



ALABAMA

GRAPHITE CORP



FOR IMMEDIATE RELEASE

Alabama Graphite Corp. Announces 99.999% Certified Graphite Purity in a Single Pass via Proprietary, Environmentally Sustainable Purification Process; Provides Complete Elemental Analysis

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

TORONTO, CANADA — (April 24, 2017) — [Alabama Graphite Corp.](#) (“AGC” or the “Company”) (TSX-V:[CSPG](#)) (OTCQB:[CSPGF](#)) (FRANKFURT:[1AG](#)) is pleased to announce that it has achieved 99.999% Carbon total percentage by weight (“wt% C”) purity from its graphite originating from its flagship, 100%-owned [Coosa Graphite Project](#) — located in Coosa County, [Alabama](#), USA — via the Company’s propriety, [low-temperature thermal purification process](#). This secondary-processed ultra-high-purity flake graphite serves as the feedstock to manufacture the Company’s 100% sourced-and-manufactured-in-USA [ULTRACSPG™](#) natural [Coated Spherical Purified Graphite](#) (“CSPG”) battery-ready graphite for use in lithium-ion (“Li-ion”) batteries.

It is important to note that AGC achieved the five nines (“5N”) 99.999% wt% C purity — *in a singular pass* — by further optimizing the Company’s exclusive purification process. AGC sent a multi-kilogram sample of its secondary-processed purified graphite for purity certification to a leading US-based independent laboratory that performs Glow Discharge Mass Spectrometry (“GDMS”) analysis on carbon. The name of the arm’s-length laboratory is being withheld for reasons of commercial confidentiality. GDMS is a mature, sophisticated and versatile technique for measuring purity, which is widely recognized for being the most precise determination of the concentration of mineral impurities in graphite. AGC’s graphite was extremely pure in that the amount of mineral impurities were below the limits of detection for a conventional Loss-on-

Ignition (“LOI”) test. The GDMS instrument used for testing AGC’s material is dedicated to certifying electronic semiconductor grade/nuclear grade graphite.

With regard to addressing the most stringent lithium-ion battery industry requirements for graphite purity, AGC’s CSPG product was determined to have negligibly low concentrations of elemental impurities, including: Iron (“Fe”), Chromium (“Cr”), Nickel (“Ni”), and Zinc (“Zn”) at less than 0.7 parts per million (“ppm”) combined (*please refer to Table 1 below for complete GDMS analysis*). For impurities, which are critical to advanced alkaline batteries, AGC’s battery-grade ultra-high-purity graphite featured very low levels of Molybdenum (“Mo”) at 1.5 ppm, Arsenic (“As”) at less than 0.05 ppm, Fe at 0.05 ppm, Vanadium (“V”) at less than 0.05 ppm, Copper (“Cu”) at 0.05 ppm, to name a few. When exposed to the corrosive battery electrolytes these impurities could leach out from the graphite, diffuse to the counter electrode, and act as battery poisons, potentially curtailing and/or compromising battery performance. Therefore, concentrations of certain critical elements should be kept as low as possible.

The advanced alkaline-battery industry requires its graphite to contain no more than the following concentrations of critical impurities: Fe <150 ppm; Mo <2 ppm; V <10 ppm, As <1 ppm, Cu <5 ppm, among other less critical impurities¹. AGC has demonstrated that concentrations of such critical impurities in the Company’s graphite are well below the industry threshold. Neither synthetic, nor natural graphite, currently being used by the battery industry, can be made as pure as AGC’s secondary-processed battery-grade ultra-high-purity graphite. Established battery manufacturers often have difficulties meeting the critical impurity requirements since their graphite refining technologies, and/or raw materials that they use, are not as advanced as AGC’s ultra-high-purity graphite.

¹ Nardi, J.C. (1999). US Patent PCT/US1999/000270. [*Alkaline cell having a cathode incorporating expanded graphite*](#). Washington DC: U.S. Patent and Trademark Office. Eveready Battery Company, Inc. Publication [WO 1999034673 A1](#) 1/6.

Additionally, AGC’s environmentally responsible and sustainable graphite purification process does not utilize caustic chemicals or harsh acids that are commonly regarded as dangerous and environmentally harmful (*e.g. hydrofluoric acid — as is commonly used in Chinese graphite production — hydrochloric acid, sulfuric acid, nitric acids, or alkali roasting, caustic-soda roasting, etc.*), nor does the process require copious amounts of 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’](#)

AGC aspires to be an American-sourced-and-manufactured battery-graphite supplier and is confident that its ultra-high-purity graphite holds the potential to make a better Li-ion battery; specifically, by allowing for superior electrochemical performance in Li-ion battery anodes compared to ≥ 99.95 -wt%-C-pure anode material. Application of ultra-high-purity graphite is expected to result in the reduced rate of self-discharge reactions and consequently, in longer calendar life batteries. As such, AGC intends to conduct electrochemical tests on various purities in anodes, including the Company’s ultra-high-purity material, to demonstrate the correlation between higher purity battery-ready anode graphite and superior electrochemical performance.

Further, AGC intends to commence studies on the role of mineral impurities in graphite and their long-term effect on performance in Li-ion batteries, particularly with respect to their long-term cycling performance. AGC believes it will eventually be able to easily, safely, sustainably, and responsibly produce an ultra-high-purity graphite, and that there may be potential additional benefits to its use in CSPG for use in Li-ion batteries, such as higher capacity, increased power, longer-lasting (increased calendar life), and safer batteries.

Donald Baxter, President and Chief Executive Officer commented, *“We are pleased that we were able to have our 99.999 wt% C ultra-high-purity graphite independently certified and thoroughly analyzed via GDMS by a leading US laboratory. The importance of achieving 5N purity in a single pass via AGC’s environmentally sustainable process cannot be emphasized enough, in terms of potential cost effectiveness, technical feasibility, product efficiency and quality, with a comparatively minimal environmental footprint. Further, the accompanying elemental/mineral impurities analysis on more than 75 elements represents the most comprehensive report to date on AGC’s purified graphite material — our feedstock to produce our sourced-and-made-in-USA ULTRACSPG™ battery-ready graphite. I am especially pleased to see that AGC’s elemental impurities are often below the detection limit of a GDMS technique. Batteries that utilize such an ultra-high-purity natural anode graphite will likely be safer and run for longer.”*

TABLE 1: GDMS ANALYSIS OF AGC’S COOSA PURIFIED GRAPHITE CONCENTRATE

The following are the results of the comprehensive GDMS analysis performed on AGC’s Coosa graphite concentrate after undergoing the Company’s proprietary, low-temperature thermal purification process:

Trace Mineral Impurities / Key Elements	Concentration Parts Per Million (“PPM”) Wt %
Ag (Silver)	<0.05
Al (Aluminum)	0.14
As (Arsenic)	<0.05
Au (Gold)	<0.1
B (Boron)	2.5
Ba (Barium)	<0.05
Be (Beryllium)	<0.01
Bi (Bismuth)	<0.05
Br (Bromine)	<0.5
C (Carbon)	Matrix
Ca (Calcium)	<0.5
Cd (Cadmium)	<0.5
Ce (Cerium)	<0.5
Cl (Chlorine)	2.9
Co (Cobalt)	<0.05

Cr (Chromium)	<0.5
Cs (Caesium)	<0.5
Cu (Copper)	<0.05
Dy (Dysprosium)	<0.05
Er (Erbium)	<0.05
Eu (Europium)	<0.1
F (Fluorine)	≤5
Fe (Iron)	0.05
Ga (Gallium)	<0.05
Gd (Gadolinium)	<0.05
Ge (Germanium)	<0.1
Hf (Hafnium)	<0.05
Hg (Mercury)	<0.1
Ho (Holmium)	<0.05
I (Iodine)	≤100
In (Indium)	binder
Ir (Iridium)	<0.01
K (Potassium)	<0.5
La (Lanthanum)	≤5
Li (Lithium)	<0.01
Lu (Lutetium)	<0.05
Mg (Magnesium)	<0.1
Mn (Manganese)	<0.05
Mo (Molybdenum)	1.5
N (Nitrogen)	—
Na (Sodium)	0.17
Nb (Niobium)	<0.05
Nd (Neodymium)	<0.05
Ni (Nickel)	<0.05
O (Oxygen)	—
Os (Osmium)	<0.01
P (Phosphorus)	<0.05
Pb (Lead)	<0.1
Pd (Palladium)	<0.05
Pr (Praseodymium)	<0.1
Pt (Platinum)	<0.05
Rb (Rubidium)	<0.05
Re (Rhenium)	<0.01
Rh (Rhodium)	<0.05
Ru (Ruthenium)	<0.05

S (Sulfur)	0.53
Sb (Antimony)	<0.05
Sc (Scandium)	<0.01
Se (Selenium)	<0.5
Si (Silicon)	6.7
Sm (Samarium)	<0.05
Sn (Tin)	<0.1
Sr (Strontium)	<0.05
Ta (Tantalum)	<50
Tb (Terbium)	<0.05
Te (Tellurium)	<0.05
Th (Thorium)	<0.01
Ti (Titanium)	<0.05
Tl (Thallium)	<0.05
Tm (Thulium)	<0.05
U (Uranium)	<0.01
W (Tungsten)	0.08
V (Vanadium)	<0.05
Y (Yttrium)	<0.05
Yb (Ytterbium)	<0.05
Zn (Zinc)	<0.1
Zr (Zirconium)	<0.05

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

Donald K. D. Baxter, P.Eng.

President, Chief Executive Officer and Executive Director

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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.

ABOUT ALABAMA GRAPHITE CORP.

[Alabama Graphite Corp.](http://www.alabamagraphite.com) 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

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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.

Note: a preliminary economic assessment 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.*

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.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

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