also makes him a prolific author having penned "Get the Skinny on Silver Investing" available as an e-book or through Amazon.com. As publisher of The Morgan Report, he has appeared on CNBC, Fox Business, and BNN in Canada.

Additionally, David provides the public a tremendous amount of information by radio and writes often in the public domain. You are encouraged to sign up for his free publication which starts you off with the Ten Rules of Silver Investing where he was published almost a decade ago after being recognized as one of the top authorities in the arena of Silver Investing.

Contact: *www.silver-investor.com*

ROBBED! MY GOLD WAS STOLEN FROM MY HOME. WHAT I DO NOW INSTEAD

By Jeff Clark, TheGoldAdvisor.com

I was robbed of my gold.

It's a true story and honestly a little embarrassing. I had a bunch of gold Eagles and Maple Leafs stolen from my home, most of my personal holdings at the time.

The thing is, I thought they were secure: the coins were stored in a small safe, well hidden from view, with a key kept in a separate room. They had been delivered discreetly. And I never talked about them, even before I started working in the industry.

BUT ALL THE PRECAUTIONS I'D TAKEN DIDN'T MATTER

The thief had searched my home with meticulous desperation. Once he found the safe, it was only the work of a crowbar and hammer until my gold was gone.

I'll never forget how violated, angry, and confused I felt. I'm sure you can relate if you've been victim of burglary, too. I'm just glad we weren't home at the time… more on that in a minute.

That incident many years ago forced me to rethink how I store my precious metals. Hopefully you can learn from my mistake. Because at the end of the day, do you want your gold and silver so much at home that you'd hesitate for a second to let go of them?

This topic is so important that I decided to share my distressing experience, in the hopes that you can benefit from it…

IT'S NOT GOOD ENOUGH TO "BE CAREFUL"

When most people buy gold, they instinctively know it needs to be kept safe. It's gold, after all, the ultimate form of money for millennia. Movies have been made about stealing it, smuggling it, recovering it from shipwrecks, and even just digging it out of the ground.

What many people don't know is the best way to keep it safe. Most just end up hiding it at home, or in a safe deposit box at the local bank. But those methods aren't risk-free, as I painfully found out. In fact, they come with more risk, and more cost, than many investors realize.

- **Keep in mind there's no replacement policy that comes with your gold: lose it and it's gone for good. Even insurance policies for home storage fall woefully short.**

If you think you've been "careful" with your bullion storage plan, see how many of the following risks you're exposed to with these common methods…

#1: HOME STORAGE

Most investors have gold shipped to their homes. I've heard of some that even display it proudly for friends and family. I can't blame them—if you've ever held a gold or silver bar, you recognize the inherent emotion in that. Usually though, common sense takes over, and they at least hide it from prying eyes. But, doing so exposes you to several key risks:

<u>Handheld home fireproof safe.</u> Small safes with a handle so it can be easily moved. These are usually designed to hold important household papers—not valuable bullion.

If you carried the safe into your house, a thief can carry it out. All they need do is find it, which is exactly what happened to me.

<u>Large home safe, bolted to floor.</u> Most investors think their bullion is secure with this type of safe, especially if it's also hidden from view.

Regardless of whether it has a combination lock or a key, what will you do if a thief demands entry—while brandishing a gun or knife? This is not hyperbole: it happened to a close family friend, and the ending of the story was very unpleasant… his wife was tortured and he was killed, and the thieves made off with over half a million in bullion. Their kids have no recourse and no parents.

<u>How many people know you own gold?</u> You might think you've been careful about who you've told, but I bet more people know than you think…

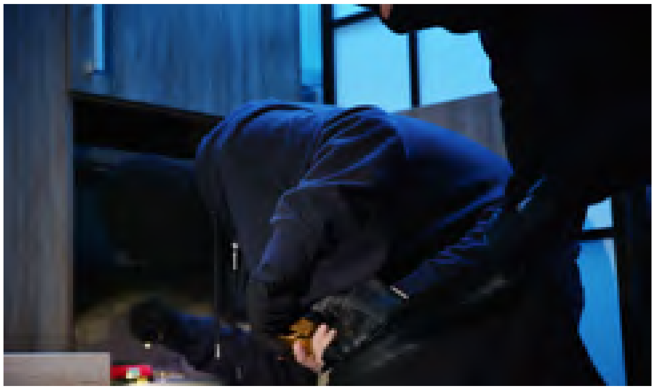
- The local bank staff, when you did a wire transfer
- Local bullion shop staff. Maybe a neighbor. Or someone sitting in their car "talking" on the phone your whole trip in and out of the bullion shop.
- Those nice guys you bought a safe from. Or came to your house to install it.

You get the point.

AND DON'T FORGET ABOUT THE "RIPPLE EFFECT"

If more than one person knows you have gold, or even just a safe, who have they told? And who did those people tell? Do your kids know? How certain are you that they don't blather at school?

Have you talked about gold in an enthusiastic way with anyone? What have you said on social media? Could someone come away with the idea that you might own gold? If so, did they mention it to anyone? How would you know?

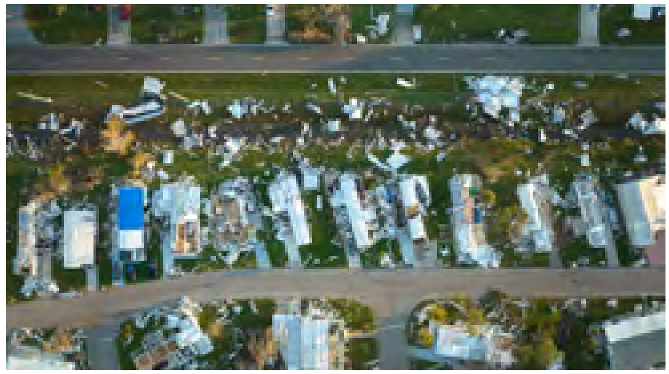


If a would-be thief hears a rumor that you might have gold, your entire home storage plan is sunk. Once the word is out, there's no takebacks. You're now a potential target, with the risk increasing as bullion prices climb.

Backyard Burial. Just dig a few holes in the backyard. If you've got the luxury of space, it gets gold out of the house. But consider:

- Even if you're sure the "midnight gardening" went unnoticed, you buried it deep enough (modern metal detectors work to about four feet), and you used an airtight, waterproof, erosion-resistant, insect-proof container...
- With backyard burial, what happens when something unforeseen happens? Hit by a drunk driver... heart attack... you break-up/ get divorced and your ex feels entitled to their share, or their new significant other does... your kids can't interpret your treasure map, or they lose it, or someone else finds it.

Natural disaster. Beyond any personal tragedy, bullion stored at home can be lost to fire, flood, tornado, earthquake and any other natural disaster. Think of the victims to the 1,000+ tornados that touch down every year in the US.



HOW'S YOUR WALL SAFE HOLDING UP?

You have no control—and little recourse—should you become the victim of a natural disaster. **Wouldn't it be nice to know your gold is safe and sound and available to sell with a few clicks, despite what may happen around you?**

What about insurance? Yes, you can insure your home-gold stored on a homeowner's policy. However, the cost is usually exorbitant—2% or more of the value annually according to our survey, much more than a bullion depository. And it almost never covers a rise in the gold price. Further, insurance typically won't cover negligence on your part or acts of God. And now a whole bunch of people know—agent, office staff, corporate office—which exposes you further to the ripple effect I mentioned above.

The simple truth is, while it makes sense to keep a small amount of gold and silver at hand for emergencies, any more than an amount you can afford to hand over willingly is ill advised. Maybe you're the type who likes to base-jump without a helmet. I'm not, and I owe my family much more than that.

#2 BANK SAFE DEPOSIT BOX

Some assume a bank safe deposit box is safe—but are you really comfortable with all these risks and restrictions?

- **No Insurance:** Did you know that whatever you put in a bank safe deposit box is uninsured against theft and all acts of nature? If something happens, you have little recourse. The risk is yours, not the bank's.
- **Loss of Access:** A government-imposed bank "holiday" or outright failure leaves no access to boxes for often weeks or longer. Another financial crisis is a very real specter, and your gold and silver would be inaccessible for one of the very reasons you bought them: protection against the financial system.
- **Bank Intervention or Seizure:** State and federal governments could lock you out of your box or seize its contents on the flimsiest allegation—it's called civil asset forfeiture and requires no conviction, not even an indictment. They come with no warning and no presumed innocence. Banks are heavily regulated and insured by the government, so they will unequivocally comply with any order from the IRS or other agency. They might not even notify you until long after the fact, if at all.

The bottom line is that storing the bulk of your precious metals at home or in the banking system exposes you to many risks, any one of which could impose financial hardship for an indefinite period.

- **A crisis hedge should not carry the degree of risk that comes with these methods!**

HOW I STORE MY BULLION NOW

Don't get me wrong… keeping some bullion close at hand is important. You should have a little readily accessible in the event of an economic or personal emergency. A financial "go bag" if you will. Secure it properly and tell only one other trusted confidant where it's located.

After that, however, keeping a significant amount of your tangible assets at home or in a bank risks you losing too much in one mishap.

- **After storing a little gold and silver close to home, the remainder of your tangible wealth should be stored in a private, non-bank, fully allocated, fully liquid, fully insured, highly secure vault. This offers the best protection during times of financial and social crisis.**

That is precisely how I store my gold and silver now. In fact, since I'm in the public eye, I keep none at home.

Over the past 20 years since I was robbed, my holdings have grown, and I now use several vaults. But I was recently attracted to a new one, a domestic vault program that is becoming another storage solution for me, one I like so much that we *added them as an advertiser*.

Here's who they are, and why I like them and have opened an account.

MONEYMETALS.COM

What first caught my attention about Money Metals is they recently built an impressive new vault, which is now the largest depository in the US—even bigger than Fort Knox!

What I like about their program is that it's a fully integrated system. Which means you can buy and sell directly from storage. Of course, you can also request delivery from your depository account at any time… and only pay the shipping cost to your destination.

Is the Money Metals Depository safe? Well, the county sheriff is a tenant in their other building literally across the street, where the Eagle, Idaho city police also maintain its headquarters.

More importantly, Money Metals' facility is extremely robust, with physical barriers, access controls, mantraps, layers of alarm systems, laser curtains, Class 3 vaults, and many other security features, including their own in-house security team and dozens of armed employees on the premises at any given time. They've never had a loss.

Also, storage costs are lower than Brinks. Here's the fee structure for standard, non-IRA storage customers. For IRA customers working with various trustees that offer storage at Money Metals, the storage fees are even lower, usually just 19 basis points.

Now one of the largest bullion dealers in North America, Money Metals has been in business since 2010, launching its precious metals storage business in 2014.

But the growth in storage demand has been so dramatic that Money Metals recently built their new *state-of-the-art secure bullion depository*. They now have over 10,000 storage customers from among their overall customer base of 600,000+.

This storage agreement outlines the detailed terms and fees. Naturally they provide customers with disclosures, audits, and insurance certificates.

Value of Your Holding	Annual Fee (billed quarterly)
$0 - $15,999	$96
$16,000 - $99,999	0.59% (.0059)
$100,000 - $999,999	0.49% (.0049)
$1,000,000 - $2,999,999	0.39% (.0039)
Call for pricing on $3+ million	

Of course you can buy for delivery from Money Metals, too. Orders over $198 ship free to any U.S. address (Canadian customers add US$50).

You can also send in metals you currently keep elsewhere, a feature not every bullion depository offers.

You can even visit your holdings in person! Or do it by Zoom. You can do this for free once a year. Just give them a heads-up to schedule it.

Money Metals also offers IRAs, and a program where you can take out a loan secured by your own holdings.

This truly is a full-service bullion system, which is why I opened my own account.

HOW TO GET STARTED WITH STORAGE

I believe every investor should use professional storage once they have a small stash close to home. This program is highly affordable and is easy to get started. No more excuses.

- *Simply visit MoneyMetals.com to make a purchase and during checkout choose the option to open a depository account—it's that easy!*

If you don't want to make a new purchase and would rather send in precious metals you currently have elsewhere, *start by creating your storage account here*. You can also call Money Metals at 1-800-800-1865. They're open 24/7 Monday through Saturday.

THE NEXT CHINA FOR SILVER

By Peter Krauth

China's dominance of the solar manufacturing industry runs to the tune of +80%, so it's not surprising that country dominates silver headlines.

But investors need to take stock of India's growing influence on silver markets. Long known as precious metals afficionados, Indians have been storing their wealth in gold and silver for a very long time.

Indians buy gold and silver as a method of savings, especially because it can always be sold for cash if needed, and because they have little trust in their currency which has gone through endless, dramatic cycles of debasement.

Indians are big gold buyers, and they buy with excess cash following their harvest season. Hindus will often wait to make larger gold purchases for their fall festivals of Dhanteras and Diwali.

India and East Asia together represent about 65% of global silver jewelry demand. Silverware represents about 6% of silver demand, with most of that coming from India.

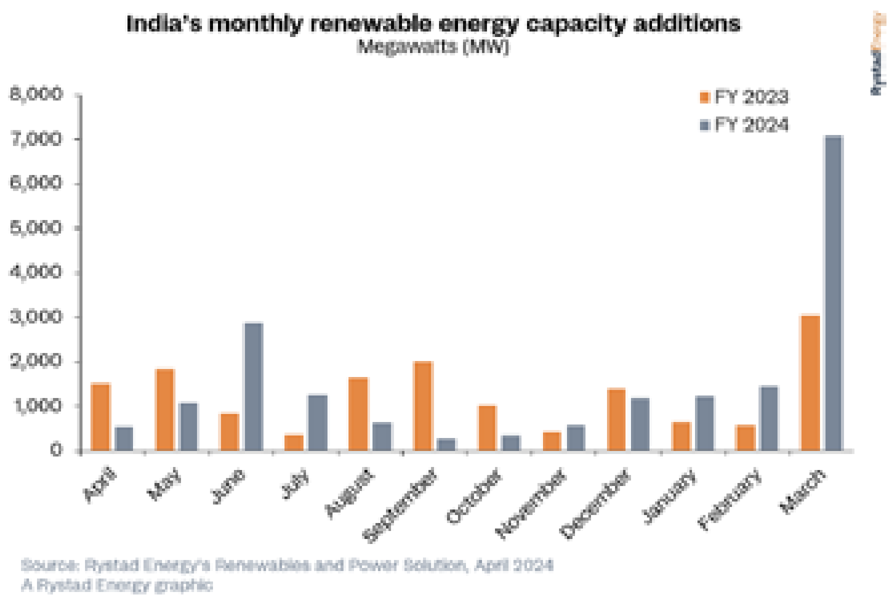
Although India's affinity for silver has mostly been for physical coins and bars, silverware and silver jewelry, the nation of 1.45 billion people is enjoying a strong and growing economy. As the country continues to modernize, they are turning to renewable energy along the way, and that means a lot more solar power.

And according to the International Energy Agency (IEA), India will lead the world with the largest energy demand growth of any nation over the next 30 years. It seems highly likely that a lot of that will go to renewable energy.

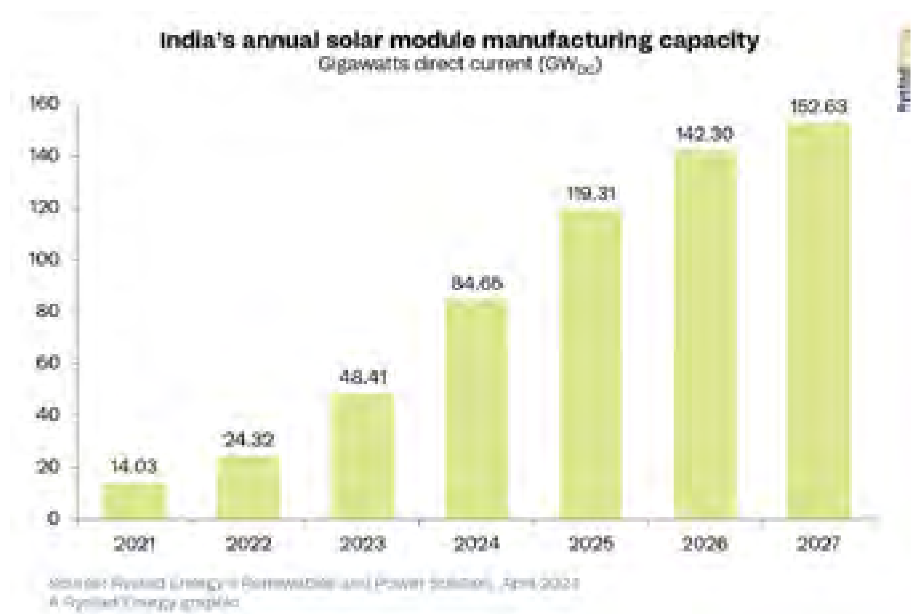
This chart from Rystad shows a massive surge in renewables so far and forecast for 2024 over 2023.

According to their estimates, India is set to triple its panel manufacturing capacity by 2027.

Adani Green Energy is turning large swathes of barren land in India's Gujarat State into the world's largest renewable energy park. It will take five years to build, but when finished it's estimated to be five times the size of Paris and will meet the energy demands of a population the size of Switzerland's.



In fact, research from Rystad Energy suggests India will see explosive growth in solar manufacturing capacity over the next three years.

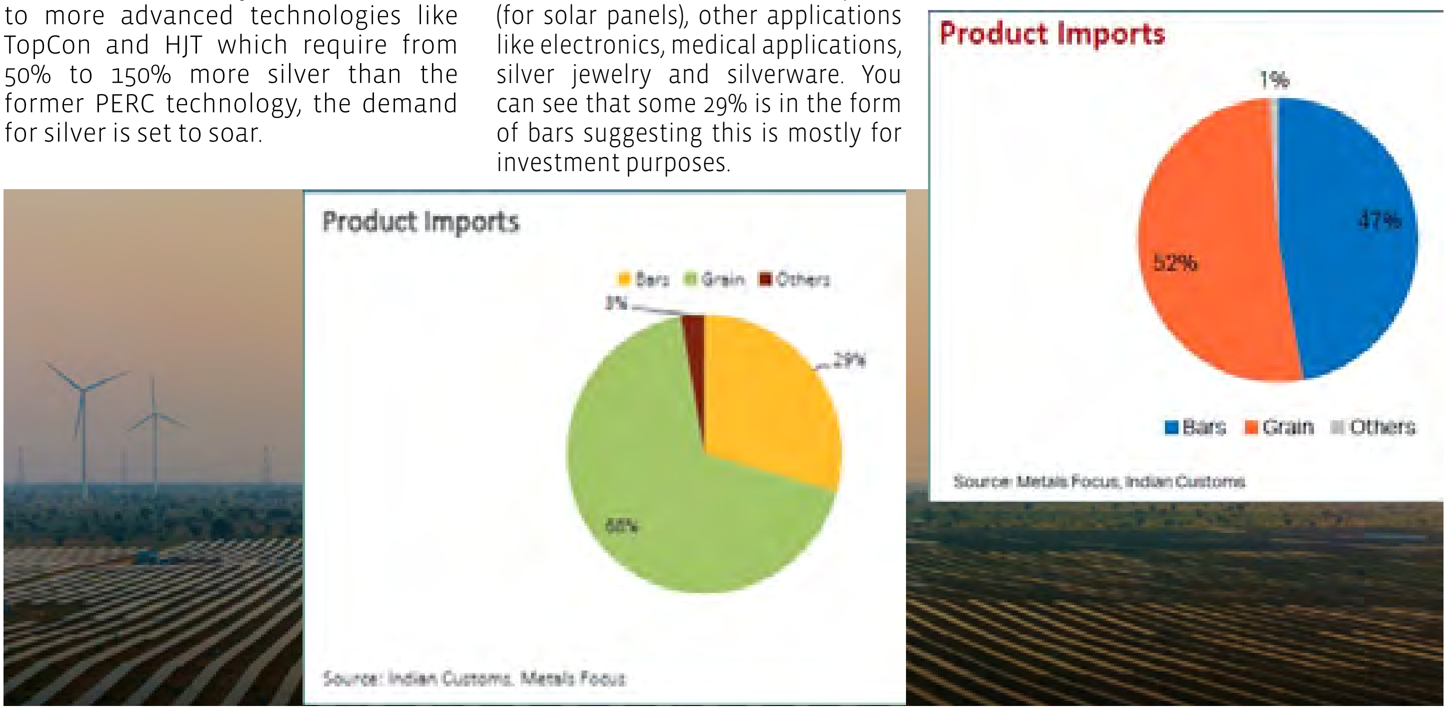


Once ready, this desert will host wind turbines but mostly solar panels, generating 30 GW of energy to power 16 million homes.

As the solar industry itself transitions to more advanced technologies like TopCon and HJT which require from 50% to 150% more silver than the former PERC technology, the demand for silver is set to soar.

And it seems that has already started to happen in India. This chart shows the breakdown of recent silver imports in July. About two thirds of silver is in grain form, from which it is modified and converted into a usable form, such as silver paste (for solar panels), other applications like electronics, medical applications, silver jewelry and silverware. You can see that some 29% is in the form of bars suggesting this is mostly for investment purposes.

Now look at the same chart from March, and we can clearly see a huge shift from bars toward grains, suggesting demand has moved dramatically towards industrial applications.



The next chart plots silver imports to India for 2023 and 2024.

Notice the surge in imports this past February, when they reached 70.7 Moz of silver. That was 64% of 2023's full year imports...in just one month! Last year, India imported about 3,625 metric tons of silver. Indian ministry data show that in the first half of 2023 the country imported 560 tons, while the same period this year saw imports jump to 4,554 tons.

According to Chirag Thakkar, CEO of Amrapali Group Gujarat, a leading silver importer, industrial demand could cause imports to double to between 6,500 and 7,000 tons. Thakkar told Reuters on the sidelines of the India Gold Conference that, *"There is a traditional demand for jewellery. People are also buying for investment purposes now that the duty cut has made silver more affordable."*

In late July, Reuters reported that India had slashed import duties on gold and silver for the world's second-largest bullion consumer.

The government cut import duties from 15% to 6% on gold and silver "To enhance domestic value addition in gold and precious metal jewellery..."

Naturally, that's another driver that's triggering huge demand for silver, and therefore imports, into this massive market that already boasts a very long-term affinity towards precious metals.

One thing is certain, I will be watching ongoing developments closely as India moves towards becoming a silver demand powerhouse.

Subscribers to my Silver Stock Investor newsletter receive this kind of Research on a regular basis.

Twice per month I provide a review of the silver price, silver markets, unique research, the recommended portfolio, and updates on all the companies in the Silver Stock Investor Portfolio.

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In other words, you always get first crack with any new movement in our paid newsletters (excluding financings and private placement opportunities).

A few days rarely makes a big difference, but either way you'll always get a head start.

Second, this is the point where there's typically lots of legalese that makes attorneys dreamy but the rest of us sleepy. So, here's our disclaimer in straight talk:

1) You can lose all your money from an investment on this site. Or from all of them.

2) We're not licensed financial advisors, so nothing we say can be considered personal advice for you. We can't possibly know what's good advice for you anyway.

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4) You should first check with a financial planner or investment advisor—we know they're sometimes negative or ignorant about this specialized sector and even gold in general, but they have information and guidance that might be useful to you that is outside the scope of this letter.

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6) While we normally own all the stocks in the portfolio, there may be times where we may not own shares (e.g., insufficient funds) or must sell for reasons unrelated to a company (e.g., medical need).

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THE ONLY NICKEL DEPOSIT IN SPAIN

By Christian Elferink

Denarius Metals Corp. (TSX-V: DSLV) (OTCQX: DNRSF) has been a publicly traded company for almost three years and in that short period of time managed to acquire an impressive asset base. Loyal readers of Prospector News should be quite familiar with Denarius and in this issue, we will highlight yet another acquisition made by the company.

DENARIUS IN A NUTSHELL

For those who are less new to Denarius Metals - Denarius Metals is a Canadian junior company engaged in the acquisition, exploration, development and eventual operation of polymetallic mining projects in high-grade districts, with its principal focus on the Lomero Project, a polymetallic deposit located on the Spanish side of the prolific copper rich Iberian Pyrite Belt, one of the largest districts of pyrite-rich massive sulfide deposits in the world. The Company has commenced construction activities at its 100%-owned Zancudo Project in Colombia, which includes the historic producing Independencia mine, providing an opportunity to develop near-term production and cash flow commencing in 2024 through local contract mining and long-term growth through continued exploration of the Zancudo deposit which remains open in all directions. The Company is also carrying out an exploration campaign on the Toral zinc-lead- silver project located in the Leon Province, Northern Spain, pursuant to a definitive agreement signed in 2022 for an option and joint-venture arrangement with Europa. Europa has granted Denarius two options to earn up to an 80% ownership interest in Europa Metals Iberia S.L., a wholly owned subsidiary of Europa which holds the Toral Project. The Company's fourth project, and latest acquisition, is the Aguablanca Project, highlighted below.

ACCELERATING PATH TO PRODUCTION IN SPAIN THROUGH NEW ACQUISITION

On December 5th the company announced that it has entered into a definitive agreement with the shareholders of Rio Narcea Recursos, S.L. to acquire a 50% interest in RNR, which has the rights to exploit the historic producing Aguablanca nickel-copper mine, including a 5,000 tpd processing plant, located in Monesterio, Extremadura, Spain, approximately 88 km from the company's Lomero Project. Denarius has acquired 50% of the issued and outstanding shares of RNR in an arm's length transaction with the RNR Shareholder Group for cash consideration totalling €25 million, of which €2.5 million has been paid and the balance will be paid in instalments of €5 million on 31 March 2024 and approximately €5.8 million at the end of each of June, September, and December 2024.

Serafino Iacono, Executive Chairman and CEO of Denarius Metals, commented, *"The acquisition of a 50% stake in RNR reflects the continued execution of our strategy of acquiring significant projects in highly prospective and tier one mining jurisdictions in Spain. The acquisition gives us ownership in the only nickel deposit in Spain and one of the few in Europe. With our Zancudo Project in Colombia already on track to commence production in 2024, this acquisition gives us a second mine going into operation next year with Aguablanca set to resume production through underground mining in the next 12 months. The acquisition also accelerates our path to production from our flagship Lomero Project using excess capacity available in RNR's 5,000 tonnes per day ("tpd") processing plant. Our technical expertise and location of assets in the nearby Autonomous Community of Andalucia makes us uniquely suited to benefit from the synergies derived from a combination of the Lomero and Aguablanca Projects. We look forward to continuing our work to help the Autonomous Communities of Andalusia and Extremadura become frontrunners in sustainable raw material technologies and practices to support the European climate neutrality goal and increase local well-being."*

The historic producing Aguablanca mine shows a historical resource estimate:

- M&I 6,414,000 tonnes @ 0.63% Ni, 0.56% Cu, 150 g/t Co, 0.28 g/t Pt, 0.24 g/t Pd, 0.15 g/t Au
- Inferred 242,000 tonnes @ 0.52% Ni, 0.42% Cu, 93 g/t Co, 0.11 g/t Pt, 0.11 g/t, 0.10 Pd, 0.06 g/t Au

Following last year's update of the Lomero Project's Mineral Resource estimate, the Company is ready for initial engineering studies and a preliminary economic assessment. The proximity to Aguablanca offers significant benefits: extra processing capacity, cost and time savings, faster mining operations start, local job creation, reduced environmental impact, and quicker permitting. This collaboration will produce various strategic and precious metals, diversifying the Company's portfolio and leveraging cyclical demand.

NEAR-TERM PRODUCTION IN COLOMBIA

Denarius has contracted a local miner and has finalized a mine plan based on a 500 tonne per day operation starting in 2024 and expanding to 1,000 tpd in 2025. A new 1,000 tonne per day processing plant has been ordered that will be installed in 2024 and produce a high-grade gold-silver concentrate starting in late 2024.. Permitting, road construction and the next phase of exploration are in the works. The Company recently closed a private placement of CA$20.6 million of gold-linked convertible debentures with its principal use of funds focused on bringing the project into production.

Denarius released a positive Preliminary Economic Assessment (PEA) for the Zancudo Project showing the following numbers:

- The Zancudo Project PEA is based on an updated MRE, with an effective date of July 31, 2023 comprising of 860,000 ounces Au @ 6.5 g/t Au, 14,100,000 ounces Ag @ 107 g/t Ag represent a total of 1,060,000 AuEq ounces.
- 10.3-year mine life for a total expected production of 683,000 payable AuEq Oz
- Recoveries: 85% for Au and 87% for Ag
- Initial CAPEX: US$14.8 million including a US$2.0 million contingency.
- AISC: US$1,059/oz
- NPV5%: US$206.3 million @ $1,800 Au, $22 Ag
- IRR: 287%

The Project incorporates local contract mining and is expected to stimulate the local economy, benefitting the Municipality of Titiribi and surrounding communities through direct and indirect employment at the Project, local sourcing of services and supplies and community programs funded by the Company.

With a series of upcoming catalysts and a team who knows how to deliver, Denarius Metals is an opportunity to invest in an undervalued company coming into production in 2024. To stay up to date with company news and learn more, visit www.denariusmetals.com

GLOBEX MINING ENTERPRISES: A UNIQUE MODEL FOCUSED ON VALUE AND ACQUISITIONS

By Ryan Blanchette

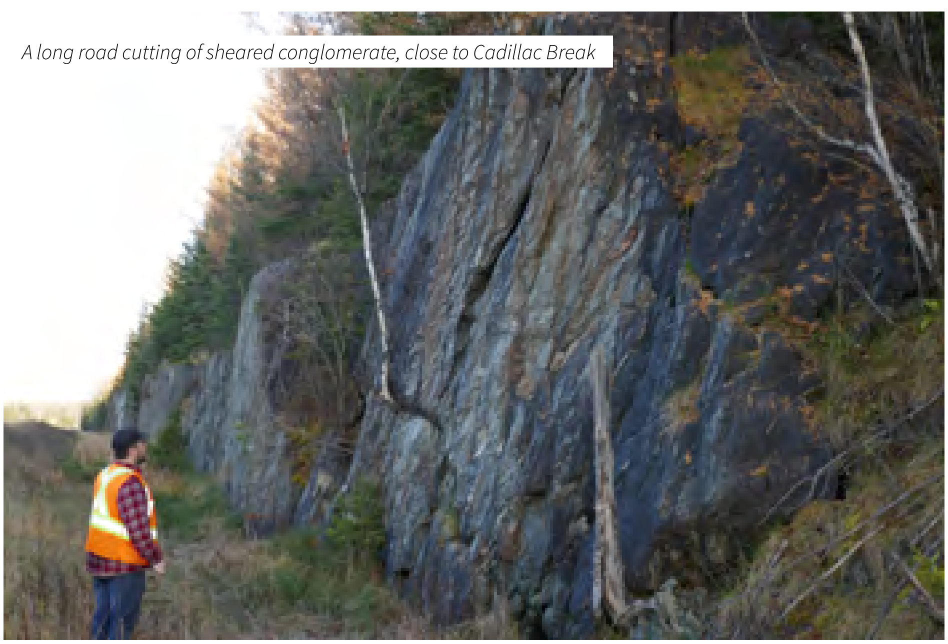
In a sea of junior mining companies that primarily focus on development of a single or handful of mining sites, **Globex Mining Enterprises (TSX:GMX) (OTCQX:GLBXF) (FRA: G1MN)** stands as a rare exception to the rule. With offices in Quebec and Toronto, Globex seeks to prioritize value-based acquisitions of numerous mining sites and enhancing them through exploration, options, or joint ventures in order to develop them to production with the possibility of selling them outright.

Globex presents itself as a Mineral Property Bank, with 252 total projects to include 105 royalties as of 2024. Primarily focused on polymetallic base metals, specialty minerals, and precious metals, the company owns 100% of all listed properties located in low-political risk jurisdictions such as Eastern Canada, Germany, and the United States. With over $25 million in cash and shares, Globex functions with zero debt thanks to its business model and experienced management team led by Jack Stoch, a 40-year veteran of the mining industry with a Bachelor of Science in Geology devoted to building Globex into a highly successful mining and exploration company.

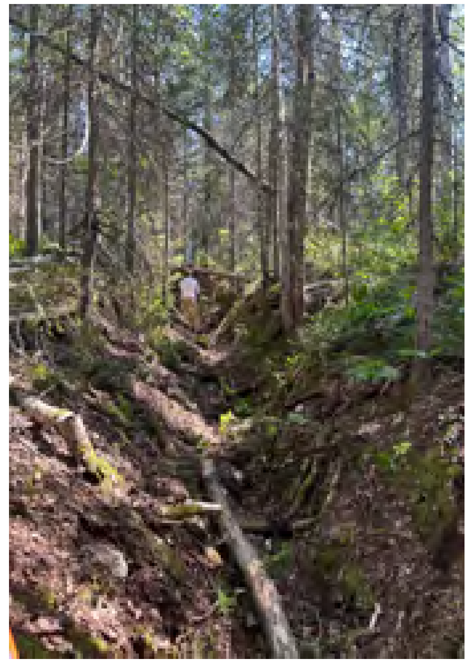
Globex's property criteria requires a prospective project to contain key features such as pre-existing drill intersections of economic interest, confirmed past production quantities, and mineralized showings or specified drill targets. The project sites must be easily accessed and located on major ore localizing structures or in prolific mining camps and show historical resource potential or targeting.

The corporation has grown with minimal dilution of shareholders by optioning land packages from its inventory for cash and shares while retaining royalties on future production; this allows partners to assume the exploration risk and grants Globex the power to conserve its cash reserves and prevent unnecessary shareholder dilution. At 56 million current shares and operating for over 35 years, Globex has never experienced a rollback and prides itself on smart fiscal management while developing key strategic partnerships across the mining sector.

Several important projects are underway that present massive upside for the company. The prospect of antimony, a highly critical metal valuable to military production and currently banned from export by its largest producer China, exists at their Bald Hill property in New Brunswick,



A long road cutting of sheared conglomerate, close to Cadillac Break

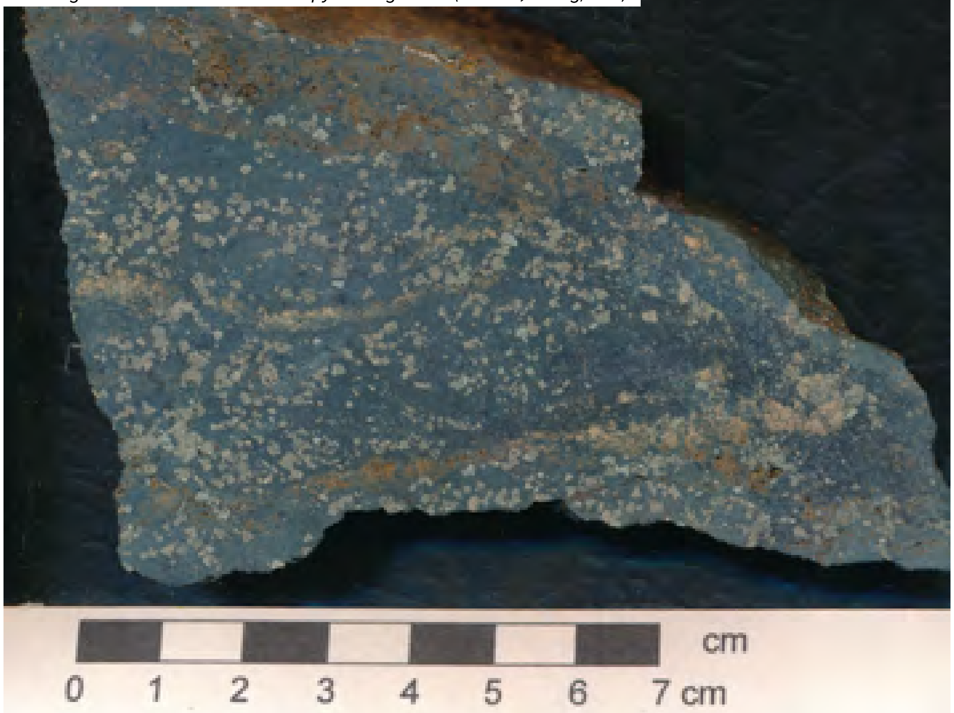


Old trench (~ 1930) in process to clean and sampling

Canada. On September 10th, Globex announced this property had been successfully optioned to Superior Mining International Corporation; under the terms of the agreement, Globex will receive $680,000 in cash and 2 million shares over a four-year period. Globex will also retain 3.5% in Gross Metal Royalty on all minerals successfully mined from the property, another key feature of its unique business model. Next door to this project Globex owns an additional antimony / gold project with Sb assays of up to 53% and a gold zone of approximately 100,000 oz. Au as well as various other occurrences.

Another project currently being drilled under an option agreement by Emperor Metals also has great potential. Starting at over 700,000 oz. Au in multiple zones located on or near the gold localizing Porcupine Destor Break the property is fast approaching 1 million ounces. Emperor is paying Globex yearly cash and share payments and undertaking serious exploration expenditures. Globex retains a Gross Metal Royalty. The cash and share payments top up Globex's treasury and the exploration expenditures add value to Globex's asset base.

Strong carbonate alteration with pyrite in gabbro (L26054, 3.70 g/t Au)



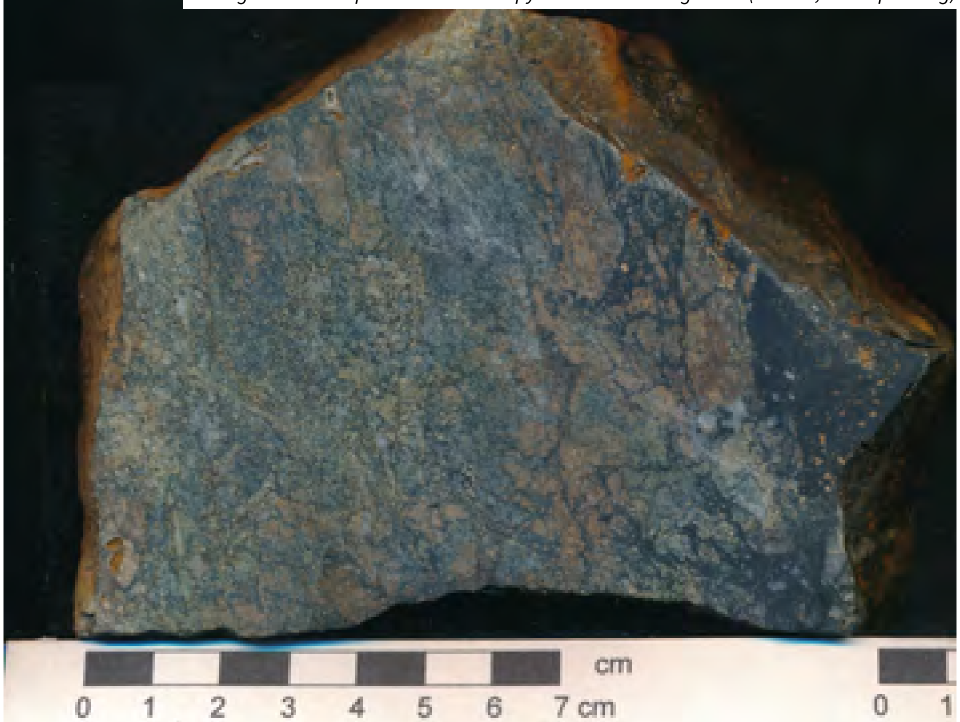
The Chibougamau area royalty properties in Quebec also present the opportunity for large amounts of gold and copper to be extracted from this historically active region. Significant gold and copper intersections exist within previously mined or lightly explored areas and a new discovery the C3 Zone, has good potential among others. 47.6 million tons of copper and gold have already been extracted from Chibougamau, and several unmined deposits still exist with the possibility of iron and vanadium (Mont Sorcier) existing in large quantities along with more copper and gold still potentially to be unearthed. Globex owns a 1% Gross Metal Royalty on the Mont Sorcier iron deposit and a 3% Gross Metal Royalty on a neighboring copper and gold zone located in the main mining camp.

Other exciting projects include the Rare Earth Elements (REEs) property located in Mojave County, Arizona. Centrally located on Virgin Mountains near the Arizona-Nevada border, this property has the potential of holding several REEs crucial to emerging technologies in a renewable world such as solid-state fuel cells, superconductors, hydrogen storage and wind turbines and hybrid-electric cars. Highly enriched beryllium also exists on site in the form of pegmatites up to 6 meters thick; beryllium also plays an important role in the technological field, used in several specialized areas to include the space industry and military applications.

Recently, an unexpected and promising find occurred at the Guigues Silica Project in Quebec. Originally acquired for its silica production capabilities, new hydrogen exploration activities performed by Quebec Innovation Materials Corp has revealed significant hydrogen concentrations, with levels exceeding 1,000 parts per million (PPM) - well above instrumental detection limit. This new find represents yet another diverse addition to the Globex roster as hydrogen will play a significant part towards developing sustainable technologies supporting clean emission goals.

Globex Mining Enterprises aims to continue its strategy of acquiring promising mineral properties while fostering strategic partnerships. They are listed on the Toronto Stock Exchange (GMX), the Frankfurt Stock Exchange (G1MN) and on the American OTCQX International Exchange (GLBXF). Globex represents a dynamic player in the Canadian mining sector and abroad; with a diversified portfolio and a unique strategic approach to the industry, they are poised for growth in a future driven by minerals and metals. The company is well-positioned to capitalize on rising commodity prices and increasing demand for metals, particularly in the context of global economic recovery, green renewable energy initiatives, and critical minerals important to national security objectives.

Strong carbonate-quartz-tourmaline-pyrite alteration in gabbro (L26066, result pending)



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PLUS: **Mark Skousen...Jennifer Shaigec...Chris Powell...Lobo Tiggre...Jordan Roy-Byrne...Jeff Deist...Mary Anne & Pam Aden...Dana Samuelson ...Bill Murphy...Gary Alexander... Albert Lu...Omar Ayales...Rich Checkan...Thom Calandra** and more!

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