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TURNING MINING WASTE INTO PROFIT WITH BACTECH'S BIOLEACHING TECHNOLOGY

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TURNING MINING WASTE INTO PROFIT WITH BACTECH'S BIOLEACHING TECHNOLOGY

By Nicholas Tartaglia

BacTech Environmental Corporation (CSE: BAC) (OTC: BCCEF) (FSE: 0BT1) is a Canadian company pioneering environmental technology through bioleaching. BacTech's method is a proprietary sustainable solution for recovering valuable metals from mining waste while also neutralizing toxic contaminants like arsenic. BacTech is in pursuit of addressing the toxic legacy of mining operations while creating economic value. They are setting themselves apart in the mining industry leveraging naturally occurring bacteria to process and recover metals like gold, silver, cobalt and nickel. Billions are spent annually on land reclamation and remediation, without solving the issues. The company's slogan, "Our Bugs Eat Rocks," encapsulates this innovative approach, emphasizing the natural, low-impact method of using bacteria to tackle complex mining waste that the industry is seeking solutions for.

In BacTech's portfolio, they have their proprietary BACOX bioleaching technology that employs bacteria to break down and oxidize the sulphide mineralization. Sulphides normally contain most of the metal values but are also the source of future acid rock drainage in tailings. By bioleaching the sulphide, which could be described as the mortar that holds everything together, is broken down to release metals for conventional recovery. It also stabilizes arsenic contained in toxic, concentrates and tailings. The bacteria, harmless to humans and the environment, thrive in controlled reactor tanks, oxidizing sulphides in just 5–6 days— a process that would take 20 years in nature. Traditional methods such as smelting or roasting release harmful arsenic trioxide gases and are heavily restricted (e.g., the World Health Organization limits smelters to processing concentrates). This of course leads to a shortage of options for miners looking to process their arsenopyrite concentrates. This efficiency not only reduces environmental harm but also lowers capital and operating costs compared to conventional methods.

THE TENGUEL PROJECT

BacTech has been licensing bioleaching plants around the world to different clients since 1994, but have recently taken a new focus on building/owning/operating processing facilities. A key project in BacTech's new endeavor is its planned bioleaching facility in Tenguel, Ecuador, near Ponce Enriquez, a region rich in high gold/silver/arsenic material. The 100-acre parcel of land in Tenguel was acquired in 2023 with a proposed 50-tonne-per-day (tpd) plant aimed at processing arsenopyrite concentrates, targeting a feed grade of 1.75 ounces of gold per tonne, which could yield approximately 35,000 ounces annually.

Using the Assumptions: Gold US$1,600 | Silver US$18

Annual Gold Production	35,000 Ounces (100 oz/day)
Capital Cost	US$20M
Operating Cost	US$212 per Tonne
Purchase Price of Feedstock	65-70% of Contained Gold Value
After-Tax NPV 5%	US$145M
After-Tax Payback	1 Year
Annual Revenue (100%)	US$100M

Primary Ore	Metals Recovered
Arsenopyrite	Gold, Silver

- ✓ Bioleach Test Work
- ✓ Bankable Feasibility Study
- ✓ Land Acquisition
- ✓ Construction Permit Granted
- ✓ EIS Granted in 7 Months
- ✓ Consultation Permit
- Detailed Engineering Ongoing
- Financing Discussions Ongoing

Figure 1: The Tenguel Project – Phase 1, pg.9

The modular design allows for expansion without disrupting production, tapping into a total production capacity of 250 TPD in its phase 2 initiative of the Tenguel project. They are currently seeking a total estimated US $90M to fund the CAPEX required for Phase 1 and Phase 2. Within the US $90M, $20M is needed for Phase 1. Phase 2's construction will begin immediately after Phase 1 is in production and cash-flowing. Once financing is secured, BacTech will initiate Phase 1 construction of the Tenguel Project expected to take 12-14 months. The company has already identified suppliers for equipment and materials, as well as a contractor to execute the project's construction.

BacTech Environmental Corp. secured an Investment Protection Agreement with the Government of Ecuador on April 28, 2022, covering up to US$80 million in investments for its plant and operations expansion in Ecuador. This agreement provides key protections, including a guarantee of non-discrimination, property rights, and freedoms in production, marketing, profit transfers, and import/export activities. Additionally, it ensures tax stability with a 12-year Income Tax exemption and offers arbitration for dispute resolution, fostering a secure environment for BacTech's growth in the region. They also have 100% local support for the Tenguel Project.

The operation cycle at the Tenguel Project would work by BacTech first acquiring materiel from miners. Arsenopyrite laden material would be dropped off, and paid for, on a contractual basis by the miner. Using its proprietary technology and experience in bioleaching, the company would process the material into a dore gold bar and then sell the dore bar to a purchaser.

Beyond Ecuador, BacTech is exploring opportunities in other regions, pursuing partnerships with local governments and NGOs to fund projects and ensure mining companies adhere to high ESG (Environmental, Social, Governance) standards that are becoming more and more important in ensuring the viability and development of mines. For example, in artisanal mining areas like Peru and Ecuador, where mercury use has caused widespread environmental degradation, BacTech's bioleaching offers a safer alternative, producing gold and benign arsenic byproducts. In fact, BacTech has committed to Ecuador government that it will not purchase any material that has been pre-treated with either mercury or cyanide. The company collaborates with local stakeholders, ensuring communities benefit from its operations.

BacTech's vision extends beyond immediate projects. By combining environmental remediation with metal recovery, it addresses a critical need in the mining industry: sustainable practices that don't sacrifice profitability. Its bioleaching technology not only mitigates the environmental damage of past mining but also supports the global demand for metals critical to green technologies—like cobalt and nickel for batteries—ensuring mining can play a responsible role in the future. Another great example of BacTech's innovative and sustainable solutions is their new global patent filed for its Zero Waste bioleaching process. The purpose of this is to target environmentally harmful mine waste to transform it into eco-friendly products like green steel production which transforms soluble iron pure magnetite for use in environmentally friendly steel manufacturing or organic fertilizer by producing ammonium sulphate fertilizer from sulfuric acid generated during bioleaching.

For younger generations, BacTech's story is a bridge to understanding mining's importance, showing how innovation can transform an ancient industry into a force for environmental good while meeting the resource needs of a modern world.

'DRILL BITS'
A RESOURCE MARKET SUMMARY TO MAY 9TH, 2025

By Rod Blake

As we left the month of April behind – two items that directly affect resource investors stood out to me. The first was that at a **new 2½-year closing high of 654, and up some 9.36% for 2025 to date – the TSX Venture Exchange was the best performing North American market**. Compare this to the next best performing TSX Composite Index with a return of -0.07%, followed by the American Dow 30 -5.71%, S&P 500 -6.06% and NASDAQ's -9.98% returns so far this year.

It is not very often that the Venture Exchange outperforms its larger cousins. The Venture usually shines when there has been a new major discovery such as Hemlo, diamonds in Canada's north, or when a new market emerges such as cannabis. The other time **the Venture outperforms is when there is a significant move in the price of a key commodity** or commodities in general.

Which brings us to gold bullion and the yellow metal's affect on the Venture Exchange? I believe that **about half of the listings of the approximately 1,700 issues on the TSX Venture Exchange are in some way related to gold** – so as gold goes so goes the Venture. For comparison – the **S&P 500 Index has only one gold company – Newmont Corporation (TSX:NGT). Gold bullion reached a new all-time closing high of US$3,423 a troy ounce** (t oz) in late April. This clearly goes a long way in focusing investor attention on the Venture.

I wondered how the current all-time high in the price of gold bullion compared to the inflation adjusted previous all-time high of US$850 established in January of 1980. According to artificial intelligence app Gemini – and depending on what inflation figures are used – **the 1980 $850 high for gold equates to US$3,420 - US$3,800 today**. So based on Gemini – **gold bullion officially achieved a new all-time closing high in April, 2025**.

With gold bullion doing so well – **can a run to new highs for silver be expected?** The best way to look at this question is by **the gold/silver ratio which at current prices of US$3,423 / US$33.88 is about 101 - 1**. That is – **it takes about 101 ounces of silver to buy one ounce of gold. This is historically high to the norm gold/silver ratio of about 60** and reveals that silver is currently very underpriced when compared to gold, or that gold is very overpriced to silver, or a combination of both. Is silver poised to move higher? Is gold in for a major correction or are both going to move somewhat closer to each other? There's good arguments for all three scenarios that only time will tell…

With gold bullion at a record high – **the U.S. Dollar Index or 'DXY' fell to close at a new 3-year low of 98.37**.

Something in the lithium market doesn't add up. We've been told for some time now that the conversion to electric vehicles (EVs) is accelerating and the demand for new production of the key mineral in an EV battery - lithium will be critical. Yet here is the price of lithium a **new 4-year closing low of US$9,009 a metric tonne** (t). Either the demand isn't there or major lithium suppliers such as **Albemarle Corporation (NYSE:ALB)** are having no trouble in supplying the current lithium market.

Mining giant **Barrick Gold Corp. (TSX:ABX) (NYSE:B)** announced the company will change its name to **Barrick Mining Corporation** to better reflect the company's **expanding interest in** other minerals such as **copper**. Barrick's **trading symbol** will remain the same in Toronto but change to **'B' in New York**.

Mandalay Resources Corp. (TSX:MND) shares' **rose by $0.47 or 9.16% to close at $5.60** after the Toronto, ON based producer agreed to an **all-stock take over from Australia's Alkane Resources Ltd. (ASX:ALK)** to form a combined entity with a value of some **$898-million**.

New Gold Inc. (TSX:NGD) (NYSE:NGD) stock **rose by $0.89 or 19.35% to close at a new 8-year high of $5.59** after the Toronto, ON based miner pleased the street with its **1st-quarter production and financial numbers**.

Going the other way – the share price of **Taseko Mines Ltd. (TSX:TKO) fell by $0.28 or 9.12% to $2.79** after the Vancouver, BC based copper and molybdenum miner failed to impress investors with the company's **1st-quarter production and financial figures**.

It seems to take forever to get a mine into production – so I was pleased to see the price of **Artemis Gold Inc. (TSX-V:ARTG)** shares' **rise by $2.29 or 12.12% to close at a new all-time high of $21.19** after the Vancouver, BC miner announced that its **Blackwater Gold Mine** in central British Columbia **had officially achieved commercial production status**.

Hecla Mining Co. (NYSE:HL) stock f**ell by $0.93 or 17.00%** to close at a **new 1-year low of US$4.54** after the Coeur d'Alene, ID based miner's Keno Hill Silver Operations in Yukon weighed on the company's **1st-quarter financials and 2025 guidance**.

Uranium equities started to catch a bid in April and the share price of **Energy Fuels Inc. (TSX:EFR) (NYSE:UUUU)** shares **rose by $0.10 or 1.59% to close at $6.37** after the Denver, CO miner reported its **Pinyon Plain Mine** in Arizona produced **a record 151,000 pounds of U_3O_8** in April.

Cameco Corporation (TSX:CCO) (NYSE:CCJ) stock **rose by $1.93 or 3.06% to close at $64.93** after the Saskatoon, SK based uranium giant please the street with its **1st-quarter operations and 2025 guidance**.

This as the price of **uranium closed at a new 3-month high of US$70.20 a pound** (lb).

The old drillers helper in me always likes to report exceptional drilling news, so with that in mind -

I remember the excitement when I was part of a team that found native copper at the Afton discover near Kamloops, BC in the early 1970s. So, it caught my eye when the share price of **Giant Mining Corp. (CSE:BFG)** surged **up by $0.105 or 51.22% to $0.31** after the Vancouver, BC based explorer reported **drill hole MHB-34 returned visible native copper**.

Osisko Metals Inc. (TSX-V:OM) reported its drill hole 30-1-65 at the company's **Gaspé Copper Project in Eastern Québec** returned 323.0 metres (m) of **0.43% copper** (Cu).

Crude oil fell to a new **4-year closing low of US$57.23 a barrel** (bbl).

Which no doubt encouraged investors to trade the price of **Pine Cliff Energy Ltd. (TSX:PNE)** down to a n**ew 4¾-year closing low of $0.52**.

Cuban nickel producer **Sherritt International Corp. (TSX:S)** saw its stock price **fall to a new 5-year closing low of $0.125**.

Interfor Corporation (TSX:IFP) stock fell to a **new 5-year closing low of $13.28** as the Burnaby, BC based forest company was dropped from the TSX Composite Index. Being dropped from an index can create selling pressure as some institutions and index funds cannot hold a security that is not part of an index.

Gold equities continued to be favor with –

Minera Alamos Inc. (TSX-V:MAI) rising to close at a new 8-month high of $0.37 and –

Kinross Gold Corp. (TSX:K) (NYSE:KGC) closing at a new 16-year high of $21.62.

The **Canadian Loonie** rose to close at a **new 5½-month high of US$0.7257**.

The **TSX Venture Exchange** closed at a **new 3-year high** of 683.

For the year to the second week in May –

The **TSX Venture Exchange** is **up 14.21**% to **683** and the **TSX Composite** is up **2.27%** to **25,358.**

Gold bullion is **up 27.06%** to **US$3,324**, with **silver up 11.47%** to **US$32.71**, and **copper up 12.99%** to **US$4.61**.

Crude oil is **down 13.06%** to **US$61.06** while **natural gas is up 11.14%** to **US$3.79**.

Overall, the **CRB Commodities Index** is **up 1.71% at 356**.

REVITALIZING A GOLD-RICH LEGACY IN ARIZONA

By Christian Elferink

In the western United States, home to abandoned mining towns and relics telling tales of historic gold rushes, **Arizona Gold & Silver Inc. (TSX-V: AZS) (OTCQB: AZASF)** is exploring for new riches. Arizona Gold & Silver Inc. is a junior exploration company strategically targeting high-potential gold and silver assets within the historically productive and mining-friendly jurisdictions of Arizona and Nevada. The company is led by President & CEO Mike Stark, a discovery veteran with multiple multi-million-ounce successes, alongside Greg Hahn, VP Exploration, a Certified Professional Geologist with over four decades of epithermal system expertise The company's flagship asset, the Philadelphia Gold-Silver Project, is located in the historic Oatman Mining District of northwestern Arizona. Accessible via a year-round gravel road off State Highway 68, the project benefits from nearby grid power and a skilled labor pool in Bullhead City & Kingman. Recent staking by the company of approximately 300 acres for potential leach-pad or tailings facilities further broadens development optionality.

THE PHILADELPHIA PROJECT

The Philadelphia Project sits at the heart of the Oatman Mining District. This district is a significant gold province, having historically produced over 2 plus million ounces of gold, primarily from high-grade underground operations such as the Tom Reed, United Eastern, and Gold Road Mines. The Philadelphia property itself hosts the past-producing Arabian-Philadelphia Mine, which was developed around the turn of the 19th century. Historical records, though incomplete, suggest production of approximately 50,000 to 75,000 tons at an average grade ranging from 0.3 to 0.79 oz/t (approximately 10 to 27 g/t Au).

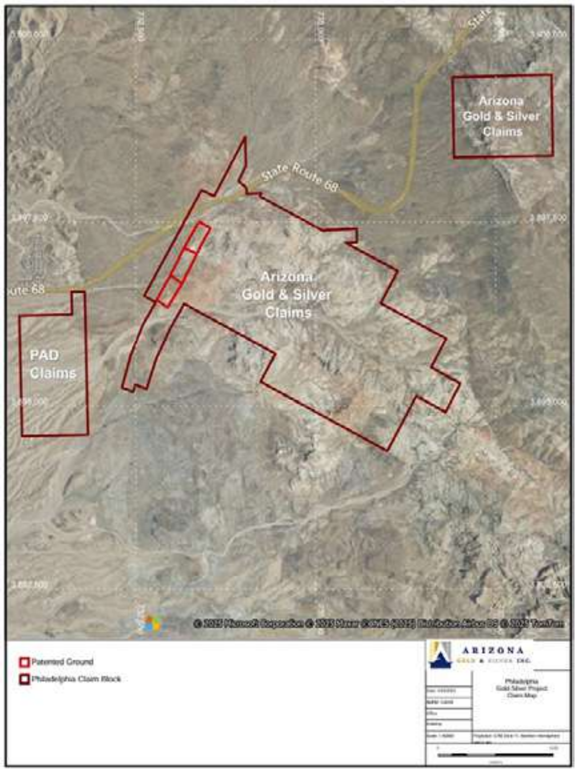
Arizona Gold & Silver is targeting a classic low-sulfidation epithermal system hosted in rhyolitic volcanics along the Arabian Fault. Exploration has delineated multiple target zones:

- **Bulk-Tonnage Stockwork:** The best hole returned 115.85m at 1.34 g/t Au and 5.78 g/t Ag from near surface, highlighting a shallow, wide mineralized envelope amenable to heap-leach processing.
- **High-Grade Veining:** The best hole returned 1.5m @ 72.5 g/t Au, confirming the presence of bonanza-grade veins within broader stockwork. The vein system has a known strike length of at least 3 kilometers (of which 1.6 km has been drilled)

Drilling by Arizona Gold & Silver has been remarkably consistent, with all 152 holes drilled to date intersecting mineralization. This shows how robust and continuously mineralized the system is which in turn increases confidence in the predictability of mineralization for future resource modeling.

Demonstrating foresight, Arizona Gold & Silver recently acquired approximately 300 acres of strategically located land, less than 1.5 kilometers southwest of the Philadelphia mineralized zone. This land, secured via claim staking at what CEO Mike Stark described as "negligible cost," is characterized by gently dipping hills of unconsolidated alluvial gravels, ideal for the construction of future leach pad or tailings disposal facilities. Mr. Stark commented:

"In my view we must look ahead to the potential production requirements of the Philadelphia project. This land acquisition fits in extremely well as it is nearby and was acquired at negligible cost. In the meantime, our drilling program is progressing well with results showing a high success rate. We are looking forward to announcing further results as they come available."



UPCOMING CATALYSTS

The company is well-positioned financially to advance its exploration programs. Recent exercises of warrants and options, primarily by company insiders and other supportive shareholders, have strengthened its treasury to over C$3.24 million as of April 18, 2025. The company has stated it is fully funded for the current drilling program and beyond year-end. This strong insider financial commitment signals a robust belief in the project's upside from those most familiar with its potential.

A series of important catalysts are anticipated in the near term:

- **Pending Assays:** Results are awaited from several recently completed drill holes, including PC25-137, PC25-138, PC25-139, and PC25-148, all of which have reportedly intersected the target mineralization and are currently at the assay laboratory. Drilling is ongoing, with hole PC25-152 currently in progress.
- **Expanded Drill Program:** The company is continuing its permitted 12,000-meter drill program for 2024-2025. This includes approximately 4,000 meters at the Rising Fawn zone and 3,000 meters at the Perry Gap area, targeting extensions of known mineralization and new zones such as the Red Hills target.
- **Potential Maiden Resource Estimate:** A primary objective of the current drilling is to delineate an initial mineral resource estimate for the Philadelphia Project. While a definitive timeline has not been published, the consistent pace of drilling indicates progress towards this crucial milestone, which would represent a significant value inflection point for the company.

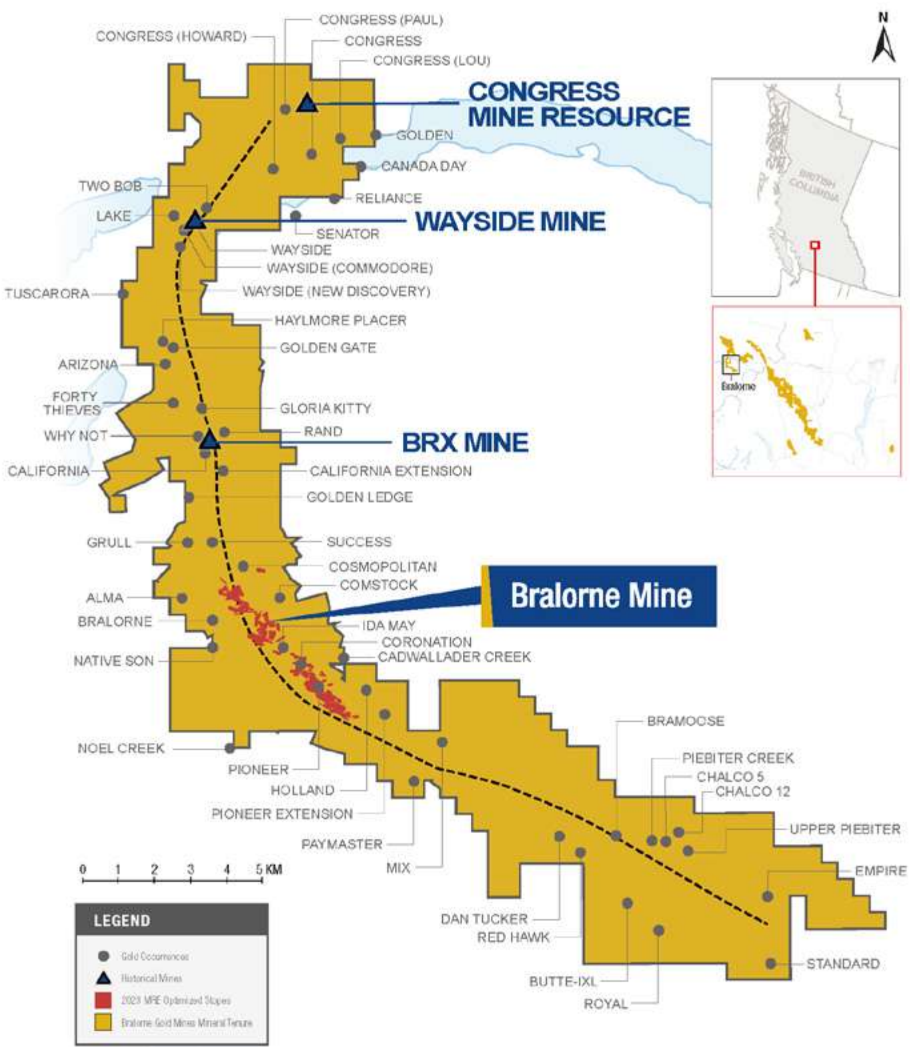
This period of high potential news flow, backed by a solid financial footing, positions Arizona Gold & Silver for continued de-risking and value accretion as gold trades above US$3,000/oz and investor interest in miners is picking up.

TALISKER RESOURCES LOOKING TO PRODUCTION IN A TRANSFORMATIONAL YEAR

By Lynnel Reinson Communications

Gold-focused junior resource company, **Talisker Resources (TSX:TSK)** is on the precipice of a major milestone in their development. Early in February, 2025, the company announced that they had concluded pre-operation activities at their flagship Bralorne Project with contractors and equipment ready to commence onsite operation. CEO, Terry Harbort, expressed his anticipation in the announcement,

> **"With all time high gold prices we are excited to be finalising our pre-development activities and eagerly look forward to our first blast for 2025 setting the basis for a transformational year for Talisker."**
> (News Release)



This milestone comes five years since their acquisition of the project late in 2019. Talisker has worked tirelessly to prove the potential of the asset; after many successful rounds of funding and over 100 km of drilling being completed, they will become one of the rare juniors to bring a project into production.

This accomplishment adds to the already illustrious track record of Talisker Resources board of directors and executive team, who have already collectively discovered over 60 million ounces of gold across various prior ventures. The company is headquartered in Toronto, Ontario, but is primarily focused on British Columbia, particularly in the Squamish Lillooet Regional District (SLRD). Bringing value and contributing to the SLRD is a core tenet of the way that Talisker will operate as the Bralorne Project enters production.

Creating strong ties with other companies operating in the area, along with local communities and First Nations, is a key aspect of Talisker's managerial philosophy aiding them in advancing the Bralorne Project. Talisker has generated tremendous opportunities and value by upholding the commitments made in a 2022 statement by VP Sustainability and External Affairs, Michael McPhie;

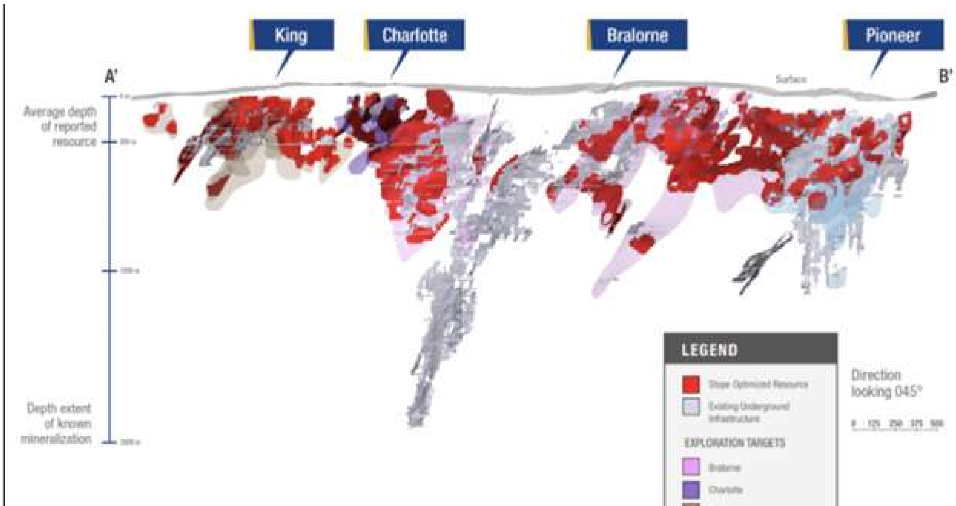
> **"At Talisker, we believe in partnering with local communities. We aim to develop mutually beneficial relationships that support Talisker's operational goals while creating tangible, lasting benefits for local communities and stakeholders. We recognize and respect Indigenous Peoples and their communities and view them as valued partners."**
> (2021 Report)

The company has also entered multiple agreements to process the ore which will soon be coming from Bralorne. One, with Nicola Mining to process 6,300 tonnes and one with New Gold f350,000 tonnes. These deals give Talisker flexibility as they begin ramping up production.

Additionally, Talisker endeavours to engage local vendors and suppliers wherever possible, supporting this effort by being an active part of the Bridge River Valley Community Association Economic Development Committee. A great importance to the company's local commitments, are those to First Nations, as reflected in the 2023 agreement with the Bridge River Indian Band (Xwísten), which continues to build upon an established exploration agreement.

The 2023 Bridging Agreement with Xwísten reflects the way that Talisker works, it serves as a framework for further agreements between the two parties. With a focus on communication, collaboration, and mutual benefit, Talisker and Xwísten will continue to bring prosperity to the Squamish Lillooet Regional District. Chief Ina Williams of Xwísten was enthusiastic in her comments on the agreement, *"We are pleased to have entered into this Agreement with Talisker that is the result of hard work, open communications and a true willingness to doing things right. The Agreement covers elements of importance to both parties along with provisions that will support growth and opportunities for Xwísten. We look forward to working with Talisker into this new phase of our relationship together."* And they see working together as a key aspect of Talisker's operations in the SLRD.

Building upon this agreement and relationship is a May 2024 Ore Hauling Agreement, as stated by CEO, Terry Harbort; *"This Ore Hauling Agreement is a critical part of our operations and the partnership between Stromsten Enterprises and Bridge River Management Corporation, a wholly owned economic development corporation of the Bridge River Indian Band (Xwisten), provides for a direct participation of Bridge River Management in the Bralorne operations of Talisker. This Ore Hauling Agreement underscores Talisker's commitment to building positive working relationships with Indigenous communities in the areas in which we work."*



Long Section of the Bralorne Gold Project 2023 MRE, Looking Northeast (045°)

The impact of this type of meaningful engagement is emphasized by the CEO of Bridge River Management LP, Steve Hughes, ***"By having Xwisten people drive the trucks for ore hauling, this initiative not only supports capacity building within the community but also creates a pathway for future opportunities and sustainable development. It's encouraging to see partnerships like this that prioritize community involvement and empowerment."***

In addition to eagerly anticipated advances being made on the Bralorne Project (shown above) Talisker continues to advance other promising exploration activities like the newly acquired Golden Hornet Project. As noted by Mr. Harbort,

"Although [the company] remains squarely focused on the transition to gold production at Bralorne, it is good to remind our shareholders of Talisker's extensive exploration portfolio in British Columbia and the excellent results received from Golden Hornet, Talisker's first greenfields drill program."

Building up their asset base, which includes the promising Ladner Gold Project and now the Golden Hornet Project ([read more on the company's website]), bolsters the value of Talisker and makes them even more interesting to watch as they begin to move ore in the coming months.

NEXGEN PROPELLED INTO SPOTLIGHT BY LOCAL INDIGENOUS LEADERSHIP AND COMMUNITIES

By Lynnel Reinson Communications

NexGen Energy (TSE: NXE), a Canadian uranium developer working in the Athabasca Basin region of northern Saskatchewan, is on the cusp of making even greater contributions to the Canadian and global energy sector. The company's flagship Rook I project is set to become one of the largest producers of low-cost uranium in the world, seated right in the middle of Canada. Once in operation, the Rook I project will readily propel the country to the leading edge of energy resources, providing tremendous benefits to the Athabasca Basin region, Saskatchewan, and the country, especially as tariffs are being implemented. NexGen is the first uranium developer ***"in over 20 years to receive Provincial Environmental Assessment approval for a greenfield uranium mine and mill project in Canada"*** (May/June 2024 Issue). Furthermore, the Project has full support from NexGen's Indigenous Nation partners from the Local Priority Area, who are advocating strongly for the construction of the mine to get underway as soon as possible. Currently NexGen is awaiting their final approval to move into construction from the Canadian Nuclear Safety Commission (CNSC), with hearings set for November 19, 2025, and February 9 to 13, 2026. NexGen, the province, and local partners, however, are ready and keen to get to work on Rook I immediately.

Once in operation, the Rook I Project is capable of delivering up to 30 million pounds of high-grade uranium per year. This equates to supplying the equivalent emission reduction of taking 70 million cars off the roads annually. In addition to the near finalizing the development of their tier one Arrow deposit, the Company has even more data to share in their most recent update regarding the exciting prospectivity of their 190,000-hectare land package. The most promising drill intercept to date at their Patterson Corridor East (PCE) discovery, located 3.5 km east of the Rook I Arrow deposit, showcases the company's potential for continued growth while highlighting their readiness for production at Rook I.

Leigh Curyer, Founder and Chief Executive Officer, commented:

This intercept from RK-25-232 is geologically exceptional and represents a transformational moment taking PCE into a category to rival Arrow at the same stage of drilling. Discovering mineralization of this intensity so early in our 2025 program outpaces the success pattern experienced at the Arrow Deposit. Incredible, considering Arrow's status on the world stage. To put this into context, the width of high-grade intense mineralization in RK-25-232 at PCE was first encountered at Arrow well into the delineation phase of resource definition. Together with Arrow, it's validation a very significant regional mineralizing event has occurred at Rook I that we are only just beginning to assess the magnitude. Today's result comes at a time the need for Canada to optimize the development of its energy fuel resources has never been more important. NexGen, Saskatchewan and our community partners are ready to immediately commence construction of the Rook I Project subject to the completion of the CNSC approval process." (Release)

NexGen sits poised to be a major part of the clean energy transition, with Rook I set to account for around a quarter of current global uranium fuel production, before even taking into account the potential expansion into other deposits like PCE.

NexGen has an unprecedented level of support for the Rook I project, with a recent statement of advocacy from Clearwater River Dene Nation (CRDN), Metis Nation-Saskatchewan (MN-S) and MN-S Northern Region II (NRII) pushing the CNSC to move ahead with their approval of the project. CRDN Chief Teddy Clark is adamant in his assertion

"This is the only shovel-ready project in Canada, that is fully supported not only financially, provincially, but by the impacted Indigenous Nations impacted by the Project. No other Project has had this level of support from the Indigenous communities, as no other Project has had such a positive impact like the Rook I Project will with our community."

Chief Teddy Clark continued emphatically, ***"These delays that we have seen from the CNSC have delayed the critical employment and economic opportunities that our members are counting on to provide for their families. CRDN and NexGen have worked together since day one and our partnership for this Project, that Canada and the world needs, is the gold standard in addressing the Truth and Reconciliation Calls to Action #92. As Chief of CRDN, the most impacted community, I want the CNSC to fully realize by delaying this Project the negative impact on our community is substantial."*** (Release)

It is one thing for a company to have the acceptance of First Nations to build a project, but it is exceptional to have the rigorous support of Rook I that NexGen has gained by working as well and as closely with CRDN, MN-S, and MN-S NRII, as they have.

With new Prime Minister Mark Carney having recently taken office, all involved are looking to him to hold to the commitments made leading up to the election; ***"Canada has a tremendous opportunity to be the world's leading energy superpower, in both clean and conventional energy."*** The PM's plan stated,

"We are going to aggressively develop projects that are in the national interest in order to protect Canada's energy security, diversify our trade, and enhance our long-term competitiveness – all while reducing emissions. We can lead the energy transition while ensuring affordable energy at home and building the strongest economy in the G7."

(Release)

NexGen's Rook I Project, which is 'shovel ready' as described by Chief Clark, will play a major role in making Canada into an 'energy superpower' and deliver unprecedented economic and social benefits to northern Saskatchewan's Indigenous and local communities. Support, advocacy and readiness are all in place – and all that NexGen needs now for turning years of disciplined planning into the world's largest single source uranium mine and re-establishing Canada as the world leader in uranium production is the final go ahead from Federal decision makers.

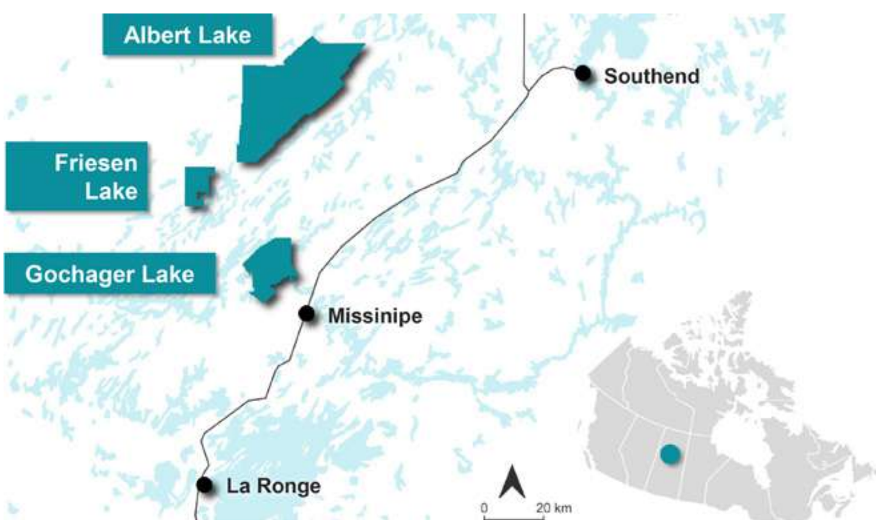
UNLOCKING SASKATCHEWAN'S HIGH-GRADE NICKEL POTENTIAL

By Christian Elferink

In the rugged expanse of Saskatchewan's north, a junior explorer is quietly working towards discovering the next high grade magmatic nickel sulphide deposit. **Fathom Nickel Inc. (CSE: FNI) (OTCQB: FNICF) (FSE: 6Q5)** is positioning itself at the intersection of two compelling macro trends: the growing demand for critical battery metals and the global urgency to secure domestic supply chains.

Focused on magmatic nickel sulphide exploration, Fathom controls over 120,000 hectares in the underexplored Trans-Hudson Orogen. Home to some of Canada's most prolific nickel-copper-cobalt systems. With a portfolio centered on its two flagship projects, Gochager Lake and Albert Lake, Fathom is positioning itself to capitalize on the burgeoning demand for critical metals, particularly nickel, driven by the electric vehicle revolution and the broader green energy transition.

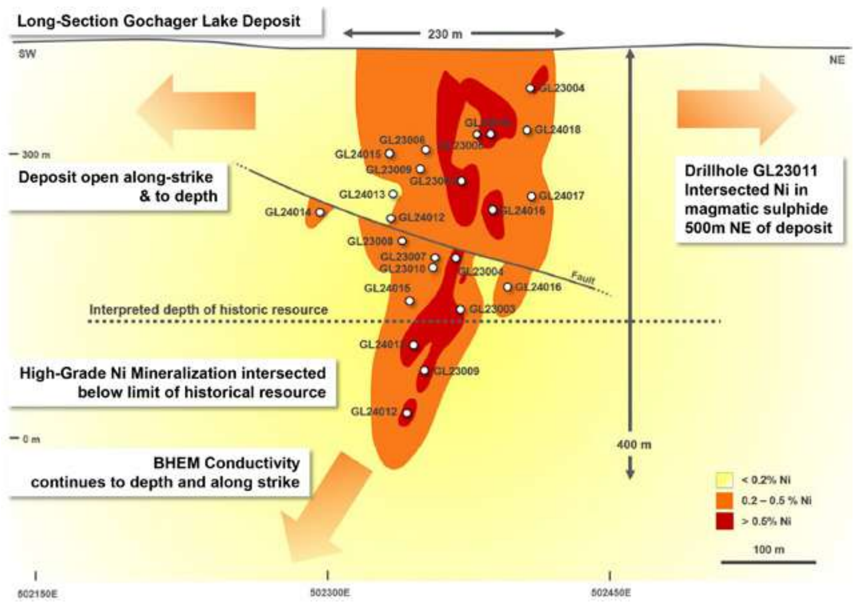
Fathom Nickel is led by a seasoned management team with extensive experience in mineral exploration and resource development. CEO and VP Exploration, Ian Fraser, P.Geo., brings over 35 years of experience managing exploration programs both in Canada and internationally, with a track record that includes contributions to projects like the Casa Berardi Gold Mine.



GOCHAGER LAKE PROJECT

Both projects are located in north-central Saskatchewan, a jurisdiction consistently ranked among the top five globally for mining investment by the Fraser Institute. The flagship Gochager Lake project hosts a non-compliant historical resource of 4.26Mt at 0.295% Ni and 0.081% Cu, originally defined in the 1960s. But recent work by Fathom has revealed that this deposit was merely scratching the surface—both literally and geologically.

The Gochager Lake deposit is part of a broader magmatic nickel sulphide system situated along a structurally controlled corridor marked by chaotic, multi-phase intrusions. Recent drilling has dramatically expanded the mineralized footprint by up to 25 times that of the historical resources and confirming presence of multiple high-grade chutes of nickel-copper-cobalt sulphide mineralization.



Notable intercepts include:

- Drillhole GL23003: 21.85 meters grading 2.26% Ni, 0.50% Cu, and 0.17% cobalt (Co).
- Drillhole GL24016: 3.84 meters grading 2.12% Ni, 0.53% Cu, and 0.16% Co.
- Drillhole GL24013: 3.96 meters grading 2.28% Ni, 0.51% Cu, and 0.18% Co.

Geophysical surveys show conductors extending along strike and at depth, suggesting the presence of additional, yet-undiscovered lenses. The project's evolving geological model increasingly resembles Voisey's Bay, Vale's world-class discovery in Labrador, including the potential for multiple deposit clusters along the same structural trend. Fathom has established an all-season camp at Gochager and is permitted to utilize winter access routes to support year-round exploration. These upgrades reduce logistical costs and support efficient mobilization ahead of a planned winter 2025 – 2026 drilling campaign targeting high-conductance EM anomalies associated with very robust, multi-element soil geochemical anomalies.

ALBERT LAKE PROJECT

Albert Lake hosts the past-producing Rottenstone Mine, which operated from 1965 to 1969, yielding 26,00 tonnes at remarkable grades: 3.28% Ni, 1.83% Cu, and 9.63 g/t PGE+Au (3E). It was originally considered an isolated high-grade occurrence, but Fathom has since proven that Rottenstone is part of a larger, dynamic magmatic nickel system.

Like Gochager Lake, the Albert Lake project is focused on magmatic nickel sulphide mineralization. Fathom's exploration has demonstrated that the high-grade Rottenstone deposit is not an isolated occurrence but part of a larger, dynamic magmatic system. Recent successes include the discovery of the Bay-Island Trend, located approximately 400-500 meters west-northwest of the Rottenstone deposit, which has returned encouraging intercepts such as 1.09% Ni, 0.42% Cu, 0.07% Co, and 0.75 g/t 3E over 3.54 meters in drillhole AL22052.

In addition, the company identified a new gold zone ~35 km southwest of the historic Rottenstone mine, with grab samples returning up to 2.68 g/t Au, approximately 14 km along strike from a recent gold discovery by Ramp Metals Inc.

LOOKING AHEAD

While near-term attention is focused on Gochager, Albert Lake's polymetallic upside and proximity to recent gold discoveries make it an attractive candidate for partnership or spin-out. Discussions are underway to potentially separate the gold assets from the nickel-focused portfolio which could unlock hidden value and streamline strategic focus.

At Gochager Lake, planned exploration includes surface geology, geochemistry, and geophysical programs to expand the defined footprint and identify additional high-quality drill targets. This work aims to pave the way for drilling in the Fall of 2025 and into the winter of 2026.

The company is in the midst of raising C$1,500,000 to fund the upcoming exploration at Gochager Lake. Crescat Capital will be participating with a strategic investment representing approximately 33% of the total offering.

Quinton Hennigh, Crescat's Geologic & Technical Advisor added, *"Fathom is on an elephant hunt at Gochager Lake. Early drilling has already discovered significant magmatic nickel-copper-cobalt sulfide mineralization. More recent work defines a robust, open-ended soil geochemical anomaly spanning at least 3km strike from northeast to southwest. Fathom now needs to extend its soil grid to more fully assess this soil anomaly as well as undertake surface TDEM surveys to search for more sulfide targets. This raise will allow the company to complete this work and build up a large inventory of refined drill targets. I am very glad to see the Company get back to work at this exciting project and eagerly await definition of new sulfide targets."*

SILICA QUARTZ SAND: THE HIDDEN CATALYST BEHIND AI AND RENEWABLE ENERGY ADVANCEMENTS

By Jamie Hyland

The AI revolution and the global push for renewable energy are transforming industries and economies—but behind these headline-grabbing shifts lies an often-overlooked material: high-purity silica quartz sand. This essential raw material is foundational to the semiconductors powering artificial intelligence and the solar panels driving the clean energy transition. Without ultra-pure silica quartz sand, neither the AI boom nor the green revolution would be possible.

To the untrained eye, silica quartz sand may seem like a simple natural resource. But when refined to extreme purities—99.95% or higher silicon dioxide (SiO_2)—it becomes the backbone of cutting-edge technologies, enabling the digital systems and renewable energy infrastructure that are reshaping our world.

SEMICONDUCTORS & ELECTRONICS: SILICON AT THE CORE OF AI

Artificial intelligence depends on semiconductors—silicon chips that

serve as the **"brains" of everything from data centers and cloud computing to autonomous vehicles and smart devices**. These chips are made by refining quartz sand into crystalline silicon, a process that demands ultra-high purity to prevent defects and ensure performance.

AI's exponential growth, driven by machine learning, neural networks, and massive data processing, requires ever more advanced processors. Data centers, the physical backbone of AI, house thousands of servers filled with silicon chips. Fiber-optic cables, made from ultra-clear silica glass, connect these centers to form the global AI infrastructure.

Even a trace of impurities in silica can disrupt chip performance, making high-purity quartz sand a critical, irreplaceable resource for AI's continued advancement.

SOLAR ENERGY: POWERING THE GREEN REVOLUTION

At the heart of solar panels lies crystalline silicon, crafted from the same high-purity silica quartz sand. The global shift toward renewable energy relies on these photovoltaic cells to convert sunlight into electricity, an essential pillar of the clean energy mix.

Silica also plays a vital role in the efficiency and protective glass layers of solar panels, which must be low iron and ultra-clear to allow light to create electricity within the crystalline silicon

wafer, and durable to withstand harsh environmental conditions. As nations set ambitious net-zero targets and solar installations surge worldwide, the demand for high-purity silica quartz sand has grown dramatically.

Industry analysts caution that a shortage of high-quality silica could constrain solar panel production. This highlights the strategic importance of secure, scalable silica supplies for the energy transition.

DATA CENTERS & CLOUD INFRASTRUCTURE: THE PHYSICAL WEB OF AI

The rise of AI has fueled a boom in data centers, massive facilities that handle data storage, processing, and transmission. These centers are packed with silicon chips, memory modules, and fiber-optic cables, all born from refined quartz.

Silica's role doesn't end at semiconductors. The glass threads inside fiber-optic cables, drawn from high-purity silica, are the arteries of the AI-driven internet, transmitting vast quantities of data at light speed. In a world increasingly powered by cloud computing, silica is as critical as electricity itself in keeping the digital ecosystem running smoothly.

WHY HIGH-PURITY SILICA MATTERS: UNIQUE PROPERTIES

High-purity silica is indispensable because of its exceptional material characteristics, which make it uniquely suited to AI and renewable energy applications:

- **Thermal Stability:** Melting point above 1,600°C ensures silicon's reliability in high-temperature chip fabrication.
- **Electrical Insulation:** High dielectric strength prevents current leakage in electronic components.
- **Optical Clarity:** Ultra-pure silica transmits light with minimal distortion, key for fiber optics and solar glass.
- **Chemical Inertness:** Resists corrosion and chemical reactions, preserving the integrity of chips and solar cells.

Together, these properties enable the **performance, durability, and scalability** that today's tech landscape demands.

MANITOBA'S STRATEGIC SILICA HUB: SIO SILICA LEADS THE WAY

One unlikely place at the forefront of this sand-to-tech supply chain is Manitoba, Canada. The province is emerging as a strategic hub for high-grade silica quartz sand production, thanks to a unique deposit beneath its prairies. In southeastern Manitoba, this Company is tapping into a massive formation of **exceptionally pure quartz sand**.

Sio Silica Corporation's project near Vivian, MB has uncovered a world-class resource. Sio Silica holds North American's largest known deposit of high purity quartz, with 459 mining claims secured across more than 100,000 hectares of land.

Sand grains (Sio Silica Corporation)

Sio Silica's raw quartz consistently achieves purity levels exceeding 99.95% even before processing, making it an essential and irreplaceable input for advanced high-purity quartz applications. Additionally, over 98% of the quartz falls within the +40/-140 mesh size distribution, ensuring it is ideally suited for a wide range of high-tech and industrial uses.

Amid surging global demand, Manitoba is stepping onto the world stage as a critical player in the silica supply chain. Sio Silica's project has revealed sand purity levels exceeding 99.999% SiO_2 (under laboratory conditions), on par with the planet's best. The deposit's sheer size, estimated in the billions of tonnes in situ, positions Manitoba to sustain production for decades, offering North American semiconductor and solar manufacturers a secure, local source of ultra-pure silica.

Feisal Somji, CEO of Sio Silica, emphasizes the strategic importance of the project:

"Our Manitoba project is not just a resource – it's a gateway to vertical integration and advanced manufacturing here in Canada," Somji says.

"By unlocking this ultra-pure silica deposit, we can secure a domestic supply for silicon chips and solar panels, bolster the digital and green economies, and deliver lasting economic benefits to local communities."

More than just extraction is planned. Manitoba's silica boom is opening doors to **value-added opportunities**, from silicon refining to potential wafer and solar panel production, supported by abundant hydroelectric power and a skilled workforce.

Carla Devlin, President of Sio Silica, adds that the company's vision is both ambitious and grounded in practical needs: *"The time is now. In a world facing rising geopolitical uncertainty, securing domestic access to high-purity silica is not just an economic opportunity—it's a matter of national security. Our Manitoba deposit positions Canada to anchor resilient supply chains for semiconductors, clean energy, and AI infrastructure. If we move decisively, we can lead the transition to a secure, sustainable, and technology-driven future."*

Devlin's outlook reflects a blend of optimism and realism. Manitoba's resource could play a pivotal role in securing reliable, domestic supplies for critical technologies. All told, the province's rise as a key silica supplier could reinforce Canada's standing in global tech and renewable energy supply chains.

CONCLUSION

While AI and renewable energy dominate global conversations, their success hinges on a humble but mighty material: high-purity silica quartz sand. From the silicon chips that power artificial intelligence to the solar panels capturing sunlight, silica is the silent enabler of modern progress.

With Manitoba's rich silica resources stepping into the spotlight, North America has an opportunity to strengthen its technological future by securing reliable, domestic supplies of this critical material. As industries pursue sustainability and supply chain resilience, high-purity silica is proving to be far more than just a commodity—it is a strategic resource at the heart of today's most transformative innovations.

In the grand narrative of technological advancement and the clean energy transition, silica quartz sand stands out as the quiet enabler—the **grain of sand holding up the pillars of our high-tech future.**

PERMITTING REFORM IS NOT *REMOTELY* ENOUGH

THE U.S. (AND CANADA) REMAIN BEHIND IN THE EVOLVING WORLD WAR 3 OVER COMMODITIES

By Chris Temple – Editor/Publisher
The National Investor

Back in March, President Trump issued an executive order adding further substance to numerous of his campaign promises to "re-shore" Mining, critical materials, and related energy industries.

The White House's *separate talking points* are at https://www.whitehouse.gov/fact-sheets/2025/03/fact-sheet-president-donald-j-trump-takes-immediate-action-to-increase-american-mineral-production/. It all *sounds* wonderful; and what many of us have been pining for over a very long time!

The actual language of the E.O. is at https://www.whitehouse.gov/presidential-actions/2025/03/immediate-measures-to-increase-american-mineral-production/.

More recently, on April 18, the president released the names of the first 10 specific U.S. projects – covering lithium, copper, gold and more – to be "fast tracked" under the so-called fast 41 provision. They are:

- Resolution Copper Project
- Stibnite Gold Project
- Warrior Met Coal Mines
- McDermitt Exploration Project
- South West Arkansas Project
- Caldwell Canyon Mine Project
- Libby Exploration Project
- Lisbon Valley Copper Project
- Silver Peak Lithium Mine
- Michigan Potash

Further, as also mentioned at https://www.whitehouse.gov/articles/2025/04/trump-administration-advances-first-wave-of-critical-mineral-production-projects/, these 10 projects are but the first of others that will be named in the near future

For more color, *The Northern Miner* had some excellent recent coverage of this at https://www.northernminer.com/news/trump-to-fast-track-key-u-s-mining-projects/1003877834/.

In between, the president in other executive actions—together with Energy Sec. Chris Wright, Interior Sec. Doug Burgum and others taking some action pursuant to Trump's directives—have done what they can do to streamline a process that has pretty much led the world up to now in delaying extractive projects of most kinds.

specifically, for their industry and for the cause and sake of American independence on energy, metals et al.

It's not…yet.

Just as once upon a time former President George W. Bush prematurely declared "Mission Accomplished" at the start of *his* Gulf War, so too are a lot of hopeful and well-meaning people declaring a "victory" that has not yet been assured or *even really enabled*.

Forgive me for being the bearer of this reality check, folks…but even speeding up the reform process some in and of itself does NOT make any of the targeted projects—or any others—a bit more economical in the context of *global* pricing but *first world* costs.

In the wake of these and related moves—including even state-specific E.O.'s on Alaska and its resources, for instance—I've seen many a resource stock pundit, exploration company C.E.O. and others popping champagne corks of a sort in excitedly putting out press releases and more acting as if all the world is right again: for them

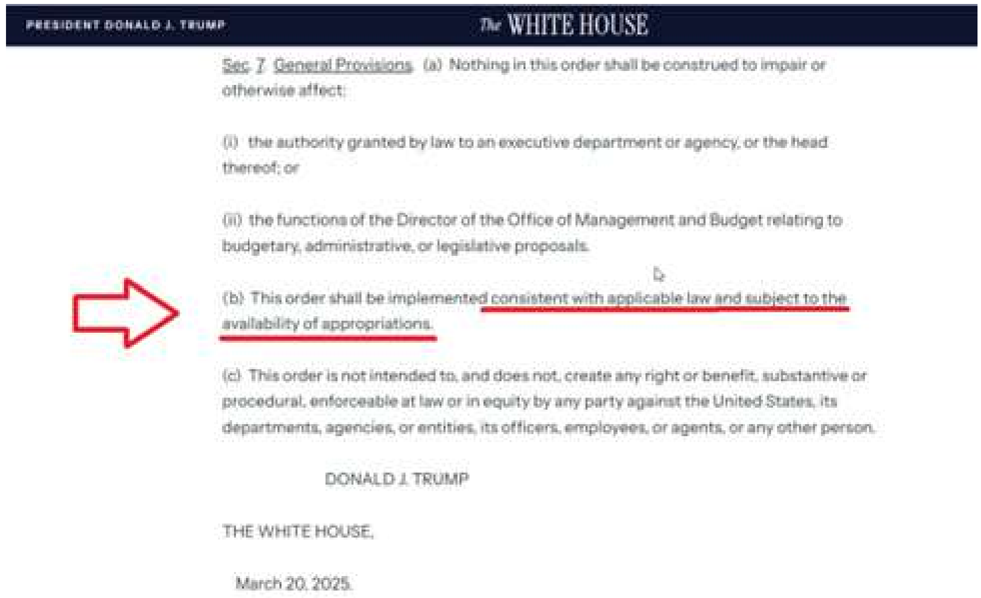
Make no mistake: as on many other issues I am 110% on board with the stated goals of President Trump in this area. Well before he was even inaugurated, I sat down at a conference last fall with my long-time friends Craig and Shelly Huey of *The Huey Alert Podcast* (see https://www.youtube.com/watch?v=lpzOf4apBjo) to discuss just how big a deal Doug Burgum's appointment by the president-elect was in particular.

And I said then—and will again now—that everyone working in, associated with or invested in these various entities will be enjoying the best *policy* tailwind of our lives.

But for those of you who have been paying attention to my 2025 theme—*Let's Do the Math*—I also must repeat here that policy reforms, streamlined regulations and the like still do NOT make uneconomic projects economic.

As with so many other industries, America over several decades outsourced the production of *many* things, joining us at the hip to a regimen that simply does not allow for U.S.-made products of most kind to be able to compete with imports, *including many metals and refined products*. Whether we're talking about sneakers, toys *or metals*, the combination of *deliberately* low-ball global pricing and First World costs just doesn't work.

That remains the much larger problem with bringing mining and ancillary industries back to America in a meaningful way. And sad to say—though there will indeed be some further projects that get some manner of federal government grants and/or loans to further projects—all of that, for instance, doesn't go very far to make development-stage nickel projects in the U.S. competitive in an environment with a global nickel price well under $20,000/ton.


PRESIDENT DONALD J. TRUMP — The WHITE HOUSE

Sec. 7. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

THE WHITE HOUSE,

March 20, 2025.

Indeed, for those of you who have actually read it (or read/listened to Yours truly on this subject a few different times since March 20's E.O.) you've seen that **this "victory" carries within it the excuses for its own eventual disappointment and overall failure in two key areas:**

First, its quest must be "consistent with applicable law." There remains a lot of hoops any project must jump through on both state and federal levels. It remains *way* too easy for nuisance suits to delay projects for myriad reasons, though that has been pushed back on some already even prior to Trump's taking office again, with time limits already law now for certain kinds of legal challenges.

Sure, things have improved on this front and will further; but it's not remotely enough.

Second, what money is made available to some projects will be "subject to the availability of appropriations." *Good luck with that one!* As I have (regrettably) been covering, President Trump and the G.O.P. Congress are poised to deliver budget deficits even higher than those under "Sleepy Joe" this year and, perhaps, even in Fiscal Year 2026. The president's "Big, Beautiful Bill" – er, that is "BIG, BEAUTIFUL BILL" – isn't moving along all that well.

I'm not hopeful that with a new record $1 trillion budget for the Military-Industrial Complex… extensions of 2017's tax cuts and new ones to boot…and the refusal so far in Congress to cut even meager amounts from the present year budget based on *specific* fraud found by the D.O.G.E. effort… there's going to be much dough from the discretionary budget to move the needle much on domestic mining et al. I would *dearly love* to be proven wrong or overly pessimistic here. *But the math just doesn't lie like politicians do*. And if this is all going to be done correctly, there's *far* more work to be done.

I urge you to study and get behind initiatives such as the Coalition for a National Infrastructure Bank. A while back I visited in great detail on this subject with your Editor Mike Fox; you can go back and listen to that discussion at https://www.youtube.com/watch?v=4pqbwGo5Kug

About the time you'll be reading this, Mike and I will be taking part in the New York Section of the S.M.E.'S Critical

Trends in Mining Finance Conference, where, among other things, I'll have a presentation on this subject as well. An abbreviated video which hits all the salient points has been made available to share with readers here, at https://www.youtube.com/watch?v=JEaj5ddwJKQ.

BOTTOM LINE: As I have discussed above, in those two videos and elsewhere, the commitment needed to properly do the job of making America more minerals and energy independent anew has NOT yet been made. It's my conclusion that all the permitting reform, while necessary and welcome, is but a small start to the overall game plan needed.

A failure to add all the other ingredients I discuss will lead to disappointment.

Meanwhile, in Canada, we await the specific plans of Prime Minister Mark Carney now that he's solidified his hold as prime minister.

In a position, arguably, to move the needle more and perhaps even faster than may be the case in the U.S. (and, for other reasons, given Canada's energy and minerals wealth far beyond that of the U.S. as a proportion of our respective overall economies/potential) Carney's early moves will be telling.

During the recent election campaign, a lot of noise was made and seeming promises as well to, among other things, even remove entirely federal oversight and regulation of permitting and put it all squarely on the shoulders of provinces.

That, if it turns out to really be the case, would speed things up WAY faster than what we'll see in the U.S. And to be sure, where they can, some provinces have already done more to aid the overall effort for Canadian resources (notwithstanding the fact, though, that Canada similarly has that same global pricing vs. First World costs/standards problem.)

Another potential near-term advantage for Canada is that *it already has an infrastructure bank*. It will be interesting

to see if two-time central banker Carney would get on board with something that would use private money (a la the N.I.B. proposal in the U.S.) and do an end run around the Bank of Canada/conventional banking system in this regard.

We can hope, can't we?

To learn more
Visit *nationalinvestor.com/* and make sure you're signed up on Chris' notification list.

Contact
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TRUMP TAPS UP BLACKROCK TO ACQUIRE OPERATOR OF PANAMA CANAL PORTS; BEIJING WANTS DEAL BLOCKED

By Ted J. Butler

A consortium spearheaded by the world's largest asset management firm, BlackRock Inc, reached a deal in principle on the 4th of March with a subsidiary of Hong Kong based port operator, C.K. Hutchinson, to acquire 43 of its port operations for the substantial sum of $22.8 billion.

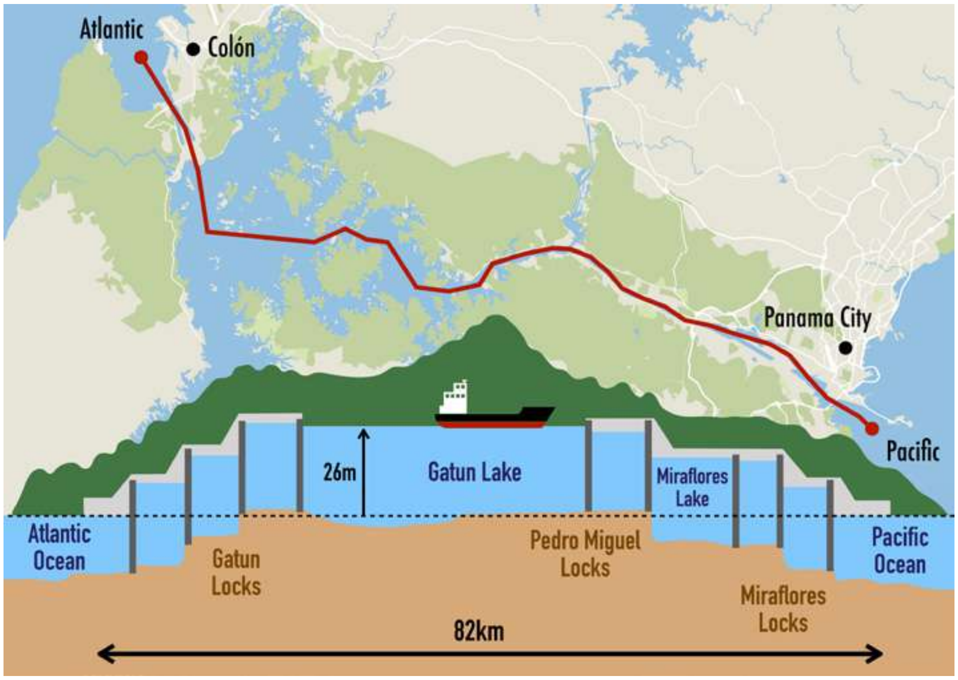
Representing approximately 80% of the 53 ports operated by C.K. Hutchinson globally, the deal's completion would see New York based BlackRock gain access to a portfolio spanning 23 countries, including ports located in the supply chain chokepoints of Egypt, Holland, Mexico, Australia and Pakistan.

Notably, the agreement would not encompass ports domiciled in Mainland China and Hong Kong, where C.K Hutchinson derives 12% of its revenue. That said, the transaction's closure would see BlackRock inherit 90% of Panama Ports Co – the entity behind two of the world's most strategically important ports, Balboa and Cristobal.

Historically speaking, the Balboa and Cristobal ports have enabled the Panama canal to elegantly straddle between the Pacific and Atlantic oceans since the U.S constructed them in 1909 and 1914 - long before C.K Hutchinson came along to acquire the rights to operate them in 1997.

Fast forward to 2025, and it is clear that there has been a concerted and coordinated effort between the U.S. Government and BlackRock to reclaim the Panama canal – starting with the acquisition of operational rights to the Balboa and Cristóbal ports and culminating with a likely re-assertation of U.S control over the canal itself.

Initially, this is evidenced by Trump's use of the collective "we" in respect to the C.K. Hutchinson deal, which shows how he sees BlackRock's actions as congruent with that of his administration. Freudian slip or not, it also fuels the belief that the asset manager - with $11 trillion in AUM - exists as an informal extension of Uncle Sam.



"To further enhance our national security, my administration will be reclaiming the Panama canal, and <u>we've</u> already started doing it..."

Donald Trump, March 4th

Moreover, the alignment of BlackRock's prior investment activity with Trump's interests suggests the deal was blatantly premeditated. Namely, one of the two partners in BlackRock's consortium for the Hutchinson Ports deal was Global Infrastructure Partners (GIP). Conveniently, BlackRock also announced it would be acquiring GIP way back in January 2024, before going on to make the acquisition official for $12.5 billion on October 1st.

The plot thickens further as we examine the ownership structure of BlackRock's second partner, Terminal Investment Limited (TIL). A global port operator like C.K. Hutchinson, TIL was already owned 20% by GIP. However, since BlackRock wholly acquired GIP, BlackRock now holds 20% of TIL. In doing so, the asset manager joined shipping giant, Mediterranean Shipping Company (MSC), who owns 70% of shares in TIL.

For context, MSC overtook its publicly traded Danish rival, Maersk, to become the world's largest container shipping line in 2022. If the Hutchinson Ports deal goes through, the Swiss firm will also become the world's largest port operator with stakes in more than 100 terminals across 54 countries, including 8 in the U.S and 3 in Panama. As such, it's worth noting the Hutchinson Ports deal is taking place for legitimate business reasons too.

Notwithstanding this - and the fact that business interests often converge with Government endeavours in a perfectly legal manner - the ability of BlackRock CEO, Larry Fink, to choreograph the nuts and bolts of the C.K Hutchinson deal over 1 year before Trump came into office in November suggests an unparallel level of foresight and conviction, especially at a time when there was no guarantee that Trump would have been elected.

Of course, the corporate talking heads will balk over Fink for his 'uncanny dealmaking ability' and 'visionary strategic positioning', citing BlackRock's track record of sharkish M&A – not least it's acquisition of Barclays' BGI division during the 2008 GFC. Meanwhile, the pragmatists will posit that the magnanimous, Bond-villain-like Fink had been colluding with the Trump Administration. Incidentally, the latter group may well have reason.

"In the days before finalising the deal, Fink held calls with Trump, Secretary of State Marco Rubio, Treasury Secretary Scott Bessent, and National Security Advisor Michael Waltz, ultimately garnering the administration's blessing, according to those close to the deal." - Wall Street Journal

https://www.wsj.com/articles/blackrock-ceo-fink-says-trump-listens-to-business-leaders-1492049948

"Larry did a great job for me. He managed a lot of my money, and I have to tell you, he got me great returns last year."
Donald Trump, 2017

Evidently, these personal ties are not inconsequential: BlackRock has reneged on its ESG crusade since Trump took office, pulling out of its DEI initiatives on February 26th - a week before C.K Hutchinson deal was agreed. Not to mention, Trump was even rumoured to be considering Fink as U.S Treasury Secretary earlier last year.

Furthermore, personal ties between President Xi and the billionaire largest shareholder of C.K Hutchinson, Lee Ka-Shing could have also motivated the deal. Chiefly, Ka-shing sold off Chinese real estate before the 2021 crash, whilst also publicly showing sympathy to Hong Kong protestors in 2019 – both of which angered Xi.

Despite this, if we take off our proverbial tinfoil hats for a moment and focus our attention on facts instead of speculation, we do indeed stumble across some far more rational reasons for the C.K Hutchinson deal – ones that function independently, without the need to allege malfeasance between Trump, Fink, Xi and Ka-Shing.

First and foremost, the U.S is by far the largest user of the Panama canal, with 66% of the canal's traffic either originating from or heading to U.S. ports in 2019. By the same token, approximately 40% of all U.S. container traffic passes through the canal each year, equating to a substantial $270 billion worth of cargo.

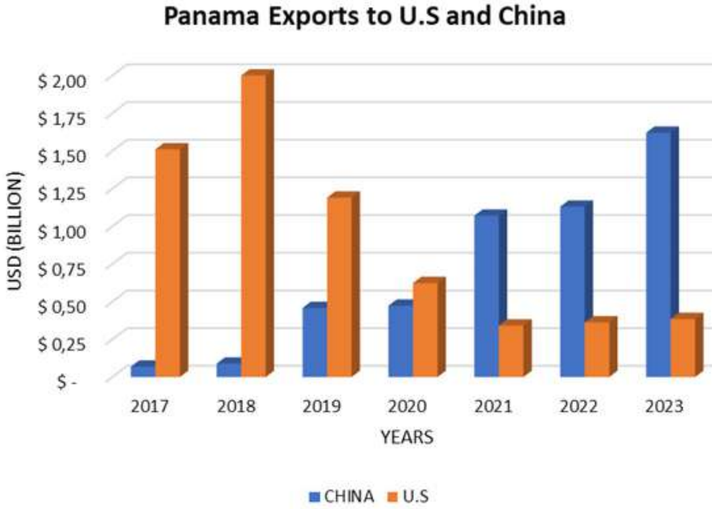
Knowing this full well, China has made it a strategic priority to gain a foothold in Panama over the last decade - just as it has done more broadly across Latin America and Africa via a combination of Xi Jinping's soft power diplomacy approach and infrastructure investments from the Belt and Road Initiative (BRI).

Namely, Panama became a member of China's BRI in 2017, welcomed Xi Jinping for a state visit in 2018, and even leapfrogged the U.S to become Panama's top export partner in 2020, thereby capitalising on a trademark "falling asleep at the wheel" moment from Sleepy Joe, and from Trump to an extent as well.

During this period of U.S inertia, China was also able to implement its patented Safe City surveillance technology in Panama and was even reported by the BBC to be constructing a Fourth Bridge nearby the Panama canal, with clear progress visible between satellite photos taken on March 2024 and January 2025.

In light of these advancements, it should therefore not come as a surprise to readers that a U.S company wants to acquire a port operator with a stronghold in Panama. Incidentally, Trump was already putting his foot down in February prior to the deal, when he deployed U.S Secretary of State, Marco Rubio, on a state visit to Panama.

During his meetings, Rubio urged Panama to reduce Chinese influence in the Canal area, warning that failure to do so would result in the United States taking action. As a result, Panamanian President, José Raúl Mulino, stated that his country would not renew its agreement with China's BRI, which was due to expire in 2026.



https://oec.world/en/profile/country/pan?-yearSelector1=2017

Importantly, President Mulino responded that sovereignty over the canal was not in question and defended Panama's position. However, President Trump has since turned the screw further, announcing a ship building division within the federal government, in a move that confirms the renewed importance of maritime power.

"To boost our Defense industrial base, we will create a new office of shipbuilding in the White House and offer special tax incentives to bring this industry home to America, where it belongs."

Donald Trump, March 4th

In spite of this "tremendous" progress as Trump likes to call it, the U.S Government and BlackRock are not home and hosed just yet as far as closing the C.K Hutchinson deal is concerned. Primarily, this is because they are now on the radar of China's market regulator, who threatens to pull the plug on the deal altogether. In addition, Lee-Ka Ching – the brains behind the deal – is starting to get cold feet amidst pressure from Beijing.

Starting with the former, China's market regulator vowed to carry out an antitrust review on the C.K Hutchinson deal on Friday 28th March, citing its need to protect fair competition and safeguard the public interest. In truth, Beijing's response is understandable: BlackRock would inherit 10.4% of global container throughput and become the world's 3rd largest port operator from the trade-off, whilst Chinese firms likely inherit higher costs.

As for the leverage Beijing has to sabotage the deal, the BBC reports that a Chinese national security law introduced in 2020 could allow China to influence Hong Kong–based companies in the event of a conflict. This—along with the fact that China blocked BlackRock's former parent firm, Blackstone, from acquiring Chinese real estate firm Soho China in 2021—will be deeply unsettling to both Fink and Trump.

At the same time, President Xi will be doing his utmost to deliver a deeply unsettling feeling to C.K Hutchinson Senior Advisor, Lee Ka-Ching, who has recently been 'mulling the ports deal delay', according to Bloomberg on March 31st. Incidentally, the world observed a similar situation with Alibaba CEO, Jack Ma, who largely became a long-term recluse, after flying too close to the sun in terms of his outspokenness towards Beijing's policies.

If Ma's example is anything to go by, you can bet your bottom Yuan that Beijing will be tempting - and perhaps even threatening - Ka-Ching with all sorts of desperate tactics. Whether Ka-Ching folds under the pressure and drops the deal is unknown at this time. What is known, however, is that both the Panamanian and Chinese authorities have a bone to pick with the deal, which could present significant roadblocks to its completion.

For one, Panama's Comptroller General says Panama "left $1.3 billion on the table" for CK Hutchison and is consequently filing a lawsuit against officials who authorized the renewal of CK Hutchinson's 25-year port concession. Meanwhile, Fink himself admitted that the ports deal would be "reviewed as one transaction". Therefore, if China's market regulator can prove illegality for just 1 of the 43 ports, the entire deal will be off.

Despite this, Fink told The Economic Club of New York on April 7th that he was ***"optimistic the transaction would be approved"***. Serving as evidence that Fink may be right, a memorandum of understanding was signed on April 9th by U.S. Secretary of Defense, Pete Hegseth, and Panamanian Security Minister, Frank Ábrego, which granted U.S forces with rotational and temporary access to key Panamanian military installations.

Some may view this move as camouflaged intervention - a Monroe Doctrine throwback that grossly undermines Panama's freedom and sovereignty. Others may call it a strategic decision, designed to protect U.S interests in the face of growing Chinese influence. Ultimately, the author's job is not to tell you what to think. However, the longevity of U.S hegemony will surely be determined by the way in which the Panama Ports pendulum swings.

NICOLA CONTINUES TO GROW PARTNERSHIPS AND DISTRICT PROCESSING CAPACITY

By Lynnel Reinson Communications

Nicola Mining (TSX-V: NIM) is a Canadian junior mining company based in Vancouver, British Columbia with multiple and diverse assets in the province. Their flagship asset is the permitted New Craigmont Copper Project, located in the Quesnel Trough, one of the premier copper belts in Canada. Its asset is in good company, because ***"immediately north of New Craigmont is Canada's #1 Teck Highland Valley Copper Mine, which is Canada's most profitable and lowest cost producer. Nicola's wholly owned historic Craigmont Copper Mine still ranks as one of North America's highest grade producers, having shut down solely due to $0.60 per lb copper in 1981."*** (Long Investor).

DIVERSE ASSET PORTFOLIO

In addition to the New Craigmont Copper Project, Nicola also has a 100 percent stake in the permitted Treasure Mountain Silver Project, another historic mine with further exploration potential southwest of New Craigmont, and a 75 percent economic stake in the Dominion Creek Gold and Silver Project, located southwest of Prince George. While continuing exploration of their mineral properties, Nicola's additional operations play a major role in funding their exploration efforts.

UNIQUE MILLING CAPABILITY

The company owns and has been operating the only milling and tailings facility in the province authorized and permitted to process third party materials. Beginning in January 2023, Nicola Mining has been in production with multiple profit-sharing agreements to mill gold and silver concentrate with companies including Blue Lagoon Resources, Talisker Resources, and Osisko Development. Blue Lagoon Resources and Talisker Resources are each on the cusp of production on their projects and will be moving ore to Nicola's facility soon. After a successful trial of the milling process with Blue Lagoon in 2021 and milling of Talisker's ore stockpile last spring, investors are confident that both Blue Lagoon and Talisker will be fruitful going forward.

UPCOMING PRODUCTION AT DOMINION CREEK

Production at this project is expected to begin in July, with Nicola and their partner High Range being well into the preproduction process: ***"Nicola has already paid the required reclamation deposit on behalf of itself and High Range Exploration Ltd. ("High Range") for a Notice of Work and Reclamation Program while the latter has been actively prepping towards ore extraction, which is targeted to commence in July of 2025. Ore from the bulk sample will be transported to Nicola's wholly owned mill for processing."*** (Release).

STRATEGIC PARTNERSHIPS

As well as the milling agreements, Nicola has established a contract with Ocean Partners UK Limited, enabling the worldwide sale of gold and silver concentrate. Nicola Mining is also in partnership with Lower Nicola Site Services (LNSS.ca), a joint venture between the Lower Nicola Indian Band Corporation, and Intracon Construction of Kamploos the two companies run a rock quarry, a gravel pit and ready-mix concrete plant located on the same property as their mill and tailings facility.

ANALYST RECOGNITION

Through its diversified operations, Nicola Mining is able to grow and simultaneously continue exploration and development at its New Craigmont, Treasure Mountain, and Dominion Creek Projects. The strength of this operational strategy has drawn the praise of Noble Capital Markets, an investment research firm, who have forecasted the company will outperform market indices. Noble summarized their review of Nicola stating; *"In our opinion, the company's corporate governance practices are shareholder friendly, including a five-member board comprised of mostly independent directors, including the chairperson. Nicola Mining operates in the mining friendly jurisdiction of British Columbia which ranked 25th out of 84 jurisdictions in terms of investment attractiveness in the Fraser Institute's Annual Survey of Mining Companies 2023. In our view, the company is unique among junior exploration companies in that it has several operations that generate cash flow that is used to support the company's operations and exploration activities and minimizes the need for dilutive equity issuance. The company has significantly de-risked its exploration projects and the fundamental outlook for metals that will be produced from its mining projects remains favorable."* (Report)

As described by Noble, Nicola has made many strategic moves that differentiate them from other junior companies; those moves will be coming to fruition in the near future as ore begins to make its way to Nicola's Merritt mill and tailings facility.

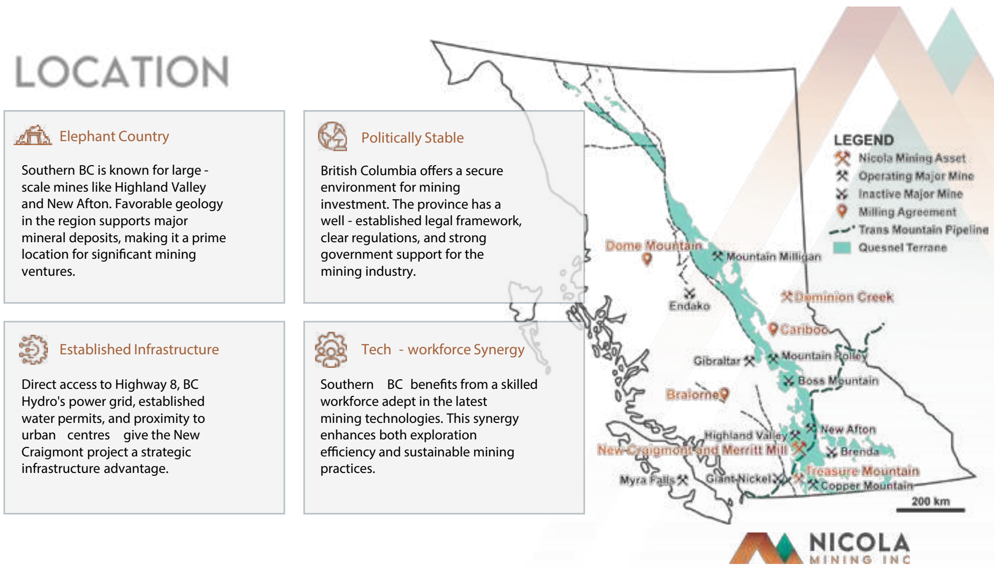
OUTLOOK

Nicola Mining is continuing to stand out as a bit of a maverick amongst their peers, developing in unique but effective ways. Its operational revenue and cashflow support ongoing exploration, rather than being funded purely through loans or equity capital.

The company has previously established and maintained permitting on their wholly-owned properties as well as beneficial cooperative agreements: milling agreements with Blue Lagoon, Talisker, and Osisko, and joint ownership of Dominion Creek. All this is in addition to multiple First Nations' support and partnerships, such as its quarry run in tandem with Lower Nicola Site Services.

There are many reasons for believing this unique organization will continue to find success with their innovative and well-considered approach. Furthermore, any future dollars the company adds to the province's GDP will themselves add an additional 93 cents of additional economic activity to the region, according to the [Fraser Institute's report]. Nicola Mining's transparency and willingness to engage with all the First Nations communities and businesses means the company is positioned to lead the region in not only exploration, but sustainable business development with both Indigenous and non-Indigenous partners. Offering even greater confidence in Nicola's strategy and direction is the recently published report by Noble Capital Markets affirming the company's value, Nicola Mining may be in the process of setting an example for other junior resource companies to follow in the future.

[CEO Peter Espig Explains Company Vision (Video)]



BLUE LAGOON RESOURCES PREPPED FOR PRODUCTION THIS SUMMER

By Lynnel Reinson Communications

British Columbia-based Blue Lagoon Resources has recently received their mining permit from the provincial government, marking a crucial juncture in their path allowing them to progress from exploration to full-fledged operation. This permit is one of only nine permits granted in the last decade, and means Blue Lagoon is about to bring their flagship Dome Mountain project into production this year. Company CEO and President, Rana Vig, notes how rare it is for a junior resource company to evolve from pure exploration into production, crediting their team, partners, collaboration, and regard for culture and environment, stating:

Today, we proudly stand on the brink of that transformation. Securing the final mine permit is not just a milestone - it's a testament to the relentless dedication of our team, the strength of our partnerships, our extensive collaboration with Lake Babine Nation, and our unwavering commitment to responsible resource development in our beautiful province

(Release).

He continues, sharing a collective excitement for not only the company's future, but the shared future with Lake Babine Nation, and the province, ***"Blue Lagoon is now poised to become British Columbia's next gold producer, and this is just the beginning of an exciting new chapter for our Company and our shareholders."*** (Release). Having secured their permit and anticipating initial production of 15,000 oz of gold, Blue Lagoon is working to finalize operational planning, logistics, personnel, and infrastructure; their expectation is for production to begin as early as July of this year.

Blue Lagoon has advanced a great distance on the path to sustainable success, having years ago prioritized engagement and collaboration with the local communities and First Nations, embracing and celebrating their commitments to community.

CEO Rana Vig described in conversation how Blue Lagoon hired a member of Lake Babine Nation to paint various murals around the Dome Mountain site as a visual reminder to think of the company's role as stewards of Lake Babine Nation's yintah —the Babine word for territory and the natural resources it sustains. This visual reminder is as essential to their operation, ensuring yintah is as central to Blue Lagoon's work culture as their daily safety briefings.

Additionally, in their sustainable approach they have been building partnerships with groups like Nicola Mining. Together, they have recently extended their established toll milling agreement for use of Nicola's Merritt, BC Mill and Tailings facility, all while securing necessary funding through private equity and strategic investors, including Nicola Mining and Crescat Capital, to begin their production. In April, Blue Lagoon closed their over-subscribed financing, and with over $4.75 million in funding secured the company is set to begin operations. In his February message to shareholders and investors, Mr. Vig expressed the company's confidence in their differentiated approach to exploration explaining, "Over the past few years, we have strategically invested more than $30 million into Dome Mountain, ensuring that when we reached this milestone, we would be ready to move forward with minimal additional capital. Now, with approximately $3 million in additional CapEx, we will be in a position to begin mining operations - a remarkably low cost compared to industry norms." Further, the President and CEO concluded in the same letter that ***"With strong fundamentals, a fully permitted high-grade gold mine, and a well-defined production strategy, Blue Lagoon Resources is positioned for a breakthrough year in 2025."*** (Letter)

The milling agreement with Nicola Mining is a key aspect of Blue Lagoon's novel approach to resource development. The company has been ahead of the curve in their strategy for Dome Mountain, planning ahead for the moment they received their mine permit and would be able to hit the ground running. Using previously gathered material from the historic activity at the project, Blue Lagoon worked with Nicola Mining to develop and build on the processes needed for the milling

agreement. Nicola Mining CEO, Peter Espig, described the advantage of such early optimization well; *"Our collaboration in 2021, which involved processing 5,000 tonnes of Dome Mountain material at our mill, provided both teams with invaluable operational insights. This hands-on experience helped optimize logistics, improve processing efficiency, and fine-tune key aspects of the milling process. We look forward to continuing our partnership as Blue Lagoon embarks on this exciting new chapter as British Columbia's next gold producer."*

With this proof of concept completed, and permit in place, Blue Lagoon is moving forward with great optimism. By outsourcing milling operations to Nicola's established plant, Blue Lagoon lowers their own capital needs to commence operations and creates beneficial cash flow for both companies.

Blue Lagoon highlights the company's next steps: ***"As the Company transitions into production, its strategic focus will be on generating and investing cash from operations to self-fund further exploration across the expansive Dome Mountain property that has 15 known high grade gold veins with 90% of the nearly 21,000 hectare property yet to be explored"*** (May 4, 2020 News Release). This disciplined approach is designed to unlock the district-scale potential of the project while minimizing shareholder dilution. ***Additionally, the Company will allocate funds toward infill drilling the Boulder vein to expand the known resource, improve resource classification, and extend the mine's life, ensuring sustainable growth and long-term value creation for its shareholders."*** (Release) As they are able to begin generating cash flow, Blue Lagoon unlocks the potential of self-funding their growth and fully delivering on the promise present in the Dome Mountain project.

As Blue Lagoon Resources was working their way through the exploration phase at Dome Mountain, they had their eye on moving into production early on; making strategic investments in initiatives, such as the milling agreement with Nicola Mining, that will allow the company to move from explorer to producer with far lower capital needs than typical underground mining operations. Blue Lagoon's novel approach allows them to stand out among junior resource companies and, with their mining permit in hand, their strategic planning is set to deliver returns for all involved.

PRECIOUS METALS OFFER PROTECTION AGAINST LOOMING ECONOMIC CHALLENGES

By Richard Mills

USA Today reported the US economy's performance in Q1 was the worst in three years. GDP growth in the last quarter of Biden's administration was 2.4%; in the first quarter of Trump's administration, it is – 0.3%.

Wednesday's Commerce Department report showed that US consumer spending rose 0.7% in March, a solid gain but consumers might have been stocking up before Trump's tariffs took effect.

The personal consumption expenditures (PCE) price index (A measure of the prices that people living in the United States, or those buying on their behalf, pay for goods and services and the Fed's preferred inflation gauge) rose 2.3% from a year earlier, a lower annual inflation rate than in recent months but the March inflation data comes from a time before most of Trump's tariffs took effect.

US and global stock markets went into a tizzy and still are — though since the 90-day hiatus was announced and trade deals are supposedly under negotiation they have recovered somewhat. The bond market too sold off dramatically after Trump's announced high tariffs on imported goods on April 2.

Oil prices have collapsed because demand has cratered.

The macro situation? The US economy might be shrinking despite a blip from businesses and consumers stocking up before tariffs took effect. The US economy appears to have at least temporarily stalled.

China is canceling orders of key agricultural exports. It earlier this month halted a shipment of 12,000 tons of pork, the largest order since the pandemic in 2020. In the week ending April 17, China dropped its soybean orders to just 1,800 tons, down more than 97% from 72,800 tons bought the week before. China has switched to Brazil as its main soybean supplier.

US farmers growing everything from soy, cotton, pork, grains and hay are reeling.

The New York Post reports the US agricultural industry into a "full-blown crisis" as canceled orders from China are forcing farmers to lay off workers or shut down their businesses, according to a trade group.

Renowned economist Stephen Roach believes that we are heading for a 'Stagflation for the Ages', writing in Project Syndicate that *The supply-chain disruptions during the pandemic look almost quaint compared to the fundamental reordering of global trade currently underway. This fracturing, when coupled with US President Donald Trump's attacks on central-bank independence and preference for a weaker dollar, threatens a prolonged period of stagflation.*

The US decoupling from global trade networks, especially from China-centric and US/Canada/Mexico-centric supply chains, will reverse supply-chain efficiencies that reduced inflation by at least half a percentage point a year over the past decade. The reversal is likely to be permanent.

Also, the reshoring of manufacturing to the US will not be seamless, nor accomplished in the short time with projects taking years to plan and construct. Finding workers for mostly low paying jobs seems to be an issue.

An AI overview tells us; In February 2024, there were approximately 482,000 unfilled manufacturing jobs in the US. While this is down from the 513,000 job openings in January, it's still a significant number. Some studies project that as many as 1.9 to 2.1 million manufacturing jobs could remain unfilled by 2030 if current trends continue.

STAGFLATION AND GOLD

Frank Holmes believes investors think gold is a classic fear trade that retail investors are still sorely underexposed to.

Your author believes they should be scared, economic signs point to a coming bout of stagflation.

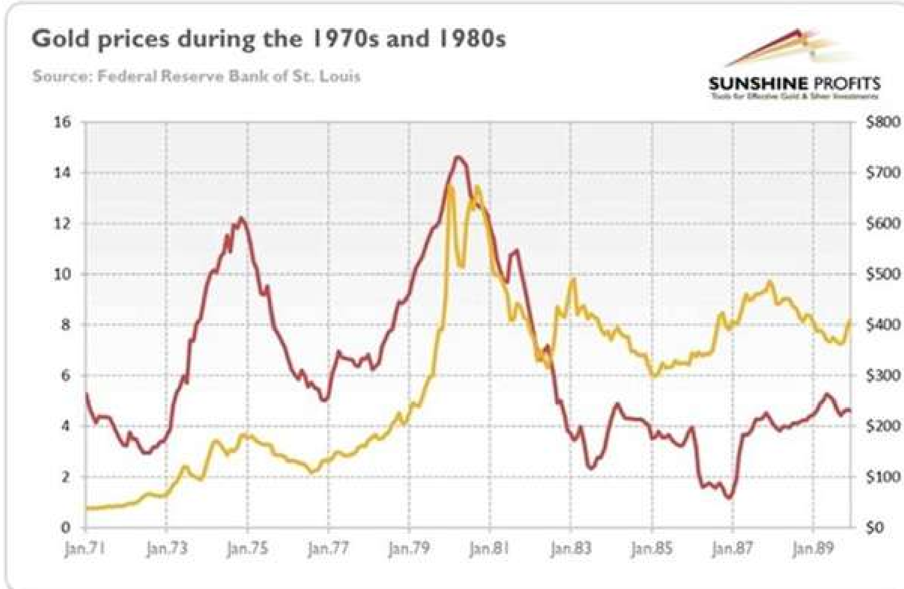
A stagflationary environment is one where economic growth is decelerating and inflation remains high.

Is the US on a road leading to possible stagflation and recession? An official recession being called could be just 2 months away. Tariffs are thought to be, by most, inflationary. Decelerating growth should mean more job losses on top of Federal job loss programs underway. The US, and perhaps large parts of the global economy are on the road to stagflation.

Add in the tense geo-politics at play globally from Syria to North Korea, to Taiwan, to Iran, to Israel to the Ukraine and realize that's as gold friendly as much as Basal III.

Echoes of History Navigating Today's Global Challenges

What are good investments in a stagflationary environment. The answer is Gold and Silver.



Gold prices in yellow compared to inflation in red.Source: Sunshine Profits

GOLD AND STAGFLATION

Gold does well in stagflationary periods and outperforms equities during recessions.

The chart below by Sunshine Profits shows the gold price climbing during the stagflationary 1970s, surging from $100 per ounce in 1976 to around $650 in 1980, when CPI inflation topped out at 14%.

In fact, gold outperforms other asset classes during times of economic stagnation and higher prices. The table below shows that, of the four business cycle phases since 1973, stagflation is the most supportive of gold, and the worst for stocks, whose investors get squeezed by rising costs and falling revenues. Gold returned 32.2% during stagflation compared to 9.6% for US Treasury bonds and -11.6% for equities.

Table 1: Gold in USD has been the best stagflation performer since 1973

Annualised average adjusted return (AAAR)[2] since Q1 1973 (all figures in %)*

Asset	Full Sample	Goldilocks	Reflation	Stagflation	Deflation
Gold (US$/oz)	54.7	-3.1	8.4	32.2	12.8
S&P 500 Index	54.4	16.8	28.5	-6.6	11.4
EAFE equities	29.5	10.5	18.8	-11.6	11.7
US Treasury & Agency bonds	32.4	7	2.3	9.6	11.2
US Corporate bonds	44	10.9	8.6	6.1	14.1
S&P GSCI Index	48.8	9	34.7	17.5	-13.5
US Dollar Index	5.5	4.6	0.6	0.9	-0.7

*As of Q2 2021. Please refer in the appendix of 'Stagflation rears its ugly head' for a detailed descriptions of the methodology.

Source: Bloomberg, World Gold Council.

A 2023 Forbes article asks ['How Does Gold Perform With Inflation, Stagflation And Recession'](#)?

How's this for performance? In six of the last eight recessions, gold outperformed the S&P 500 by 37% on average.

During the last major bout of inflation, 1973-79, inflation averaged about 8.8% a year, while gold rocked a 35% annual return. The article notes that elevated oil prices were the primary drivers of inflation and stagflation in the 1970s.

The 2021 inflation was different from the 1970s. It was caused by government spending, supply chain disruptions and rates held too low for too long, according to Forbes. Sound familiar to what's happening today?

When inflation started rising in March 2021 gold was trading around $1,700/oz. Over subsequent months, both gold and inflation headed higher, with the CPI topping out at 9% in July 2022 and gold reaching $2,050 in March 2022.

Forbes notes *Stagflation creates economic uncertainty because it challenges the traditional relationship between inflation and unemployment. Historically, gold benefits in economic uncertainty.*

CONCLUSION

Bad economic and geo-political news leads to precious metals being an attractive alternative to stocks.

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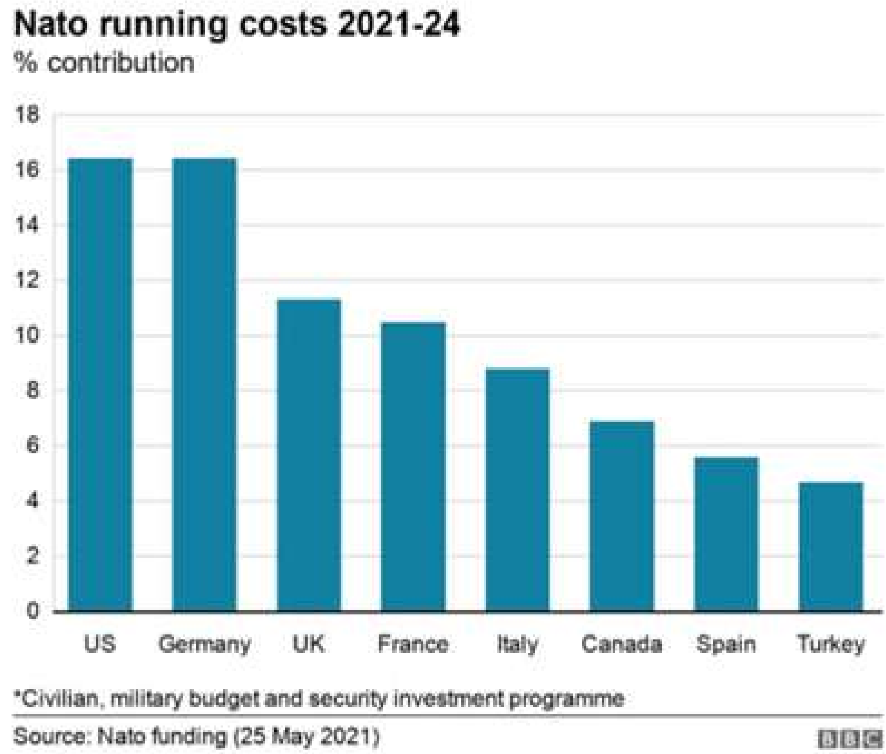
WESTERN BIFURCATION: HOW A NATO SCHISM ENABLES EASTERN OPPORTUNITY

By Ryan Blanchette

In political science, it is said that power abhors a vacuum. Like water filling space in an empty vessel, the natural human inclination to seize control where there is none has always been present; nowhere is this practice more evident than during periods of great change and paradigm shifts. The rise of China as a global force, both industrially and militarily, and the re-emergence of Russian influence in Europe seeking to gain lost ground after the end of the first Cold War, has established a powerful Eastern bilateral partnership not seen for over 100 years. Both countries have agreed that the time is now to take decisive action and cement this partnership as the dominant geopolitical authority to overthrow Western hegemony. For China and Russia, this move could not come at a better time. Since the early 2010's, the West's hold of global power has slowly slipped. As Eastern military technology and resource control flourished, over-reliance on imports, debt-driven economic policies, and military drawdowns weakened Western geostrategic positioning.

The glue still holding Western multilateral power together has largely been NATO. Consisting of 32 member states and over 3 million combined personnel, it has been an ever-present shield against Eastern aggression, beginning at the onset of the first Cold War and continuing into the present day. As the sole Western superpower, the United States has historically contributed the largest amount of money and manpower towards NATO's defense. At present, the US still provides the lion's share of NATO power: while the founding principle of common funding means that the US supplies 16% of the annual NATO budget (the largest share, along with Germany's 16%), its national defense budget dwarfs any other NATO nation by far – which during a full-scale NATO-involved war, would devote additional resources from its arsenal to fulfill NATO objectives. These factors have meant that the United States has been the de facto NATO leader since its inception.



NATO Cost Share totals by percentage. Source: BBC

As such, the US has the ability to substantially strengthen NATO's position, but also to equally weaken it. Since his first term began in 2016, President Donald Trump has been a critic of NATO and of large intergovernmental alliances in general. Unhappy with the US having to – in the words of Vice President Vance – consistently "bail Europe out" in times of duress, Trump has increasingly stated that if NATO countries will not pay what he describes as their fair share, those nations may not be able to count on US military might in the event of open conflict, and this puts another founding principle at jeopardy. Article 5 of NATO's treaty states that an attack against one ally is considered an attack on all members and has ensured a shared bond of collective defense which made for a tremendous deterrent during the first Cold War.

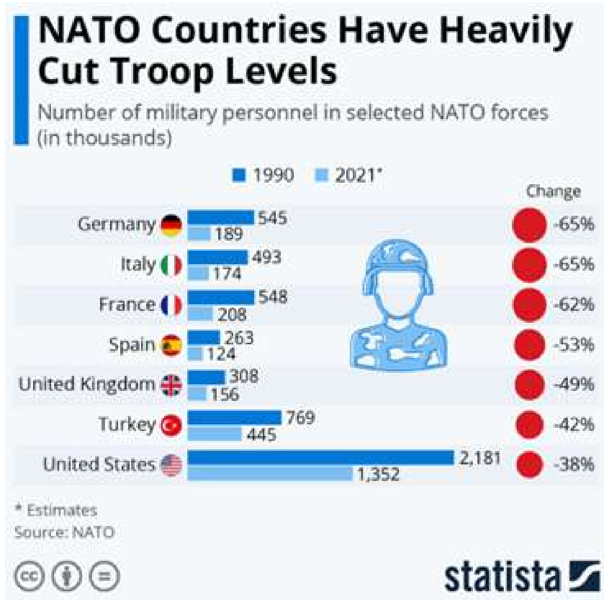
Analysts have written that this puts the entirety of European security in peril. With the United States possibly unwilling to defend its NATO allies, a Russian kinetic attack could potentially throw the entire continent into chaos. However, this scenario is still extremely unlikely. During the campaigns of Philip II of Macedon around 340 BC, the Greek general-king subdued much of Greece's city-states including Thebes, Athens and Corinth. He then turned to Sparta, famed for its warrior class of citizens; he informed them that if he invaded Laconia, the regional home of Sparta, he would destroy them. Known for their short, direct responses, the Spartans replied in classic Laconic phrase: "If". Philip and the Macedonians never touched the city of Sparta. An overt Russian engagement against a NATO member

would unquestionably be a strategic negative and serve no actual purpose towards their ultimate goals towards re-consolidation of European power. Perhaps more importantly however is America's version of "if". Despite Trump's talk of non-protection and the possibility of not coming to NATO's aid, Article 5 still exists – and Vladimir Putin simply has no concrete proof if Trump is serious or not. That uncertainty is enough to obstruct any Russian strike attempt, regardless of its perceived ambition or geopolitical sanity.

What is far more probable is increasing Western bifurcation and its deleterious knock-on effects towards European and global security, which creates the void of power and decreases stability. Napoleon Bonaparte once said, ***"Never interrupt your enemy when they are making a mistake."*** China and Russia are in an advantageous position of viewing the schism of NATO powers in real time and adjusting according to their outcomes; this allows them to publicly highlight the negatives and quietly benefit from the positives. However, all is not perfect in the East. Russia has suffered far more losses of men and material than first projected in Ukraine, in large part due to NATO's consistent supply of weapons and fighting vehicles. This setback, specifically in lives lost, will take years to fully recuperate – and makes any hypothetical attack on NATO even less likely. China has positioned itself dramatically well in the past twenty years, but their demographics are not on a promising trajectory. The nation's population has declined for three consecutive years, highlighted by low birth rates and not enough working-class citizens to replace an aging elderly class. The Chinese economy has also made tremendous gains in the past ten years but is heavily dependent on global exports which makes for an easy target in any consolidated Western effort to re-balance the scales of trade.

Donald Trump with NATO Secretary General Mark Rutte.

Even so, the Eastern bloc looks to have the upper hand and can project further disconnects between the Trump administration and its NATO allies. Secretary of Defense Pete Hegseth stated publicly that the United States' primary security concerns are not in Europe, but its own southern border. Behind closed doors, European leaders have begun pre-planning measures designed to replace any US troop withdrawals with their own, ensuring as best they can that no gaps appear in combat readiness. What was unthinkable during the height of the first Cold War has become a legitimate reality. If stability, predictability, and the greatest deterrent ever conceived are to return at full force, Europe must face the obvious truth that Trump will not back down from his statements, with the knowledge that ultimately, he does not want NATO to fracture or be left vulnerable. He wants the acceptance that without 40+ years of American military dominance, Europe may have dissolved under a Soviet invasion, and that still today that dominance protects millions of European lives; to him, this comes at a price he hopes the Europeans will finally agree to pay. The global balance of force may be at risk if an agreement cannot be obtained.



NATO troop drawdowns since the end of the first Cold War. Source: Statista

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 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*

HONEY BADGER SILVER: NOT YOUR AVERAGE SILVER MINING INVESTMENT

By Ted J. Butler

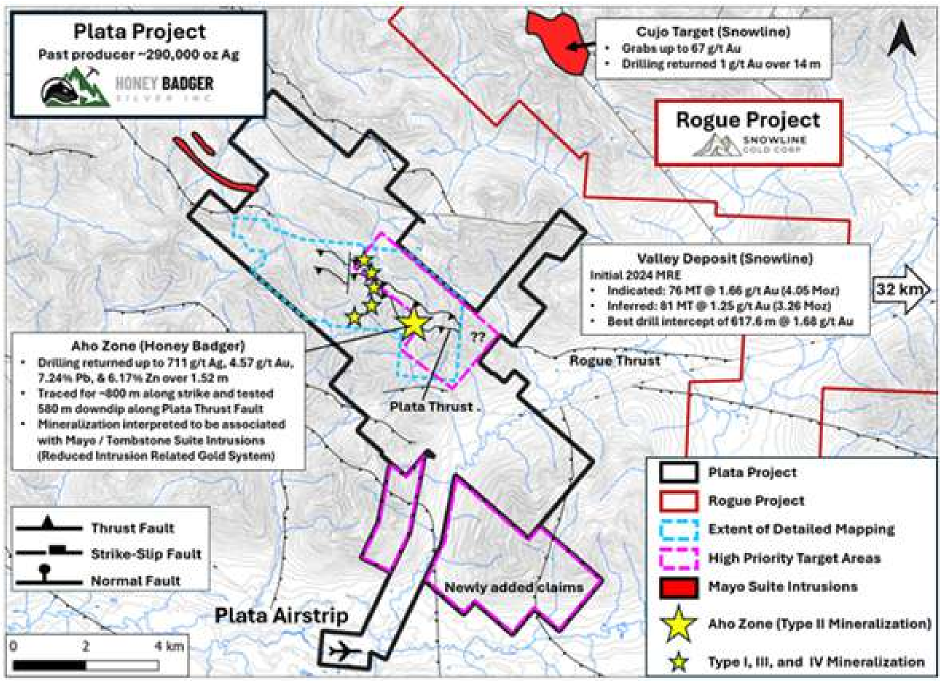
Whilst it may sound counter-intuitive at first, **Honey Badger Silver (TSX-V:TUF)** is not a mining company. Instead, it is best viewed as an "actively managed silver ETF", which aims to leverage silver ounces in the ground, along with cash flows from streams and royalties, to provide investors with diversified exposure to silver price upside.

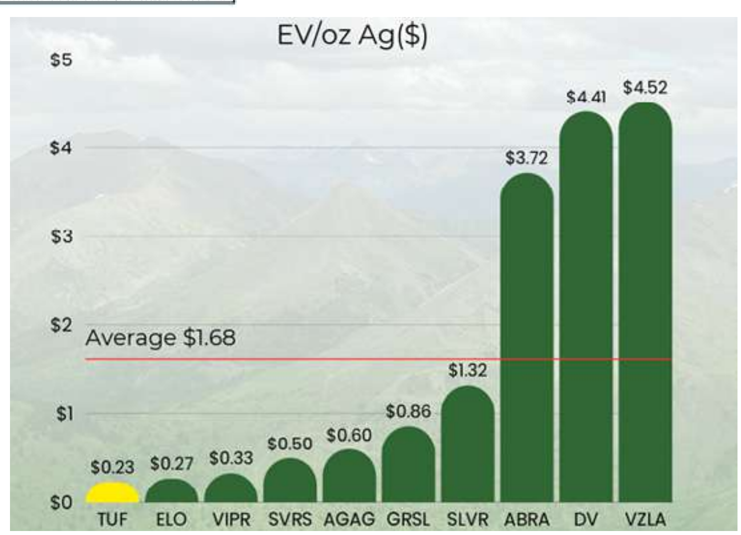
Admittedly, the company is at an early stage of its development, with a market capitalisation just under $10 million. That said, Honey Badger's management team is already rolling out an innovative strategy to unlock value for shareholders – one that is rooted in an all-Canadian portfolio of seven 100% owned silver projects.

Starting in the Yukon along the Tombstone Gold Belt, the company's "Plata" project was a past producing mine to the tune of 290,000 oz Ag. In fact, with grab samples up to 19,334 gpt Ag, and an airstrip on-site, silver grades at surface were so high at Plata that ore was directly transported by airplane to Idaho for treatment.

Naturally, Honey Badger sees the potential for district-scale, high-grade silver deposits analogous to Hecla's Keno Hill. At the same time, the company notes ***"strong indications of a potential large gold system"*** akin to its neighbour, Snowline Gold, and has therefore identified 32 "highly prospective" drill-ready targets at Plata. Staying in the Yukon, Honey Badger's "Clear Lake" property, located 225km north of Whitehorse, possesses a historical inferred resource of 5.5 Moz of silver, 1.3Blbs of zinc, and 185Mlbs of lead. Meanwhile, its "Hy" and "Groundhog" projects are also located in the Yukon, with trenching returning up to 684 g/t silver for the latter.

Moving across to the Northwestern Territories, Honey Badger's "Sunrise Lake" is a VMS deposit with a historic indicated resource of 12.6 Moz of silver. Whereas, its "Yava" project in Nunavut holds an estimated 4.5 Moz of silver, and is located near Glencore's Hackett River Project – a globally significant undeveloped silver resource.





Last but not least, the company's "Nanisivik" property – also located in Nunavut – is a historic silver production site, which previously yielded over 20 Moz of silver. As such, exploration continues for unmined resources with high silver potential within the 100+ million tons of massive sulphide that remains unmanned on the property.

In total, these projects are estimated by Honey Badger to contain as much as 150 million ounces of silver equivalent. Excluding its highly prospective Plata property, this means that Honey Badger currently trades at $0.23 EV per ounce of silver - a significant discount to the peer average of $1.68 EV/ounce Ag.

With time, Honey Badger intends to use this undervaluation to its shareholders advantage, delivering cash flow via exposure to silver royalties and streams. For now, however, the company is strategically leveraging AI and its experienced geologists, as it analyses which project will provide the highest value in terms of dollar spent.

"We would rather spend a lot of money defining targets. I know the market might not like this and I know it's not sexy. But for us as a company, I'd much rather do that especially in this market context, which may not even recognise us for results at this point. Right now, we are prioritising where we are going to drill."

Chad Williams, Executive Chairman & Interim CEO, Honey Badger Silver

By patiently hanging fire in this manner, Honey Badger is not embarking on a drilling campaign prematurely, thereby abstaining from an unnecessary $1 million+ expenditure. In doing so, the company is proving itself as a trustworthy shepherd of shareholder capital, as it sensibly awaits for a material rise from the silver price.

Incidentally, this "champagne taste, beer budget" ethos also translates to the company balance sheet. Headed up by $500,000 in cash, the company's annual obligations are expected to be a relatively meagre $65,000 – a noticeably low burn rate, which can be owed to the exceedingly low holdings costs at Honey Badger's projects.

"While everybody else in the silver market has been dormant for the last 3 or 4 years, we have been highly active, aggregating a portfolio of silver assets. And it doesn't cost as much. It's almost like a free option on these assets. It's not like we have to earn in – we already own them. We don't have to spend money on these assets. They're ours." Chad Williams, Executive Chairman & Interim CEO, Honey Badger Silver

Living and breathing this cost discipline, Williams reinvests $2 into the company for every $1 of after-tax salary. A former CEO of Victoria Gold and Head of Mining Investment Banking at Blackmont, he also helped discover major deposits like El Peñón and Arequipa as an analyst, and was even an architect of the streaming model.

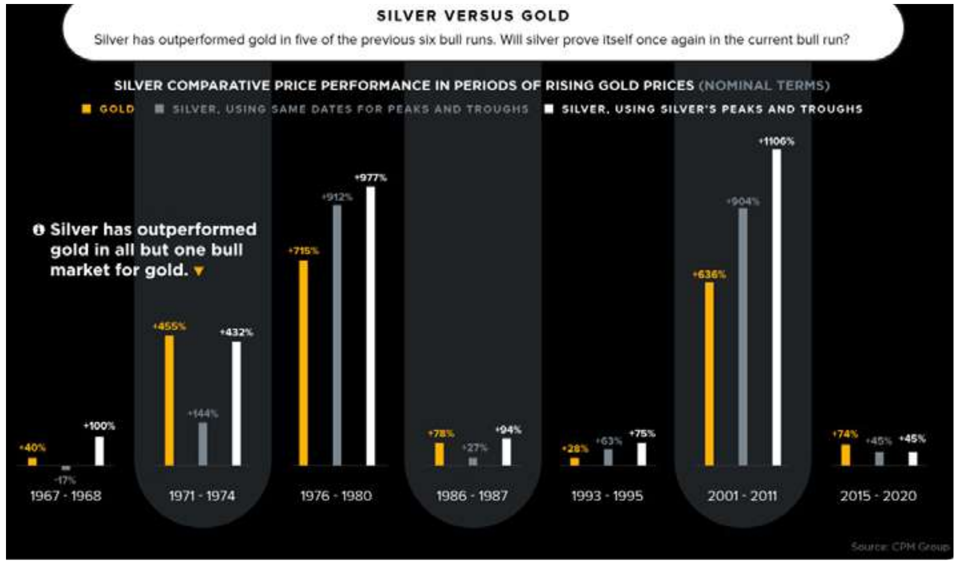
"Even though (Bob Quartermain) had 1 Boz of silver reserves, many institutions wouldn't invest because he didn't have cash flow or silver revenue. So, I went to see Ian Telfer who was at Wheaton River and said: 'Ian sell your silver to Bob'. That became streaming and we're going to try and do something very similar."

Chad Williams, Executive Chairman & Interim CEO, Honey Badger Silver

As mentioned, the streaming aspect of Honey Badger's strategy will come further down the line. However, this doesn't change the fact that Williams' commitment to the company is unquestionable. Namely, he holds a 27% stake in Honey Badger, which has approximately 80 million shares outstanding, excluding options and warrants.

Not to mention, Williams is joined by Eric Sprott, who owns a 3% share in Honey Badger. A precious metals industry Billionaire, Sprott's $250-500 silver price prediction exceeds Honey Badger's more conservative $100 target. Although, even if silver only reaches $65, it would still mark a double from the current price of $32.50.

Therefore, whilst there is no guarantee that the silver price will awake from its stagnating slumber, the white metal has a historical tendency to outperform gold in 6 of its last 7 bull markets up to 2011. As such, betting against silver – ***and the notoriously tenacious Honey Badger*** – could prove to be a missed opportunity.



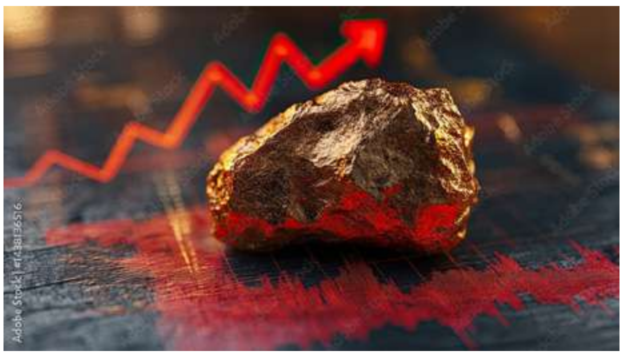
https://www.visualcapitalist.com/silver-bulls-how-silver-performs/

COPPER PRICE SUPPORTED BY CHINESE DEMAND, TARIFFS HIATUS, EASING OF GEOPOLITICAL TENSIONS

By RicK Mills

China is by far the largest copper consumer and is the world's number one refiner of the metal by a large margin.

Following the announced 90-day suspension of tariffs, the stock market rebounded and with it the price of copper.



The red metal is now trading at $4.62 a pound, 5% higher than the April 8 trough of $4.07. Year to date, the copper price is 7.5% stronger.

There are several reasons for copper's reversal of fortune.

The first is an easing of geopolitical tensions.

Russian President Vladimir Putin unilaterally called for a three-day ceasefire in Ukraine that took effect on May 8. The development is an improvement over Putin's rejection of a US-Ukraine ceasefire in March, although Ukraine has not accepted the latest ceasefire and has instead called for a 30-day cessation of hostilities.

The United States and the Houthis in Yemen have also agreed to a ceasefire, brokered by Oman. Aljazeera reported Tuesday that Trump announced the United States is abandoning its daily bombing campaign in Yemen *"because the Houthis don't want to fight anymore."* The Iran-aligned group has been attacking ships in the Red Sea in support of Palestinians after war broke out in Gaza following Hamas' attack on Israel in October 2023.

Also in the Middle East, US and Iranian officials are scheduled for a fourth round of nuclear talks in Oman. According to Fox News, Trump will visit Saudi Arabia, Qatar and the United Arab Emirates next week.

Finally, there has been movement on the issue of trade talks between the US and China. PBS reported Wednesday that *China announced a barrage of measures meant to counter the blow to its economy from U.S. President Donald Trump's trade war, as the two sides prepared for talks later this week*.

China's plans include cutting interest rates and reducing bank reserve requirements to help free up more funding for lending. The government is also expected to increase the amount of money available for factory upgrades, innovation, elder care and other service businesses.

Reuters said *The talks are the first opportunity for the two sides to de-escalate tensions after a protracted cat-and-mouse game over tariffs in which neither wanted to be seen as backing down.*

The next reason is due to robust Chinese buying.

Bloomberg reports *The global copper market is flashing signs of tightness, as strong Chinese buying squeezes scant supplies even in the face of worries about a looming industrial downturn*.

A trader at Zijin Mining Investment Shanghai Co., a unit of China's top copper miner, said demand growth for copper has been running at double-digits this year, a pace which cannot continue.

Copper Chart in Ton / USD

Source: Kitco

"Demand will slow in the second half along with output," said Wai Lei, vice head of trading.

For now, traders point to a number of areas of demand strength, including strong orders from State Grid Corp of China and production of copper-intensive goods such as air conditioners and electric vehicles.

Grid spending in the first three months of the year rose by 25%, and investment in new equipment climbed by 60%, Bloomberg reported.

Purchases of home appliances were up 16% during the five-day holiday at the start of May.

Low inventories at metal warehouses is another sign of market tightness. Copper levels in Shanghai Futures Exchange warehouses fell by 136,000 tons in April, for the largest four-week drawdown on record.

The sharp declines were likely a result of Chinese buyers purchasing copper when prices suddenly fell last month.

Supply disruptions are also playing a part. Bloomberg said ***The threat of US tariffs on copper has spurred a huge rush to ship metal to the US, pushing America's monthly imports to a record high and drawing stocks away from other parts of the world***.

The third reason is supply limitations.

On May 6, UN Trade and Development (UNCTAD) said long-term demand for copper, driven by digital expansion and clean energy, is expected to rise 40% by 2040. This would require more than 10 million tonnes of additional copper, almost half of the 23Mt of copper mined globally in 2024. To accomplish this feat would require an investment of up to $250 billion over the next five years, Global Trade Review reports.

Even if that level of investment is realized, equating to an estimated 80 new mines, producing so much additional copper faces challenges. According to the UNCTAD report, this includes supply limitations, increasing trade tensions, and declining ore grades.

In September of last year McKinsey consultancy said that copper prices would need to increase by 20% to incentivize the quarter-trillion-dollar price tag.

The article notes that Trump's tariff regime has added to concerns in the sector, chiefly whether there will be tariffs on copper imports and if so how much will they be.

In February, Trump ordered an investigation into the copper market, which many believe is to determine the level of tariffs. In March, US copper prices jumped to record highs as importers front-loaded shipments to get ahead of potential tariffs. China's copper stockpiles dwindled rapidly as a result.

Researchers at the University of Michigan and Cornell University found that copper can't be mined fast enough to keep up with current US policy guidelines to make the transition from fossil-fueled power and transportation to electric vehicles and renewable energies.

	Mine production		Refinery production		Reserves[6]
	2023	2024[e]	2023	2024[e]	
United States	1,130	1,100	882	890	47,000
Australia	778	800	442	460	[7]100,000
Canada	500	450	315	320	8,300
Chile	5,250	5,300	2,080	1,900	190,000
China	1,820	1,800	12,000	12,000	41,000
Congo (Kinshasa)	2,930	3,300	2,170	2,500	80,000
Germany	—	—	609	630	—
India	27	30	509	510	2,200
Indonesia	907	1,100	225	350	21,000
Japan	—	—	1,490	1,600	—
Kazakhstan	[e]740	740	458	470	20,000
Korea, Republic of	—	—	604	620	—
Mexico	699	700	509	350	53,000
Peru	2,760	2,600	403	390	100,000
Poland	395	410	592	590	34,000
Russia	[e]890	930	[e]1,000	960	80,000
Zambia	712	680	222	170	21,000
Other countries	3,020	2,700	2,460	2,500	180,000
World total (rounded)	22,600	23,000	27,000	27,000	980,000

Source: US Geological Survey

"We show in the paper that the amount of copper needed is essentially impossible for mining companies to produce,"

said Adam Simon, co-author of the paper, published by the International Energy Forum (IEF).

Copper price to remain elevated due to increasing demand for electricity and supply challenges — Richard Mills

A recent graphic by Visual Capitalist cites data from Benchmark Mineral Intelligence showing that meeting global battery demand by 2030 would require 293 new mines or plants.

In the table below, notice that, of all the metals, copper requires the most additional tonnage, an increase of 3,664,000 tons, or 61 mines.

Visual Capitalist notes, and we wholeheartedly agree, that it is no easy task to build new copper mines, or any mines, for that matter: ***After discovery and exploration, mineral projects must go through a lengthy process of research, permitting, and funding before becoming operational.***

In the United States and Canada, building a copper mine from discovery to production can take upwards of 30 years.

Other jurisdictions such as Ghana, the DRC and Laos build mines faster, but even in the top copper-producing countries, there are problems.

Chile and Peru are grappling with strikes and protests, along with declining ore grades. Seventh-ranked Russia faces an expected decline due to the ongoing war in Ukraine.

Mineral	2024 Supply (t)	2030 Demand (t)	Supply Needed (t)	No. of Mines/Plants	Type
Lithium	1,181,000	2,728,000	1,547,000	52	Mine
Cobalt	272,000	401,000	129,000	26	Mine
Nickel	3,566,000	4,949,000	1,383,000	28	Mine
Natural Graphite	1,225,000	2,933,000	1,708,000	31	Mine
Synthetic Graphite	1,820,000	2,176,000	356,000	12	Plant
Manganese	90,000	409,000	319,000	21	Plant
Purified Phosphoric Acid	6,493,000	9,001,000	2,508,000	33	Plant
Copper	22,912,000	26,576,000	3,664,000	61	Mine
Rare Earths	83,711	116,663	32,952	29	Mine

Source: Visual Capitalist

Some of the world's largest mining companies, market analysis firms and bank are warning that this year, a massive shortfall will emerge for copper, which is now the world's most critical metal due to its essential role in the green economy.

The deficit will be so large, The Financial Post stated, that it could hold back global growth, stoke inflation by raising manufacturing costs, and throw global climate goals off course.

Two reasons identified by Sprott why supply is not keeping up with demand; developing a new copper mine is lengthy and expensive, often taking over a decade from exploration to production; and the mining sector has seen long periods of underinvestment, when low copper prices meant reduced exploration budgets and fewer discoveries.

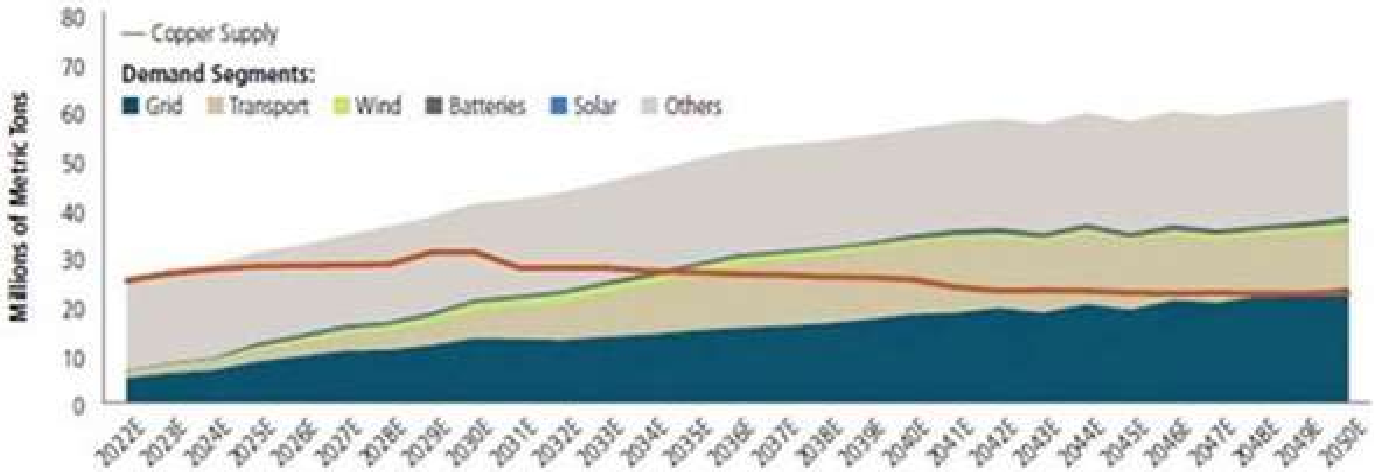
There has also been an overdependence on mergers and acquisitions. It's much easier for a copper mining company to increase its reserves by purchasing a smaller company (and its reserves), than dedicating capital to greenfield exploration, which is expensive and risky.

Capital for the development of copper mines peaked at $26.13 billion in 2013. Since then, it has almost halved and remained low, with only $14.42 billion spent in 2022, according to Sprott.

Despite the funding gap, several commentators have mentioned the dawn of a new copper super cycle focused on the global energy transition, compared to the previous commodity super cycle that was driven by China's industrialization and urbanization.

Five reasons why we are entering the next copper super cycle — Richard Mills

Figure 4. Copper Supply and Demand Imbalance May Likely Grow

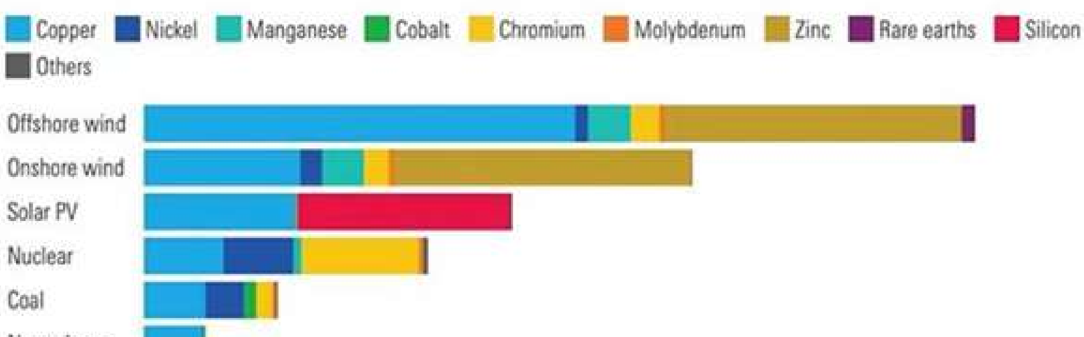


Source: BloombergNEF Transition Metals Outlook 2023. The line represents demand and the shaded area represents supply. Demand is based on a net-zero scenario, i.e., global net-zero emissions by 2050 to meet the goals of the Paris Agreement.

Morningstar reports that Global efforts towards decarbonisation are a structural growth engine for many raw materials or metals, and copper is one of the key metals for the energy transition.

Minerals used in clean energy technologies compared to other sources

kg/MW



Source: Morningstar

For example, wind and solar are among the most popular forms of renewable energy today. The graph below shows the amount of copper required to generate energy from offshore wind (wind turbines in the sea), onshore wind (wind turbines on land) and solar photovoltaics compared to fossil fuels such as coal and natural gas.

CONCLUSION

Looking into the copper crystal ball, Goldman Sachs recently raised its near-term copper price forecast to $9,150-$9,330 a tonne ($4.15-$4.23/lb) from $8,370-$8,620 ($3.79-$3.90/lb) previously. The influential bank cited a de-escalation of global trade tensions and resilient demand from China as the reason for the price upgrade. Goldman also said that high US copper imports this quarter are expected to deplete non-US inventories. This drawdown will tighten the London Metal Exchange's forward spreads and discourage new speculative short positions, keeping prices elevated. (Mining.com)

Goldman agrees with Zijin Mining Investment Shanghai that there will be a significant slowdown in global copper demand in the second half of the year, especially if the US tariffs copper imports.

However in the longer term, Goldman predicts that the copper market will move into deficit in 2026, ***"driven by strong demand from electrification-related sectors and limited growth in mining."***

This should push prices from an expected low of $9,000/tonne [$4.08/lb] in October 2025 to more than $10,500/tonne [$4.76/lb] by the end of 2026, the bank wrote.

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UNDERVALUED, INDISPENSABLE, AND HIGHLY STRATEGIC: THE CASE FOR TITANIUM INVESTMENT

By Ted J. Butler

Whilst speculators chase gains in "flavour of the week" metals such as antimony, prudent natural resource investors are already positioning themselves for the next asymmetric investment opportunity. Incidentally, titanium is a metal embodying the deep value that these astute investors seek. Yet Main Street remains naïve to the metal's unique characteristics, as well as the supply-demand catalysts that stand ready to drive price higher.

Starting with the fundamentals, it's critical to note that 90% of titanium demand is for titanium dioxide (TiO2), with around 66% utilised as a brightening pigment in paints, plastics, and paper. Bullishly, this demand segment is expected to grow at 5.7% CAGR between 2024 and 2030. During this time, the global value of the TiO_2 paints market is set to rise from $14 billion to $19.8 billion, marking a rise of 41.5% over the course of 6 years.

In terms of the material properties facilitating this robust demand growth, TiO_2 boasts an exceptionally high refractive index of 2.4-2.7, thereby scattering light more effectively than any other white pigment, whilst delivering unparalleled brightness and opacity. For context, the next best alternatives are relatively inefficient and duller. Namely, zinc oxide musters a refractive index of 2.1 at best, as calcium carbonate lags with 1.59.

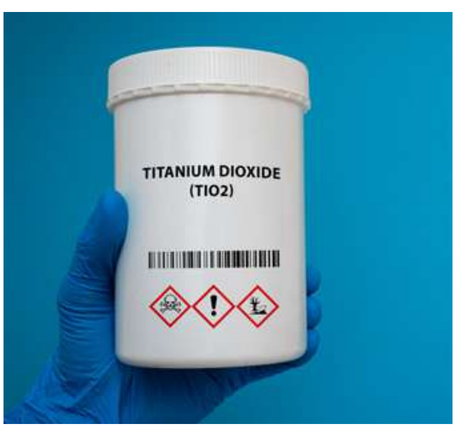
Furthermore, TiO_2's chemical inertness and photostability ensure coatings resist degradation from UV exposure, moisture and oxygen. In accelerated weathering tests, TiO_2-based paints also tend to exhibit limited visible fading, showing ΔE colour changes below 1.0, while alternatives often exceed ΔE 3.0. Not to mention, the compound's high contrast ratio - regularly exceeding 94% - ensures superior hiding power with less material.

As a result, it would be fair to say that TiO_2 has earnt itself a "moat" in the niche pigments segment – one that will serve as both a foundation for demand, and a long-term catalyst for price. Despite this, it's vital to note that TiO_2 does not live or die by the sword of the pigments market. Instead, the compound's industrial versatility enables it to straddle from uses in next generation solar panels to new and emerging battery technologies.

More specifically, TiO_2 anatase is being explored as a battery anode material due to its fast diffusion, strong cycling stability, and low volume expansion. Outperforming graphite in high-power applications, anatase-based anodes have even demonstrated capacity retention above 90% after 1,000 cycles at high charge rates. As such, TiO_2 usage in sodium-ion batteries is set to grow from $52.8M in 2023 to $145.1M by 2030 at a 15.7% CAGR.

By the same token, TiO_2 anatase is gaining traction in solar technology, particularly as an electron transport layer in dye-sensitized and perovskite solar cells. Notably, perovskite efficiencies have surged from under 4% in 2009 to over 26% by 2024, now rivalling silicon. Therefore, as the perovskite market grows to USD

Pigment	*Refractive Index (n)*	*Contrast Ratio (%)*	*ΔE Color Change (1000 hrs)*	*Chalking Resistance*	*Oil Absorption (g/100g)*	*Toxicity / Safety*
TiO_2 (Anatase)	*~2.4–2.55*	*~94–97*	*<1.5*	*7–9*	*~25–30*	*Non-toxic, food-safe*
Zinc Oxide (ZnO)	*~2.0–2.1*	*~85*	*~2.5–3.0*	*5–7*	*~40–60*	*Generally safe*
Calcium Carbonate	*~1.59*	*<80*	*>3.0*	*<5*	*~15–20*	*Safe, widely used filler*
Lithopone	*~1.84–1.9*	*~88*	*~2.0–3.0*	*6–8*	*~10–15*	*Outdated, niche applications*
Kaolin Clay	*~1.54*	*<75*	*>4.0*	*<4*	*~30–50*	*Safe, low-performance filler*



3 billion by 2030, TiO_2 anatase's electron mobility and high surface area will surely necessitate robust demand.

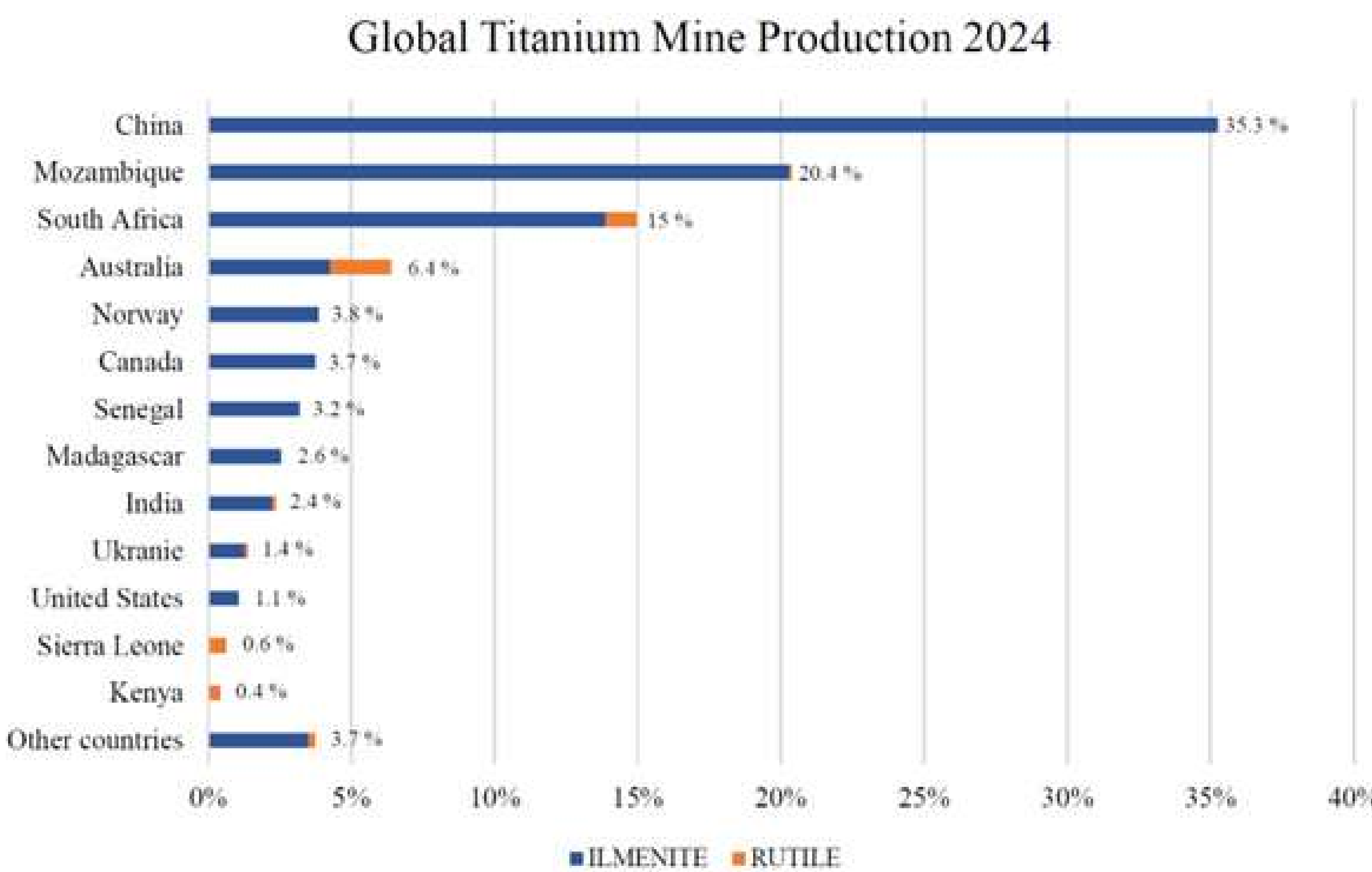
Eventually, the above TiO_2 demand drivers will converge with offtake from 3D printing - offering lightweight, high-strength solutions for medical implants and aerospace applications. Prior to this, however, the titanium investment case will be supported by the supply side. Concerningly for the G7, these catalysts are characterised by China's 35% share of global titanium production – a stark contrast to the U.S and Canada's combined 4.8%.

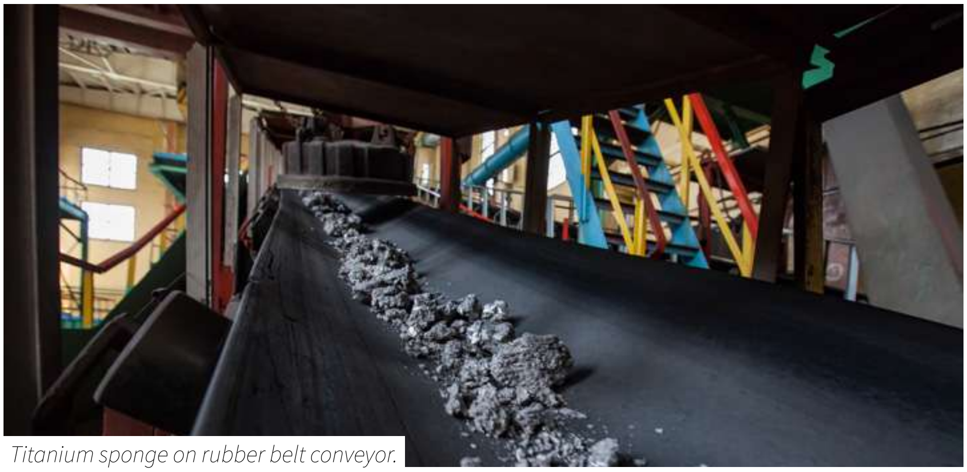
Put simply: If China continues to weaponize its critical mineral monopolies against the U.S, then titanium prices could rise sharply due to supply chain dislocation. Already, we observed this with prices of gallium, germanium, and antimony, which skyrocketed after Beijing enacted export bans in December. Therefore, with further export bans imposed upon 7 rare earths on April 4th, titanium may well be the next to find itself in Beijing's crosshairs.

Of course, a price rise could be kept at bay if the 2nd and 3rd largest titanium producing countries were reliable sources of supply for the West. That said, Islamist insurgencies are threatening operations in Mozambique, whilst South Africa continues to rely on a dilapidated and intermittent electricity grid. Naturally, the U.S – and the G7 more broadly - cannot exactly hang their hats on what is a further 35% of global TiO_2 production.

Moreover, China's dominance is visible in its strategic presence in Mozambique, where a $786 million Belt and Road investment in Africa's longest suspension bridge is sweetening supply deals with the world's 2nd largest titanium producing nation. In 2014,

Drone View of Kenmare Resources plc is an established mining company, which operates the Moma Titanium Minerals Mine, located on the north east coast of Mozambique.




Titanium sponge on rubber belt conveyor.

this saw China companies ramp up investments in Mozambique to produce one million tons per year of ilmenite, before shipping the product to China for the next 25 years of processing.

To make matters worse, China dominates the next stage of the supply chain with a 66% share of global titanium sponge production. Chinese allies, Russia and Kazakhstan, also comprise a further 10% of the world's titanium sponge production, bringing the East's total to over ¾ of global production. On the other hand, the U.S eked out a negligible 500 tons of titanium sponge in 2023 – equivalent to 0.15% of global titanium sponge production.

Unsurprisingly, therefore, the U.S. is more than 95% reliant on imports for titanium sponge, with 2024 volumes of 40,000 tons just below 2023's record 40,400 tons. From 2020- 2023, 82% of these U.S imports derived from Japan on average. And yet, when one realises that Japan produces zero titanium ore domestically, and that it was the world's 2nd largest importer of titanium in 2023, it begs the question: Where is U.S titanium coming from?

In short, the answer is a complicated mix of politically unstable mining jurisdictions. Namely, of the 327,000 tons of titanium of ores and concentrates Japan imported in 2023, it derived 91,256 tons (27.9%) from low Tier 2 jurisdiction, South Africa, 67,212 tonnes (20.5%) from Tier 2.5 jurisdiction, India, and 34,077 tons (10.4%) from Tier 3 jurisdiction, Mozambique – a country not even ranked by the Fraser Institute due to "frontier-risk".

In this sense, we estimate that close to two thirds of Japan's titanium ores and concentrates – which later make up the lion's share of the U.S titanium sponge supply – are sourced from mining jurisdictions plagued by political and safety risks. At the same time, China's imports of titanium ores and concentrates totalled 4.25 million tons in 2023 – approximately

13 times that of Japan, and 6 times that of the European Union.

Of course, the U.S and China just struck a trade deal to slash tariffs by 115%. As such, readers should be wary that pressure on titanium prices may be alleviated. That said, its critical to note that the agreed 'trade deal' is merely a 90 day truce whilst both parties iron out the details. Therefore, if negotiations fail, and if Xi once again looks to his critical mineral monopolies for leverage, a titanium price squeeze may be just around the corner.

Table 5.—Estimated Salient Critical Minerals Statistics in 2024[1]

(Metric tons, mine production, unless otherwise specified)

Critical mineral	United States: Primary production	Secondary production	Apparent consumption	Net import reliance as a percentage of apparent consumption	Primary import source (2020–23)	World: Leading producing country	Production in leading country	Percentage of world total	World production total
Aluminum (metallurgical grade bauxite)	—	—	[2]1,600,000	>75	Jamaica	Guinea	130,000,000	29	[3]450,000,000
Antimony	—	3,500	24,000	85	China[4]	China	60,000	60	100,000
Arsenic	—	NA	[5]9,100	100	China[4]	Peru	[5]27,000	47	[5]58,000
Barite	W	—	W	>75	India	India	2,600,000	32	[5]8,200,000
Beryllium	180	NA	170	E	Kazakhstan	United States	180	50	360
Bismuth[7]	—	80	760	89	China[4]	China	13,000	81	16,000
Chromium	—	100,000	440,000	77	South Africa	South Africa	21,000,000	45	47,000,000
Cobalt	300	2,000	8,500	76	Norway	Congo (Kinshasa)	220,000	76	290,000
Fluorspar	NA	—	430,000	100	Mexico	China	5,900,000	62	9,500,000
Gallium	—	—	[2]19	100	Japan	China	750	99	760
Germanium[7]	—	NA	NA	>50	Belgium	China	NA	NA	NA
Graphite (natural)	—	—	52,000	100	China[4]	China	1,270,000	79	1,600,000
Indium[7]	—	—	[5]250	100	Republic of Korea	China	760	70	1,080
Lithium	W	NA	W	>50	Chile	Australia	88,000	37	[3]240,000
Magnesium[7]	—	110,000	[2]50,000	>75	Israel	China	950,000	95	[3]1,000,000
Manganese	—	—	680,000	100	Gabon	South Africa	7,400,000	37	20,000,000
Nickel	8,000	92,000	[8]180,000	48	Canada	Indonesia	2,200,000	59	3,700,000
Niobium	—	NA	8,400	100	Brazil	Brazil	100,000	91	110,000
Palladium	8	45	83	36	Russia	Russia	75	39	190
Platinum	2	8.5	71	85	South Africa	South Africa	120	71	170
Rare earths (compounds and metals)[9]	1,300	NA	6,600	80	China[4]	China	[10]270,000	69	[10]390,000
Scandium	—	—	NA	100	Japan	China	NA	NA	NA
Tantalum	—	NA	770	100	China[4]	Congo (Kinshasa)	880	42	2,100
Tellurium[7]	W	—	W	<25	Canada	China	750	77	[5]980
Tin	—	17,900	37,000	73	Peru	China	69,000	23	300,000
Titanium (metal)[7]	W	W	[2]40,000	>95	Japan	China	220,000	69	[3]320,000
Tungsten	—	W	W	>50	China[4]	China	67,000	83	81,000
Vanadium	—	8,200	14,000	40	Canada	China	70,000	70	100,000
Yttrium	NA	—	500	100	China[4]	China	NA	NA	NA
Zinc[7]	[11]220,000	([12])	820,000	73	Canada	China	4,000,000	33	12,000,000
Zirconium (ores and concentrates)	<100,000	NA	<100,000	<25	South Africa	Australia	500,000	33	1,500,000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