

# GRAPHENE 3D LAB INC.

Interim MD&A-Quarterly Highlights  
For the nine months ended February 28, 2018

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## Introduction

This Management Discussion and Analyses (“MD&A”) of Graphene 3D Lab Inc. (the “Company” or “Graphene 3D”) provides a summary of the corporate activities and the financial and operating results of the Company for the nine months ended February 28, 2018. The following information should be read in conjunction with the condensed interim consolidated financial statements and the notes for the nine months period ended February 28, 2018, which are prepared in accordance with International Financial Reporting Standards. All amounts are expressed in US dollars unless otherwise noted. Canadian dollars are indicated by the symbol “C\$”. This MD&A should also be read in conjunction with the audited financial statements of Graphene 3D Lab Inc. and the accompanying notes for the year ended May 31, 2017, which were also prepared in accordance with International Financial Reporting Standards (“IFRS”).

## Forward-looking Statements

Certain statements contained in the following Quarterly Highlights constitute forward-looking statements. Such forward-looking statements include but are not limited to statements regarding the Company’s ability to identify and pursue a suitable business opportunity and its ability to raise sufficient financing to continue its operations. These forward-looking statements involve a number of known and unknown risks, uncertainties and other factors including financial, operational, environmental and political risks, general equity and market conditions. The outcome of these factors may cause the actual results and performance of the Company to be materially different from any plans or results expressed or implied by such forward-looking statement. Readers are cautioned not place undue reliance on these forward-looking statements.

There are a number of important factors that could cause the Company’s actual results to differ materially from those indicated or implied by forward-looking statements and information. Such factors include, among others, risks related to Graphene 3D’s proposed business such as failure of the business strategy, stable supply prices, demand and market prices for 3D printing products, and government regulation; risks related to Graphene 3D’s operations, such as additional financing requirements and access to capital, reliance on key and qualified personnel, insurance, competition, intellectual property and reliable supply chains; risks related to Graphene 3D and its business generally such as potential exposure to tax under Canadian and US income tax laws, laws and regulations relating to cross-border mergers and acquisitions, infringement of intellectual property rights, product liability, environmental protection, currency exchange rates and conflicts of interest.

## 1.1 DATE OF REPORT

This report is prepared as of April 30, 2018.

## 1.2 COMPANY OVERVIEW

Graphene 3D Lab Inc. (the “Company” or “Graphene 3D”), formerly MatNic Resources Inc. (“MatNic”) was incorporated pursuant to the British Columbia Business Corporations Act on January 17, 2011. On August 8, 2014, the Company acquired Graphene 3D Lab (U.S.) Inc. (“Graphene 3D U.S.”) through a reverse acquisition/takeover transaction (“Transaction”). The historical operations, assets and liabilities of Graphene 3D U.S. are included as the comparative figures as at and for the period ended May 31, 2014, which is deemed to be the continuing entity for financial reporting purposes. Graphene 3D U.S. was incorporated on September 3, 2013 in the State of Delaware, U.S.A.

In association with the Transaction, MatNic changed its name to Graphene 3D Lab Inc. and concurrent with the closing of the transaction, the Company effected a change in directors, management and business. On August 11, 2014 the Company’s common shares resumed trading on the TSX Venture Exchange (“TSX-V”) under the symbol “GGG.” On October 7, 2014, the Company began trading on OTCQB, the venture marketplace for entrepreneurial and development stage companies operated by OTC Markets Group, under the symbol “GPHBF”.

Graphene 3D U.S. is a C-corporation, organized on September 3, 2013 under the laws of the State of Delaware. The founders of the corporation include Daniel Stolyarov, Ph.D., Co-CEO and Elena Polyakova, Ph.D., Co-CEO. Founding team members have many years’ worth of combined experience in 3D printing, material production, R&D, and the commercialization of new

materials. Graphene 3D U.S. was initially a spinout of Graphene Laboratories Inc. (“Graphene Laboratories” or “GLI”). On August 12, 2015, the Company entered a Share Exchange Agreement (“SEA”) to acquire all of the issued and outstanding shares of GLI. This transaction was reviewed and accepted for filing by the TSX Venture Exchange and closed on December 8, 2015. Graphene Laboratories now operates as a wholly-owned subsidiary of Graphene 3D.

### **1.3 NATURE OF BUSINESS**

Graphene 3D is in the business of developing, manufacturing, and marketing proprietary polymer nanocomposite graphene-based materials for a number of industries including the aerospace and automotive industries, manufacturers of medical prosthetics and the military, as well as the various types of materials for 3D printing, such as fused filament fabrication. Graphene 3D currently has six US patent applications pending for its technology.

The Company also holds a provisional patent relating to the manufacture and processing of graphene. Graphene is a novel material with a variety of outstanding properties. It is currently available in the market at various grades, with performance characteristics such as mechanical strength, and conductivity improving with fewer atomic layers. Graphene Laboratories patented manufacturing process provides proof of concept to allow for a low-energy, chemical-free manufacture designed to achieve high-grade graphene material at a projected industry leading low cost. The Company has begun planning on a two-phased development program to advance this manufacturing process from bench-top prototype to a large-scale manufacturing operation.

Graphene 3D Lab, Inc. is also a world leader in the development, manufacturing, and marketing of proprietary composites and coatings based on graphene and other advanced materials. These diverse materials have a wide spectrum of commercial, research, and military applications. The Company’s wholly-owned subsidiary, Graphene Laboratories Inc., currently offers over 100 graphene and related products to a client list comprised of more than 12,000 customers worldwide, including nearly every Fortune 500 tech company and major research university. Some notable clients are: NASA, Ford Motor Co., GE, Apple, Xerox, Samsung, Harvard University, IBM, and Stanford University

The Company operates several subdivisions which include the following:

#### **R&D Materials**

Graphene Supermarket (R&D Graphene Materials): The Company’s suite of graphene products is available online at the company’s e-commerce platform Graphene Supermarket ([www.graphene-supermarket.com](http://www.graphene-supermarket.com)). Graphene 3D is a world leader in the development, manufacturing and marketing of graphene and other 2D crystals as well as composites based on these nanomaterials. These diverse materials have a wide spectrum of commercial, research and military applications

#### **Materials for 3D Printing**

The 3D printing division of the Company offers a portfolio of 3D printable filaments including a portfolio of specialty fused filament fabrication filaments. These materials can be purchased through multiple distribution networks worldwide or directly from the web-store [www.blackmagic3D.com](http://www.blackmagic3D.com).

The Company invested heavily into production equipment in 2015 to establish a fully operational production line. With the fully operational production line, the Company was able to bring to market the first 3D printable conductive graphene filament which has since shown continually increasing sales. The Company’s manufacturing capabilities of specialty filaments were best demonstrated with the more recent release of the Ferro-Magnetic and Nylon filaments. Graphene’s expectations for the upcoming months include introducing several new filaments with innovative properties that will meet the needs of its growing customer base.

#### **Conductive Epoxies**

The Company is focus has been on developing the best in conductive epoxy systems. Through research and development, our team have been able to create innovative, new products with unique properties by using a proprietary mix of high-performance carbon fillers to achieve superb electrical and mechanical properties for electrically conductive epoxy. The Company’s specialty adhesive epoxies are well suited for use in aerospace, automotive industries, electronics and communication etc.

Three different product lines are offered:

Carbon -P series: Carbon filled conductive epoxy (G6-EP), with main features:

- Non-metallic: carbon filled
- Excellent electrical conductivity: 5 Ohm x cm
- Ultralight: density is less than 1.1 g/cm<sup>3</sup>
- Low-cost silver alternative
- Excellent gap-filling adhesive

Silver – SG series: Silver/Graphene conductive epoxies (G6-SG, G6-FXSG, G6-HTSG).

- Traditional epoxy materials tend to be brittle and are prone to mechanical failure. Graphene fillers add superior durability, fatigue and crack resistance in addition to low electrical resistance. The Company uses a proprietary mix of silver and graphene materials to achieve a superb combination of mechanical and electrical properties.
- G6-SG - Silver/Graphene conductive epoxy;
- G6-FXSG – Flexible Silver/Graphene conductive epoxy;
- G6-HTSG – High-temperature Silver/Graphene conductive epoxy

Silver- NS series: Silver/Carbon conductive epoxies (G6-NS10, G6-NS11, G6-HTNS).

- These epoxies have been developed based on advanced proprietary technology that requires less silver content to be at par with leading silver-based epoxies in terms of electrical properties. This improvement makes G6E-NS™ less dense, more flexible, and allows for stronger adhesion to the target substrate.
- G6-NS10 - Silver/Carbon conductive epoxy;
- G6-NS11 - Silver/Carbon conductive epoxy
- G6-NS - High-temperature Silver/Carbon conductive epoxy

Adhesive materials produced by the company are distributed under the G6-Epoxy™ trade name and can be purchased at <https://g6-epoxy.com/>.

## **Fine Chemicals for Drug Discovery**

ChemApproach is a worldwide supplier of a wide variety of building blocks (many of these are unique) to R&D facilities in pharmaceutical and agriculture industries, academic institutions, biotechnology, and Hi-Tech companies. It's professional team of PhD chemists hold many years of industrial experience in design, development and implementation of projects, as well as experience in synthetic organic chemistry. This division offers a plethora of the substituted aromatic and heterocyclic compounds. Most of its molecules are synthesized as medicinally-relevant and drug candidates. The production scale varies from grams to multi-kilograms quantities. The divisions main expertise lies within the introduction of the various substituents to the aromatic rings, a large variety of functional group transformations, and a selective incorporation of halogens in organic molecules, particularly, iodine. These classes of organic molecules have a wide range of application in: Drug-design, Biochemistry, Polymer chemistry, Electronics and Hi-Tech, Petrochemical <https://chemapproach.com/>

## **Graphene Manufacturing Process Patent**

The Company filed a non-provisional patent pertaining to the preparation and separation of atomic layers of graphene. This technological breakthrough represents a new, energy and chemically efficient process to manufacture, sort and classify graphene nanoparticles resulting in the potential for large scale production of high grade graphene. This patent relates to graphene nanoplatelets (GNP). Specifically, the patent covers a new, energy efficient, not chemically invasive, process that significantly lowers the cost of preparing and separating high quality, few atomic layer thick GNP. The application claims priority to provisional application No. 62/058,313, filed on October 1, 2014.

The business implications associated with this filing are significant and near term. The extraordinary qualities of graphene have positioned it as one of the most sought-after materials in research and development since its discovery in 2004. However, up to now, the high-cost of quality material has generally restricted its use to R&D labs. The Company is changing that and looks forward to offering these benefits to the client base and to others who will now utilize graphene in mainstream manufacturing. To date, manufacture of graphene has been restricted to manual intensive, high-energy, toxic chemical processes to allow for the production of the highest quality graphene. The Graphene 3D patent intends a low-cost, low-energy, primarily automated, toxic free method of producing and classifying the highest purity graphene nanoplatelets.

## **1.4 HIGHLIGHTS FOR THE NINE MONTHS ENDED FEBRUARY 28, 2018**

## Corporate Developments

In June 2017, the Company announced the addition of Graphene-HIPS to the family of 3D printing products offered by the Company. This new material was a distinctly engineered and innovative semi-flexible FDM 3D printing material reinforced with graphene and designed for high performance 3D printing. This FDM material exhibits outstanding interlayer adhesion, toughness and superb impact resistance. These properties provide an excellent mechanical and structural performance for 3D printed objects made from this material. It was well suited for printing precise functional components for engineering applications. Unlike other 3D printing material, Graphene-HIPS is both temperature and weather resistant, which made it an ideal material for outdoor projects.

The Graphene-HIPS filament was commercially available for desktop FDM/FFF 3D printers in the size of 1.75 mm at 400 grams per spool and distributed through the e-commerce sites: BlackMagic3D and Graphene Supermarket, as well as on Amazon.com. On October 2, 2017, the company was included in the strategic plan for economic development growth within the region prepared by LIREDC, titled "A Region in Motion". In this document, LIREDC named relocation and expansion of production capacity of Graphene Laboratories Inc. as one of the priority projects recommended to receive financial support from the State of New York. This strategic plan was supported by New York State as confirmed in an announcement by Governor Andrew M. Cuomo during an Award Ceremony that was held in the city of Albany on December 13, 2017. The Long Island Region was identified as a Top Performer, and New York State awarded the Long Island Region \$83.3M to fund the projects listed in the plan recommended by the LREDC. The Grant of \$500,000 received by the Company is a part of this award.

On November 20, 2017, the Company, through Graphene Laboratories, executed a Distribution Agreement with Great Lakes Graphite Inc. ("GLK"), a provider of high quality micronized graphite products. Graphene Laboratories will offer these products through its online web store Graphene Supermarket, thereby addressing its customer database that includes more than 12,000 customers.

On February 21, 2018, the Company announced an Invention in Blockchain and Cryptocurrency Mining Space and Filed for IP Protection. The invention addresses an overwhelming need for more efficient energy management in data centers and computational facilities in cryptocurrency mining and other industries. This technology is versatile and is designed to work with various computing equipment used for cryptocurrency mining including CPUs, GPUs and ASICs. Graphene-enhanced materials help to boost performance of such systems giving the Company the competitive edge.

On March 8, 2018, the Company announced that it had moved from Calverton, NY to a new location at 760 Koehler Avenue, Ronkonkoma, State of New York as the Company made the decision to relocate the business operations to a facility with a more favorable industrial setting. This new 8,000 square foot facility is situated in a tech park near Long Island MacArthur Airport and is about 30 miles from the company's existing address. It is located on industrial property, and comes with a larger production floor, office and lab space.

Micronized graphite products are used by customers in a wide variety of industries for a wide variety of applications that include composite materials, electronics, batteries, lubricants, coatings and friction products. GLK sources Brazilian graphite and further processes and purified it in the USA. Working with partners to micronize and purify graphite enables GLK to create standard and customized products, to customer specifications. As a result, GLK can offer a material with outstanding quality that is consistent from batch to batch.

On March 29, 2018 the Company's wholly-owned subsidiary Graphene Laboratories entered into a Technology Transfer Agreement with a multinational manufacturer producing advanced materials with uses in the pharmaceutical industry ("Industrial Partner"). The Industrial Partner will manufacture a certain advanced material at one of its European facilities utilizing the Company's technology. The Company will assist with the first production campaign and provide guidance related to technical details of the process to facilitate adoption of the technology by the Partner. The material produced as a result of this production campaign will be subjected to third party testing and evaluation. If the tests yield positive outcome, the Company expects that this technology will be used for large-scale production in the future.

The Company agreed to grant a limited-time exclusive license to the Industrial Partner for the material manufactured within this production campaign. The Company retains ownership of its Intellectual Property rights and may further benefit from it either through further licensing and royalty payment or sale of IP.

Under the terms of the agreement, in the case of successful completion of the project, the Company will receive up to a total of US \$202,500 in royalty payments and US \$7,000 for miscellaneous expenses. An initial advance of US \$57,000 is due within 30 days from the effective date of the Agreement and a further, US \$152,500 is due within 30 days upon successful completion of the project. The term of the Agreement is set to nine months.

## Management Team Changes

On July 28, 2017, Mr. Roman Rabinovich was appointed to the Board of Directors. Mr. Rabinovich serves as a Senior Director at FTI Consulting. FTI Consulting is one of the largest business advisory firms providing advice and services which include, but are not limited to business restructuring, mergers and acquisitions and business performance improvement. Mr. Rabinovich has tremendous experience in strategic development, transaction advisory, litigation support, and business restructuring engagements. He specializes in analysis of corporate finance and building optimal pricing strategies to improve sales growth.

On the same day Mr. A. Paul Gill resigned from the Board of Directors.

## Financial Update

On June 13, 2017, the Company terminated its finance lease obligation by completing the buy-out of the equipment under the lease. The termination of the finance lease and buy-out of the equipment was settled for \$103,676, of which a deposit in the amount of \$5,000 was paid during the year ended May 31, 2017, and the remaining amount was paid through a short-term loan acquired on the termination date. The short-term loan obtained has a due date of September 11, 2017, includes a loan fee of \$1,440 and does not bear any interest. The lease had been terminated and paid off by the Company on September 11, 2017.

On July 28, 2017, 300,000 options were granted to a director of the Company at an exercise price of C\$0.105 valid for 5 years, vested immediately.

On September 1, 2017, the Company closed a non-brokered private placement financing issuing 5,400,000 common shares at a price of C\$0.08 per unit for gross proceeds of \$348,667 (C\$432,000).

On November 13, 2017, 500,000 bonus shares were issued to an officer of the Company at a deemed price of C\$0.12 with a fair market value of \$47,121 (C\$60,000).

On November 14, 2017 the Company granted 2,450,000 incentive stock options to certain directors, officers and consultants. The Options are exercisable at \$0.12 for a period of 5 years from the date of grant and vested immediately.

On December 14, 2017, the Company announced that a grant of \$500,000 awarded to the Graphene Laboratories Inc., by Long Island Regional Economic Development Council ("LIREDC") to help financing the renovation of the Company's new facility at Ronkonkoma, has been supported by the State of New York. The grant will also finance the acquisition of new equipment for the facility. The grant requires 80% matching fund to be paid by the company. Also, the Company commits to increase its workforce and increase the number of employees.

On January 18, 2018, 10,581,010 common share purchase warrants were exercised at the amended price of C\$0.12 per share for gross proceeds of \$1,020,184 (C\$1,269,721). 500,000 common share purchase warrants were expired unexercised during the nine months ended February 28, 2018.

As at February 28, 2018, the Company has 73,451,814 (May 31, 2017 – 56,970,804) issued and outstanding common shares of which 330,000 (May 31, 2017 – 7,427,758) are subject to escrow agreements.

## 1.5 RESULTS OF OPERATIONS

The Company's net loss for the nine months ended February 28, 2018 totaled \$952,258 (2016 - \$690,986) or \$0.015 (2016 - \$0.013) per share.

Revenues and cost of goods sold increased compared to the previous comparative period as a result of increased operations and revenues generated from GLI which was acquired by Graphene 3D in December 2015.

Total operating expenses for the nine months ended February 28, 2018 was \$666,038 (2016 - \$748,478). Expenses with significant changes from the previous comparative period are as follows:

- Share-based compensation (recovery) of \$226,514 (2016 – recovery \$108,413) was due to granted 2,750,000 stock options to certain directors and officers with a fair value of \$0.12
- Salaries and benefits of \$241,249 (2016 - \$283,026) decreased due to the departure of an employee in the period.

- Professional fees of \$318,712 (2016 - \$189,114) increased due to increased fees in relating to the engagement of business advisory, accounting and compliance services and valuation services associated with the GLI acquisition.
- Office and administrative expenses of \$150,257 (2016 - \$205,550) includes rent, communication, insurance and other general office costs. Office and administrative expenses decreased due to the cost saving initiative.
- Depreciation expense of \$70,407 (2016 - \$82,686) decreased due to disposal of equipment since the prior comparative period.
- Amortization of intangible asset of \$32,730 (2016 - \$32,730) is a related to the intangible asset acquired as part of the GLI transaction in December 2015. The intangible asset is amortized on a straight-line basis over ten years.

Research and development expenditures are summarized as follows:

	Quarter ended Feb. 28, 2018	Quarter ended Nov 30, 2017	Quarter ended Aug 31, 2017	Quarter ended May 31, 2017	Quarter ended Feb 28, 2017	Quarter ended Nov 30, 2016	Quarter ended Aug 31, 2016 \$	Quarter ended May 31, 2016 \$
Research personnel	53,675	37,766	54,252	64,327	64,235	74,621	37,678	31,381
Research and development equipment and supplies	11,598	1,849	8,056	2,898	5,124	11,968	13,364	28,606
Patent registration expense	2,869	450	599	6,030	1,421	500	6,971	1,789
Total research and development expenses	68,142	40,065	62,907	73,255	70,780	87,089	58,013	61,776

Since the corporate RTO transaction in August 2014, the Company has ramped up its research and development budget and activities incurring significant expenditures on its R&D activities over the past several quarters. The Company has expanded these activities with the purchase of research and development equipment and supplies to set-up the extruder equipment acquired in the year ended May 31, 2015. Recent reductions in R&D spending were as a result of the Company focusing its resources on revenue generating activities.

## 1.6 SELECTED FINANCIAL INFORMATION

The following table contains selected financial information for Graphene 3D for the year ended May 31, 2017 as compared to the year ended May 31, 2016, and the period commencing September 3, 2013, the date of incorporation, and ending May 31, 2014. The information set forth should be read in conjunction with the audited annual financial statements, prepared in accordance with International Financial Reporting Standards (“IFRS”), and the related notes thereon.

	Year ended May 31, 2017 \$	Year ended May 31, 2016 \$	Year ended May 31, 2015 \$
Revenue	1,108,998	773,412	41,056
Net loss	1,017,590	2,207,055	4,276,273
Comprehensive Loss	1,025,195	2,244,845	4,306,207
Net loss per share	\$0.02	\$0.05	\$0.11
Total assets	1,057,022	1,273,546	1,022,322
Total non-current financial liabilities	147,391	217,348	-

Non-current financial liabilities consist of the long-term portion of the finance lease obligation and deferred tax liability related to the acquisition of GLI in December 2015.

## 1.7 SUMMARY OF QUARTERLY RESULTS

The following summary information is taken from the Company’s quarterly and annual financial reports covering the last eight reporting quarters.

	Quarter ended Feb 28, 2018 \$	Quarter ended Nov 30, 2017 \$	Quarter ended Aug 31, 2017 \$	Quarter ended May 31, 2017 \$	Quarter ended Feb 28, 2017 \$	Quarter ended Nov 30, 2016 \$	Quarter ended Aug 31, 2016 \$	Quarter ended May 31, 2016 \$
Revenue	(235,592)	(209,965)	(234,513)	<b>(309,098)</b>	(267,895)	(235,449)	(296,556)	<b>(416,088)</b>
Cost of goods sold	127,329	124,914	33,698	<b>203,147</b>	125,847	163,906	133,318	<b>342,714</b>
Gross (profit) loss	(108,263)	(85,051)	(200,815)	<b>(105,951)</b>	(142,048)	(71,543)	(163,238)	<b>(73,374)</b>
Operating expenses	401,060	494,971	400,226	<b>496,985</b>	343,232	420,565	268,588	<b>742,028</b>
Other (income)expenses	10,910	11,577	27,643	-	-	-	11,810	-
Net loss	303,707	421,497	227,054	<b>326,034</b>	201,184	349,022	117,160	<b>668,654</b>
Comprehensive Loss	288,707	421,595	226,591	<b>341,652</b>	214,363	352,590	116,590	<b>620,835</b>
Net loss per share (basic and diluted)	\$0.005	\$0.007	\$0.004	<b>\$0.006</b>	\$0.004	\$0.006	\$0.002	<b>\$0.01</b>
Total assets	1,649,404	1,050,555	1,171,990	<b>1,057,022</b>	1,283,449	1,505,418	1,477,573	<b>1,273,546</b>
Shareholders' equity	1,340,508	641,460	740,749	<b>675,074</b>	927,814	1,125,977	1,078,817	<b>886,158</b>

The Company's revenue and margins showed significant improvement with the inclusion of the GLI business activities. The acquisition of GLI took effect on December 8, 2015 and as a result, the GLI reporting has only been consolidated with Graphene 3D since December 8, 2015.

Operating expenses increased during the quarter ended May 31, 2016 in comparison to the quarter ended February 29, 2016 primarily due to stock-based compensation expense on the 2,500,000 options granted in March 2016 vesting immediately which had a value of \$327,424 that was expensed in the quarter. The decrease in operating expenses in the quarter ended August 31, 2016 was also a result of the higher stock-based compensation expense in the three months ended May 31, 2016, as well as due to the stock-based compensation recovery of \$135,384 from the forfeited unvested options during the period.

The increase in loss for the quarter ended November 30, 2017 was primarily due to stock-based compensation of \$203,207 recorded for the 2,450,000 share options granted to directors, officers and consultants of the Company during the period.

The Company completed its relocation to new premises at the end of February 2018. The relocation took a number of months to complete and did have an impact on sales. However, the Company was able to mitigate that impact by accelerating production to produce additional inventory to be sold during the relocation. The operating expenses for the quarter ended November 30, 2017 included approximately \$200,000 in stock-based compensation. When adjusting for that and comparing to February 28, 2018 operating expenses the increase in the quarter ended February 28, 2018 can be attributed to the additional costs to produce inventory that could be sold during the relocation period.

There were no significant variations in other operating expenses.

## 1.8 LIQUIDITY AND CAPITAL RESOURCES

As of February 28, 2018, the Company had working capital surplus of \$898,967 (May 31, 2017 - \$166,165).

Cash and cash equivalents totaled \$689,999 as at February 28, 2018 (May 31, 2017 - \$39,424).

Cash used in operating activities during the nine months ended February 28, 2018 was \$666,038 (2016 - \$748,478). The main cause of this change was lower inventory, accounts payable and accrued liabilities and offset by lower prepaids during the period.

Cash generated in investing activities during the nine months ended February 28, 2018 was \$25,831 (2016 - \$8,650) from the proceed of disposal equipment of \$21,622 and a short-term loan of \$4,209 from a director in the Company.

Cash generated from financing activities during the nine months ended February 28, 2018 was \$1,313,147 (2016 - \$820,930) resulting primarily from shares issued private placements and warrants exercised.

As at February 28, 2018, share capital totalled \$7,213,167 (May 31, 2017 - \$5,799,624) representing 73,451,814 (May 31, 2017 - 56,970,804) issued and outstanding common shares without par value. Warrant reserve was \$33,946 (May 31, 2017 - \$33,946) and contributed surplus was \$2,821,938 (May 31, 2017 - \$2,595,424). As a result of the net loss for the nine months ended February 28, 2018 of \$952,258 (May 31, 2017 - \$1,017,590), the deficit was \$8,630,849 as at February 28, 2018 (May 31, 2017 - \$7,678,591). Accordingly, net assets were \$1,340,508 at February 28, 2018 (May 31, 2017 - \$675,074).

The Company’s ability to meet its administrative expenses and complete its planned research and development activities and its ramp up of commercial operations is ultimately dependent upon management’s ability to secure additional financing. While management has been successful in obtaining funding in the past, there can be no assurance that it will be able to do so in the future.

## 1.9 COMMITMENTS

The Company entered into a use permit for the Company’s facilities ending July 31, 2017. The lease requires monthly payments of \$11,050.

The Company entered into a finance lease that requires monthly payments of \$4,337 until March 1, 2019. During the nine months ended February 28, 2018, the Company terminated its finance lease obligation by completing the buy-out of the equipment under lease.

## 1.10 TRANSACTIONS WITH RELATED PARTIES

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Related parties may be individuals or corporate entities. Key management includes directors and officers of the Company. The Company entered into the following transactions with related parties:

- a) During the nine months ended February 28, 2018, the Company paid and accrued salaries to directors and officers of the Company in the amount of \$164,423 (2016 - \$112,500).
- b) During the nine months ended February 28, 2018, the Company issued 2,750,000 (2016 – 800,000) stock options with a fair value of \$327,000 (2016 - \$117,917) to directors and officers of the Company. For the nine months ended February 28, 2018 \$226,514 (2016 - \$108,413) has been included in share-based compensation.
- c) During the nine months ended February 28, 2018, the Company terminated its finance lease obligation (Note 9) by completing the buy-out of the equipment under the lease. The termination of the finance lease and buy-out of the equipment was settled for \$103,676, of which a deposit in the amount of \$5,000 was paid during the year ended May 31, 2017, and the remaining amount was paid through a short-term loan acquired on the termination date. The short-term loan was reimbursed on September 11, 2017 by the Company and did not bear any interest.
- d) As at February 28, 2018, \$4,209 (2016 - \$NIL) was due to a director of the Company for short-term loans for recoveries of business expenses.

The following amounts were due to related parties:

	February 28, 2018	May 31, 2017
Salary to directors and officers	\$ 95,192	\$ 18,103
Loans payable to directors	4,809	-
Professional fees to related parties	-	16,566
Expense reimbursements to related parties	206	4,059
	<u>\$ 100,207</u>	<u>\$ 38,728</u>

Amounts due to related parties are unsecured, have no fixed repayments and are non-interest bearing.

## Acquisition of Graphene Laboratories

On December 8, 2015, the Company closed a non-arm’s length share exchange agreement (the “SEA”) to acquire all of the issued and outstanding shares of Graphene Laboratories Inc. (“GLI”). GLI is incorporated under the laws of the Commonwealth of Massachusetts, U.S.A, and is controlled and managed by the Co-Chief Executive Officers of the Company.

## 1.11 RISKS AND UNCERTAINTIES

An investment in the Company's securities involves a high degree of risk. Potential investors should carefully consider the following information about these risks. If any of the following risks actually occurs, the business, financial condition and prospects of the Company could be materially adversely affected. In that case, the value of any securities of the Company could also decline and investors could lose all or part of their investment.

The risks and uncertainties described below are those that Graphene 3D's management believes are material, but these risks and uncertainties may not be the only ones that the Company may face. Additional risks and uncertainties, including those that management currently are not aware of or deem immaterial, may also result in decreased operating revenues, increased operating expenses or other events that could result in a decline in the value of any securities of the Company. The following information is a summary only of certain risk factors and is qualified in its entirety by reference to, and must be read in conjunction with, the detailed information appearing elsewhere in Management Discussion and Analysis.

An investment in the securities of the Company is highly speculative.

### **Risks Related to Our Business and Industry**

If the market does not develop as we expect, our products may not be accepted by the market.

- There is significant competition in our market, which could make it difficult to attract customers, cause us to reduce prices and result in reduced gross margins.
- The long sales cycle for our products makes the timing of our revenues difficult to predict.
- We may not be able to generate operating profits.
- We plan to grow very rapidly, which will place strains on management and other resources.
- We may not be able to hire the number of skilled employees that we need to achieve our business plan.
- Loss of key management or sales or customer service personnel could adversely affect our results of operations.
- If our manufacturing facilities are disrupted, sales of our products will be disrupted, and we could incur unforeseen costs.
- Global economic, political and social conditions may harm our ability to do business, increase our costs, and negatively affect our stock price.
- We may need to raise additional capital from time to time if we are going to meet our growth strategy and may be unable to do so on attractive terms.
- Our operating results and financial condition may fluctuate on a quarterly and annual basis.

Our operating results and financial condition may fluctuate due to a number of factors, including those listed below and those identified throughout this "Risk Factors" section:

- the development of new competitive systems or processes by others;
- the entry of new competitors into our market whether by established companies or by new companies;
- changes in the size and complexity of our organization, including our international operations;
- levels of sales of our products and services to new and existing customers;
- the geographic distribution of our sales;
- changes in product developer preferences or needs;
- delays between our expenditures to develop, acquire or license new technologies and processes, and the generation of sales related thereto;
- our ability to timely and effectively scale our business during periods of sequential quarterly or annual growth;
- limitations or delays in our ability to reduce our expenses during periods of declining sequential quarterly or annual revenue;

- changes in our pricing policies or those of our competitors, including our responses to price competition;
- changes in the amount we spend in our marketing and other efforts;
- the volatile global economy;
- general economic and industry conditions that affect customer demand and product development trends;
- changes in accounting rules and tax and other laws; and
- We could be subject to personal injury, property damage, product liability, warranty and other claims involving allegedly defective products that we supply, which could result in material expense, diversion of management time and attention and damage to our business reputation.
- We could face liability if our 3D printers are used by our customers to print dangerous objects.
- We may not have adequate insurance for potential liabilities.
- Even a partially uninsured claim of significant size, if successful, could materially adversely affect our business, financial condition, results of operations and liquidity. However, even if we successfully defend ourselves against any such claim, we could be forced to spend a substantial amount of money in litigation expenses, our management could be required to spend valuable time in the defense against these claims and our reputation could suffer, any of which could adversely affect our results of operations.

### **Risks Related to Our Intellectual Property**

We may not be able to obtain patent protection or otherwise adequately protect or enforce our intellectual property rights, which could impair our competitive position.

- Obtaining and maintaining our patent protection depends on compliance with various procedural, documentary, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.
- We may incur substantial costs defending against third party infringement claims as a result of litigation or other proceedings.
- Our failure to expand our intellectual property portfolio could adversely affect the growth of our business and results of operations.

## **1.12 OUTSTANDING SHARE DATA**

The authorized capital of the Company consists of an unlimited number of common shares with no par value. As at the date of this MD&A, the following common shares, options and share purchase warrants were outstanding:

	<b>Number of Shares</b>	<b>Exercise Price</b>	<b>Expiry Date</b>
Issued and Outstanding Common Shares	73,451,814		
Share Purchase Warrants	279,340	C\$0.25	July 11, 2018
	135,625	C\$0.25	September 13, 2018
	42,438	C\$0.25	September 29, 2018
Stock Options	1,575,000	C\$0.25	February 28, 2019
	690,000	C\$0.21	August 24, 2021
	200,000	C\$0.21	September 13, 2021
	300,000	C\$0.11	July 28, 2022
	1,950,000	C\$0.12	November 13, 2022
<b>Fully Diluted at February 28, 2018</b>	<b>78,624,217</b>		

As of the date of this MD&A, 330,000 issued and outstanding common shares remain in escrow.

## **OTCQB Listing**

The Company has been verified to trade on OTCQB®, the venture marketplace for entrepreneurial and development stage companies operated by OTC Markets Group (OTCQX: OTCM) and began trading Oct. 7, 2014. Euro Pacific Capital, Inc. is a qualified Principal American Liaison (“PAL”) and has submitted a Letter of Introduction for Graphene 3D in accordance with the standards for trading on OTCQB.

## **1.13 OPERATING SEGMENTS**

The Company operates in one reportable segment – the development and manufacturing of graphene-enhanced materials for 3D printing. Substantially all of the Company’s revenue was generated in the U.S. and all capital assets are located in the U.S.

## **1.14 FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS**

The fair value of the Company’s cash and cash equivalents, amounts receivable, and accounts payable and accrued liabilities approximate carrying value which is the amount recorded on the statement of financial position due to their short-term nature.

### *Credit risk*

Credit risk is the risk of financial loss to the Company if counter-party to a financial instrument fails to meet its contractual obligations. The Company manages credit risk by investing its cash and cash equivalents with a large United States and Canadian chartered banks. The Company manages credit risk for trade and other receivables through established credit monitoring activities. As at February 28, 2018, the Company’s maximum exposure to credit risk is the carrying value of cash and cash equivalents and accounts receivable.

### *Interest rate risk*

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Financial assets and liabilities with variable interest rates expose the Company to interest rate risk with respect to its cash flow. As at February 28, 2018, the Company is not exposed to significant interest rate risk.

### *Currency risk*

The Company has transactions internationally and is exposed to foreign exchange risk from the Canadian Dollar. Foreign exchange risk arises from financing and purchase transactions that are denominated in currency other than the US Dollar, which is the functional currency of the Company. As at February 28, 2018 the Company held \$322,671 in Canadian dollar cash and cash equivalents. A 10% increase or decrease in the Canadian dollar would increase or decrease comprehensive income by \$32,000.

### *Liquidity risk*

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company manages liquidity risk through the management of its capital structure and financial leverage as outlined above. As at February 28, 2018, the Company has cash and cash equivalents of \$689,999 and a working capital surplus of \$898,967. However, the Company has an accumulated deficit of \$8,630,849. The continuation of the Company depends upon the support of its lenders and equity investors, which cannot be assured.

## **APPROVAL**

The Board of Directors of Graphene has approved the disclosure contained in this MD&A. A copy of this MD&A will be provided to anyone who requests it.

## **ADDITIONAL INFORMATION**

Additional information related to Graphene is on SEDAR at [www.sedar.com](http://www.sedar.com) and the Company’s website <http://www.graphene3dlab.com>.