

Stillwater Critical Minerals Partners with Cornell University on Hydrometallurgy and Carbon Sequestration Initiatives for its Stillwater West Ni-PGE-Cu-Co + Au Project in Montana, USA

Company to Participate in US Department of Energy's MINER Kickoff Event in Austin, Texas

February 14, 2023 – Vancouver, BC – Stillwater Critical Minerals (TSX.V: PGE; OTCQB: PGEZF; FSE: 5D32) (the “Company” or “SWCM”) is pleased to announce it has partnered with Cornell University under the MINER program, funded by the U.S. Department of Energy (“DOE”) via the Advanced Research Projects Agency program (“ARPA-E”). Test work, led by Dr. Greeshma Gadikota, will focus on novel hydrometallurgical techniques and carbon capture, with the objective of increasing the extraction of critical minerals using reduced energy for a carbon negative mining future.

Cornell University is the recipient of a federal grant from ARPA-E as part of a program entitled “Supercritical CO₂-Based Mining for Carbon-Negative Critical Mineral Recovery”. Cornell University seeks to advance CO₂-sourced hydrometallurgical pathways for recovering energy critical metals, including nickel, cobalt, platinum and palladium, coupled to the carbon mineralization of calcium and magnesium components to produce calcium and magnesium carbonates. Novel functional materials for the selective capture and recovery of these energy critical metals will be developed. Various sources for CO₂ will be investigated including air for metal recovery coupled to carbon mineralization. These approaches will be specifically tuned to the mineralogy of the Company’s Stillwater West project in Montana.



Dr. Greeshma Gadikota

Dr. Greeshma Gadikota stated, “The U.S. imports the great majority of its energy critical metals from mines all over the world, leaving the U.S. quite vulnerable. Our research is all about decarbonizing the mining industry and developing an independent, domestic supply chain of these critical metals. It’s important for U.S. manufacturing, green energy, national security, and competitiveness.”

Relating to the Cornell University partnership, Company President and CEO, Michael Rowley, will join Dr. Gadikota at the ARPA-E MINER kick-off event in Austin, Texas on February 14 and 15, 2023. Other presenters and attendees include Tesla Motors, major mining companies, top US government officials and financial institutions. More information on the MINER program is available here: <https://arpa-e.energy.gov/technologies/programs/miner>.

Michael Rowley, Stillwater Critical Minerals President & CEO, stated, “We are very pleased to be selected as the industry partner for Dr. Gadikota’s cutting-edge work and to work closely with her team toward our shared vision of securing the future domestic supply of the critical minerals the US so urgently needs. Our Stillwater West project is rapidly advancing as a potential large-scale, low-carbon source of nickel, copper, cobalt, palladium, platinum and rhodium. Located in an active and expanding US mining district with a long history of critical minerals production and demonstrated world-class scale and grade, Stillwater West is on a very short list of assets with the potential to play a significant role in realizing the goals set out in the bipartisan Inflation Reduction Act, and other ongoing initiatives. It is our belief that mining can do more than supply minerals by conventional means, and that partnerships such as this are the path toward more sustainable practices.”

About Dr. Greeshma Gadikota

Dr. Greeshma Gadikota is an Assistant Professor and Croll Sesquicentennial Fellow in the School of Civil and Environmental Engineering with a field appointment in the Smith School of Chemical and Biomolecular Engineering at Cornell University. Dr. Gadikota directs the Sustainable Energy and Resource Recovery Group. She held postdoctoral research associate appointments at Princeton University and Columbia University, and a research associate appointment at the National Institute of Standards and Technology (NIST). Her PhD in Chemical Engineering and MS degrees in Chemical Engineering and Operations Research are from Columbia University. Her BS in Chemical Engineering is from Michigan State University. She is a recipient of the DOE, NSF and ARO CAREER Awards, Sigma Xi

Young Investigator Award, Cornell Engineering Research Excellence Award, Inaugural Cornell Rising Women Innovator Award, and AIChE Sabic Award for Young Professionals from the Particle Technology Forum. Dr. Gadikota received her PhD in Chemical Engineering and earned her MS degrees in Chemical Engineering and Operations Research, from Columbia University. Her BS in Chemical Engineering is from Michigan State University.

Research Interests

With more than 80% of our energy resources recovered from the subsurface environments which requires about 50 billion cubic meters of fresh water and contributes to more than 75% of global CO₂ emissions, our grand societal challenge lies in meeting our growing demand for energy and resources while reducing environmental impact. Addressing these earth-scale challenges requires us to develop novel technologies to engineer targeted physico-chemical interactions in complex engineered and natural environments. Enabling emergent technologies for a sustainable earth requires us to advance the cross-scale science of fluid-solid interactions in complex and extreme environments. With this perspective, our research is directed towards applications that involve (i) engineering the natural environment for sustainable energy and resource recovery and (ii) designing novel chemical pathways for advancing low carbon and negative emissions technologies.

About ARPA-E

The Advanced Research Projects Agency-Energy (ARPA-E advances high-potential, high-impact energy technologies that are too early for private-sector investment. ARPA-E awardees are unique because they are developing entirely new ways to generate, store, and use energy. ARPA-E projects have the potential to radically improve U.S. economic prosperity, national security, and environmental well-being. We focus on transformational energy projects that can be meaningfully advanced with a small amount of funding over a defined period of time. Our streamlined awards process enables us to act quickly and catalyze cutting-edge areas of energy research.

ARPA-E empowers America's energy researchers with funding, technical assistance, and market readiness. Our rigorous program design, competitive project selection process, and active program management ensure thoughtful expenditures. ARPA-E Program Directors serve for limited terms to ensure a constant infusion of fresh thinking and new perspectives. To learn more visit: <https://arpa-e.energy.gov/>.

About Stillwater Critical Minerals Corp.

Stillwater Critical Minerals (TSX.V: PGE | OTCQB: PGEZF) is a mineral exploration company focused on its flagship Stillwater West Ni-PGE-Cu-Co + Au project in the iconic and famously productive Stillwater mining district in Montana, USA. With the recent addition of two renowned Bushveld and Platreef geologists to the team, the Company is well positioned to advance the next phase of large-scale critical mineral supply from this world-class American district, building on past production of nickel, copper, and chromium, and the on-going production of platinum group and other metals by neighboring Sibanye-Stillwater. Per an expanded NI 43-101 mineral resource estimate released January 2023, the Platreef-style nickel and copper sulphide deposits at Stillwater West contain 1.6 billion pounds of nickel, copper and cobalt, and 3.8 million ounces of palladium, platinum, rhodium, and gold, in a compelling suite of critical minerals and are open for expansion along trend and at depth.

Stillwater Critical Minerals also holds the high-grade Black Lake-Drayton Gold project adjacent to Treasury Metals' development-stage Goliath Gold Complex in northwest Ontario, currently under an earn-in agreement with Heritage Mining, and the Kluane PGE-Ni-Cu-Co critical minerals project on trend with Nickel Creek Platinum's Wellgreen deposit in Canada's Yukon Territory.

Note 1: References to adjoining properties are for illustrative purposes only and are not necessarily indicative of the exploration potential, extent or nature of mineralization or potential future results of the Company's projects.

Note 2: Magmatic Ore Deposits in Layered Intrusions—Descriptive Model for Reef-Type PGE and Contact-Type Cu-Ni-PGE Deposits, Michael Zientek, USGS Open-File Report 2012–1010.

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Forward-Looking Statements

Forward Looking Statements: This news release includes certain statements that may be deemed "forward-looking statements". All statements in this release, other than statements of historical facts including, without limitation, statements regarding potential mineralization, historic production, estimation of mineral resources, the realization of mineral resource estimates, interpretation of prior exploration and potential exploration results, the timing and success of exploration activities generally, the timing and results of future resource estimates, permitting time lines, metal prices and currency exchange rates, availability of capital, government regulation of exploration operations, environmental risks, reclamation, title, and future plans and objectives of the company are forward-looking statements that involve various risks and uncertainties. Although Stillwater Critical Minerals believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Forward-looking statements are based on a number of material factors and assumptions. Factors that could cause actual results to differ materially from those in forward-looking statements include failure to obtain necessary approvals, unsuccessful exploration results, changes in project parameters as plans continue to be refined, results of future resource estimates, future metal prices, availability of capital and financing on acceptable terms, general economic, market or business conditions, risks associated with regulatory changes, defects in title, availability of personnel, materials and equipment on a timely basis, accidents or equipment breakdowns, uninsured risks, delays in receiving government approvals, unanticipated environmental impacts on operations and costs to remedy same, and other exploration or other risks detailed herein and from time to time in the filings made by the companies with securities regulators. Readers are cautioned that mineral resources that are not mineral reserves do not have demonstrated economic viability. Mineral exploration and development of mines is an inherently risky business. Accordingly, the actual events may differ materially from those projected in the forward-looking statements. For more information on Stillwater Critical Minerals and the risks and challenges of their businesses, investors should review their annual filings that are available at www.sedar.com.

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