Nord Precious Metals Advances Re-2Ox Pilot Plant Process Equipment Selection with SGS Bench-Scale Metallurgical Test Programme

written by Raj Shah | July 29, 2025

July 29, 2025 (Source) – Nord Precious Metals Mining Inc. (TSX.V: NTH) (OTCQB: CCWOF) (FRANKFURT: 4T9B) (the "Company" or "Nord") reports that SGS Canada Inc. (Lakefield) has outlined a two-phase bench-scale metallurgical test programme designed to translate the Re-2Ox flowsheet into a pilot-ready design with technical parameters for scale-up. The Re-2Ox process targets the recovery of critical and precious metals from concentrates containing elevated deleterious metal levels that typically incur processing penalties or rejection at conventional processing and refining facilities.

Highlights

- **Hard-rock concentrate validation** – Alkaline pressure-leach tests will define the operating window for the Company's hard-rock concentrate samples. A confirmatory test on legacy tailings preserves future reclamation optionality.
- **Equipment specifications for modular deployment** – SGS will generate kinetic information, mass balances, and reagent consumptions supporting containerized unit designs that can be deployed at mine sites globally.
- **Offtaker flexibility** – Process liquors will be retained to enable precipitation and calcination tests for cobalt

oxide or carbonate production if strategic partners require alternatives to sulfate-based battery metals, eliminating the need to repeat primary leaching.

Technical Programme Structure

Phase 1 will establish operating parameters through systematic bench testing across the complete Re-2Ox flowsheet. The alkaline pressure leach testing will evaluate the Company's concentrate samples to establish optimal processing parameters. The programme will test Nord's concentrate samples to develop processing solutions for complex feeds. Nord's samples include materials with deleterious content that would typically face significant smelter penalties, demonstrating the Re-2Ox process's ability to handle challenging feed compositions.

Phase 2 will process a single autoclave batch through each downstream circuit, validating continuous operation at pre-pilot scale. Caustic regeneration testing addresses reagent recycling, a critical factor for remote deployments where chemical logistics pose operational challenges.

Market Context

The closure of major, deleterious metal-tolerant smelters, including Tsumeb's recent move to care and maintenance, has created an acute processing bottleneck for complex concentrates globally. Nord's modular Re-2Ox technology targets this gap, offering field-deployable solutions that convert penalty-bearing feeds into saleable products at the mine gate.

The SGS bench-scale data will support Nord's progression toward Technology Readiness Level 7, positioning Re-2Ox for commercial licensing following the MICA-funded pilot demonstration at Temiskaming Testing Labs.

“This programme converts laboratory insight into purchase-order detail,” said Frank J. Basa, B.Eng., Chief Executive Officer. “The ability to process deleterious metal concentrate feeds that conventional smelters reject represents a significant commercial opportunity as global ore grades decline and impurity levels rise.”

Commercial Implications

The bench-scale data will support:

- Modular unit specifications for deployments
- Capital cost estimates enabling build-own-operate-transfer agreements
- Technical data supporting penalty element removal targets exceeding 99%
- Product specifications adaptable to market requirements, whether battery-grade sulfates, oxides, or carbonates

Next Steps

Phase 1 data will allow SGS to produce equipment lists and obtain supplier quotations, narrowing the capital-cost estimate for the planned one-tonne-per-day Re-2Ox pilot line at Temiskaming Testing Labs. The Company intends to finance Phase 1 from existing resources, complemented by the previously announced C$200,000 MICA grant.

SGS will issue a formal proposal incorporating the above scope, deliverables, and a detailed schedule. Upon execution, selection work is expected to commence. An interim design-basis memorandum will be released mid-programme, followed by a comprehensive report that will support pilot procurement, financing, and strategic partnership discussions.

Qualified person

The technical information in this news release was approved and prepared under the supervision of Mr. Frank J. Basa, B.Eng., (PEO), director of Nord Precious Metals, a qualified person accordance with National Instrument 43-101.

About Nord Precious Metals Mining Inc.

Nord Precious Metals Mining Inc. operates the only permitted high-grade milling facility in the historic Cobalt Camp of Ontario, where the Company has established a unique position integrating high-grade silver discovery with strategic metals recovery operations. The Company's flagship Castle property encompasses 63 sq. km of exploration ground and the past-producing Castle Mine, complemented by the Castle East discovery where drilling has delineated 7.56 million ounces of silver in Inferred resources grading an average of 8,582 g/t Ag (250.2 oz/ton) in 27,400 tonnes of material from two sections (1A and 1B) of the Castle East Robinson Zone, beginning at a vertical depth of approximately 400 meters. Note that mineral resources that are not mineral reserves and do not have demonstrated economic viability. Please refer to the Nord Precious Metals Press Release May 28, 2020, for the resource estimate.

Nord's integrated processing strategy leverages the synergistic value of multiple metals. High-grade silver recovery supports the economics of extracting critical minerals including cobalt, nickel, and other battery metals, while the company's proprietary Re-2Ox hydrometallurgical process enables production of technical-grade cobalt sulphate and nickel-manganese-cobalt (NMC) formulations. This multi-metal approach, combined with established infrastructure including TTL Laboratories and underground mine access, positions Nord to capitalize on both precious metals markets and the growing demand for battery

materials.

The Company maintains a strategic portfolio of battery metals properties in Northern Quebec through its 35% ownership in Coniagas Battery Metals Inc. (TSXV: COS) as well as the St. Denis-Sangster lithium project comprising 260 square kilometers of prospective ground near Cochrane, Ontario.

More information is available at www.nordpreciousmetals.com.

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