

Gratomic Inc.
MANAGEMENT DISCUSSION AND ANALYSIS
(Form 51-102F1)
For the year ended December 31, 2020



This Management Discussion and Analysis is dated February 24, 2021.

Gratomic Inc. (hereafter the “Company” or “Gratomic Inc.”), was incorporated under the Business Corporations Act (Ontario), R.S.O. 1990, on February 27, 2007 and is listed on the TSX Venture Exchange (TSX-V: GRAT). The Company’s corporate office is located at Bay Adelaide Centre - East Tower, 22 Adelaide Street West, Suite 3600, Toronto, Ontario M5H 4E3. The Company is a junior exploration company primarily engaged in the acquisition and exploration of exploration assets located in Canada and Namibia.

The following is the management discussion and analysis (“MD&A”) of the financial condition, changes in financial condition and results of operations of Gratomic Inc. for the year ended December 31, 2020. The MD&A should be read in conjunction with the Company’s interim unaudited condensed consolidated financial statements for the year ended December 31, 2020 (www.sedar.com) which have been prepared using accounting policies consistent with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”).

The Company’s ability to realize the costs it has incurred to date on its properties is dependent upon it being able to identify economically recoverable reserves; to finance their exploration and evaluation costs; to resolve any environmental, regulatory, or other constraints which may hinder the successful development of the reserves; and to attain profitable operations.

The business of mining and exploration for minerals involves a high degree of risk and there can be no assurance that current exploration programs will result in profitable mining operations. The recoverability of the carrying value of exploration and evaluation assets and the Company’s continued existence is dependent upon the preservation of its interest in the underlying properties, the discovery of economically recoverable reserves, the achievement of profitable operations, or the ability of the Company to raise alternative financing, if necessary, or alternatively upon the Company’s ability to dispose of its interests on an advantageous basis. These conditions indicate the existence of material uncertainties which cast significant doubt on the Company’s ability to continue as a going concern. Changes in future conditions could require material write downs of the carrying values.

Although the Company has taken steps to verify title to the properties on which it is conducting exploration and in which it has an interest, in accordance with industry standards for the current stage of exploration of such properties, these procedures do not guarantee the Company’s title. Property title may be subject to government licensing requirements or regulations, unregistered prior agreements, unregistered claims, aboriginal claims, and non-compliance with regulatory, environmental and social requirements.

The consolidated financial statements have been prepared using accounting policies applicable to a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business as they become due. The Company has incurred a loss for the year ended December 31, 2020 of \$3,643,639 and has an accumulated deficit of \$20,542,115. The Company is a junior mining company and is subject to risks and challenges similar to other companies in a comparable stage. These risks include, but are not limited to, dependence on key individuals, investment risks, market risks, and the ability to maintain adequate cash flows, and continuing as a going concern. Cash on hand is currently not adequate to cover expected expenditures for the next 12 months and therefore the Company will be required to secure additional

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funding. These challenges and the continued cumulative operating losses cast significant doubt on the Company's ability to continue as a going concern. These consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts nor to the amounts or classification of liabilities that might be necessary should the Company not be able to continue as a going concern. Such adjustments can be material.

Unless otherwise specified, all dollar amounts herein are expressed in Canadian currency.

Additional information on the Company may be found on SEDAR on www.sedar.com

Forward-Looking Information

In making and providing the forward-looking information included in this MD&A the Company's assumptions may include among other things: (i) assumptions about the price of metals; (ii) that there are no material delays in the optimisation of operations at the exploration and evaluation assets; (iii) assumptions about operating costs and expenditures; (iv) assumptions about future production and recovery; (v) that there is no unanticipated fluctuation in foreign exchange rates; and (vi) that there is no material deterioration in general economic conditions. Although management believes that the assumptions made and the expectations represented by such information are reasonable, there can be no assurance that the forward-looking information will prove to be accurate. By its nature, forward-looking information is based on assumptions and involves known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements, or results, to be materially different from future results, performance or achievements expressed or implied by such forward-looking information. Such risks, uncertainties and other factors include among other things the following: (i) decreases in the price of base metals; (ii) the risk that the Company will continue to have negative operating cash flow; (iii) the risk that additional financing will not be obtained as and when required; (iv) material increases in operating costs; (v) adverse fluctuations in foreign exchange rates; and (vi) environmental risks and changes in environmental legislation.

This MD&A (See "Risks and Uncertainties") contains information on risks, uncertainties and other factors relating to the forward-looking information. Although the Company has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking information, there may be other factors that cause actual results, performances, achievements or events not to be anticipated, estimated or intended. Also, many of the factors are beyond the Company's control. Accordingly, readers should not place undue reliance on forward-looking information. The Company undertakes no obligation to reissue or update forward looking information as a result of new information or events after the date of this MD&A except as may be required by law. All forward-looking information disclosed in this document is qualified by this cautionary statement.

Outlook and Performance Highlights

Outlook

Gratomic Inc. is an advanced materials company focused on mine to market commercialization of graphite products most notably high value graphene based components for a range of mass market products. With its unique Aukam graphite asset the Company is poised to replace a large part of declining production capacity of vein graphite from Sri Lanka

Aukam Graphite Asset

Gratomic currently owns 63% of the historical Aukam graphite mine in Southern Namibia. Aukam graphite has been tested in several high value applications including nano engineered graphenes. The Aukam graphite when converted to graphenes have proven suitable for inks & pastes for the printed electronics industry, super hydrophobic graphene variants for architectural and marine coatings, elastomers for cycle and passenger vehicle tires, and elements for resistive heaters. There is year round road access to the Aukam project from paved Highway B4 that runs between Luderitz and Keetmanshoop via district gravel roads south from the Highway. The infrastructure in the area is good with nearby power from the national grid, water from

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underground aquifers and a rail link to Luderitz and Keetmanshoop adjacent to Highway B4 approximately 70 km north of the project.

In addition to the underground workings on the Aukam property, there are five unprocessed stockpiles that remain from the historical mining. These stockpiles still contain significant graphite with assays of samples taken during detailed sampling on a 10m x 10m grid ranged between 3.98 and 57.07% Cg (carbon as graphite) and averaged 20.04% Cg (see Technical Report on the Aukam Graphite Deposit, Bethanie District, Karas Region, Namibia - September 12, 2016, gratomic.ca). The stockpiles provide the company with a supply of high grade graphite that is ready to be processed.

Performance highlights

During the year ending December 31, 2020 –

- During March, 2020 Gratomic Inc accepted the resignations of Sheldon Inwentash, Gerry Feldman, and Jakson Inwentash, appointed Arno Brand as President and Chief Executive Officer and announced the appointment of Mr. Walter Luke and Alex Helmelt to the Board of Directors.
- May 6, 2020, Gratomic receives confirmation from the Ministry of Mines and Energy of Namibia that the Minister has issued Mining Licence 215 (ML215) for the Company's Aukam Graphite Property in Namibia.
- May 21, 2020, the Company extended delivery schedules against TODAQ's current Purchase Orders for Aukam graphite and continues to work with TODAQ to execute the existing off-take agreement.
- June 11, 2020 the Company completed financings for \$2,250,000 and shares for debt settlements in the amount of \$267,005.
- July 15, 2020, Gratomic appointed Armando Farhate as Chief Operations Officer and Head of Graphite Marketing and Sales.
- July 23, 2020 the Company granted 4,800,000 options to Directors, Officers and Consultants exercisable at \$0.15 per share with a 5 year term to July 23, 2025.
- October 6th, 2020, The Gratomic team completed the excavations intended to contain the concrete foundations that will accommodate the custom designed processing equipment including material thickener, cyclone, material hopper, settling reservoir, and filter press.
- On November 5th, the Company has secured the consultancy services of Karl Trudeau to oversee final assembly, commissioning and operational readiness of its Aukam graphite processing plant in Namibia, Africa.
- December 30th, 2020, Gratomic announces completion of civil construction work and begins final equipment assembly, with metal structures and support frames being supplied by a local vendor.

Exploration and Evaluation Expenditures

Exploration and evaluation expenditures for the year ended December 31, 2020 are summarized as follows:

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Outlays by expenditure category, by project, for the three months ended December 31, 2020 and 2019 are as follows:

	<u>Aukam Namibia project</u>		<u>Montpellier Quebec project</u>		<u>Buckingham Quebec project</u>		<u>Total</u>	
	2020	2019	2020	2019	2020	2019	2020	2019
	\$	\$	\$	\$	\$	\$	\$	\$
Field work, supplies and other	-	2,816	-	-	-	-	-	2,816
	-	2,816	-	-	-	-	-	2,816

Outlays by expenditure category, by project, for the years ended December 31, 2020 and 2019 are as follows:

	<u>Aukam Namibia project</u>		<u>Montpellier Quebec project</u>		<u>Buckingham Quebec project</u>		<u>Total</u>	
	2020	2019	2020	2019	2020	2019	2020	2019
	\$	\$	\$	\$	\$	\$	\$	\$
Drilling	-	1,698	-	-	-	-	-	1,698
Field work, supplies and other	-	246,976	-	-	-	-	-	246,976
Geological and other consulting	85,497	316,293	933	-	7,744	-	94,174	316,293
Travel and accomodation	-	51,082	-	-	-	-	-	51,082
	85,497	616,049	933	-	7,744	-	94,174	616,049

Results of Operations

The following table provides selected financial information for the three months and years ended December 31, 2020 and 2019.

	For the three months ended December 31,		For the years ended December 31,	
	\$	\$	2020	2019
	2020	2019	\$	\$
Operating expenses	(610,651)	(729,882)	(2,461,894)	(3,275,603)
Net loss	(1,302,498)	(729,882)	(3,643,639)	(3,244,288)
Net loss per share	(0.02)	(0.02)	(0.07)	(0.09)
Exploration and evaluation assets	5,713,285	5,619,111	5,713,285	5,619,111
Total assets	9,961,823	8,641,626	9,961,823	8,641,626

Comments on source and use of funds

During the year ended December 31, 2020

1. During the year ended \$3,591,264 was raised as a result of; private placements \$873,188, convertible debenture \$1,500,000, less cash issue costs of \$311,610; warrants exercised \$1,609,044; options exercised \$79,500, asset disposal proceeds of \$18,328, and loss on debenture conversions of \$177,186.
2. Cash used in operating activities amounted to \$1,909,979 comprised of a loss of \$3,643,639 plus non-cash items \$1,777,886, and \$44,226 used in working capital.

The Company has cash of \$1,102,848 at December 31, 2020 and will need to raise additional cash to meet its operating plans over the next 12 months.

Revenues

At this time, the Company has no sales or revenues.

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Expenses

The major expense items for the years ended December 31, 2020 and 2019 are summarized as follows:

	For the three months ended December 31,		For the years ended December 31,	
	\$	\$	\$	\$
	2020	2019	2020	2019
Consulting	(126,262)	216,334	7,029	638,911
Filing fees and permits	10,063	14,966	56,945	47,456
Investor relations	801	9,180	5,526	37,636
Management fees	132,501	111,999	321,739	728,000
Marketing	228,058	53,307	499,431	697,592
Office and other	107,111	363,745	485,394	672,327
Professional fees	152,634	73,408	239,127	183,691
Share-based compensation	-	-	624,000	44,033
Travel, meals and accommodation	22,353	(113,055)	22,353	225,957
	610,650	729,882	2,461,894	3,275,603

Comments on the year ended December 31, 2020:

The lower twelve month expenses of \$2,461,894 (2019 - \$3,275,603) are indicative of minimal operating activities due to covid and plant shut-down, and efforts to contain costs. The lower costs are explained by; reduced consulting fees by \$631,882; reduced management fees by \$406,261 due to there being only one CEO (2019 – there were two); reduced marketing fees by \$188,161; reduced travel meals and accommodation by \$203,604; increased share based compensation \$579,967.

Exploration and Evaluation Assets

The technical content of the mineral property disclosure in this MD&A has been reviewed and approved by Steven Gray, B.Sc., P. Geo, Gratomic's QP and a qualified person as defined by National Instrument 43-101. Except where noted the property disclosure in this MD&A has not been the subject of a National Instrument 43-101 report.

Description of properties:

Aukam Graphite Project, Namibia

The Aukam Graphite project is a property located in Namibia's Karas Region in Africa. The Aukam property is comprised of Exclusive Prospecting Licences EPL 3895, EPL 6710, EPL 7512, EPL 7513, in respect of base and rare metals, industrial minerals, and precious metals. Located in the district of Bethanie, Karas region of southern Namibia, the licence areas total 137,473 hectares, are contiguous and include the farm Aukam104 and Harichab121.

Graphite in the Aukam area is hosted by altered Garub Sequence granite that is exposed in an erosional window in the Nama cover. Graphite mineralization at Aukam occurs as massive lenses and veins, and as disseminated patches mostly associated with strong alteration. It is hosted by an east-west trending shear zone traceable on surface for about 400 metres along with mapping indicating the mineralization may extend for four kilometres.

The rights to explore and develop parts of the property, which are of primary interest, are owned by Gazania Investments Two Hundred and Forty Two (Pty) Ltd ("Gazania"). The Company purchased a 63% interest in Gazania. Under certain terms of the purchase agreements, the Company is required to complete the plant and infrastructure set up (in progress) necessary to process 5,000 tonnes of graphite per year, and obtain government authorization to begin commercial operations (completed); the timeline for these activities is

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referred to herein as the Farm-Out period. Should completion of the plant and infrastructure set up necessary to process 5,000 tonnes of graphite per year extend beyond receipt of the mining license, the vendor will be paid USD\$25,000, per quarter that it is so extended, until the plant and infrastructure set-up are complete. In the event that the necessary plant and infrastructure set up is extended, and the revenue is less than USD\$100,000 per month, the Company will loan the vendor US\$25,000 per quarter. Interest on the loan will be compounded monthly at a rate equal to one-month term LIBOR plus one. Should the Company fail to make any required payments until the Farm-Out period is complete or fail to complete the plant infrastructure 6 months after receipt of the mining license, it will forfeit 2% of its interest for each 30-day delay. Following conclusion of the Farm-Out period the Company will fund all operations to run all plant related activities and expenditures for the first five months. Thereafter, the Company and the vendor will contribute funding proportionate to their respective holdings. The Company has the option to buy an incremental 10% of the vendor's remaining interest for a cash payment of USD\$180,000.

A 2% revenue royalty is payable to the individual who farms the property.

Under Namibian laws royalties are payable in connection with the Aukam Graphite Project as follows:

- a) A 3% revenue royalty is payable the Namibian government.
- b) A 6% net profit incentive, required under the Namibian Economic Empowerment Framework, is payable to employees working on the project.

Montpellier Graphite Property, Quebec

The Montpellier property consists of claims located in the Hartwell Township, Casse Laurentides Region in Quebec. The property hosts graphite mineralization in a zone 15 meters wide, and has been delineated over a strike length of 250 meters by historical drilling and trenching. Graphite occurs disseminated in marble and paragneiss and within veins hosted in pegmatite, diopside skarn, marble and gneiss.

The historical drilling at Montpellier included one drill hole with a weighted average of 10.47% Cg (Carbon as graphite) over 44.97 meters and 12.33% Cg over 21.64 meters. (1984, Ministère de l'Énergie et des Ressources Québec, Report Nos. GM42965, 80p; GM41744, 41p.). Note that estimates of true thickness were not determined in the historical drilling. Two other graphite zones occur 575 meters east of the main zone of mineralization.

During 2016 an airborne electromagnetic and magnetic survey was carried out over the property to determine possible extensions to the graphite mineralization. Results of the survey indicate a single, wide, prospective area defined by electromagnetic conductors and associated magnetic anomalies that appear to be folded into a "C" shape about an east-west trending axis. The strike length of the folded conductors and associated magnetic anomalies is more than 2.2 kilometres.

The vendors have been granted a 2% net smelter royalty ("NSR"). The Company has the right to repurchase a 1% NSR from the vendors for \$1,000,000.

Buckingham Property, Quebec

The 100%-owned Buckingham Graphite Property is located 7 kilometres northwest of the town of Buckingham, Quebec, Canada and 82 km north of Imerys Graphite & Carbon's operating Lac des Iles graphite mine. The property consists of eight claim blocks totaling 480 hectares and is accessed by well maintained bush roads.

The property is located within the Central Metasedimentary Belt of the Grenville Geologic Province. It is underlain by paragneiss and marble, with associated pegmatite, and amphibolite. Graphite occurs disseminated in marble and paragneiss and within veins hosted in pegmatite, diopside skarn, marble and gneiss. Two graphitic zones, the Uncle Zone and the Case Zone have been discovered to date, with both zones showing high grade occurrences of disseminated flake and vein type graphite and yielding assay values as high as 81.1% Cg. Initial crushing and flotation of two samples from the Uncle Zone has achieved purity of up to 99.4% Cg from a single flotation test without process optimization (see news release dated February 17, 2015).

Airborne time domain electromagnetic (TDEM) survey flown over the Buckingham project in 2016 outlined several anomalies. The largest conductor stretches over 1.54 kilometres in a northeast-southwest direction.

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The northeastern portion of this conductor is coincident with graphite mineralization in the Case Zone from which 35 grab samples collected in 2015, yielded values ranging from 1.6% Cg to 28.7% Cg (See news releases dated May 22, 2015 and November 4, 2015). The length of the conductor suggests that the Case Zone may be longer than previously thought.

Trenching during Q4-2016 along the TDEM conductor uncovered zones of graphite mineralization hosted primarily by paragneiss. Highlights of the trench sampling include 8.33% Cg over 11.3 metres, 2.76% Cg over 15 metres, 2.23% Cg over 27 metres and 1.52% Cg over 65.5 metres. Individual samples assayed between 0.02% Cg and 17.3% Cg, with an average of 1.92% Cg for the 158 samples.

In 2017 additional trenching and diamond drilling were executed to follow up on the successful results of the 2016 trenching program. Highlights of the work included trench results of 15.0% Cg over 8.0 metres, and diamond drill results of 7.4% Cg over 12.0 metres, in hole CK17-01, and 6.1% Cg over 88.0 metres beginning at nine metres, included a higher-grade interval of 20.7% Cg over 8.0 metres in hole CK17-02

Summary of Quarterly Results

The following table sets out selected consolidated quarterly information for the last eight quarters.

	December 31 2020 \$	September 30 2020 \$	June 30 2020 \$	March 31 2020 \$
Exploration and evaluation assets	5,713,285	5,651,999	5,641,361	5,630,716
Deficit	20,542,115	19,239,617	18,008,093	17,086,830
Total Assets	9,961,823	9,545,496	10,082,587	8,516,915
Net and Comprehensive Loss	1,302,498	1,231,524	921,263	188,354
Basic and Diluted Loss Per Share	0.02	0.02	0.02	0.01

	December 31 2019 \$	September 30 2019 \$	June 30 2019 \$	March 31 2019 \$
Exploration and evaluation assets	5,619,111	5,616,296	5,486,661	5,274,462
Deficit	16,898,476	16,168,593	15,626,318	14,991,051
Total Assets	8,641,626	8,591,572	8,874,783	9,106,428
Net and Comprehensive Loss	729,882	542,275	635,267	1,336,863
Basic and Diluted Loss Per Share	0.01	0.02	0.02	0.04

Q4 2020

The 2020 Q4 loss of \$1,302,498 (2019 - \$729,882) includes an impairment loss of \$541,470 (2019 - \$Nil), interest expense \$83,391 (2019 - Nil), shareholder indemnification \$150,000 (2019 - Nil) and operating expenses \$610,651 (2019 - \$729,882).

Q3 2020

The 2020 Q3 loss of \$1,231,524 (2019 - \$542,275) includes share based compensation \$624,000 (2019 \$8,492) and interest expense \$99,045 (2019 - Nil).

Q2 2020

The 2019 Q2 loss of \$921,263 (2019 - \$635,267) includes a loss on debt settlement of \$489,509 (2019 - Nil) which is the major reason for the variance in 2020 vs 2019. Operating expenses of \$413,841 (2019 - \$647,764) reflect cost reduction actions taken, and reduced operating activities due to plant shut-down and the impact of covid-19; in addition, during 2019 share based compensation was incurred \$138,150 (2020 - Nil).

Q1 2020

The lower 2020 Q1 expenses of \$188,354 (2019 - \$1,394,331) are indicative of efforts to contain costs. The lower costs are explained by; reduced consulting fees by \$195,515; reduced management fees by \$383,763

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due to bonus in the prior year; reduced marketing fees by \$358,868; reduced share based compensation \$35,541; reduced travel meals and accommodation by \$123,488.

Liquidity

Presently the Company has a working capital of \$437,199 and will need funding to meet its operating plans over the next 12 months.

Future exploration and development programs will depend on the Company's ongoing ability to raise funds. Gratomic Inc. is an exploration stage company and continues to rely on equity offerings and other partnership arrangements to fund its activities. There can be no assurance that funds will be available.

Capital Resources

There were no unusual factors that affected the Company's capital resources during the year ended December 31, 2020 except the private placements and convertible debenture raises noted herein.

Off Balance Sheet Arrangements

The Company is not a party to any off balance sheet arrangements or transactions.

Transactions With Related Parties

The Company has determined that key management consists of the Company's Board of Directors and corporate officers, including the Company's Chief Executive Officer and Chief Financial Officer. The Company paid or accrued the following amounts to key management, and private corporations owned by them:

	For the three months ended		For the years ended	
	December 31,		December 31,	
	2020	2019	2020	2019
	\$	\$	\$	\$
Fees charged to:				
Management fees	229,501	112,000	496,438	728,000
Professional and other expenses	94,531	16,544	188,548	97,511
Exploration and evaluation assets	-	-	-	75,000
Share-based payments	-	-	455,000	-
	324,032	128,544	1,139,986	900,511

During the year ended December 31, 2020, legal fees in the amount of \$188,548 (2019 – \$119,618) were paid or payable to a law firm whose partner is an officer of the Company.

Included in accounts payable and accrued liabilities at December 31, 2020 was \$197,197 (2019 – \$381,622) owing for services to directors, and officers, companies owned by directors and officers, and a law firm whose partner is a director and an officer of the Company.

Events Affecting the Company's Financial Condition

During the year ended December 31, 2020, there were no unusual factors that affected the Company's financial condition.

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Subsequent Events –

The Company entered into an agreement with Next Graphite, Inc. (“NextG”) dated November 12, 2020, and amended January 25, 2021, for the acquisition of NextG’s 37% interest in Gazania 242 Pty Ltd., the Namibian company which holds the licenses on the Aukam property. Upon completion of the acquisition, Gratomic will hold 100% of the rights and interests in the Aukam Mining License (ML215) and exploration License (EPL 3895).

In consideration for the interest, Gratomic will, upon closing of the acquisition, issue a total of 25,758,915 common shares in the capital of Gratomic and a cash payment of \$100,000. The shares will be subject to an 18-month escrow subject to the release of 1/3 of the original balance every 6 months.

Gratomic has also granted the recipients of the shares the right to participate in any future financings of Gratomic at the same price as any other participants on a pro rata basis to their percentage holding in Gratomic at the time of any such fundraise.

On February 22, 2021, the Company announced that the entire convertible debenture issued on June 11, 2020, in the amount of \$1,500,000, had been liquidated. All of the debentures were converted into common shares.

Since December 31, 2020, the Company has issued 31,573,900 common shares in satisfaction of debenture conversions and warrants and options exercised as follows; there have been 18,077,233 warrants exercised; 1,780,000 options exercised; 11,716,667 common shares have been issued in satisfaction of debenture conversions.

Critical Accounting Judgements and Key Sources of Estimation Uncertainty

Critical judgements exercised in applying accounting policies that have the most significant effect on the amounts recognized in the interim unaudited condensed consolidated financial statements are as follows:

i) Determination of functional currency

The Company determines the functional currency through an analysis of several indicators such as expenses and cash flows, financing activities, retention of operating cash flows, and frequency of transactions with the reporting entity.

ii) Capitalization of deferred exploration costs

Minority interest and equity are adjusted to reflect the ownership interest of consolidated subsidiaries in which a minority interest shareholder has a carried interest.

Management is required to assess impairment of intangible exploration and evaluation assets and property and equipment. The triggering events are defined in IFRS 6 and IAS 36 respectively. In making the assessment, management is required to make judgments on the status of each project and the future plans toward finding commercial reserves to which the exploration and evaluation assets and property and equipment relate to.

Management has determined that there were no triggering events present as at December 31, 2020 and 2019, as defined in IFRS 6 and IAS 36, as such, no impairment test was performed.

Critical estimates exercised are as follows:

i) Valuation of share-based compensation

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The Company uses the Black-Scholes Option Pricing Model for valuation of share-based compensation. Option pricing models require the input of subjective assumptions including expected price volatility, interest rates, and forfeiture rate. Changes in the input assumptions can materially affect the fair value estimate and the Company's earnings and equity settled benefits.

ii) Income taxes

In assessing the probability of realizing income tax assets, management makes estimates related to expectations of future taxable income, applicable tax opportunities, expected timing of reversals of existing temporary differences and the likelihood that tax positions taken will be sustained upon examination by applicable tax authorities. In making its assessments, management gives additional weight to positive and negative evidence that can be objectively verified.

iii) Property and equipment

Management reviews the carrying value of long lived assets including plant and equipment and amortizable intangible assets for impairment to determine if the carrying value of an asset may not be recoverable due to changes in the current and expected future use of the asset, external valuations of the asset, and the obsolescence or physical damage to the asset. If such indicators of impairment exist, the asset's recoverable amount is estimated. An impairment loss is recognized if the carrying amount of an asset or its related cash generating unit exceeds its estimated recoverable amount.

iv) Flow-through shares

Canadian Income Tax legislation permits an enterprise to issue securities, referred to as flow-through shares, whereby the investor can claim the tax deductions arising from the renunciation of the related resource expenditures. The Company accounts for flow-through shares whereby any premium paid for the flow through shares in excess of the market value of the shares without flow-through features at the time of issue is credited to flow-through premium liability and included in profit or loss at the same time the qualifying expenditures are made.

v) Valuation of convertible debentures

The Company allocates the total proceeds received from the issuance of convertible debentures, net of issuance costs, to debt and equity. The fair value of the debt is estimated using discounted cash flows using an estimated cost of borrowing. The estimated cost of borrowing represents what the Company may borrow secured debt at without a conversion option. The residual was allocated to equity.

Recent Accounting Pronouncements

Adoption of new standards

IFRS 16 is a new standard effective January 1, 2019, that sets out the principles for recognition, measurement, presentation, and disclosure of leases including guidance for both parties to a contract, the lessee and the lessor. The new standard eliminates the classification of leases as either operating or finance leases as is required by IAS 17 and instead introduces a single lessee accounting model.

The adoption of IFRS 16 resulted in no impact on the opening accumulated deficit at January 1, 2019.

Risk Management

Credit Risk

The Company's credit risk is primarily attributable to amounts receivable. The Company has no significant concentration of credit risk arising from operations. Management believes that the credit risk concentration with respect to the financial instrument included in amounts receivable is remote.

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Liquidity Risk

The Company's main source of liquidity is derived from common stock issuances. As at December 31, 2020, the Company had current assets of \$1,732,126 (December 31, 2019 - \$407,328) to settle current liabilities of \$1,294,927 (December 31, 2019 - \$1,117,355). All of the Company's accounts payable and accrued liabilities have contractual maturities that are subject to normal trade terms.

Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market interest rates. The Company has cash balances and no interest-bearing debt. The Company's current policy is to invest excess cash in investment grade short term deposit certificates issued by its banking institutions. The Company monitors its cash balances and is satisfied with the creditworthiness of its banks. As a result, the Company's exposure to interest rate risk is minimal.

Market Risk

Foreign Currency Risk

The Company's functional and reporting currency is the Canadian dollar and all expenditures are transacted in Canadian dollars. As a result, the Company's exposure to foreign currency risk is minimal.

Price Risk

The Company is exposed to price risk with respect to commodity prices. The Company closely monitors commodity prices to determine the appropriate course of action to be taken by the Company. As the Company's properties are in the exploration stage and to date do not contain any identified mineral resources or reserves, the Company does not hedge against commodity price risk.

Sensitivity Analysis

Based on management's knowledge and experience of the financial markets, the Company believes the following movements are reasonably possible over a twelve-month period:

- (i) The Company receives low interest rates on its cash and cash equivalent balances and, as such, the Company does not have significant interest rate risk.
- (ii) The Company holds balances in foreign currencies that give rise to exposure to foreign exchange risk, however at any point in time the balances are not significant. The Company estimates that a 10% increase or decrease in the foreign currency would give rise to a gain or loss of approximately \$20,000 respectively.

Mining License Update

On May 6, 2020, Gratomic received confirmation from the Ministry of Mines and Energy of Namibia that the Minister has issued Mining Licence 215 (ML215) for the Company's Aukam Graphite Property in Namibia.

We would like to thank the Ministry for their co-operation and hard work to assist Gratomic's progression into a mining company from a junior exploration company.

Operations Update

October 19th, 2020, 100% of Gratomic owned drills were mobilized to execute a strategic diamond drill program targeting areas proximal to known graphite mineralization previously defined by mining, diamond drilling, and surface sampling. The drill program will also incorporate exploratory drilling, testing known structures along strike and optimized targets indicated by recent Geophysical Surveys.

November 9th, 2020, local concrete and brick crews have recently arrived on-site at Aukam. The local contractors have been employed to construct the foundations for the custom designed and constructed water filtration deionization unit, settling reservoir, and product thickener tanks, along with various smaller non-structural components of the processing plant build-out. Gratomic is very pleased to include local, independent builders in the construction of its Aukam Graphite Project. This collaborative effort will allow

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the Company to adhere to its strict timelines, while simultaneously providing opportunities to local businesses and community members. The workers have been commissioned from the nearby town of Aus to complete construction work on various foundations and tanks.

On November 20th, 2020, Gratomic announced that Fanie Barnard arrived to the Aukam Graphite project in Namibia. Mr Barnard was been appointed to complete onsite construction and oversee the concrete work on the Aukam Graphite processing plant which is expected to be completed by the end of this month. Also, a local company, Pro Edge Steel, in Keetmanshoop was commissioned for designing and supplying various structural base plates and steel frames.

With excavation work completed on Aukam, the team has begun installing concrete forms and rebar in preparation for the final construction phase. The structural base plates and hold-down bolts are being carefully positioned into the concrete foundations during the pouring process. Once the concrete has been properly cured, the equipment structures and support frames will be assembled and installed onto the new foundations.

Fanie Barnard, and Gratomic's Aukam team have begun work on the installation of rebar and pouring of concrete on all required foundations.

On December 30th, 2020, Gratomic announces completion of civil construction work and final equipment assembly on its Aukam Processing Plant in Namibia.

Gratomic has engaged the services of 12 additional temporary workers, through the local community of Aus, to relieve the Company's Aukam workers and to allow them time-off during the Holiday Season. This is one of the many additional steps that the team has undertaken to ensure that time constraints are met according to the strict construction timeline.

Final equipment assembly has started on metal structures and support frames, manufactured locally by Pro-Edge Steel. Each piece of equipment is being assembled over its custom designed structure.

Simultaneously, the onsite team is setting up water, slurry, hydraulic, and electrical installation in preparation of the commissioning phase that comes thereafter.

On October 28, 2020, the Company announced that it is in the process of submitting 243 Kg of high purity graphite concentrate obtained from its pilot testing program for characterization for use as anode material in Lithium Ion battery cells. The graphite will initially be put through an Air Classification process in Toronto, Ontario and from there will be sent to Dorfner Anzaplan in Germany to undergo spherical micronization and classification. This verification process should establish Gratomic as a leader among its peers in proving that its graphite will be suitable for the anode material supply chain for North American battery manufacturers like Tesla, Panasonic, and others.

On December 22nd 2020, Gratomic uploaded its updated December 2020 corporate presentation to its website. The updated Presentation outlines the new strategic focus of the Company on the electric vehicle battery market and an emphasis on the near negligible environmental impact of its processing facility, which is currently nearing its commissioning phase. The Presentation also outlines information on the EV battery market, which gives investors a much more well-rounded understanding of the Company's new strategic plan. Gratomic's previous focus had been applications of graphenes for use in a variety of different products including tires. This has now become a secondary focus, along with the exploration and development of assets outside of its core Aukam Graphite Project.

The Company announced the filing of a Technical Report on its Buckingham Graphite Project on December 22, 2020 and intends to pursue the further exploration of this valuable property. Information on the Buckingham Graphite Project is included in the Presentation. The Presentation also provides current information about the status of the Company's processing plant at its Aukam Graphite property in Namibia.

On December 31st, 2020, Gratomic applied to trade its graphite product M97 on a technology metals trading

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platform that will provide global institutional liquidity in a number of US proclaimed critical metals products including graphite. Product M97 is a grade of graphite that Gratomic is developing and testing as a suitable product for battery grade graphite. The metals exchange, which must remain unnamed until its own launch in the first quarter of 2021, has impeccable corporate governance, and regulatory credentials. The metals exchange is headquartered in the UK and boasts strategic support from a leading globally known securities trading platform. That company provides full security to the underlying stock, in the manner of other international commodities exchanges.

Gratomic has been developing Product M97 from Graphite process in its pilot plant at its Aukam Property and its analysis to date indicates that the grade of graphite can be obtained once its Aukam processing plant is operating. Product M97 will not be listed for trading until the metals exchange is satisfied with the specifications of the product, has accepted Product M97 for trading and sufficient quantities of the product are available for trading.

Engineering Update

The final layout for the processing plant has been completed. The plant was designed in a east-north-east direction 220m linear distance from the main adit.

The grinding circuit equipment;

Jaw crusher – to reduce the material size for the horizontal impact crusher. Completed
8m conveyer – Transport material to the horizontal impact crusher. Completed
Horizontal Impact crusher – reduce material size to below 2.2mm for the mill. Completed
8m conveyer – transport crushed material to the vibrating screen. Completed
3 Layer vibrating screen – split the material in under and oversize. Completed
2× 12m Conveyers transporting the oversize material to the horizontal impact crusher. Completed
3m conveyer – transport the undersize material to storage.
87ton capacity material storage – catchment area for the undersize material
6.6m screw conveyer - to transport material from storage to the rod mill
Rod mill – grind the material to optimal flotation size. Completed
3× Cyclone – sorts the mill discharge in under and oversize, under size will be transported to the thickner and oversize reground in the mill.

The flotation circuit;

9m Thickner – the undersize material from the cyclone will settle in the thickner before entering the flotation circuit.
3× mixing tanks – one for each flotation step, each including its own chemicals dosing system
2× rougher columns 6475mm high × Ø1377 – initial flotation
2× cleaner columns 6475mm high × Ø1377 – final flotation
2× scavenger columns 6475mm high × Ø1377 – recover graphite missed by the rougher and cleaner columns.
6m thickner – the cleaner columns feed into the thickner for the final concentrate to settle.

The drying circuit;

Filter press – the 6m thickner feeds the filter press to remove 90-95% of the liquids from the concentrate.
Chipper – the filter press produces a 1000 × 1000 graphite concentrate cake. The chipper breaks the cake for efficient drying.
Rotating dryer – Dries the final product to less than 0.5% moisture content.

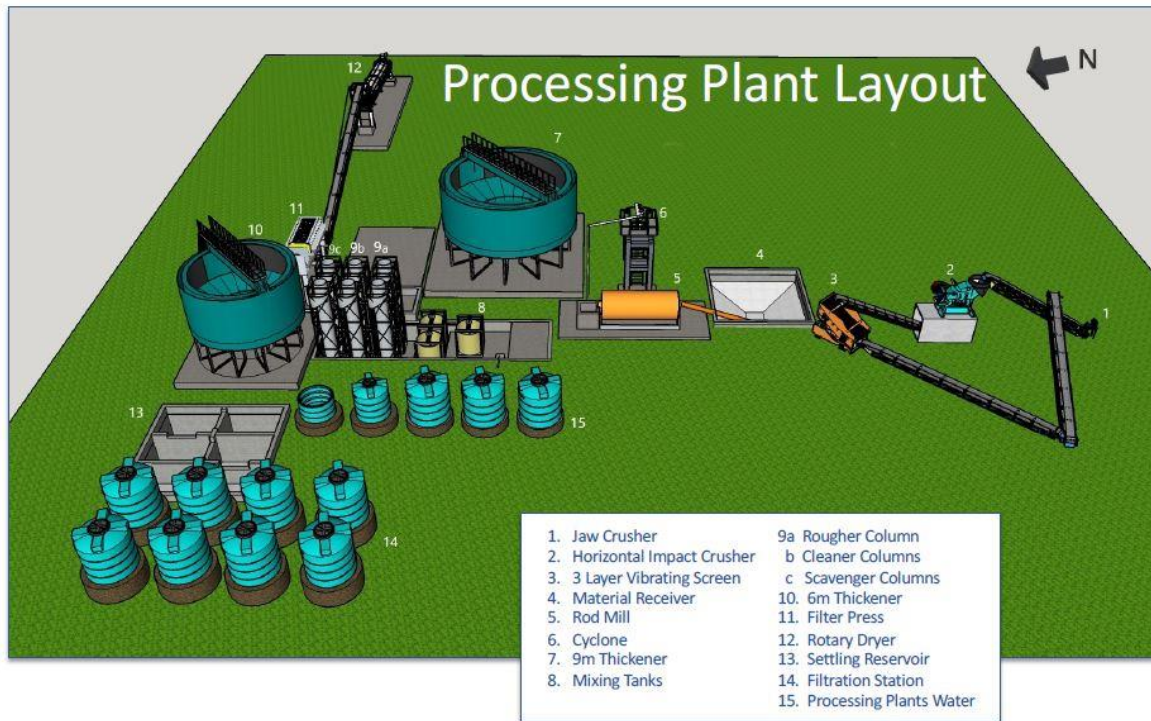
Filtration station;

Three Settling pond are employed to settle out all the material in the water:
7200 × 7200 × 2500 settling pond

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7200 × 7200 × 2000 settling pond
7200 × 7200 × 1500 settling pond

8 × 10 000L water tanks will act as the sand-based filtration system to recover most of the water for re-use in the plant.



Management Update

In March, 2020, Arno Brand was appointed President and Chief Executive Officer eliminating the Co-CEO designation, replacing Sheldon Inwentash who stepped down. The company announced the appointment of Mr. Walter Luke to the Board of Directors replacing Gerry Feldman and Jakson Inwentash who resigned. Mr. Luke is a professional project manager with over 29 years of global experience directing projects for tech giants such as Nortel, Bell Mobility, Nigeria Multilink, Australia Optus, and New Zealand Clear. Mr. Luke's successful private enterprise has taken him to over 40 countries and has brought international recognition (several Chairman's and President's awards) for his contributions to new business developments worldwide. Mr. Luke holds a project manager professional certification from the Project Management Institute.

On Apr 8, 2020, Gratomic appointed Armando Farhate as Executive Management and Head of Advisory Board to advise and oversee the construction and commissioning of the processing plant, Grade and Quality Control Management, and Head of the Company's Advisory Board. He will focus on product quality control and will advise on plant construction at the Aukam Graphite Mine in Namibia. In addition to holding an MBA and a Degree in Mechanical Engineering, Armando's brings over thirty years' professional experience in various capacities including CEO, COO, Industrial Director, VP/Director/Sales Manager. As Operations and Product Director for Imerys Graphite & Carbon, Armando was directly responsible for the mining and processing facilities at the two sites in Quebec, Canada. He coordinated a joint venture project in Northern Namibia with a market capitalization of 40 million dollars USD and was responsible for ensuring market demand was accommodated. Mr. Farhate was directly responsible for the establishment of new product lines, production processes, pricing, sales management, and marketing campaigns. He established the long term

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strategy for Natural Graphite, which included sourcing strategy and the definition of new production sites.

Prior to his tenure at Imerys Graphite & Carbon, Mr. Farhate was the Chief Operating Officer at Nacional De Grafite, Ltda. In his capacity as COO for this prestigious graphite company, Armando was directly responsible for the management and overseeing of 650 employees in various areas including geology, mine planning, mining, processing, engineering and projects, research and development, quality systems, environmental management, and sales and marketing.

During his time with Nacional De Grafite, Ltda., Mr. Farhate coordinated the opening of new mines, obtaining all necessary permits and licensing. In addition to the evaluation of all mineral assets, Armando was also responsible for the introduction of controls on production, efficiency, costs and inventory levels of three different plants and more than 20 product lines. He optimized the management of working capital and generated gains of up to BRL 5 million/yr in the industrial units. Mr. Farhate led the development of new products and processes, including negotiating partnerships with public and private universities in Brazil and abroad. He placed an emphasis on obtaining graphite oxide and graphene from natural crystalline graphite, and on developing process technology for lithium-ion battery anodes.

On November 5th, the Company has secured the consultancy services of Karl Trudeau to oversee final assembly, commissioning and operational readiness of its Aukam graphite processing plant. Based in the province of Québec, Canada, Karl Trudeau possesses unique experience achieved through the operation of natural graphite facilities. He was Plant Director for six years at Imerys Graphite et Carbone (formerly Timcal) in Lac-Des-Îles, QC, Canada. Imerys is the largest graphite producer in North America. His next role would occur with Nouveau Monde Graphite, where he became the Chief Operations Officer. This role would last for over two years.

Additional experience in the mining industry includes the exploration and mining of various types of minerals. Karl previously occupied 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.

On December 30th, 2020, Andre Bennet was appointed as Mechanic and maintenance Supervisor for the Aukam Graphite Project.

TODA Notes Update

On October 17, 2019, Gratomic announced the Supply Agreement with TODAQ Holdings (“TODAQ”) to supply TODAQ with an aggregate of USD \$25,000,000 of graphite, payable in TODA Notes (“TDN”), and on December 20, 2019 Gratomic announced it had received its first of two purchase orders from TODAQ. Following is an update on the current status of TDN trading. TDN has been trading on BitForex, a digital asset exchange, with a 30-day average price and volume of approximately USD \$0.24 and USD \$950,000, respectively. TDN first started trading on Bitforex on November 1, 2019 at a price of USD \$0.10 and a volume of USD \$300,000. To follow TDN, please click the following link: https://www.bitforex.com/en/spot/tdn_btc . No TDN will be issued to the Company until the equipment and the processing plant is in production.

Other Disclosures

Share Capital

Common Shares -

As at December 31, 2020, and the date hereof, there were 92,494,521 and 124,068,421 common shares respectively of the Company issued and outstanding.

Warrants -

At December 31, 2020 and the date hereof there were a total of 35,163,486 and 17,086,253 warrants respectively outstanding.

Options -

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At December 31, 2020, and the date hereof, there were a total of 5,655,000 and 3,875,000 stock options respectively outstanding.

Additional Information -

Additional information about the Company including the financial statements, press releases and other filings are available on the internet at www.sedar.com and additional supplemental information is available on the Company website at www.gratomic.ca.