



CENTRAL AMERICA NICKEL INC.

NEWS RELEASE

## CENTRAL AMERICA NICKEL ANNOUNCES FILING OF A PROVISIONAL PATENT APPLICATION FOR LITHIUM EXTRACTION AND RECOVERY

**Montreal, Quebec / November 9, 2023** - Central America Nickel Inc. (the “Company” or “CAN”) is pleased to announce it has filed a provisional patent application No. 63/596413 titled “*Process for Extraction of Lithium Values from Spodumene Feedstocks.*”

- The provisional application relates to a novel process for the extraction and recovery of lithium values from a spodumene feedstock in high yield and purity, with the use of CAN’s proprietary Ultrasound Assisted Extraction technology (UAEx) as intensification approach.
- The successful application of ultrasound-assisted leaching, the UAEx, has been a significant leap in lithium recovery from spodumene feedstocks. A process of calcination followed by the application of UAEx has demonstrated promising results of **lithium extraction rates exceeding 80% over a 90-minute leaching cycle**; the processed ore was spodumene feedstock at a grade of 5.80% Li.
- This proprietary process of lithium extraction enhanced by ultrasound is a green chemistry approach which can significantly reduce acids and reagents used, which leads to increased recovery rates and accelerated recovery times, therefore overcoming certain technical and economic limitations of existing commercial processes.
- Current commercially available processes for the extraction of lithium remain limited in their performance and level of efficiencies, and continue to impose high-energy demands during processing. The industry has therefore been exploring more environmentally-friendly alternative processes and acids for the purpose of leaching, as certain acids generate fewer undesirable by-products. This, in combination with innovative techniques such as the UAEx, can result in an environmentally cleaner approach, improved lithium recovery rates and reduced leaching time.
- Lithium is a critical mineral required for a myriad of energy applications, including a crucial role in battery performance, longevity, and energy density. According to the International Energy Agency, the period between 2017 and 2022 saw a tripling in overall demand for lithium, with demand looking to further increase as the renewable energy transition progresses over the next decade, driven by the Net Zero Scenario.
- The main advantages of the UAEx process is enabling minerals to separate from ore and dissolve more efficiently, thus lowering the cost compared to traditional processing



methods, with significantly less environmental impact, including substantially lower CO<sub>2</sub> emissions, waste and energy requirements.

The Company's metallurgical process of lithium recovery from spodumene, developed with CAN's research partners at Polytechnique Montréal, involves several steps including a leaching process of spodumene feedstock in an acidic solution while leveraging simultaneous sonication. The result includes enhanced mass transfer and accelerated dissolution rates of lithium. The process also involves the manipulation of pH levels of the pregnant solution providing for the selective precipitation of impurities resulting in a purified lithium pregnant solution, where lithium values were obtained as a lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) precipitate.

The Company has been in negotiation to acquire rights to various lithium projects, and currently has access to a past-producing critical mineral mine in Bolivia which hosts encouraging lithium sampling values; the mine is the subject of a recent acquisition made by CAN's joint venture partner, Auxico Resources Canada Inc.

The Company has the objective of refining critical minerals into end user forms for the EV battery and power-train components manufacturing supply industry, and has conducted various studies for the development of processing and refining facilities while leveraging the UAEx, alongside technology partners including Impact Global Solutions Inc., Coalia, Polytechnique Montréal, and McGill University.

### **About The Company**

Central America Nickel Inc. ("CAN") is a privately-held corporation based in Montreal, focused on the processing and purification of critical minerals and energy metals using patented and patent-pending technologies, in partnership with strategic partners. CAN has access, directly or through joint ventures, to minerals projects including nickel, cobalt, scandium, vanadium, lithium and rare earth elements located in several countries, including Guatemala and the Democratic Republic of the Congo.

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### **Forward-Looking Statements**



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