Applied Minerals, Inc. Receives Grant to Continue the Development of Halloysite-Derived Silicon for Use in Lithium-Ion Batteries

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EUREKA, October 3, 2022 - Applied Minerals Inc. (the "Company" or "AMI") (OTC:AMNL), a leading producer of halloysite clay products under the DRAGONITE trade name for high-value industrial applications, is pleased to announced that it has received a U.S. DOE Phase II, Release 2 STTR Award to continue the development of the commercialization of halloysite clay-derived porous silicon as a replacement for graphite to increase the energy density of lithium-ion batteries. The award amount is $1,150,000. Brigham Young University ("BYU") and Argonne National Laboratory ("ANL") are AMI's partners for the Phase II work. The Phase II project has a term of two years.

The Phase II award will be used to (i) optimize and scale-up the process developed by BYU to synthesize porous silicon from halloysite, (ii) test halloysite-derived silicon powder formulations with prospective partners and customers, (iii) transfer the halloysite-derived silicon technology to AMI, (iv) perform an extensive techno-econometric analysis as part of the development of a commercialization plan, and (v) generate and protect intellectual property. ANL will provide application-testing support for the project. As part of the Phase II application, AMI entered into a license agreement with BYU related to its development of a process to synthesize porous silicon from halloysite clay.

The Phase II application process required, among other things, a market analysis by a third-party consultant funded under AMI's Phase I award. According to the analysis, the total annual demand for energy storage capacity provided by lithium-ion batteries is expected to grow from approximately 300 Gwh to 2,500 Gwh by 2030. The graphite anode represents approximately 22% of the mass of a lithium-ion battery cell. Assuming a 10% - 50% replacement rate for graphite, the total potential demand for silicon-derived halloysite could be 875 million lbs. - 4 billion lbs. annually by 2030. Silicon has been shown to have 10x the theoretical storage capacity of graphite. The price of synthetic graphite can exceed $20,000 per ton.

The Company will continue to search for an industry partner to assist it in accelerating the commercialization of its halloysite-derived silicon project. Additionally, AMI believes an attractive commercial opportunity exists for the use of halloysite clay as a coating for the separator of a lithium-ion battery to improve both conductivity and thermal stability. A large, high-purity source of halloysite clay, such as that found at the Dragon Mine, is critical for the commercialization of halloysite as a lithium-ion battery mineral.

About Applied Minerals, Inc.

Applied Minerals Inc., the owner of the Dragon Mine property in Eureka, UT, is a producer of halloysite. Halloysite is aluminosilicate clay that possesses a naturally formed tubular structure. The Company markets its halloysite clay into a number of high-value application areas including, but not limited, catalysts and molecular sieves, polymer reinforcement, flame retardant additives, controlled release, construction products and lithium-ion battery minerals. Applied Minerals sells its halloysite products under the DRAGONITE trade name.

Safe Harbor Statements

The following are safe harbor statements under the Private Securities Litigation Reform Act of 1995 for Applied Minerals Inc. Some statements contained or implied in this news release may be considered forward-looking statements, which by their nature are uncertain. Consequently, actual results could materially differ. For more detailed information concerning how risks and uncertainties could affect the Company's revenue pipeline, please refer to Applied Minerals' most recent annual and quarterly reports filed with the SEC. The Company assumes no obligation to update any forward-looking information.

Investor Relations Contact:

Christopher Carney
President and CEO
info@appliedminerals.com

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