May 23, 2022

Report #1

Graphite in Namibia, Brazil and Canada

Company Details (f) (in) (in)



MAJOR MILESTONE: FIRST "PRODUCT IN BAG" ANNOUNCED

LEADING THE PACK IN HIGH-QUALITY GRAPHITE PRODUCTION RACE

There may never be a more pivotal time to take advantage of the investment opportunity offered within the electric vehicle (EV) supply chain. With lithium carbonate prices having sky-rocketed to what Elon Musk calls "insane levels", Bloomberg recently noted that lithium prices are showing signs of losing momentum. While all eyes still appear to be on the lithium market at the moment, investors sooner or later may jump on the graphite bandwagon as the fundamentals for this battery-critical mineral are arguably even hotter. As the current lithium supply deficit is forecasted to go back into surplus by 2025, the story looks all the more different for graphite as its supply deficit is expected to more than triple from 10% this year to 32% in 2025. New graphite supply is urgently needed, which is however not as easy as increasing lithium output. When investors realize that graphite is the most crucial bottleneck for global adoption of EVs, graphite exploration and mining companies such as Gratomic Inc. are poised to become the "go-to place" for the creation of shareholder value in the EV supply chain.

In a race from exploration to mining that started in 2012 with the EV revolution and global movement to phase out Internal Combustion Engines (ICE) only few companies have succeeded in bringing new graphite supply online. The reasons are manifold with low deposit grades, costly impurities, challenging metallurgy and lack of funding on top of the list.

Having raised \$5.5 million in March and being in the final stages of commissioning its Aukam graphite processing facility in Nambia, Gratomic is uniquely positioned to ascend to one of the world's lowest cost and highest

grade graphite producers while at the same time fast-tracking its other projects in Brazil.

As Gratomic has been working hard and diligently to turn Aukam into the world's largest vein graphite supplier, Capim Grosso in Brazil is being set up to provide significant blue-sky growth opportunities.

Arguably, the timing couldn't be any better for Gratomic and its shareholders as natural, high-grade graphite sources are in high demand already and well into the future.

TM . . .

Gratomic

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Email: info@gratomic.ca www.gratomic.ca ISIN: CA38900X2077

Shares Issued & Outstanding: 176,981,214



^Chart Canada (TSX.V)

Canadian Symbol (TSX.V): GRAT Current Price: \$0.45 CAD (05/20/2022) Market Capitalization: \$80 Million CAD



^Chart Germany (Frankfurt)

German Symbol / WKN: <u>CB82 / A2PWQP</u> Current Price: €0.31 EUR (05/23/2022) Market Capitalization: €55 Million EUR

All \$-figures in CAD unless otherwise stated

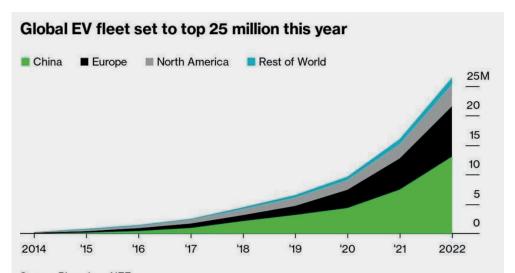


Since 2012, only 2 or 3 significant graphite projects went into production. To keep up with demand, at least one new large mine is needed every year.

According to Credit Suisse (April 2022): "Graphite is a high impact transition material with a growing supply deficit: We estimate potential demand for graphite could be 5.3x greater than current levels by 2050... We forecast a 10% deficit in CY2022 in the battery anode market, but this widens substantially to 32% by 2025. For comparison, CS forecasts lithium to have a 17% supply deficit for CY22 but return to a more manageable 1% surplus by 2025."

According to <u>"Shortage of EV battery</u> raw material graphite could delay global drive to go green" (April 2022): "Graphite, a critical mineral used in electric vehicle batteries, could see a shortage in supply amid surging demand for EVs, which may delay the global drive to go green... With electric vehicle sales expected to reach up to 11 million units in 2022, there could be a deficit of around 40,000 tonnes of graphite this year, said George Miller, an analyst from London-based battery materials data and intelligence provider Benchmark Mineral Intelligence in an interview. "There is a potential for a raw material deficit in graphite ... which would hamper utilisation rates at [battery] cell and electric vehicle production facilities," said Miller. While the deficit would not destroy the demand for electric vehicles, it could "push out the timeline for wider integration of electric vehicles in society," said Miller... "The demand outlook is incredibly strong for graphite. It will remain a critical mineral for the lithium-ion growth story and the energy transition," said Miller... While Benchmark Mineral Intelligence forecasts a potential shortage in graphite over the near term, this could incentivise higher prices and therefore more supply of the mineral into the market over time."

While recycling of used EV batteries will play an important role for future supply of critical battery metals, graphite is the one component which is currently not recyclable.

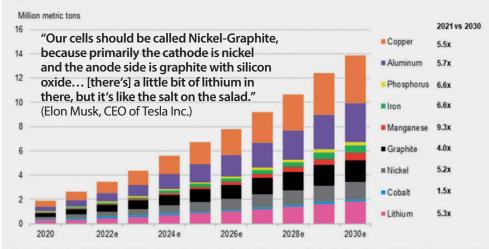


Source: BloombergNEF Includes battery electric and plug-in hybrid passenger vehicles. 2022 is based on BNEF forecast. European data includes EEA + UK.

Bloomberg Green

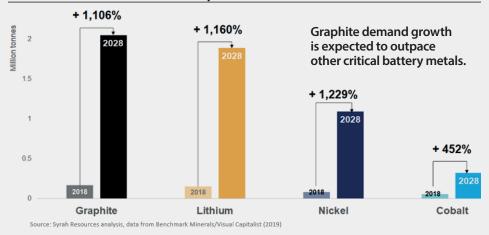
"Global automakers sold a record 4.8 million electric vehicles in 2021, up 113% from 2.3 million in 2020. Despite a slight dip in February, the upward sales trend continues in 2022, even as battery raw material prices have spiked, with estimated BEV sales up nearly 120% in the first quarter." (Reuters, March 2022)

Figure 1: Metals demand from lithium-ion batteries



Source: BloombergNEF. Note: Metals demand occurs at mine mouth, one-year before battery demand. All metals expressed in metric tons of contained metal, except lithium, which is in lithium carbonate equivalent (LCE).

Demand Growth for Critical Battery Raw Materials from LiB

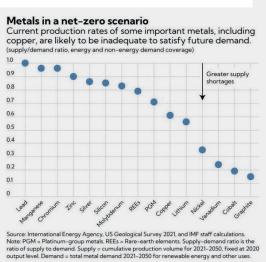




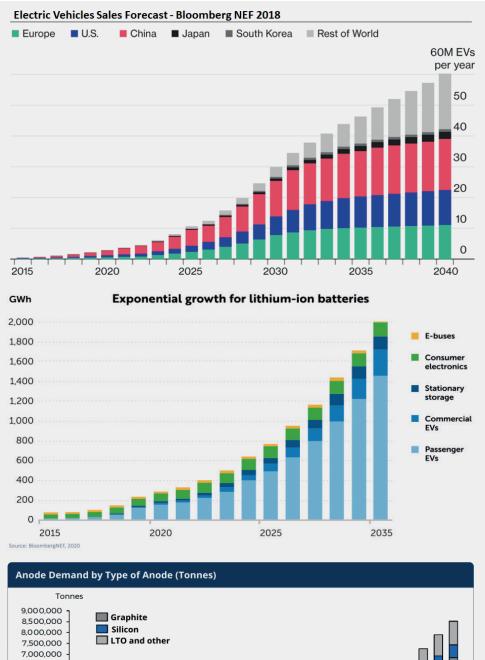
The modern lithium-ion battery contains 10-15 times more graphite than lithium. According to Benchmark, there is about 50-100 kg of natural flake graphite in every EV that uses natural graphite anode materials.

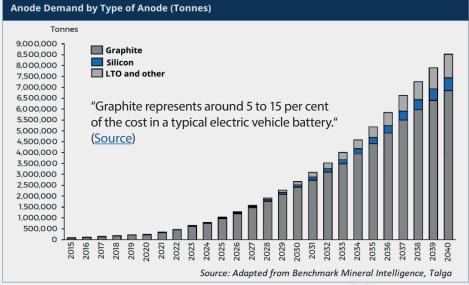
"The global demand for graphite is set to rise dramatically from 1.1 million tonnes (Mt) a year in 2020 to 4 Mt a year by 2030 (Mining Journal, 2021). If historic production trends continue, demand will far outstrip supply by 2030 (Ballinger et al., 2019). The processing and manufacturing of battery components mostly takes place in China, Japan and South Korea (Grant, 2020). This concentration of key stages in the supply chain in a small number of countries represents a potential risk to the security of global graphite supply. New sources and supply chains are needed to bridge the gap between supply and demand." (Source)

"Graphite, a critical mineral used in electric vehicle batteries, could see a shortage in supply amid surging demand for EVs, which may delay the global drive to go green... While graphite deposits are not scarce, the supply of battery-grade graphite – used as a raw material in EV batteries – is much tighter... Graphite is used for the negative end of a lithium-ion battery, known as the anode." (Source)



According to the IWF, graphite faces the greatest risk of supply shortage of all metals in a net-zero scenario, with current production rates inadequate to satisfy future demand. (Source)





"Graphite is an essential material within EV batteries. On a weight basis, there is more graphite than lithium in a lithium-ion battery, with an estimated 54 kg required for a Tesla Model S1. Demand for lithium ion anode material is forecast to increase to 1.9 million tonnes by 2028, and it is anticipated that graphite will remain the anode material of choice for decades to come." (Source)



All battery anode producers (including manufacturers in South Korea and Japan) are currently dependent on China for Purified Spherical Graphite. The race to secure high-quality natural graphite is surging, making Gratomic's investment case all the more compelling.

- As graphite **vein deposits** are rare to find in significant quantities and typically require deep underground mining, Gratomic's Aukam vein graphite occurs at or near surface, offering a low CAPEX and OPEX high-grade mining opportunity with soft rock as gangue material (in contrast to hard rock with most vein and flake deposits; weathering of gangue minerals facilitates the ease of mining).
- "There is no intimate mixing or association of the graphite with country rock as in conventional flake graphite deposits were the non-carbon and carbon phases may be deposited contemporaneously." (Source)
- Due to its relative abundance, most of the world's graphite exploration projects are targeting **flake deposits**, however typically requiring **leaching and calcination** to process into >95% Cg to qualify for further upgrading into **Purified Spherical Graphite** (99.9% Cg; battery-grade) used as battery anode material.
- Aukam's graphite can be processed into >97% Cg only with flotation, significantly reducing CAPEX, OPEX and environmental impact.
- Flake graphite deposits are large bodies of 1-12% Cg (rarely up to 22%), typically associated with sulphides and other deleterious elements difficult to extract (e.g. <u>manganese</u>).
- Aukam's flowsheet maintains the crystallinity and order of the carbon structure throughout the entire processing circuit. This feature gives Gratomic a major competitive advantage in preserving the pristine quality of vein graphite to be upgraded to the desired quality, which is in stark contrast to most flake deposits: "[The] in-situ

MINERAL CHARACTERISTICS	AMORPHOUS	DISSEMINATED (FLAKE)	VEIN	AUKAM VEIN
Carbon content	Medium (50 - 60%)	Low (3-25%)	High (>90%)	Medium (>40% average)
Purification process	None	Flotation, leaching, calcination	None	Flotation, air classification
Crystallinity	Low	Medium	High	High
Particle size	Very fine	Fine to Coarse	Lump	Lumps, Fines & Coarse
Typical host rock	Soil	Soil or hard rock	Hard rock	Soft Rock
Typical depth	Open Pit	Open Pit to 200m	>500m	Open Pit
Ease of processing	N/A	Medium	N/A	High
Deleterious elements	N/A	Fe, Al, Cu, Ca	N/A	Marginal
Density	Low	Medium	High	High
Environment Impact	Low	High for high purification	High	Very Low

"Graphite, an allotrope of carbon, is predominantly concentrated into three types of mineral deposit: Amorphous graphite (microcrystalline graphite formed by metamorphism of coal, petroleum or carbon-rich sediments); flake graphite (disseminated graphite flakes associated with metamorphic rocks); and vein graphite occurring in veins or fracture-fillings in igneous and metamorphic rocks... A large proportion of worldwide graphite production is derived from deposits of disseminated flake graphite." (Source) "Graphite deposits typically range from 2% to 8% Cq, with 15% to 20% Cg considered high grade. With the exception of vein deposits, which can be selectively mined (often by hand), all other graphitic ores require processing. The flowsheet is determined by both the mineralogy and the target market and aims to maximise the recovered flake size whilst achieving the desired concentrate purity as well as separating the graphitic carbon from the other forms of carbon present... In the case of the battery market, a high grade (>95% Cg) flotation concentrate is required and is subjected to further treatment such as micronisation/spheroidisation, chemical/thermal treatment and finally carbon coating to produce spherical graphite for use in batteries (10-30 micron and 99.9% Cg)." (Source)

flake size measure [reported in resource estimates of graphite flake deposits] is only meaningful if the in-situ flakes are basically pure graphite and can be recovered without any size reduction, which is very unlikely. Mining and handling practices initially degrade flake size, while processing can have a particularly significant impact on the product flake size. In RPM's experience, there are numerous examples where the in-situ flake size distribution had a significant jumbo and coarse flake component and the resultant marketable product flake size was fine to very fine." (Source)

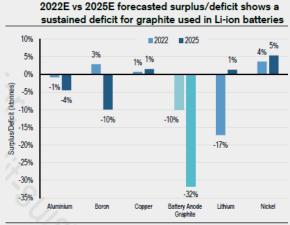
- Most flake graphite mines in production today at average grades of 4% Cg are marginally economic.
- Although vein deposits require more drilling than flake deposits, vein deposits host the superior form of graphite.

- Aukam's vein graphite is a **technically superior natural graphite supply**, with a higher degree of crystallinity than flake graphite; translating into **superior electrochemical properties** for lithium-ion batteries (e.g. excellent electrical conductivity, chemically inert, high density, resistant to oxidation and high temperatures).
- "In many applications vein graphite may offer superior performance since it has slightly higher thermal and electrical conductivity, which result from its high degree of crystalline perfection. Vein graphite also has the highest degree of cohesive integrity of all natural graphite materials. High cohesive "energy" means that vein graphite is easy to mold and can be formed into solid shapes without the aid of a binder addition." (Source)
- "When compared with the natural flake graphite, crystalline vein graphite

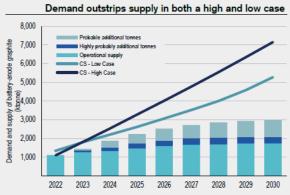


possesses extremely high carbon purity and high crystallinity, making it a superior raw material in contrast to synthetic and natural flake graphite for LIBs [Lithium-Ion Batteries]." (Source)

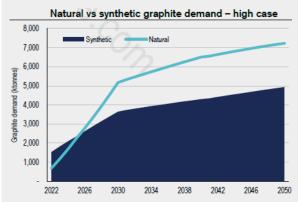
- Natural graphite provides a **superior** ESG (Environmental, Social, and Governance) profile and is expected to experience the highest growth going forward.
- Spherical graphite is the battery-grade material needed to make superior lithium-ion batteries. To make it with flake deposits, first medium- to large-flake graphite is mined, followed by an expensive secondary process to turn the flat flake shape into a spherical shape. This requires fine grinding/spheroidization and **chemical purification** to ultimately produce the desired product, which is purified and also very fine. That product (in form of powder) is sold to customers in the battery industry.
- **Synthetic graphite** is great(ly needed) because of its energy capacity, however it can not compete with natural graphite in terms of energy density. As such, it is expected that lithium-ion batteries will continue to have a mixture of synthetic and natural graphite.
- Gratomic aims to meet that market demand by introducing a cleaner alternative spherical graphite to the electric vehicle and energy storage battery markets.
- · China accounted for 76% of the world's natural graphite supply and 56% of synthetic graphite supply. In 2021, China was the world's leading producer of natural graphite, producing an estimated 820,000 t, or around 79% of total world output. (Source)
- The global graphite market currently is about 2.2 million t annually with ~50% of that being natural graphite (flake, amorphous and vein sources) with the key producers China, India and Brazil. Synthetic graphite made from petroleum coke makes up the remainder and is highly energy intensive (i.e. expensive) and not environmentally friendly although total graphite content levels are high.



Source: Credit Suisse - Super Materials Demand Model; CS commodities



Source: Credit Suisse - Super Materials Demand Model; CS commodities



Tonnes Graphite supply shortages emerging 12,500,000 as EV demand ramps up 10,000,000 7,500,000 5,000,000 2,500,000 Total Demand Highly Probable additional tonne Probable additional tonnes

Source: Benchmark Minerals Intelligence, January 2022

Source: Credit Suisse - Super Materials Demand Model

Operational supply

"Supply deficit set to grow: We forecast a 10% deficit in CY2022 for the battery anode graphite market, but this widens substantially to 32% by 2025. For comparison, CS forecasts lithium to have a 17% supply deficit for CY2022 but return to a more manageable 1% surplus by 2025. While there is no shortage of natural graphite reserves, a combination of mining lead times, lengthy material qualification processes, China energy policy impacts to synthetic production, and the unfunded status of several new graphite mines, may cause a sustained supply deficit and put significant upward pressure on pricing. The average flake price increased by 19% through 2021 but has spiked 38% since November 2021... Graphite is the only anode material that can be used. There are currently no commercial substitutes for this specific battery chemistry despite extensive research efforts on alternative anode materials. Graphite is currently the dominant choice for the anode in most lithium-ion batteries, although certain manufacturers also use lithium titanate instead of graphite. Efforts to replace some or most atoms of carbon in the graphite anode with silicon atoms are underway (e.g. Tesla, Porsche) and are expected to drastically improive the energy density of the cells. However, silicon anodes swell during charging, causing its surface to crack and performance to drop. For this reason, general consensus is that silicon will reach a 'battery stability'cap at approximately 10-15% of the anode."

Needle coke market balance: Deficit to start in 2023

(Source: Credit Suisse, April 2022)

 Balance - Operational, highly probable Balance - Operational, highly probable, probable

Source: Benchmark Minerals Intellgence, Q3 2020 Forecast



"Natural graphite grows in importance: Currently 58% of battery anode material is made from synthetic graphite and 39% from natural graphite. In 2030, it is projected that 41% of anode material will be synthetic and 49% natural. Natural spherical graphite has a higher power capacity and is less expensive than synthetic. Moreover, production of synthetic has an emission-intensity >3x greater than natural graphite and new developments lowering spheronisation costs may see natural graphite disrupt other end-market applications. Finally, our assessment of the potential for greater silicon doping in anodes and All Solid Batteries leads us to conclude that graphite will remain the dominant anode material for decades to come." (Credit Suisse in April 2022)

- "Needle coke is used as a primary raw material for graphite electrodes in an electric furnace. It is a premium grade, high-value petroleum coke used in the manufacturing of graphite electrodes of very low coefficient of thermal expansion (CTE) for the electric arc furnaces in the steel industry. When making the electrodes, it takes up to six months to make with processes, including baking and rebaking to convert the coke into graphite." (Source)
- "Furthermore, needle coke's exceptional features, such as low electric resistance, low coefficient of thermal expansion, and less breakage, are projected to drive needle coke demand during the projection period. However, growing environmental worries about needle coke production are limiting the worldwide needle coke market's growth." (Source)
- "Trends in operation of electric arc steel furnaces require higher quality cokes for graphite electrode manufacture. Coke for this market must be low sulphur, low metal, with good crystallinity and produce electrodes with very good thermal stability and high strength... Only a very small percentage of world coke production can qualify for this market." (Source)

Aukam is one of the most desirable graphite assets in the world.



Gratomic is fairly advanced into the commissioning of its newly constructed processing plant with an initial output capacity of 22,000 t graphite annually.

- The Aukam Plant is being built to become one of the few plants in the world to produce battery-grade graphite material in a truly environmentally conscious manner.
- Aukam's processing only includes 2 phases, the wet circuit followed by the dry circuit.
- On <u>April 21</u>, Gratomic announced the major milestone of producing the first batch of processed graphite from its

Aukam Plant as part of the wet commissioning process and operational readiness that the facility is currently undergoing. This marks the first product produced at the Aukam site since 1974. Gratomic continues to optimize the processing plant through the operational readiness stage and into the full production phase.

Once Aukam is up and running, investors may ask: What's next?

On the one hand, Gratomic over-engineered the front and back end of the circuits to accommodate expansion plans (doubling capacity to 44,000 t graphite annually, making Aukam one of the largest graphite mines outside of China and Brazil).



On the other hand, Gratomic aims to fast-track its Brazil projects at the same time, with the vision to become one of the world's largest high-quality graphite suppliers with global operations. The Capim Grosso Project in Brazil is classified as a vein deposit, where Gratomic initially completed ~10 km of trenching only to find out that graphite mineralization continued beyond. Gratomic envisions Capim Grosso to become its second graphite operation.

Looking into the future, Gratomic intends to attach a component of added-value manufacturing. Gratomic has entered into a cooperative agreement Forge Nano Inc., a leading expert in the field of battery materials. Battery anode materials generally consists of 3 stages of processing: micronization, spheronization and coating. Forge Nano specializes in the final coating stage with its patented Atomic Layer Deposition coating technology, specifically designed to minimize the requirement of coating graphite after the micronized and spheronized process. This technology promises not only massive cost advantage but also optimization for use in battery anodes. Forge Nano has compiled a comprehensive IP portfolio that provides full benefits to its partners and licensees for battery applications. Forge Nano also has a wide selection of forward-thinking partners, ranging from Volkswagen, Air Liquide, and LG Technology Ventures to Mitsui Kinzoku and SBI Investments.

A fairly unique partnership, which not many other graphite producers have, is Gratomic's Memorandum of Understanding (MOU) signed with Millennium Metals Ltd. (TM2) in February 2022 with the intention of being the first to industrialize graphite as a commodity. TM2 is the world's first spot market where direct investment in technology metals is possible. It is quickly becoming the one-stop-shop for electric vehicle (EV) battery manufacturers and OEMs. The metals and minerals available on the TM2 platform are essential to EV batteries, aerospace, semiconductors, and many additional high-tech industries. TM2's innovative approach to commodities has created a global community within the electric vehicle space. Petur

Opportunities

EXISTING MARKETS

Continued need for graphite in its

EV BOOM & GROWING DEMAND

Second largest component in the Li-

Second largest component in the ion Battery:

✓ Graphite is the material with the largest share in weight in Li-ion batteries amounting to up to 70% of the total battery weight, totalling between Skg (hybrid electric vehicles) to 100 kg (hybrid electric vehicles) to 100kg (full electric vehicles) per

Irreplicable and reliable anode

As of today, and for the foreseeable battery. Nearly all applications of Li-ion batteries use coated spherical graphite as the anode material.

ESG & MINING

Estimated Carbon Footprint:

v 0.8 Kg per tonne

Recycling/recovery:

Air Quality:

✓ Estimated little to no impact on Air Quality for surrounding communitie or workers due to contained

Strategic Partnerships

Institutionalization of Graphite



Through its partnership with TM2 Technology Metals trading platform, Gratomic will be the first graphite company in the world to have its graphite traded on the open market as a commodity.

TM2 has developed strategic partnerships with the Nasdag and the London Metals Exchange, providing much needed access to the materials required in the manufacture of clean energy components. Additionally, TM2 has established relationships with 28 Giga factories as the one-stop shop for the technology metals and critical minerals required for the development of electric vehicle batteries.

*Visit https://tm2.com/ & https://www.forgenano.com/ to learn more about our strategic partners!

Product Development

Forge Nano has developed their patented Atomic Laver Deposition (ALD) coating, which creates a higher performing, more economical, and safer solution to traditional carbon coating systems.

ALD is a surface engineering technique that creates angstrom-thick, uniform, pin-hole free coatings. ALD is a thin film application technique that uses a sequential gas phase chemical deposition process.

During this gas phase process, chemicals called precursors are introduced to the substrate to be coated. The chemical reactions caused by the precursors leave behind a oneatom thick coating. Repeating this process can build up multi-layers on nearly any surface



Shareholder Value

- · Pioneering innovative exploration and development
 • Implementation of
- continuous improvement efforts to increase efficiency and streamline processes resulting in extremely competitive

Balance Sheet

- · Strictly enforced cash flow controls Strong focus on
- industry competitive ratios
- · Extremely desirable debt to asset ratio

- · Strategic focus on the discovery and acquisition of desirable graphite assets to expand
- multinational roster Continued development of
- projects/end user relationships Focus on becoming a key player in the green energy

supply chain

Expertise

- · Decades' combined experience in financial, geological, and mining sectors with emphasis on mining exploration & development
- Dedicated ESG strategy as one of the Company's foundational pillars

- Sustainable growth through the tactical backstop of acquired assets that meet strict project criteria
- Focus on acquisition & development of strategic assets which fall within the lowest quartile cost

Gratomic, as a company, is focused on building a sustainable operation in an environmentally friendly" manner, so that we can leave a lasting legacy for future generations.

~ Arno Brand CEO & President

Georgesson, TM2's CEO, commented: "We intend on becoming the landmark market for technology metals globally, with full coverage of the periodic table and full transparency. We want more people to feel empowered by this new and unique opportunity to invest in metals. It's a new level of freedom and democracy both for investors and producers to get access to a direct trading

market without any intermediaries and with the full transparency and accessible information regarding the sustainability requirements demanded by the public."

In a race that started in 2012, Gratomic is one of the very few graphite companies to have successfully brought its asset through to the final construction phase.



AUKAM (NAMIBIA)

The Aukam Property (141,600 hectares, or 1,416 km²) is located in the Karas region of southern Namibia, close to the port city of Lüderitz. In 1909, after the discovery of diamonds nearby, Lüderitz enjoyed a sudden surge of prosperity due to a diamond rush to the area.

- Since gaining independence from South Africa in 1990, the stable political environment in Namibia continues to attract foreign direct investment, while its ports form a natural gateway for international trade. Around 80% of global trade by volume, and over 70% of global trade by value, is seaborne. Some 90% of Africa's imports and exports are conducted by sea. (Source)
- Mining, Namibia's leading economic sector, accounts for roughly 10% of Namibia's GDP every year. (Source)
- Historically, **diamond** mining has been the leading sub-sector of Namibia's mining industry (DeBeers is the primary land-based diamond producer, also handling off-shore diamond mining). (Source)
- Namibia is the world's 4th largest producer of **uranium** oxide. The Husab open-pit is the world's 3rd largest uranium mine, owned by China General Nuclear Power Company, one of China's single largest investments in Africa). The Rossing Uranium Mine (majority owned by China National Uranium Corp.), also situated in the Namibian desert, is the world's 5th largest producer of uranium oxide (the world's largest uranium deposit associated with an igneous rock). (Source)
- Namibia is also a leading producer of **zinc**, with 2 operational mines: Skorpion (operated by Vedanta Resources Ltd.) and Rosh Pinah (owned by various shareholders, with Exxaro Base Metals Pty Ltd. owning the largest interest at 46%). (Source)
- Lodestone Namibia Proprietary Ltd., a mining company with U.S. shareholding, is extracting **iron ore** deposits in eastern Namibia. (Source)



The Aukam Property can be accessed year-round by road from paved Highway B4 between Lüderitz and Keetmanshoop via District Road D446 (gravel) 42 km south from the highway. Aukam is located 199 km (2h 17min by car) from the Port of Lüderitz.





"The Port of Lüderitz serves the mines in the southern regions of Namibia and north-western South Africa with imports and exports of mining commodities. With a new 500 m quay, two recently-acquired 60-tonne Haulers and one 45-tonne Reach Stacker, the port can provide efficient and safe cargo handling facilities for importers and exporters... Commodities are handled in three formats namely containers, bulk and breakbulk at the Namibian Ports. Main commodities handled are: salt, copper, coal, sulphuric acid, wheat, sulphur, petroleum, manganese, ammonium nitrate, vehicles, frozen products (fish, beef & poultry), foodstuffs (rice, maize & sugar) project cargo, charcoal, malt, timber, uranium and mining chemicals." (Source) "Due to the high level of growth, in 2020 NamPort [Port of Lüderitz] completed a new container port facility, which now handles 750,000 TEUs per year. The new port is on reclaimed land, and its harbor was deepened from 12.8 meters to 15 meters." (Source)

- Other large mining operations in Namibia include **copper** (Weatherly International Plc), **fluorspar** (Okorusu owned by Solvay Fluor GmbH), **manganese** (Shaw River Manganese Ltd.), and **gold** (Navachab owned by AngloGold Ashanti Ltd., Otjikoto owned by B2Gold Corp.).
- Namibia is also an up-and-coming source for critical minerals. The country has potential to develop new mining projects for cobalt, lithium and graphite. Lepidico Ltd. is developing a

lithium mine in western Namibia. Desert Lion Energy Inc. began shipping lithium ore to China in 2018, and merged with Lepidico in 2019. (Source)

- Good infrastructure around Aukam: Power line from national grid (~2 km away), large amounts of water available from underground aquifers, rail link adjacent to Highway B4 (~70 km north).
- Little rainfall and dry lands provide a year-round mining-friendly climate.



Established in 2014, Gratomic (formerly CKR Carbon Corp.) acquired the original JV partner of Next Graphite Inc. in 2015 to earn up to 63% interest in the Aukam Graphite Project (earned in 2017). In July 2021, Gratomic acquired the remaining 37% interest and now owns 100% of Aukam with no underlying royalties. Gratomic has been debt-free since February 2021.

- Aukam is the only historical graphite producer in Namibia, producing 22,602 t graphite in 1940-1956 and 1964-1974.
- With Gratomic having explored Aukam for the past 7 years as operator, the company demonstrated significant potential for expansion of graphite mineralization outside the old workings.
- In addition to a small open-pit and 5 underground adits on the property, 5 dumps remain from historical mining. These stockpiles still contain significant graphite material: Assays from 73 composite samples taken from the lower 3 stockpiles averaged 42% Cg.
- In 2015, a 25 t bulk sample from the lower adit was extracted and assays showed a range from 11.39% to 72.14% Cg, averaging 27.66% Cg.
- In 2016, chip channel samples from 3 exposed graphite veins in the underground workings assayed 18.34% Cg over 0.9 m (0.85 m true width; close to the entrance to the adit), 41.98% Cg over 0.84 m (0.83 m true width; at the intersection of the adit with a crosscut) and 56.06% Cg over 1 m (true width unknown; from the wall of a 2.2 m wide stope near the end of the adit).
- Gratomic has since conducted over 2,000 m of exploratory drilling (underground drilling typically varying in length from 3-45 m per hole).
- Gratomic identified graphite mineralization both in the underground workings and over a broad footprint on surface (over 566 m east-west, sub-parallel to the electromagnetic anomaly with a north-south width of up to 190 m). Disseminated graphite at surface is targeted as a pathfinder to vein graphite at depth.











 All of this exploration, along with Gratomic completing 8 months of pilot testing on historically mined product, has led to the awarding of a Mining Licence (ML 215) by Namibia's Ministry of Mines & Energy in May 2020.

• A maiden NI43-101 resource estimate, in addition to a pre-feasibility study, are underway.



- Several bench-scale metallurgical tests have demonstrated that **conventional flotation** is a viable means of concentrating the graphite into an end-product.
- The construction, installation and commissioning of a commercial-scale graphite processing plant (capacity: 20,000 t graphite concentrate per year), has been ongoing since 2018.
- This plant has replaced the pilot plant (commissioned in 2018) which successfully produced 5.5 t graphite concentrate grading 88-96% Cg.
- The state-of-the-art production facility is currently in its commissioning and calibration phase.
- Eco-friendly and sustainable, this custom-built plant is designed for expansion to 44,000 t annually and with the environment in mind. The facility has been tailored for water conservation, boasting an estimated 95% recovery rate during the graphite processing phase.
- In September 2020, Gratomic announced that the company "has designed new and innovative graphite processing procedures that will produce higher quality graphite while minimizing environmental impacts and lowering the carbon footprint created during the processing phase. Calculations conducted internally by our team of industry experts reveals that the production of one tonne of graphite at a percentage of approximately 98% Cg will create a very low carbon footprint of 0.8Kg of carbon emissions, or 16,000 kg per annum... The graphite intended for processing at the Company's Aukam Graphite Project is in a naturally weathered state and contains little deleterious elements mitigating any lasting negative environmental impacts. This information has been verified through numerous analytical results from testing programs. Pilot testing has validated that the majority of the reject material contained minor amounts of clay silica and iron with smaller traces of calcium. The rejects material when analysed did not contain any sulfur or heavy metals which gene-



Gratomic's custom engineered and self-constructed production facility was designed to encompass the highest degree of efficiency and sustainability.



"We continue to serve our shareholders in the best way we can by delivering and executing against our objectives and deliverables... Our hard work has ultimately resulted in one of the most successful upgrades of graphite material to a grade of 99.83% Cg without any acid treatment that management has ever witnessed, these results are astonishing and exceeded our initial expectations." (Arno Brand, Gratomic's CEO and President, in September 2021)

rally pose the greatest environmental threat. The Company utilizes all resources so efficiently and effectively that waste is extremely limited."

• In April 2021, Gratomic announced its plans to take Aukam solar, allowing its processing plant to transition from

traditional fuel generators (diesel) to clean, renewable and sustainable solar power: "Gratomic looks forward to continuing to develop further green initiatives for its processing facility... The combined anticipated electrical draw of the Aukam facility currently sits at approximately half a megawatt



per hour, compared to three to six megawatts per hour at the average graphite processing operation. Due to the naturally high purity levels and high quality of vein graphite available at the site, Gratomic can also avoid processes such as acid leaching and other chemical treatments. The only treatment required can be accomplished through a water treatment system."

• On April 21, 2022, Gratomic announced to have "achieved its first PRODUCT IN BAG (PIB) milestone by generating one metric ton of material that was produced and transferred to inventory. This material will be sent to SGS Lakefield for product development in the fulfillment of the Company's obligation to modify the product to suit the needs of the end users. This is an important step that is required in the product development process, on which the Company's product line is based. The product lineup will include SG16, which is targeted for anode material development and spheronization, M97, which is highly refined but not spheronized, and C99 and +895, which are less targeted for specific applications. The grade that was produced would be suitable for applications in the markets of refractories, powder metallurgy, lubricants and friction elements, and with additional micronizing and spheronizing the material will be able to be used as an anode material in li-ion batteries. As the plant moves towards the end of operational readiness, more types of products of different specifications will be generated including higher value-added applications such as battery anode, until the plant becomes fully operational. Samples will be sent for independent laboratories to confirm the product grade obtained onsite at Aukam. The finished product was produced from historical stockpiles at the site, and during the execution, all components of the processing plant were set to work, confirming the concepts idealized by the Company's Engineering team and the functionality of the different types of equipment. Gratomic will continue to optimize the processing plant through the operational readiness stage and into the full production phase."



Stockpiles of historically mined graphite material remain on the Aukam Property, planned to be processed with the new plant once operational. Aukam is a high-grade vein-type (also called lump-type) graphite deposit with a medium to large flake distribution. Mineralization occurs as massive lenses and veins, and more rarely as minor disseminated patches hosted by variably altered granite of the Namaqualand Metamorphic Complex.





Above: Gratomic's Aukam team proudly showing first official product in bag achievement as per April 21 news-release.

Left: Graphitic material flowing out of the launder from Gratomic's self-designed flotation columns during processing. Picture from April 21 news-release.



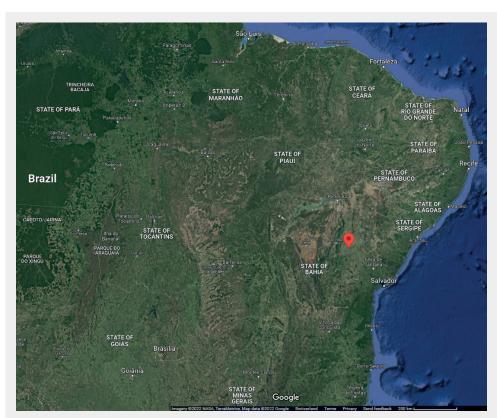
CAPIM GROSSO (BRAZIL)

In November 2021, Gratomic announced signing a Definitive Agreement to acquire 100% interest in the Capim Grosso Property (426 hectares, subject to a 3% NSR granted to the vendor) located in the Brazilian state of Bahia.

In its news-release, Gratomic stated: "Acquiring the Brazilian graphite project provides Gratomic the opportunity to diversify the Company's interests and develop the graphite deposit at the Capim Grosso project. This strategically positions the Company to better meet growing demand for high quality graphite and provides a significant competitive advantage by limiting risk through business development in several key mining friendly jurisdictions."

Gratomic's COO & Head of Graphite Marketing & Sales, Armando Farhate, added: "It was with immense pleasure that I had the opportunity to help bring Gratomic to my home country, a mining friendly jurisdiction and already among the largest graphite producers in the world. This will help to propel both Gratomic and Brazil towards the top of the list in the global graphite community."

- Prior to the acquisition, Gratomic completed a grab sampling program in July 2021, with grades of the 14 samples ranging between 3.87% and 21.22% TGC (Total Graphitic Carbon) and averaging 11% TGC. Upon receipt of the grab sample assays, Gratomic completed 2 trenching programs in August and October 2021, with grades as high as 41% TGC and averaging 14.82% TGC. The 42 trenches varied in length from 30-145 m and in depth from 1-6 m. These trenches were excavated in areas where grab sample results were positive, or where surface graphite was observed. 31 of the 42 trenches intersected graphite mineralization and an extent of 4 km of mineralized strike length has been confirmed. The aim of these trenching programs was to thoroughly define drill targets.
- On February 7, Gratomic announced results of initial metallurgical tests on the first samples obtained from the trenching programs: "A combined con-



The Capim Grosso Property is located near the municipality of Capim Grosso (2020-population: 30,862), approximately 280 km from the port of Salvador (Bahia's capital and Brazil's 4th largest city; 2020-population: 2.9 million) and 166 km from Feira de Santana, Bahia's 2nd largest city (2020-population: 619,609). With an estimated 2020-population of 15 million, Bahia is the 4th largest Brazilian state (5th largest by area).



Core from Gratomic's maiden drill program at Capim Grosso, showing high-grade graphite.

centrate grade of 97.5% C(t) was achieved in one test with total carbon grades reaching as high as 98.6% in several particle-size fractions. The open circuit graphite recovery was 70.1%, approximately 20% of the graphite losses were associated with intermediated streams and most of these graphite units will report to

the final concentrate during closed circuit operation. Optimization of rougher, and primary cleaning conditions are expected to reduce graphite losses to those tailings' streams. Based on the flotation results obtained to-date and experience with comparable graphite projects, a combined concentrate grade of 97% C(t)



with a closed-circuit graphite recovery of 85-90% is projected. Further testing on additional samples and process optimization will be conducted to confirm these projections. The metallurgical results obtained to-date are encouraging to support the plan for large scale processing of the Capim Grosso deposit."

Armando Farhate stated in the news: "Since our first contact with the Capim Grosso asset, we were convinced that it could become a word class deposit. These results raise our level of confidence and will allow us to fast track the engineering process, and subsequently, plant construction." Arno Brand added: "Gratomic intends to develop its Capim Grosso project at a similar pace as it developed its Aukam Graphite Project in Namibia. With these newly obtained metallurgical results, the Company has the confidence to expedite the bulk metallurgical and pilot testing processes at Capim Grosso."

- In late November 2021, Gratomic started a 5,000 m drilling program and added a 2nd drill rig in February 2022 to accelerate the program.
- Once the drilling is complete and all holes are assayed, Gratomic intends to process the obtained data in order to generate a Maiden Mineral Resource Estimate in accordance with the requirements of National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") for the Capim Grosso asset, which will be combined with pilot metallurgical testing data and other relevant information in order to generate a Feasibility Study (FS) and fast track the project development.
- On <u>February 14</u>, Gratomic disclosed a preliminary (simplified) **Process Flow Diagram (PFD)** for the project.
- On May 2, Gratomic announced that 1,734.30 m of the 5,000-meter drill program was completed with 15 holes, reporting assays for the first 8 holes (see table to the right) as well as assays from the 42 trenches completed to date. On May 9, Gratomic announced the 2nd batch of drill assays (holes 9-11; see table to the right), thus far completing a total of 2,047.5 m.



Outcropping graphite mineralization at Gratomic's Capim Grosso Property.

DH_Hole	DH_From (m)	DH_To (m)	Length (m)	Total Graphitic Carbon (TGC) (%)
CGD001	20.74	31.90	11.16	13.13
	37.37	38.55	1.18	10.11
	39.60	40.47	0.87	3.33
	40.84	41.32	0.48	3.08
CGD002	114.35	114.45	0.10	5.92
	130.25	130.69	0.44	8.42
CGD003	71.93	73.53	1.60	6.72
	74.80	75.40	0.60	8.24
	79.85	81.83	1.98	3.21
CGD004	26.26	27.45	1.19	3.11
	63.95	65.01	1.06	3.76
CGD005	38.07	38.64	0.57	13.54
	40.00	41.58	1.58	11.13
	47.23	48.65	1.42	8.56
	79.24	79.56	0.32	9.13
CGD006	67.60	69.35	1.75	3.47
	72.55	73.38	0.83	3.91
	77.23	81.11	3.88	7.41
CGD007	16.40	17.76	1.36	3.84
	23.25	24.70	1.45	10.89
	50.25	56.25	6.00	3.95
	56.80	58.68	1.88	5.41
	64.98	65.91	0.93	6.13
	91.40	92.70	1.30	3.54
CGD008	6.20	16.05	9.85	5.00
	16.55	18.55	2.00	3.50

DH_Hole	DH_From (m)	DH_To	Length (m)	Total Graphitic Carbon (TGC) (%)
CDG009	68.50	71.16	2.66	9.12
	71.25	71.75	0.50	5.34
	105.71	111.08	5.37	5.29
CGD010	3.45	4.05	0.60	3.88
	91.65	94.75	3.10	4.83
	48.20	49.14	0.94	8.63
	91.65	94.75	3.10	4.83
	95.75	96.75	1.00	4.45
	97.65	99.85	2.20	8.88
CDG011	85.16	92.05	6.89	12.02
	136.75	137.75	1.00	15.17

The tables highlight intervals from the first 11 drill holes on the Capim Grosso Project in Brazil (1% TGC cut-off grade and 3% minimum TGC grade used). Internal QA/QC was performed by Gratomic inserting a Certified Reference Material (CRM) every 20 samples, (OREAS 725) which assayed within 97% of the expected graphitic carbon value of the CRM. The QP therefore accepts the values of the laboratory assays. The intervals are regarded as true width (or as close as possible to) due to the dip of drillholes being perpendicular on measured dip of geology. SGS Geosol's graphitic carbon assay methods and equipment include the LECO carbon-sulphur analyzer and high temperature combustion infrared detection. During this procedure, the carbon in the sample is converted to carbon dioxide CO2, which is then measured by infrared (IR) detectors.



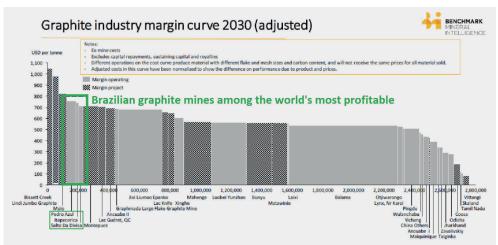
• On April 12, Gratomic announced to have entered into a Definitive Agreement for the acquisition (100%) of the **Jacobina and Igrapiuna Properties** (2,782 hectares) near the Capim Grosso Property. On May 4, as part of its due diligence review, Gratomic announced the start of a trenching program at the Jacobina Project with the following assays:

TRENCH #	FROM (m)	TO (m)	INTERVAL (m)	TGC (%)
JAT001	1	10	9	4.39
	10	13	3	4.87
	13	16	3	4.18
	16	19	3	5.23
	24	30	6	6.23
	49	52	3	7.15
	52	55	3	7.49
	55	59	4	5.59
	61	71	10	9.79
	71	78	7	6.26
	89	95	6	5.31
	104	107	3	7.36
	107	110	3	5.05
	110	115	5	2.87
	115	116	1	5.65
	116	120	4	4.36

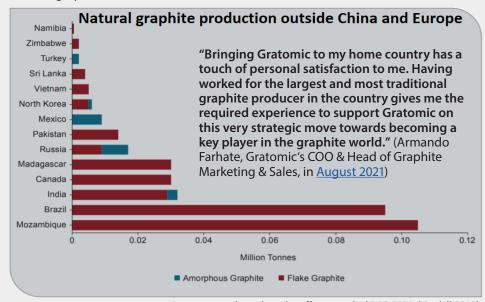
Gratomic noted: "The Jacobina property sits approximately 30km from the Capim Grosso property, and once fully developed, will likely be utilized as an additional material source for the processing plant intended to be built at Capim Grosso."

Brazil: The Graphite Giant

- Bahia is turning into a mining investment destination, offering a broad range of minerals and expected to attract \$11 billion USD to be invested in mining operations by 2025. (Source)
- The state of Bahia is ranked 4th in mineral production in Brazil (2018), distinct for its wide variety of ores. It spans 535 producers, situated across 221 different municipalities, and producing more than 2 million combined tons between 52 different ores on average per year. (Source)
- With more than 80 years of continuous high-quality graphite mining and a production of 63,600 t in 2020, Brazil is the world's **2nd largest graphite producer** after China (762,000 t), according to USGS.
- Brazil is by far the largest graphite pro-



The 3 Brazilian graphite mines Pedro Azul, Itapecerica and Salta da Divisa are owned and operated by private company <u>Nacional de Grafite</u>, producing about 70,000 t graphite of different characteristics.



Source: www.deutsche-rohstoffagentur.de / BGR 2020 / Roskill 2019)

ducer in the Americas (Canada: 8,000 t, Mexico: 3,300 t). With **70** million t graphite reserves (22% of global reserves), Brazil is on par with China (73 million t).

- Russia (25,000 t) and Ukraine (16,000 t) made up 4% of global supply (or 20% excluding China) in 2020.
- Brazil has a large domestic demand for natural graphite (estimated at 75,000 t annually or ~7% of global demand) within its high-tech battery industry as well as steelmaking, foundries, lubricants, electronics and automotive industries.

Brazil: The world's 2nd largest graphite producer

	Mine p	Reserves ³	
	2020	2021°	
United States	_	_	(4)
Austria	500	500	(4)
Brazil	63,600	68,000	70,000,000
Canada	8,000	8,600	(4)
China	762,000	820,000	73,000,000
Germany	300	300	(4)
India	6,000	6,500	8,000,000
Korea, North	8,100	8,700	2,000,000
Madagascar	20,900	22,000	26,000,000
Mexico	3,300	3,500	3,100,000
Mozambique	28,000	30,000	25,000,000
Norway	12,000	13,000	600,000
Russia	25,000	27,000	(4)
Sri Lanka	4,000	4,300	1,500,000
Tanzania	_	150	18,000,000
Turkey	2,500	2,700	90,000,000
Ukraine	16,000	17,000	(4)
Uzbekistan	100	110	7,600,000
Vietnam	5,000	5,400	(4)
World total (rounded)	966,000	1,000,000	320,000,000

eEstimated. — Zero.

¹Defined as imports – exports.

²See Appendix B for definitions.

³See Appendix C for resource and reserve definitions and information concerning data sources.

Included with "World total." Source: US Geological Survey (2022)

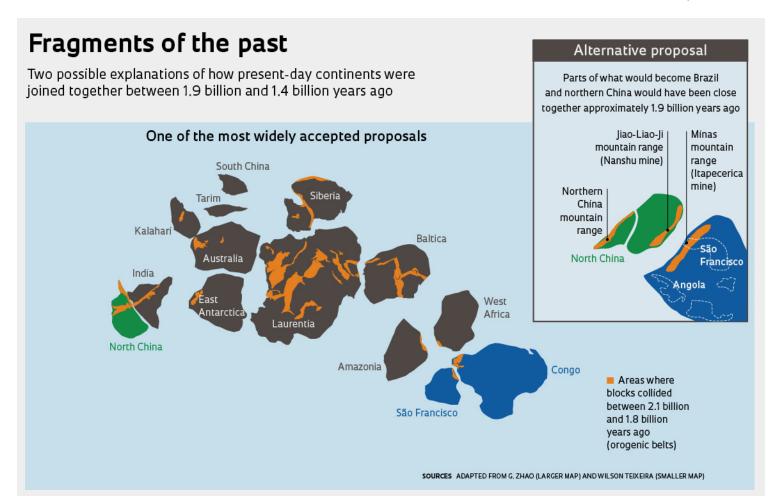


- Brazil offers a qualified workforce with competitive salaries whereas numerous universities are specialized in geology, exploration, mining and engineering.
- Brazil is seen as a blossoming field of opportunities for investors in the mining industry as the 5th largest population in the world and a major food (ranked 1st) and oil producer (14th) ranking among the world top-10 producers for steel, iron, coffee, cotton, meat, phosphate, graphite, fertilisers, cement, and ceramic tiles. Firstly, because it is relatively politically and economically stable, and secondly owing to its diversity of resources, products and markets. (Source)
- Brazil is the world's 2nd largest flake graphite mining district (14% of global production in 2018): The São Francisco Craton (SFC), where Capim Grosso is located on trend with graphite mines from Nacional de Grafite having the world's highest average sales price due to high-quality grades of its graphite products. The SCF orogenic belt is world-renowned for its graphite deposits with excellent infrastructure in place for exploration, mining and processing.
- China and Brazil may once have been neighbors: "Graphite-rich rocks suggest that areas of both countries, as well as Africa, were joined together nearly 2 billion years ago... Teixeira

believes that if what is now part of South America really was a close neighbor of present-day northern China 1.9 billion years ago, then areas of what would later become Africa were almost certainly present in the region too. In recent decades, growing evidence has suggested that Minas Gerais and Bahia were once united with the African continent, forming a geologically stable structure called the São Francisco-Congo craton... Brazil is home to 27% of the world's graphite reserves, and China to 56%." (Source)

"Capim Grosso and Aukam could be twins on different continents."

(Arno Brand, Gratomic's CEO and President, in <u>February 2022</u>)



"In the Precambrian Research article, Teixeira and a team of geologists propose that in the distant past, parts of the states of Minas Gerais and Bahia in Brazil and the Congo region of western Africa could have been connected with northern China as part of the Columbia supercontinent... The Brazilian and Chinese graphite deposits were formed approximately 2 billion years ago during the Proterozoic geological era, when advanced single-cell organisms were emerging. Detailed in an article published in Precambrian Research in May, the age of the graphite and the characteristics of the rock in which it is embedded led the researchers to propose that the Itapecerica and Jiao-Liao-Ji regions, now separated by almost 17,000 kilometers, were once neighbors in the distant past, when together they formed part of one of Earth's ancient supercontinents, known as Columbia." (Source)



BUCKINGHAM (CANADA)

Gratomic owns 100% of the Buckingham Property (480 hectares, subject to a 3% NSR granted to the vendor), located 7 km northwest of the town Buckingham (2016-population: 16,685) in southwestern Quebec, and 22 km northeast of Canada's capital Ottawa (2016-population: 934,243) in Ontario.

According to Gratomic: "An electromagnetic conductor, identified during an airborne survey in 2016, is coincident with the Case Zone. The conductor stretches over 1.54 kilometres in a northeastsouthwest direction and suggests that the Case Zone may be up to 600 metres longer than previously thought. Follow up trenching of the conductor along the Case Zone identified graphite mineralization in paragneiss and marble. Highlights of the trench sampling include 8.33% Cg (Carbon as graphite) over 11.3 metres, 2.76% Cg over 15 metres, 2.23% Cg over 27 metres and 1.52% Cg over 65.5 metres."

Subsequent drilling in 2018 showed up to 16.64% Cg over 18 m, including 6.88% Cg over 62 m (starting at a depth of 57 m; Hole CK18-07; Widths are not necessarily true widths as there is currently insufficient information to calculate true widths).

Excerpts from Buckingham's <u>Technical</u> Report (2018):

"The region of Buckingham is well known for its small-scale graphite exploitations that occurred between 1860-1920. Less than 700 m away from the east limit of the property, flaky type graphite was extracted from an adit, identified as the Walker Mine. Graphite was treated in a mill whose foundations are still present along the Devine Road. In addition, about 100 tons of vein type graphite is reported to have been extracted from 15 distinct veins (Obalski 1889), as shown by the presence of historic pits distributed southwest of the adit. Four of these historic were found in the southeast portion of the Property with small rock piles containing lump graphite next to them. Limited work was carried out on the Buckingham property



High-grade vein graphite in drill core from Buckingham. (Source)



Large flakes of graphite in drill core from Buckingham. (Source)

prior to [Gratomic] optioning the property in 2013."

"Graphite at the Buckingham project occurs as both vein and disseminated styles of mineralization. Disseminated flake type graphite is more widespread and occurs throughout the paragneiss and marblesequence comprising the Case Zone. Significant mineralized intercepts, however, are consistently associated with the presence of marble units... Mafic, calc-silicate rocks are mostly high-grade intervals (15-25% Cg). This unit is generally a few meters wide and is commonly found at the contact between the marble and the adjacent paragneiss. This type of graphite deposit shares some similarities with the Hartwell deposit, some 40 km to the east (Simandl 2015)."



Graphite mineralization in a 0.5 m pit on a strong beep mat anomaly at Buckingham (Robillard, 2013; <u>Source</u>)



MANAGEMENT & DIRECTORS

Arno Brand (CEO & President)



Arno is a Namibian entrepreneur with 14 years of experience working on major construction and mining projects in

Africa. He is an experienced commodity trader/broker with over a billion dollars in trades. Arno has been involved in numerous public transactions and company financings worth more than \$200 million. He has negotiated uranium off-take agreements on behalf of Soupamine with utilities providers around the world. Arno has generated over \$500 million for shareholders in taking private companies public and has held various important roles in several companies over his career, including CEO, COO, Director, and Project Manager.

Rodger Roden (CFO)



Rodger (CPA CA) has more than 30 years of industry experience and has worked as Vice President of Finance and CFO with public and

private companies in a broad range of industries including the mineral sector. His experience includes all aspects of corporate finance, mergers and acquisitions, IT implementations, tax, business systems and process analyses including implementation.

Bill Johnstone (Legal Counsel & Corporate Secretary)



Bill has been a partner at Gardiner Roberts LLP since 2005 practicing in the fields of securities and corporate

law. He acts as Practice Leader of the firm's Securities Law Group. Bill has been practicing law for over 30 years. He is also a director and/or officer of other TSX.V and CSE listed companies.

Armando Farhate (COO & Head of Graphite Marketing & Sales)



Armando's prior experience in the planning, engineering, research and development, processing, project management,

sales, and marketing areas of the graphite mining industry make him the ideal COO and Head of Graphite Marketing & Sales. In past projects, he was responsible for quality management, environmental management, and implementing strategic and tactical planning. Armando oversees the completion of the processing plant at the Aukam Graphite Mine, as well as regular operations at the site. He also coordinates important decisions regarding processing. His knowledge and expertise is fostering numerous opportunities for Gratomic, not only through Armando's experience but through his network within the graphite industry as well.

Fernando Luís Pereira Calha (Director of Graphite Sales & Business Development)



Fernando is experienced in strategic operations and business development in the field of technical solutions, with a focus on

measurable and sustainable results. He is also experienced in complex contract negotiations, strategic marketing, business units management and has extensive knowledge of mining and commissioning projects. Given his MBA in Business Management, a Masters in Occupational Health, Safety and Hygiene, a Diploma in Mechanical and Production Engineering and Bachelors degree in Mechanical Engineering coupled with his extensive working background, Fernando is more than equipped to represent Gratomic as Head of Graphite Sales & Business Development. With substantial expertise in international markets, extensive experience leading business start-ups and establishment of new product lines complimented by his vast experience in strategic marketing and "go-to-market" planning, Gratomic believes Fernando to be well-suited to his position with the company.

Glenda Green (Communications & Marketing)



Glenda has a background in marketing, entrepreneurship, management, team development, sales coaching, and training.

She is experienced in social media marketing, website management, and custom content creation. Glenda has experience in a managerial role with BMO and in Communications & Marketing roles in the Oil & Gas industry as well as the junior mining sector. Glenda possesses a bachelor degree in Business Administration from Mount Royal University.

Karl Trudeau (Director & Head of Namibian Operations)



Based in the province of Québec, Karl possesses unique experience achieved through the operation of natural graphite facilities. For 6

years, he was Plant Director at Imerys Graphite et Carbonne (formerly Timcal) in Lac-Des-Îles, Quebec (Imerys is the largest graphite producer in North America). His next role was with Nouveau Monde Graphite, where he became the COO. Additional experience in the mining industry includes the exploration and mining of various types of minerals. Karl previously held the position of Vice President at Minera Planet in Mexico and was directly responsible for the implementation of a greenfield project. He has a degree in Industrial Management, supplemented with over 20 years of professional experience in various roles within the mining industry.

Bruno Baillavoine (Director)



Bruno currently works with Pericles Group in the UK in several key positions. He is an Independent Director for Cel-

Sci, a leading cancer treatment research center. Bruno is also a shareholder



and ex-chairman with CleanBay Inc., a company responsible for the development process from project to long-term operation of electricity, nutrient recovery and production of fertilizer plants in the US. Bruno is an Entrepreneurial Manager, Strategist, Innovator and Business builder, with a record of creating substantial sustained growth and strong profitability in a broad range of businesses. He is an experienced CEO, Chairman, and Independent Director with successful experience ranging from small companies to large multinationals.

Daniel Baard (Director)



Daniel is an operationally oriented finance executive with extensive experience in logistics, contract mining, finance, administ-

ration, and public company accounting in diverse industries. He is a strategic leader with proven ability to streamline operations, impact business growth and enhance profitability through achievements in finance management, cost and internal controls, productivity, and efficiency improvements. Daniel is a CPA (Canada) and ACCA (Fellow, UK) who brings business, financial and analytical acumen to resolve complex problems creatively. He has most recently served as the Chief Investment Officer for the Dukathole Group from 2018 to 2021. He has wide-ranging experience as a CEO, COO and CFO, spanning several impressive projects including Loubster Bulk Services and Southern Seas Advisory Group. Daniel is a well-experienced executive with invaluable insight into the essential operations of Gratomic.

Steven Gray (Qualified Person; QP)



Steven is a professional geologist registered with the Association of Professional Geoscientists of Ontario. With more than 28

years of experience, he maneuvers effectively within the resource sector. He is Director and Managing Partner

for a private mining company operating in Arizona, Director for a publicly traded Canadian-based venture capital firm, and recently served as Vice President for a publicly traded resource company. Steven provides consulting services related to underground and open-pit mine planning, scoping and feasibility studies in Canada and abroad.

ADVISORS

Dr. Roger Moss (Advisor)



Roger is a professional geologist with 20 years of international experience in copper and gold exploration. He

was instrumental in the discovery of the multi-million ounce Navachab Gold Deposit in Namibia. He has 16 years of experience in senior management roles with junior mining companies and is an adjunct Professor in the Lassonde Mineral Engineering Program.

NAMIBIAN TEAM

Lynne Brand (HR & General Manager)



Lynne has been a dedicated contributor and supporter of the Aukam Graphite Mine since the beginning. She has persevered through the

toughest times experienced in a start-up company. She has sacrificed selflessly. Without Lynne, the Aukam Mine would not be what it is today. Her unwavering dedication, work ethics, selflessness, and loyalty are the foundation upon which Gratomic has flourished. She commented: "As one of the first Gratomic team members with feet on the ground, nothing would give me greater satisfaction than to see my dream of the Aukam Graphite Mine realized. I truly believe in this project and have faith that the current leadership team can take us there."

Sir-King Frans Indongo Jr. (Country Manager)



Sir-King Frans is a Namibian entrepreneur who has over 10 years of experience in both Namibian national and international business, Nami-

bian mining and oil & gas, and enjoys business relationships with many major national and international corporations within Namibia, South African Development Community and the International Community as a whole. His focus has been on developing relationships with governments, empowerment groups and community stakeholders, with the goal of creating long-term sustainable economic and social growth.

Natasha Kintscher (Financial Controller)



Natasha has been an accountant since 2006 for 4 companies and has been with the Gratomic team since 2017. She works hard to

ensure that all daily financial operations for the Aukam Mine are strictly monitored and accounted for. Her dedication and industriousness are a definite asset to Gratomic. She commented: "I believe that going forward with all the changes in management and the implementation of policies, especially more transparency and the new marketing strategy, this project will be successful, as investors will now have better insight into Gratomic."

Nico Sholtz (Head Geologist)



Nico is a SACNASP registered professional geologist and Qualified Person (QP) with more than 15 years experience in mineral

exploration globally. He has worked in multiple commodities for various TSX, ASX and AIM listed companies. Being proficient in mineral exploration fieldwork, drill rig supervision, the use and



recommendation of various geophysical and geochemical mineral exploration techniques, he is not only highly experienced, but also passionate and motivated to work with teams in the bush and in the boardroom.

Stephen Woodhead (SVP Finance)



Stephen is a graduate of the University of Cape Town and a member of the South African Institute of Chartered Accountants. He has over 25 years experience, having worked for

the South African Department of Finance and Trans Hex Group before relocating to Canada in 1997 as CFO of Trans Hex International. He was CFO of Desert Sun Mining Corp., developer of the Jacobina Gold Mine in Brazil, and was CFO of Crocodile Gold Corp. Stephen also acted as CFO and Vice President of numerous key players in the mining sector and has served as a Director of Apogee Minerals Ltd. and Vaaldiam Mining Inc. Currently, he is Senior Vice President of Finance for Gratomic Inc., Botswana Copper Inc., and One Bullion Ltd.

Andre Bennett (Site Manager)



Antonie Lombard (Safety Manager)



Antonie is an experienced safety manager with over 15 years of experience working in SHREQ (Safety, Health, Risk,

Environmental, Quality and Security). He is qualified in the fields of safety, legal and finance. He has worked with numerous companies within the mining and construction industry, and has previously received the "Safest

Sites" in group accolade while working with B2Gold Corp.'s mining and construction. Antonie has completed all relevant safety certificates and is working through his International Project Management certificate from Stellenbosch University.

Dunja Pritzen (Finance Manager)



Dunja joined Gratomic in August 2021. She has a BCOMPT degree in Financial Accounting, with 10 years of relevant experience in the field.

Dean Esau (HR Administrator)



Dean started at Gratomic in March 2021. Her role as HR Administrator entails both management and administrative responsibilities

within Gratomic. She is the first point of contact of all HR related matters and deals with internal and external parties. Duties include HR planning, job analysis and design, payroll and compensation, administering employment benefits, recruiting and staffing, performance and training, labour relations, organisational development, design, roll-out and enforcing of workplace policies and procedures, maintaining of work culture and monitoring organizational growth.

Jacques Van Der Merwe (Head of Processing)



Jacques is a metallurgist with a Metallurgical Engineering diploma (1984) from Pretoria Technicon. He has more than 35 years experience in process

metallurgy, process engineering and mining industry with exposure to iron and steel, mineral sands, graphite, sillimanite, copper, zinc, lead, salt, magnetite and gold processing. He has previously worked at Iscor Pretoria (South Africa), Richards Bay Minerals (South Africa), Keops Isis (South Africa), Hatch Africa (South Africa), CS Holdings (South Africa), SNC Lavalin (South Africa), Namib Trading (Namibia), Langer Heinrich (Namibia), Moma Sands (Mozambique), Gecko Namibia (Namibia), Tulela Processing Solutions (Namibia), Mimbula Minerals (Zambia).

Danie Mostert (Project Engineer)



Danie has over 36 years of experience working in processing plant projects and construction, as well as 6

years in mining and processing plant maintenance. He is certified as a Mechanical Engineer and spent 7 years studying and qualifying in order to achieve said qualification.

Klippies Kotze (Technical Buyer)



Klippies is responsible for ensuring that the Aukam project site receives all the necessary equipment required for smooth and cont-

inuous operation. He has over 20 years of experience as a Project Engineer on mines throughout Namibia, including diamond and gold projects. He has multiple qualifications and diplomas which serve as the foundation for the work done for Gratomic.

Stephanus Bothma (Senior Electrician)



Stephanus has gained extensive experience in the mining and construction industries over the 20 years as a qualified

Electrician and Cooling Technician. His responsibilities with Gratomic extend to finding and repairing electrical faults, building and installation of electrical panels as well as maintenance of both heavy and light components.

A

Raimund Rentel (Senior Exploration Geologist)



Raimund has completed his Masters of Science degree (Geology) in 2014, with geology modules in Mineralogy, Engineering

Geology, Economic Geology and Field Skills. He was a full-time mineralogy lecturer at the University of Free State and has extensive working knowledge as a geologist. At Gratomic, he is responsible for all exploration functions including the supervision of junior staff, field crews and contractors, as well as a variety of other responsibilities.

Amakreto (Kretto) David (General Foreman)



Milano Hein (Draughtsman)



Neville Cloete (Safety Officer)



BRAZILIAN TEAM

Ib Silva Camara (Head Geologist)



Ib has experience in mineral exploration and environmental geology. He integrated the graphite project of Bahia Mineral Research Company and CBPM,

as well as the Metallogenetic Map of the State of Bahia II, a partnership between CBPM and UFBA University. He worked as a consultant in the exploration of graphite, chrome and gold. His Masters degree was in Mineral Exploration, associated with the Metalogenesis Group of UFBA, with the theme "Occurrences of graphite in the Tanque Novo - Ipirá Complex, Northeast of the São Francisco Craton, Bahia, Brazil: Characterization and Metallogenetic Potential". Ib also has experience in environmental consulting with emphasis on geoprocessing, geologic mapping, water resources and soil investigation, contamination assessment and mining companies licensing.

Antonio Vitor (Regional Manager)



Antonio is an experienced project and sales manager, with history at Petrobras, PwC and Royal Dutch Shell. Since 2014, Antonio has been directly involved in planning and coordinating search

efforts for mineral exploration in Bahia and Goias states in Brazil.



VISION

Gratomic aims to become a key strategic supplier of clean, environmentally friendly and ethically sourced graphite for the Carbon Age.

MISSION

To establish Gratomic as a reliable global graphite producer through innovative thinking, experienced management, a motivated workforce, creating value for stakeholders, and being prepared to quickly adapt and rapidly respond to changing market demand.

VALUES

- Health and safety of people always comes first
- Transparency within the organization and with all stakeholders
- Integrity, teamwork and personal accountability
- Minimum environmental impact
- Out-of-the-box thinking
- Operational excellence





DISCLAIMER AND INFORMATION ON FORWARD LOOKING STATEMENTS

Rockstone Research, Zimtu Capital Corp. ("Zimtu") and Gratomic Inc. ("Gratomic") caution investors that any forward-looking information provided herein is not a guarantee of future results or performance, and that actual results may differ materially from those in forward-looking information as a result of various factors. The reader is referred to Gratomic's public fillings for a more complete discussion of such risk factors and their potential effects which may be accessed through Gratomic's documents filed on SEDAR at www.sedar.com. All statements in this report, other than statements of historical fact, should be considered forward-looking statements. Cautionary Note: "Gratomic wishes to emphasize that no Preliminary Economic Analysis, Preliminary Feasibility Study or Feasibility Study has been completed to support any level of production. In fact, no mineral resources let alone, mineral reserves demonstrating economic viability and support any level of production. In fact, no mineral resources let alone mineral reserves demonstrating economic viability and technical feasibility, have been delineated on the Aukam property. The Company is working towards completing a Preliminary Feasibility Study (PFS) on the Aukam Processing plant. The study, its recommendations, and their subsequent implementation, will provide conclusions and recommendation at a PFS level of comfort relating to the scale up of the existing processing plant to a commercial scale processing facility capable of producing the desired concentrate grades and production rates. Gratomic wishes to emphasize that the supply of graphite is conditional on Gratomic being able to bring the Aukam project into a production phase, and for any graphite being produced to meet certain technical and mineralization requirements. Gratomic continues to move its business towards production and as part of its business plan, expects to file a National Instrument 43-101 Standards of Disclosure for Mineral Projects resource estimate in Q1 2022. Risk Factors: No mineral resources, let alone mineral reserves demonstrating economic viability and technical feasibility, have been delineated on the Aukam Property. The Company is not in a position to demonstrate or disclose any capital and/or reserves demonstrating economic viability and technical feasibility, have been delineated on the Aukam Property. The Company is not in a position to demonstrate or disclose any capital and/or operating costs that may be associated with the processing plant until the PFS is completed. The Company advises that it has not based its production decision on even the existence of mineral resources let alone on a PFS or feasibility study of mineral reserves, demonstrating economic and technical viability, and, as a result, there may be an increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including increased risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. There is no quarantee that production will begin as anticipated or at all or that anticipated production costs will be achieved. Failure to commence production would have a material adverse impact on the Company's ability to generate revenue and cash flow to fund operations. Failure to achieve the anticipated production costs would have a material adverse impact on the Company's cash flow and future profitability. Statements in this report that are forward looking include that there may never be a more pivotal time to take advantage of the investment opportunity offered within the electric vehicle (EV) supply chain; that graphite's supply deficit is expected to more than triple from 10% this year to 32% in 2025; that when investors realize that graphite is the most crucial bottleneck for global adoption of EVs, graphite exploration and mining companies such as Gratomic Inc. are poised to become the "go-to place" for the creation of shareholder value in the EV supply chain; that Gratomic, with Aukam, is uniquely positioned to ascend to one of the world's lowest cost and highest other projects in Brazil; that as Gratomic has been working hard and diligently to turn Aukam into the world's lowest cost and highe become the 'go-to place' for the Creation of shareholder Vallue in the EV supply chain; that Gratomic, with Aukam, is uniquely positioned to ascend to one of the world's lowest cost and highest grade graphite producers while at the same time fast-tracking its other projects in Brazil; that as Gratomic has been working hard and diligently to turn Aukam into the world's largest vein graphite supplier, Capim Grosso in Brazil is being set up to provide significant blue-sky growth opportunities; that arguably the timing couldn't be any better for Gratomic and its shareholders as natural, high-grade graphite sources are in high demand already and well into the future; that to keep up with graphite demand, at least one new large mine is needed every year; that Gratomic's Aukam vein graphite occurs at or near surface, offering a low CA-PEX and OPEX high-grade mining opportunity; that it is expected that lithium-ion batteries will continue to have a mixture of synthetic and natural graphite; that Gratomic is fairly advanced into the commissioning of its newly constructed processing plant with an initial output capacity of 22,000 t graphite annually; that the Aukam Plant is being built to become one of the few plants in the world to produce battery-grade graphite material in a truly environmentally conscious manner; that Gratomic over-engineered the front and back end of the circuits to accommodate expansion plans (doubling capacity to 44,000 t graphite annually, making Aukam one of the largest graphite mines outside of China and Brazil); that Gratomic scapim Grosso to become one of the world's largest high-quality graphite suppliers with global operations; that Gratomic ic envisions Capim Grosso to become one of the world's largest high-quality graphite suppliers with global operations; that Gratomic ic envisions Capim Grosso to become its second graphite operation; that Gratomic intends to attach a component of added-value manufacturing; that a maiden Nil3-101 resource estimate, in addition to a pre-feasibility study, at a similar pace as it developed its Aukam Graphite Project; that Gratomic will become a key player in the graphite world; that Capim Grosso and Aukam could be twins on different continents. Such forward-looking statements are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information. It is important to note that Gratomic's exploration and production results could differ materially from those in such forward-looking statements. Risks that could change or prevent these statements from coming to fruition include that Gratomic may not be able to bring Aukam or any of its other projects into production, and even if it does, the assets may prove to be unworthy of further expenditure; there may not be an economic mineral resource; methods Gratomic thought would be effective may not prove to be in practice or on Gratomic's claims; economic, competitive, governmental, environmental and technological factors may affect Gratomic's operations, markets, products and prices; Gratomic may not have access to or be able to develop any minerals because of cost factors, type of terrain, or availability of equipment and technology; Gratomic may also not raise sufficient funds to carry out its plans; that management members, directors or partners will leave the company; that Gratomic will not fulfill its contractual obligations; there may be no or little geological or mineralization similarities between Gratomic's properties or other properties; that uneconomic mineralization will be encountered with sampling, drilling or mining; that the targeted prospects can not be reached; that exploration programs, such as mapping, sampling or drilling will not be completed, as well as mining and processing; changing costs for exploration, mining, processing and other matters; increased capital costs; interpretations based on current data that may change with more detailed information; potential mining or processing at a similar pace as it developed its Aukam Graphite Project; that veries assumption based on limited test work and by comparison to what are considered analogous deposits may prove with further test work not to be comparable; intended methods and planned procedures may not be feasible because of cost or other reasons; the availability of labour, equipment and markets for the products produced; fluctuating or falling world and local prices for graphite or its products; and even if there are considerable resources and assets on any of the mentioned companies' properties or on those under control of Gratomic, these may not be minable or operational profitably. Stated projects and companies are not necessarily indicative of the potential of Gratomic and its properties and should not be understood or interpreted to mean that similar results will be obtained from Gratomic. Repanies are not necessarily indicative of the potential of Gratomic and its properties and should not be understood or interpreted to mean that similar results will be obtained from Gratomic. Results of stated past producers, active mines, exploration and development projects in the region or globally are not necessarily indicative of the potential of Gratomic's properties and should not be understood or interpreted to mean that similar results will be obtained. Additional risk factors are discussed in the section entitled "Risk Factors" in Gratomic's Management Discussion and Analysis for its recently completed fiscal period, which is available under Gratomic's SEDAR profile. The historical information on the mentioned properties is relevant only as an indication that some mineralization occurs on the properties, and no resources, reserve or estimate is inferred. A qualified person has not done sufficient work to classify the historical information as current mineral resources or mineral reserves. Readers are cautioned that the foregoing list of factors is not exhaustive and are cautioned not to place undue reliance on these forward-looking statements. The writer assumes no responsibility to update or revise such information to reflect new events or circumstances, except as required by law.

DISCLOSURE OF INTEREST AND **ADVISORY CAUTIONS**

ADVISORY CAUTIONS

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Stephan Bogner studied Economics, with specialization in Finance & Asset Management, Production & Operations, and Entrepreneurship & International Law, at the

International School of Management (Dortmund, Germany), the European Business School (London, UK) and the University of Queensland (Brisbane, Australia). Under Prof. Dr. Hans J. Bocker, Stephan completed his diploma thesis ("Gold In A Macroeconomic Context With Special Consideration Of The Price Formation Process") in 2002. A year later, he marketed and translated into German Ferdinand Lips' bestseller "Gold Wars". After working in Dubai's commodity markets for 5 years, he now lives in Switzerland and is the CEO of Elementum International AG specialized in the storage of gold and silver bullion in a high-security vaulting facility within the St. Gotthard Mountain in central Switzerland.

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