Applied Minerals Continues Development of Silica and Silicon Anode Material for Lithium-Ion Batteries

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NEW YORK, April 29, 2020 - Applied Minerals Inc. (the "Company" or "Applied Minerals") (OTCQB:AMNL), a leading global producer of halloysite clay, under the trade name DRAGONITE, and advanced natural iron oxides, under the trade name AMIRON, announced that will dedicate additional resources toward the commercialization of silica and silicon anode material derived from halloysite clay for use in lithium-ion battery applications.

Published research has demonstrated nano-scale silica and nano-porous silicon anode material synthesized from halloysite clay significantly increases the energy storage capacity and cyclability of lithium-ion batteries. Silica and silicon-based anode material synthesized from halloysite outperforms standard silica and silicon. One objective of the battery industry is to identify a way to significantly increase the percentage of graphite (a widely used anode material) replaced by silica (~10%) and silicon (~5%) as the anode material of a lithium-ion battery. Achieving this objective would accelerate the development of the next generation of lithium-ion batteries for electrical vehicles, consumer electronics and energy grid storage.

Silica and silicon have significantly greater lithium-ion storage capacities than graphite and are the reason why battery manufacturers of electric vehicles desire to replace as much graphite as possible with silica or silicon. However, current replacement rates have been limited to 10% and 5%, respectively, because upon lithiation both standard silica and silicon experience significant volumetric expansion during charging cycles. This volumetric expansion creates stresses in the anode after the first few charging cycles, which in turn produce mechanical failures that result in a significant drop-off in battery performance.

Third-party studies have shown that, over a limited number of charging cycles, halloysite-derived silica and silicon anode material experiences a significant reduction in volumetric expansion and the associated degradation in battery performance. With additional research and development resources dedicated to building upon previous research, the Company believes the commercialization of silica and silicon anode material in lithium-ion batteries is achievable. Management is collaborating with a major global lithium-ion battery producer in the U.S., a research institute in Japan and recently began working with Brigham Young University to achieve this commercialization goal. The Company continues to work with its consultant, Greg Nielson, Ph.D., on its lithium-ion battery strategy.

The current estimated market size of graphite anode material used in electric vehicle batteries is approximately 250,000 tons per annum. This market is currently valued at $750 million - $1.0 billion. The Company believes a significant portion of this graphite anode material can eventually be replaced with halloysite-derived silica and silicon.

About Applied Minerals

Applied Minerals is the leading producer of halloysite clay and advanced natural iron oxide solutions from its wholly owned Dragon Mine property in Utah. Halloysite is aluminosilicate clay that forms naturally occurring nanotubes. In addition to serving the traditional halloysite markets for use in technical ceramics and catalytic applications, the Company has developed niche applications that benefit from the tubular morphology of its halloysite. These applications include carriers of active ingredients in paints, coatings and building materials, environmental remediation, agricultural applications and high-performance additives and fillers for plastic composites. Applied Minerals markets its halloysite products under the DRAGONITE™ trade name.

From its Dragon Mine property, the Company also produces a range of ultra-pure natural iron oxides consisting of hematite and goethite. Combining ultra-high purity and consistent quality, the inherent properties of the iron oxide from the Dragon Mine allow for a wide range of end uses in pigment and

technical applications. Applied Minerals markets its comprehensive line of advanced natural iron oxide pigments under the AMIRON™ trade name. Additional information on the Company can be found at www.appliedminerals.com and www.AMIRONoxides.com.

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.

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