



ALABAMA GRAPHITE CORP



FOR IMMEDIATE RELEASE

Independent Test Results: Alabama Graphite Corp. Succeeds in Producing High- Performance Conductivity-Enhancement Graphite for Lithium-ion Batteries

*The Energy Graphite™ Company
Sourced and Manufactured in the United States of America*

TORONTO, CANADA — (March 28, 2017) — [Alabama Graphite Corp.](#) (“AGC” or the “Company”) (TSX-V:[CSPG](#)) (OTCQB:[CSPGF](#)) (FRANKFURT:[IAG](#)) is pleased to provide the following independent results from downstream four-terminal sensing (“4T sensing”) resistivity testing of its 100% sourced-in-USA and manufactured-in-USA ultra-high-purity, natural high-conductivity enhanced graphite battery-ready product, **Delaminated Expanded Graphite** (“DEXDG”) for lithium-ion (“Li-ion”) battery cathode applications. AGC’s DEXDG’s purity is ≥ 99.9999 Carbon total percentage by weight (“wt% C”). When the Company produces its core **Coated Spherical Purified Graphite** (“CSPG”) product — engineered for use in lithium-ion battery anodes — the resultant byproduct is high-purity **Purified Micronized Graphite** (“PMG”). The DEXDG product is ultimately produced from the PMG byproduct material, but both products are high-value battery conductivity-enhancement materials. Management believes that AGC holds the potential for 100% of its run-of-mine (“ROM”) graphite material to be effectively converted into high-performance, value-added battery-ready materials.

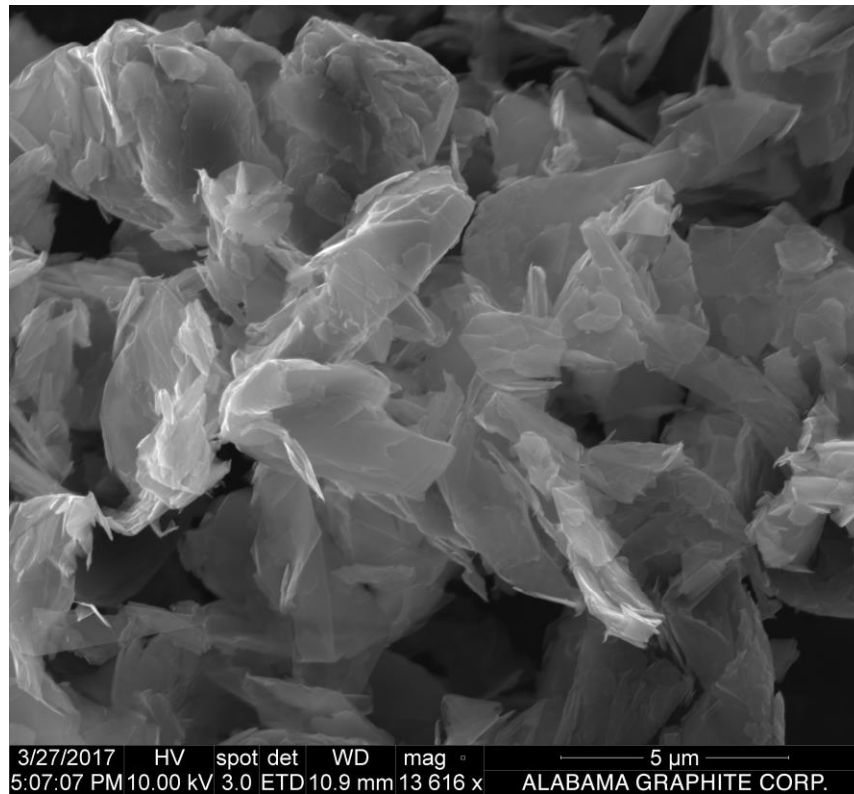


FIGURE 1: A scanning electron microscope (“SEM”) image of AGC’s Delaminated Expanded Graphite (DEXDG) conductivity-enhancement material for Li-ion battery cathode applications. To view, please click on the following link: <http://LINK-FORTHCOMING-FROM-MARKETWIRED.jpg>

In preliminary electrical conductivity testing, AGC’s DEXDG conductivity-enhancement diluent product significantly outperformed TIMCAL TIMREX® KS4 premium primary synthetic graphite and Superior Graphite’s premium-quality natural flake graphite, both commercially available conductivity-enhancement products. DEXDG is a form of processed natural crystalline flake graphite with improved electrical conductivity in electrode matrixes for Li-ion (secondary or rechargeable), lithium (primary or non-rechargeable) and alkaline battery cells. Additionally, DEXDG is preferable to conventional air-milled flake and/or premium-quality synthetic graphite when higher conductivity properties are desired, such as applications with high discharge rates.

AGC’s graphite is sourced from its flagship, 100%-owned Coosa Graphite Project — located in Coosa County, Alabama, USA — and is purified via the Company’s propriety, low-temperature thermal purification process. AGC’s environmentally responsible and sustainable graphite purification process does not utilize acids that are commonly regarded as dangerous and environmentally harmful (*e.g. hydrofluoric acid — as is commonly used in Chinese graphite production* [source: Benchmark Mineral Intelligence, 2017] — *hydrochloric acid, sulfuric acid, nitric acids, or alkali roasting, caustic-soda roasting, etc.*), nor does the process require copious amounts of scarce, clean water or costly, energy-intensive high-temperature thermal upgrading. Please refer to the Company’s [February 17, 2017](#) announcement, ‘[Alabama Graphite Corp. Achieves 99.99997% Graphite Purity via Proprietary, Environmentally Responsible and Sustainable Purification Process; Exceeds Nuclear Graphite Purity Requirements.](#)’

CONDUCTIVITY-ENHANCEMENT GRAPHITE

Derived from **Expanded Graphite** (“EXDG”), DEXDG is manufactured from purified flake graphite produced via AGC’s specialty secondary-processing technology. Due to its superior performance in batteries as a conductivity enhancement diluent, DEXDG is preferred over competing grades of flake and costlier and environmentally harsh synthetic graphite currently being used for these applications.

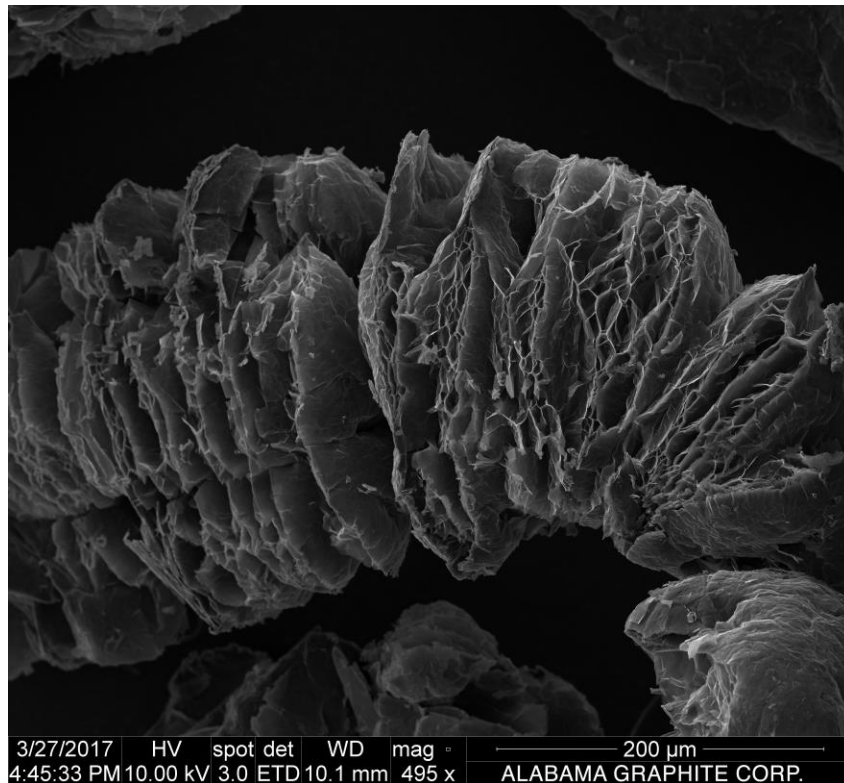


FIGURE 2: A Scanning Electron Microscope (SEM) image of AGC’s Expanded Graphite (EXDG), which is the feedstock to produce the Company’s Delaminated Expanded Graphite (DEXDG) conductivity-enhancement material for Li-ion battery cathode applications. To view, please click on the following link: <http://LINK-FORTHCOMING-FROM-MARKETWIRED.jpg>

PMG and DEXDG are used as conductivity enhancement additives in secondary (rechargeable) Li-ion batteries, primary (non-rechargeable) lithium batteries and conventional alkaline batteries. AGC currently anticipates expanding its planned secondary-processed, high-performance battery-ready product line to include DEXDG high-conductivity enhanced graphite products, in addition to PMG and the Company’s core product, [CSPG](#) — identified by the [ULTRACSPG™](#) trademark, the very first trademarked sourced-in-USA and manufactured-in-USA natural battery-ready graphite for use in Li-ion batteries. Please refer to the Company’s [November 30, 2015](#) announcement, [‘Alabama Graphite Corp. Announces Positive Preliminary Economic Assessment \(“PEA”\) for Coosa Graphite Project in Coosa County, Alabama, USA; Files Completed PEA NI 43-101 Technical Report’](#) for more information.

Note: A Preliminary Economic Assessment (PEA) is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the preliminary economic assessment will be realized. Inferred Mineral Resources represent material that is considered too speculative to be included in economic evaluations. Additional trenching and/or drilling will be required to convert Inferred Mineral Resources to Measured or Indicated Mineral Resources. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve.

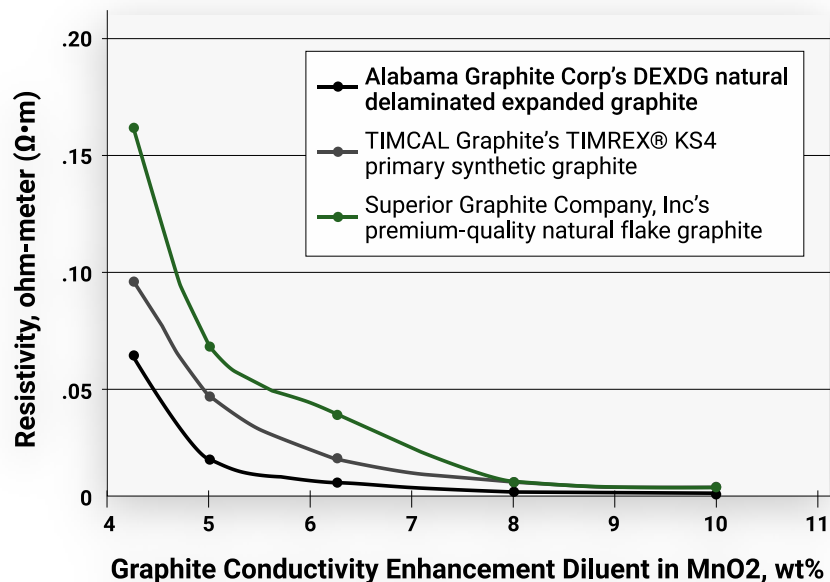
DEXDG particles are not spherical by design. Instead, they are sheet-like, twisted, torn up, with multiple breaks on the surface. The more breaks, the more contact points, the higher the resultant in-matrix conductivity. It is customary to not assemble a battery for the initial assessment of performance of graphite conductivity enhancement diluent. Rather, graphite is blended with a targeted active material and confined under unidirectional load into a cylindrical pellet, whose electrical resistivity is determined by a four-point method and is measured in ohms with a milliohmmeter or a Kelvin bridge. 4T-sensing is also known as Kelvin sensing.

The 4T-sensing resistivity testing method is an electrical impedance measuring technique that uses separate pairs of current-carrying and voltage-sensing electrodes to make more accurate measurements than the simpler and more usual two-terminal sensing (“2T sensing”). Separation of current and voltage electrodes eliminates the lead and contact resistance from the measurement. This is an advantage for precise measurement of low-resistance values.

ELECTRICAL RESISTIVITY TEST RESULTS

AGC was able to achieve a sub-10-micron (“ μm ”) size DEXG of a $D50 = 7.6 \mu\text{m}$ conductivity enhancement material for its preliminary 4T-sensing resistivity testing.

FIGURE 3: 4T-Sensing Resistivity Test Results of AGC’s DEXDG vs. Competitive Products



In Figure 3, the vertical line (*or the 'Y' axis*) represents the electrical resistivity in ohms (“Ω”), measured in the International System of Units (“SI Units”) base units for the physical measurement of length, the ohm-meter (“Ω·m”). An ohm is a standardized unit to measure electrical resistance. The horizontal line (*or the 'X' axis*) represents the addition of conductivity enhancement graphite in manganese dioxide (“MnO₂”) total percentage by weight (“wt%”). Ideally, one wants the lowest amount of resistivity with the least amount of conductivity enhancement graphite.

As indicated in Figure 3 above and Table 1 below, AGC’s DEXDG features lower resistivity (*meaning, higher conductivity*) in MnO₂/electrolytic manganese dioxide (“EMD”) electrode matrixes across all practical percentage point additions, compared to commercially available grades of both natural and synthetic graphite, produced by Superior Graphite and TIMCAL respectively. AGC achieved a low resistivity measurement of .0533 Ω·m, while TIMCAL’s TIMREX® KS4 premium synthetic graphite measured .0991 Ω·m and Superior Graphite’s premium-quality natural flake graphite measured .1524 Ω·m. Electrical resistivity (*also known as resistivity, specific electrical resistance, or volume resistivity*) is an intrinsic property that quantifies how strongly a given material opposes the flow of electric current. A low resistivity indicates a material that readily allows the flow of electric current. Electrical conductivity or specific conductance is the reciprocal of electrical resistivity, and measures a material’s ability to conduct an electric current.

TABLE 1: 4T-Sensing Resistivity Test Results of AGC’s DEXDG vs. Competitive Products

Conductivity Enhancement Material	Resistivity Measurement (Ω·m)	Graphite Conductivity Enhancement Diluent in MnO₂ (wt%)
Alabama Graphite Corp.’s DEXDG natural delaminated expanded graphite	.0533 Ω·m	4.25%
TIMCAL Graphite’s TIMREX® KS4 primary synthetic graphite (<i>by Imreys Graphite & Carbon</i>)	.0991 Ω·m	4.25%
Superior Graphite Company, Inc.’s premium-quality natural flake graphite	.1524 Ω·m	4.25%

A lower resistivity number is desirable; the lower the resistivity measurement, the higher the electrical conductivity.

Cathode electrochemical configurations, such as lithium nickel cobalt oxide (“LiNiCoO₂”) like the conventional cylindrical 18650 Li-ion battery cell, typically employs 4 wt% finely sized non-spherical graphite (PMG and/or DEXDG) and typically 4 wt% acetylene/ethyne-type carbon black as a conductivity-enhancement diluent. MnO₂ cathodes utilize 4.25 to 8 wt% DEXDG as a conductivity enhancement diluent. Carbon black and DEXDG are added to the cathodes in both

primary and secondary lithium cells. In Li-ion batteries that use graphite as an anode, the anode resistance is lowered by use of these additives.

President and Chief Executive Officer, Donald Baxter commented, *“We are very pleased with the independent test results of our American-sourced-and-manufactured DEXDG. In short, AGC has demonstrated a substantially higher level of electrical conductivity while using less of our DEXDG conductivity enhancement, compared to competing commercial natural or synthetic grades. In terms of MnO₂ cathode battery chemistries, by needing less graphite conductivity enhancement diluent, one can have more manganese dioxide in the battery and, therefore, achieve more power. Li-ion batteries are similar in that carbon black and DEXDG products are added to both electrodes to reduce the electrical resistance. With all battery chemistries, there are very finite size parameters — in other words, there’s a very limited amount of room to pack in all the battery’s constituents. As such, it is desirable to use less of the conductivity-enhancement graphite in order to maximize the battery’s high power densities. With AGC’s DEXDG, we have demonstrated that this can be achieved.*

“AGC’s core focus has been and will continue to be our CSPG product with a primary focus on United States Department of Defense (“DoD”) Li-ion battery manufacturers; however, we have also had considerable interest from numerous DoD and non-DoD battery manufacturers regarding our conductivity-enhancement graphite products,” said Mr. Baxter. *“We look forward to addressing our DEXDG products in the Company’s forthcoming Feasibility Study.”*

Tyler Dinwoodie, Executive Vice President stated, *“When we manufacture our DEXDG conductivity enhancement products, it is critical to understand that our feedstock is off-spec byproduct material from our CSPG production. AGC is the only known graphite development company that has demonstrated that 100% of its primary-processed graphite material can be converted into specialty secondary-processed, high-performance, high-value battery materials. This means there is no waste. Aside from our US DoD focused strategy and our proprietary environmentally sustainable purification process, our business model is unique in that we will not sell any conventional graphite concentrate, but rather only produce specialty battery-ready graphite products.”*

Note: Although AGC must first complete a positive Feasibility Study, secure the required financing and then construct a mine and downstream CSPG processing and production facilities, it should be further noted that no supply agreement exists today with respect to US DoD Li-ion battery projects. AGC has also received significant and increasing interest from several US government research laboratories working to develop next-generation energy and materials technologies, using domestically sourced natural flake graphite from the contiguous United States (excluding Hawaii and Alaska). Please refer to the Company’s [January 10, 2017](#) announcement, *‘Alabama Graphite Corp. Announces Multiple Shipments of American Sourced and Manufactured CSPG Samples to United States Department of Defense (DoD) Lithium-ion Battery Solutions Providers’*, its [August 15, 2016](#) announcement, *‘Alabama Graphite Corp. Announces Multi-Kilogram Shipment of American Sourced and Manufactured Samples to United States Department of Defense (DoD) Lithium-ion Battery Manufacturer’*, and its [June 23, 2016](#) announcement, *‘Alabama Graphite Corp. Announces Shipment of American Sourced and Manufactured CSPG Samples to United States Department of Defense (DoD) Lithium-ion Battery Solutions Provider’*.

CONDUCTIVITY-ENHANCEMENT GRAPHITE MARKETS

Alkaline batteries account for 80% of manufactured batteries in the United States and over 10 billion individual units produced worldwide. In Japan, alkaline batteries account for 46% of all primary battery sales. In Switzerland, alkaline batteries account for 68%, in the UK 60% and in

the EU 47% of all battery sales including secondary batteries. The global market for specialty conductivity-enhancement graphite is estimated at approximately 18,000 tonnes and is forecasted to grow considerably as battery manufacturers — regardless of the battery chemistry — look to improve battery performance. TIMCAL TIMREX® KS4 primary synthetic graphite sells more than USD\$18,000 per tonne, while natural graphite conductivity enhancement diluents sell between USD\$4,000 to \$5,000.

Readers are cautioned that AGC is not yet in production and there is no guarantee that the Company will advance to full-scale production. If, following the completion of a Feasibility Study — which has not yet been commenced — AGC is able to advance the Coosa Graphite Project into production, the resulting graphite would be sourced from within the contiguous United States of America.

On behalf of the Board of Directors of
ALABAMA GRAPHITE CORP.

Donald K. D. Baxter, P.Eng.

President, Chief Executive Officer and Executive Director

QUALIFIED PERSON

Donald K. D. Baxter, P.Eng., President, Chief Executive Officer and Executive Director of Alabama Graphite Corp., is a Qualified Person as defined by National Instrument 43-101 (“N.I. 43-101”) guidelines, and has reviewed and approved the content of this news release.

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ABOUT ALABAMA GRAPHITE CORP.

[Alabama Graphite Corp.](#) is a Canadian-based flake graphite exploration and development company as well as an aspiring battery materials production and technology company. The Company operates through its wholly owned subsidiary, Alabama Graphite Company Inc. (*a company registered in the state of [Alabama](#)*). With an advancing flake graphite project in the United States of America, Alabama Graphite Corp intends to become a reliable, long-term U.S. supplier of specialty high-purity graphite products. A highly experienced team leads the Company with more than 100 years of combined graphite mining, graphite processing, specialty graphite products and applications, and graphite sales experience. Alabama Graphite Corp. is focused on the exploration and development of its flagship [Coosa Graphite Project](#) in Coosa County, Alabama, and its [Bama Mine Project](#) in Chilton County, Alabama as well the research and development of its proprietary manufacturing and technological processing process of battery materials.

Alabama Graphite Corp. holds a 100% interest in the mineral rights for these two U.S.-based graphite projects, which are both located on private land. The two projects encompass more than 43,000 acres and are located in a geopolitically stable, mining-friendly jurisdiction with significant historical production of crystalline flake graphite in the flake graphite belt of central Alabama, also known as the Alabama Graphite Belt (*source: U.S. Bureau of Mines*). A significant portion of the Alabama deposits are characterized by graphite-bearing material that is

oxidized and has been weathered into extremely soft rock. Both projects have infrastructure in place, are within close proximity to major highways, rail, power and water, and are approximately three hours (by truck or train) to the Port of Mobile, the Alabama Port Authority's deep-seawater port and the ninth largest port by tonnage in the United States (*source: U.S. Army Corps of Engineers/USACE*). The state of Alabama's hospitable climate allows for year-round mining operations and the world's largest marble quarry (which operates 24 hours a day, 365 days a year in Sylacauga, Alabama), is located within a 30-minute drive of the Coosa Graphite Project.

On [November 30, 2015](#), Alabama Graphite Corp. announced the results of PEA for the Coosa Graphite Project, indicating a potentially low-cost project with potential positive economics. Please refer to the Company's technical report titled "*Alabama Graphite Corp. Preliminary Economic Assessment (PEA) on the Coosa graphite Project, Alabama, USA*" dated November 27, 2015, prepared by independent engineering firms AGP Mining Consultants Inc. and Metal Mining Consultants Inc., and filed on SEDAR at www.sedar.com.

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Alabama Graphite Corp. is a proud member of the National Association of Advanced Technology Batteries International ("[NAATBatt International](#)"), a U.S.-based, not-for-profit trade association commercializing advanced electrochemical energy-storage technology for emerging, high-tech applications.

For further information and updates on the Company or to sign up for [Alabama Graphite Corp. News](#), please visit www.alabamagraphite.com or follow, like and subscribe to us on [Twitter](#), [Facebook](#), [YouTube](#), and [LinkedIn](#).

FORWARD-LOOKING STATEMENTS

This press release contains forward-looking information under applicable Canadian securities laws ("**forward-looking statements**"), which may include, without limitation, statements with respect to any potential relationships between the Company and any end users and/or the DoD. The forward-looking statements are based on the beliefs of management and reflect Alabama Graphite Corp.'s current expectations. When used in this press release, the words "estimate", "project", "belief", "anticipate", "intend", "expect", "plan", "predict", "may" or "should" and the negative of these words or such variations thereon or comparable terminology are intended to identify forward-looking statements. Such statements reflect the current view of Alabama Graphite Corp. with respect to risks and uncertainties that may cause actual results to differ materially from those contemplated in those forward-looking statements.

By their nature, forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or other future

events, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such factors include, among other things, the interpretation and actual results of current exploration activities; changes in project parameters as plans continue to be refined; future prices of graphite; possible variations in grade or recovery rates; failure of equipment or processes to operate as anticipated; the failure of contracted parties to perform; labor disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of exploration, as well as those factors disclosed in the Company's publicly filed documents. Forward-looking statements are also based on a number of assumptions, including that contracted parties provide goods and/or services on the agreed timeframes, that equipment necessary for exploration is available as scheduled and does not incur unforeseen breakdowns, that no labor shortages or delays are incurred, that plant and equipment function as specified, that no unusual geological or technical problems occur, and that laboratory and other related services are available and perform as contracted. Forward-looking statements are made based on management's beliefs, estimates and opinions on the date that statements are made and Alabama Graphite Corp. undertakes no obligation to update forward-looking statements (unless required by law) if these beliefs, estimates and opinions or other circumstances should change. Investors are cautioned against attributing undue certainty to forward-looking statements. Alabama Graphite Corp. cautions that the foregoing list of material factors and assumptions are not exhaustive. When relying on Alabama Graphite Corp. forward-looking statements to make decisions, investors and others should carefully consider the foregoing factors and assumptions and other uncertainties and potential events.

Alabama Graphite Corp. has also assumed that the material factors and assumptions will not cause any forward-looking statements to differ materially from actual results or events. However, the list of these factors and assumptions is not exhaustive and is subject to change and there can be no assurance that such assumptions will reflect the actual outcome of such items or factors.

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