Battery Recycling Tests Begins Using the Re-20x Process

written by Raj Shah | March 1, 2021

March 1, 2021 (Source) – Canada Silver Cobalt Works Inc. (TSXV: CCW) (OTC: CCWOF) (Frankfurt: 4T9B) (the "Company" or "Canada Silver Cobalt") is pleased to announce a new battery recycling initiative using the proprietary hydrometallurgical **Re-20x** process.

Highlights

- The company has begun bench and pilot plant studies at SGS Canada for battery recycling using the **Re-20x** process, which is the only known hydrometallurgical process purposely designed and adaptable to recover and recycle metals from Lithium-ion, Nickel-hydride and Nickel-cadmium batteries.
- Core process chemistry of the **Re-20x** process is adaptable to rare earth metals recovery from Nickel-hydride batteries
- Battery-grade Cobalt Sulfate has been produced from a multi-element cobalt concentrate using the **Re-20x** process at SGS Canada to meet international battery specs.

The company has received electrodes of a commercial-grade nickel-cadmium battery at SGS Canada to begin initial scoping studies. Bench-scale testing followed by pilot plant studies will be undertaken. The same procedure will be used on all three battery types.

Recent data on global lithium-ion (Li-ion) battery sales compiled from 2016 highlight a discrepancy between sales of 500,000 tons, and recycling capacity of only 94,000 tons. If it

were assumed that recycling capacity was exclusively dedicated to Li-ion batteries, that would only cover 19% of annual production volume. By 2024 the gap between recycling capacity and battery production is expected to widen with only 9% of 3,000,000 tons being covered by recycling capacity according to Propulsion Quebec.

The transition toward a circular economy requires “green” battery technologies, however, true sustainability can only be achieved with an efficient way to capture valuable materials in spent batteries and diverting them from landfills. Lithium-ion battery recycling typically begins with separation of the outer casing from the cells. The cathode and anode in the cell are together used to create a powder referred to as “black mass.” The resulting blend contains valuable minerals like lithium, cobalt, nickel, manganese, and graphite.

Canada Silver Cobalt will use a purely hydrometallurgical approach by employing **Re-2Ox** for selective leaching to enhance process recovery of metals. Recycling plants that use hydrometallurgy exclusively are rare and only one is known to exist in Europe; Canada Silver Cobalt will be the first in North America to use this method.

About Canada Silver Cobalt Works Inc.

Canada Silver Cobalt Works released the first-ever resource in the Gowganda Camp and greater Cobalt Camp in May 2020. A total of 7.56 **million ounces** of silver in Inferred resources comprising very high-grade silver (**8,582** grams per tonne un-cut or **250.2** oz/ton) in 27,400 tonnes of material from two sections (1A and 1B) of the Robinson Zone beginning at a vertical depth of approximately 400 meters were identified. The discovery remains open in all directions (1A and 1B are approximately 800 meters east of the Capitol Mine workings) (mineral resources

that are not mineral reserves do not have demonstrated economic viability) (refer to Canada Silver Cobalt Works Press Release May 28, 2020. Report reference: Rachidi, M. 2020, *NI 43-101 Technical Report Mineral Resource Estimate for Castle East, Robinson Zone, Ontario, Canada*, with an effective date of May 28, 2020 and a signature date of July 13, 2020.

Canada Silver Cobalt's flagship Castle Mine and 78 sq. km Castle Property features strong exploration upside for silver, cobalt, nickel, gold, and copper in the prolific past-producing Gowganda high-grade Silver District of Northern Ontario. With underground access at Castle, a pilot plant to produce cobalt-rich gravity concentrates on site, a processing facility (TTL Laboratories) in the town of Cobalt, and a proprietary hydrometallurgical process known as **Re-20x** for the creation of technical grade cobalt sulphate as well as nickel-manganese-cobalt (NMC) formulations, Canada Silver Cobalt is strategically positioned to become a Canadian leader in the silver-cobalt space.

"Frank J. Basa"
Frank J. Basa, P. Eng.
Chief Executive Officer

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statements.