

# Alabama Graphite Corp. Announces Positive, Independent Battery-Ready Graphite (CSPG) Electrochemical Test Results from Physical Sciences Inc

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## Demonstrated Stable Cycling Over 80 Cycles

- The Energy GraphiteTM Company
- Sourced and Manufactured in the United States of America

TORONTO, May 8, 2017 - Alabama Graphite Corp. ("AGC" or the "Company") (TSX VENTURE:CSPG) (OTCQB:CSPGF) (FRANKFURT:1AG) is pleased to announce Physical Sciences Inc. ("PSI") of Andover, Massachusetts, USA has achieved positive, independent electrochemical test results from the Company's 100% sourced-and-manufactured-in-USA ULTRACSPG®; natural Coated Spherical Purified Graphite ("CSPG"). Additionally, PSI witnessed stable cycling over more than 80 cycles, demonstrating the electrochemical stability of the Company's CSPG.

AGC's ULTRACSPG - the first trademarked sourced-in-America, battery-ready graphite for use in lithium-ion ("Li-ion") batteries - is sourced and manufactured exclusively from the Company's flagship Coosa Graphite Project property, located in Coosa County, Alabama, USA. All requisite downstream secondary processing to manufacture AGC's CSPG was conducted in the contiguous USA.

PSI is an internationally known and well-respected research and development company for both the United States Department of Defense "DoD" and United States Department of Energy ("DOE"). Founded in 1973, PSI has received numerous grants and funding from the DoD and DOE, and has both government and corporate clients. PSI has provided AGC with an independent evaluation and qualification of the Company's CSPG Li-ion battery anode material.

## TEST RESULTS

In Q4 2016, AGC conveyed a sample of its D50 15-micron ("μm") CSPG to PSI for electrochemical testing. Led by Dr. Christopher M. Lang, Principal Research Scientist and Area Manager, Material and Energy Technologies for PSI, initial testing of AGC's CSPG anode material was performed by preparing anode electrodes on traditional copper ("Cu") foil at a loading of ~7mg/cm<sup>2</sup> and 92% active material. Graphite anodes were first cycled versus lithium ("Li") metal in coin cells at a C-rate of C/10, between 5 millivolts ("mV") to 1.0 volt ("V"). After conditioning cycles, the half-cells repeatedly delivered discharge capacities of 350 milliampere hours per gram ("mAh/g").

Following the positive half-cell electrochemical results, PSI proceeded to larger-scale testing. CSPG anodes with the same formulation were cast on a novel proprietary current collector PSI is developing for these tests. The prepared CSPG anodes were integrated into pouch-sized (300 mAh) full cells to investigate long-term cycling efficiency. The capacity the cells manufactured with AGC's CSPG anodes deliver is consistent with that measured for pouch cells built with a MCMB anode. This indicates the anodes manufactured with CSPG are performing as expected, based on the half-cell data. On continuing cycling of the full cells made with CSPG PSI witnessed stable cycling over more than 80 cycles with cycling ongoing. PSI plans additional testing of pouch cells constructed with anodes prepared using AGC's CSPG at the same scale in the coming months.

*Note: A C-rate is a measure of the rate at which a battery is discharged relative to its maximum capacity. A C-rate of C/10 means that the necessary current is applied or drained from the battery to completely charge or discharge it in 10 hours, which is a low discharge rate.*

Upon further successful validation by PSI, the CSPG battery-ready anode graphite will be a candidate for use in future cell designs, particularly for DoD- and DoE-funded projects.

These most recent electrochemical test results from PSI further validate previous testing of AGC's CSPG versus synthetic graphite in Li-ion battery testing. Please refer to the Company's January 19, 2016 announcement, '*Independent Test Results: Alabama Graphite Corp. Succeeds in Producing High-Performance Coated Spherical Purified Graphite (CSPG) for Lithium-ion Batteries*', in which US-based independent testing indicated AGC's CSPG achieved first cycling efficiencies of 94.91% (Irreversible Capacity Loss of 5.09%; a ~95% efficient battery) versus commercial synthetic graphite at 93.94% (Irreversible Capacity Loss of 6.06%; a ~94% efficient battery).

President and Chief Executive Officer, Donald Baxter commented, *"These positive electrochemical test results are fantastic news for AGC. As with Oak Ridge National Laboratory's independent electrochemical test results (per the Company's April 10, 2017 announcement entitled, '[Alabama Graphite Corp. Announces Research Partnership with United States Department of Energy's Oak Ridge National Laboratory; Receives Positive Preliminary Battery-Ready Graphite Test Results](#)'), AGC's battery-ready CSPG has again demonstrated its excellent high performance in Li-ion batteries and its superiority to premium-quality, but environmentally harsh and significantly more expensive synthetic graphite."*

*"PSI has achieved high numbers of reversible capacity as well as stable cycling with CSPG versus the laboratory's synthetic graphite control. We are extremely pleased to report that PSI is satisfied with AGC's battery-ready material and has already moved onto the next stage of testing, which consists of making full cells with our CSPG in a prismatic format."*

For more information about AGC's specialty, secondary processing to produce its CSPG please refer to the June 2016 comprehensive independent report, '*Alabama Graphite's Coated Spherical Purified Graphite for the Lithium-ion Battery Industry*', researched and prepared by Dr. Gareth P. Hatch, CEng, FIMMM, FIET, President of Innovation Metals Corp., Founding Principal of Technology Metals Research, LLC, and Independent Director of the Company.

#### AGC's COMMITMENT TO ENVIRONMENTAL SUSTAINABILITY

AGC's graphite is purified via the Company's proprietary, low-temperature thermal purification process. 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](#)'.

A technical data sheet ("TDS") for AGC's ULTRACSPG battery-ready anode graphite is available at [www.alabamagraphite.com](http://www.alabamagraphite.com).

AGC will continue to update shareholders and the market in a timely fashion of further material developments with respect to this and other potential American-based end users, as we are able to disclose. Please note, certain potential end users preclude the Company from announcing any aspect of its relationship and activities, ranging from the execution of an NDA to the shipment(s) of sample material(s).

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](#)

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[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 PHYSICAL SCIENCES INC.

Physical Sciences Inc. ("PSI") provides contract research and development services in a variety of technical areas to both government and commercial customers. Established in 1973, PSI has a highly interdisciplinary staff with advanced degrees in chemistry, biology, physics and applied physics, electrical, aeronautical, and mechanical engineering, and materials science. This diverse staff allows PSI to apply emerging science to important problems and continue to grow and develop novel enabling technologies across a range of markets.

For more information, please visit <http://www.psicorp.com>.

#### ABOUT ALABAMA [Graphite Corp.](#) (AGC)

[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](http://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

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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](http://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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