

Granada Gold Mine Announces that Canada Silver Cobalt Begins Testwork Using Re-20x on Granada's Rubidium Mineralized Material for the Storage Battery Market

June 30, 2021 (Source) – Granada Gold Mines Inc. (TSXV: GGM) (OTC: GBBFF) (Frankfurt: B6D) (“Granada” or “Granada Gold”) and Canada Silver Cobalt Works Inc. (TSXV: CCW) (OTC: CCWOF) (Frankfurt: 4T9B) (“Canada Silver Cobalt”) are pleased to jointly announce that Canada Silver Cobalt has begun preliminary test work at SGS, Lakefield, Canada on mineralized material from the Granada Gold Mine in Rouyn-Noranda, Quebec.

The planned test work was announced earlier this year (March 30, 2021 joint news release) after Granada Gold announced the unexpected discovery of a rare earth and alkali metals deposit at the Granada property in Quebec during exploration for gold.

Rubidium, one of the discovered alkali metals, showed particularly high assays and potential value based on quoted market prices (March 23 and May 12, 2021 Granada news releases) and therefore is an important part of the focus of the Re-20x test work.

Rubidium has numerous applications in various industries (see below), including in sodium-ion batteries which may see significant growth ahead due to their reported cost-effectiveness as stationary energy storage for homes, the grid and data centres.

Frank J. Basa, P.Eng., CEO, commented: “Granada currently

expects that rubidium will be treated as a zero-cost, by-product alkali metal recovery from Granada's gold mineralized resource. The preliminary test program will evaluate the potential recovery of rubidium mineralization and the subsequent amenability of the Re-20x process for the leaching and production of rubidium salts. Granada Gold intends to review the viability of supplying rubidium salts as a by-product of gold processing for evaluation into the new fast-evolving sodium-ion storage battery market."

Planned Re-20x testing

A 10-kilogram drill core sample was sent to SGS, Lakefield for mineralogical studies to identify the minerals associated with rubidium. The studies indicated so far that rubidium is likely in the micas and/or K-feldspars. Analytical results returned a grade of 1,238.5 ppm for rubidium. Distinct rubidium minerals do not commonly occur in nature and are almost always associated with feldspars and micas.

The test program at SGS will be undertaken in two stages. The first stage will consist of straight forward flotation followed by leaching using the Re-20x process. The second stage is straight leaching using the Re-20x process. The test program was developed to target rubidium in the mineralized zones.

Rubidium at Granada

The Rubidium mineralized material at Granada has been found to be on top on the gold-bearing mineralized material that the company is targeting as a gold mineral resource and for mining. Drill hole GR-20-22 was drilled to a depth of 1,626 meters on the Big Claim 1.6 kilometers west on strike from the discovery drill hole GR-20-20 which was drilled to depth of 588 meters. Drill hole GR-20-22 intercepted 21 distinct mineralized zones ranging in core length from 177 meters to 2.8 meters. Rare earths and alkali metals of note identified

to date are caesium (Cs), rubidium (Rb), scandium (Sc), zirconium (Zr), cerium (Ce), gallium (Ga), hafnium (Hf), neodymium (Nd) and strontium (Sr) – others pending. While still to be determined, the company may be in the position of mining the rare earth and alkali mineralized zones to access the gold-bearing mineralized material. The entire size of the rare earth and alkali metals deposit has not yet been determined.

Rubidium in Sodium-Ion Batteries

Rubidium salts have been commonly used as an electrolyte to improve the efficiency cycle of sodium-ion batteries. In recent years, it has been implemented into a larger scale for further technological advances to improve the performance rate and better cyclability in the batteries. Sodium-ion batteries have demonstrated about half the energy density of lithium-ion batteries and have applications as stationary storage like renewable energy for homes and the grid or backup power for data centers, where cost is more important than size and energy density. Currently available information places the cost of sodium-ion batteries to be about 10–20 percent less than lithium-ion batteries.

Sodium-ion batteries use abundant, cheap, and benign materials. In the Earth's crust there is over one-thousand times more sodium than lithium. It also costs less to extract and purify. Sodium metal oxide cathodes are typically used in batteries and the anodes are carbon just like lithium-ion batteries but can be made from plentiful metals such as iron and manganese. The Department of Energy's Advanced Research Projects Agency–Energy in September 2020 awarded Santa Clara, California-based Natron Energy \$19.9 million US dollars as part of a new program to fast-track technologies, with the goal of advancing their commercialization efforts. The batteries are now in low-volume commercial production. Natron's first customers are data centers and telecom companies. Sodium-ion batteries are also more stable and safer

than lithium-ion. They have a wider temperature range, are nonflammable, and do not have thermal runaway.

Additional Applications of Rubidium in Industry

Applications for rubidium and its compounds include biomedical research, electronics, specialty glass, and pyrotechnics. Specialty glasses are the leading market for rubidium; rubidium carbonate is used to reduce electrical conductivity, which improves stability and durability in fiber optic telecommunications networks. Biomedical applications include rubidium salts used in antishock agents and the treatment of epilepsy and thyroid disorder; rubidium-82, a radioactive isotope used as a blood-flow tracer in positron emission tomographic imaging; and rubidium chloride, used as an antidepressant. Rubidium atoms are used in academic research, including the development of quantum-mechanics-based computing devices, a future application with potential for relatively high consumption of rubidium. Quantum computing research uses ultracold rubidium atoms in a variety of applications. Quantum computers, which have the ability to perform more complex computational tasks than traditional computers by calculating in two quantum states simultaneously, were expected to be in prototype phase by 2025. Rubidium's photo-emissive properties make it useful for electrical-signal generators in motion-sensor devices, night vision devices, photoelectric cells (solar panels), and photomultiplier tubes. Rubidium is used as an atomic resonance-frequency-reference oscillator for telecommunications network synchronization, playing a vital role in global positioning systems. Rubidium-rich feldspars are used in ceramic applications for spark plugs and electrical insulators because of their high dielectric constant. Rubidium hydroxide is used in fireworks to oxidize mixtures of other elements and produce violet hues. (Source: USGS).

Qualified Person

The technical information in this news release was prepared under the supervision of Mr. Frank J. Basa, P.Eng., CEO of Granada Gold Mine Inc., a qualified person in accordance with National Instrument 43-101.

About Granada Gold Mine Inc.

Granada Gold Mine Inc. continues to develop the Granada Gold Property near Rouyn-Noranda, Quebec. Approximately 140,000 meters of drilling has been completed to date on the property, focused mainly on the extended LONG Bars zone which trends 2 kilometers east-west over a potential 5.5 kilometers of mineralized structure. The highly prolific Cadillac Break, the source of more than 75 million plus ounces of gold production in the past century, cuts through the north part of the Granada property, but is not necessarily indicative of mineralization hosted on the company's property.

The Granada Shear Zone and the South Shear Zone contain, based on historical detailed mapping as well as from current and historical drilling, up to twenty-two mineralized structures trending east-west over five and a half kilometers. Three of these structures were mined historically from four shafts and three open pits. Historical underground grades were 8 to 10 grams per tonne gold from two shafts down to 236 m and 498 m with open pit grades from 3.5 to 5 grams per tonne gold.

Updated Mineral Resource

The updated resource at the Company's Granada Gold project in Rouyn-Noranda, Quebec was estimated by SGS Canada and outlined in a January 29, 2021 news release. The final report was filed March 15, 2021 with an Effective date of December 15, 2020. The 43-101 Technical Report is titled: Granada Gold Project Mineral Resource Estimate Update, Rouyn-Noranda, Quebec, Canada authored by Yann Camus, P.Eng. and Maxime Dupéré, B.Sc, géo. Both of SGS Canada Inc.

Updated Mineral Resource Estimate Base Case with Details

Between the Open Pit Portion and the Underground Portion

Type	Category	Tonnes	Au (g/t)	Gold Ounces
In Pit	Measured ¹	3,756,000	1.89	228,000
	Indicated	1,357,000	2.55	111,000
	Measured+Indicated	5,113,000	2.06	339,000
	Inferred	34,000	11.29	12,000
Underground	Measured	37,000	4.22	5,000
	Indicated	807,000	4.02	104,000
	Measured+Indicated	844,000	4.03	109,000
	Inferred	1,244,000	6.33	253,000
1.	<i>Cut-off grades are based on a gold price of US\$1,600 per ounce, a foreign exchange rate of US\$0.76 for CA\$1, a gold recovery of 93%</i>			
2.	<i>Pit constrained mineral resources are reported at a cut-off grade of 0.9 g/t Au within a conceptual pit shell</i>			
3.	<i>Underground mineral resources are reported at a cut-off grade of 3.0 g/t Au within reasonably mineable volumes</i>			

The Company is in possession of all mining permits required to commence the initial mining phase, known as the “Rolling Start”, which allows the company to mine up to 550 tonnes per day. Additional information is available at www.granadagoldmine.com.

“Frank J. Basa”

Frank J. Basa P. Eng.
President and Chief Executive Officer

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SOURCE Granada Gold Mine Inc. 

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