Clean Air Metals Reports Positive Phase Two Metallurgical Test Results for the Thunder Bay North Critical Minerals Project

written by Raj Shah | June 29, 2023

June 29, 2023 (Source) – Clean Air Metals Inc. ("**Clean Air Metals**" or the "**Company**") (TSXV:AIR); (FRA:CKU); (OTCQB:CLRMF) announces that it has completed its follow-up metallurgical test program for the Thunder Bay North Critical Minerals Project.

The metallurgical test program consisted of locked cycle tests on a variety of composite samples with a range of head grades from both the Current and Escape deposits and delivered recoveries of 70.2% to 80.9% Platinum (Pt) and 74.0% to 86.9% Palladium (Pd) and copper recoveries from 89.9% to 96.3%. The tests were completed by Base Metallurgical Labs under the guidance of DRA Global.

Preliminary modelling of recoveries using estimated deposit head grades and updated recovery curves based on the test program, are shown in table 1 below.

Table 1: Modelled recoveries

Near Surface High Grade Zones (Early Years Mining)

	Pt	***Pd***	***Cu***	***Ni***	***Au***	***Ag***
% recovery	80.6%	86.2%	95.9%	57.0%	85.0%	65.2%
Head Grade	1.58 g/t	1.61 g/t	0.45 %	0.24 %	0.11 g/t	2.77 g/t

Remaining Zones (Later Mining)

	Pt	***Pd***	***Cu***	***Ni***	***Au***	***Ag***
% *recovery*	77.6%	85.0%	95.4%	55.5%	85.0%	65.2%
Head Grade	1.18 g/t	1.30 g/t	0.41 %	0.23 %	0.10 g/t	2.52 g/t

CEO Comment

Jim Gallagher, CEO of Clean Air Metals stated that: “The extensive Phase 2 test program demonstrates very good recoveries of Platinum, Palladium and Copper all Critical Metals for the Green Energy revolution. In addition, there are material amounts of Nickel, Gold and Silver. These are recoverable with conventional flotation technology producing two saleable concentrates. These results will be incorporated into the ongoing optimization studies for the mine plan at Thunder Bay North.”

The program followed a typical crush, grind, float flowsheet to generate an initial bulk concentrate, that was subsequently sent through a secondary flotation process to produce separate copper-rich and PGE/Nickel rich concentrates.

The test program was completed using core samples from both the Current and Escape deposits to produce 3 composites and 17 variability samples. The composites were structured to represent early and late mine life production. The composite samples and 15 of the variability samples were subjected to a combination of grindability tests including JK Drop Weight, SMC, Bond Work Index and Bond Abrasion tests.

Copper-Nickel Separation circuit

Early flowsheet assessments focused on sequential flotation to create the two concentrates. However, optimal results were achieved with bulk flotation, followed by a copper-nickel

separation flowsheet which resulted in improved overall recovery of metals.

Sulphide minerals within the sample composites were sufficiently liberated at a grind size K_{80} of 65mm. The process included bulk flotation with rougher and cleaner stages to create a sulphide-rich product hosting PGE, chalcopyrite, pentlandite, pyrite and pyrrhotite. This product was subsequently subjected to a regrind averaging a K_{80} of 20mm and then subjected to a high pH float to depress nickel bearing minerals and PGEs (PGE/Ni rich conc) and float copper bearing minerals (Cu rich conc).

Consistent with previous results

The program consisted of a total of 80 open circuit development tests and 8 locked cycle flotation (LCT) tests. LCT test results highlighted the potential for the following:

- Recoveries as high as 80.9% platinum and 86.9% palladium; and
- Recoveries as high as 96.3% copper and up to 69.5% nickel and 84.3% gold.

The above results are encouraging and are consistent with the stated metallurgical outcomes in the previous test program undertaken by Blue Coast Research in 2021 when using similar head grades.

Preliminary modelled concentrate grade outlined the potential for a clean copper concentrate grading 22% Cu, 38 g/t Pt+Pd and a PGE Ni-rich concentrate grading 50 g/t Pt+Pd and 3.75% Ni. Through an engagement with Ocean Partners Inc., it was identified that projected concentrates produced were marketable with interest and indicative terms received from several domestic and overseas smelters.

Financial Results

The Company also announces that it has filed its unaudited consolidated interim financial statements and management's discussion and analysis for the three month period ended April 30, 2023, available for viewing on www.sedar.com.

Financial Highlights

- Total assets as at April 30, 2023 of $41,653,021
- Total cash as at April 30, 2023 of $9,951,916
- Working capital as at April 30, 2023 of $9,896,655
- Shareholder's equity as at April 30, 2023 of $38,158,330

Financial Summary

	For the three months ended	
	April 30,2023	**April 30,2022**
Operating Expenses	$ 977,172	$ 1,098,079
Net Loss and Comprehensive Loss	(905,500)	(560,871)
Loss per share –		
Basic and Diluted	$ (0.00)	$ (0.00)

	April 30,2023	**January 31,2023**
Total Assets	$ 41,653,021	$ 42,290,356
Total Liabilities	3,494,691	3,425,984
Total Shareholders' Equity	$ 38,158,330	$ 38,864,372

Full details of the financial reports and operating results for

the three month period ended April 30, 2023 are described in the Company's unaudited consolidated interim financial statements with accompanying notes and related Management's Discussion and Analysis, available on SEDAR at www.sedar.com.

Grant of Stock Options

The Company announces that it has granted an aggregate of 4,250,000 incentive stock options to certain directors, officers and employees of the Company, subject to regulatory approval. The stock options are exercisable at $0.06 for a period of 5 years from the grant date and subject to vesting terms.

Qualified Persons

Mr. Dave Frost F.AusIMM, a qualified person under National Instrument 43-101 and Vice President Process Engineering for DRA Global, has reviewed and approved all of the metallurgical results information in this press release.

Social Engagement

Clean Air Metals Inc. and its wholly owned subsidiary Panoramic PGMs (Canada) Ltd. acknowledge that the Thunder Bay North Critical Minerals Project is on the traditional territories of the Fort William First Nation, Red Rock Indian Band and Biinjitiwabik Zaaging Anishinabek. The parties together are the Cooperating Participants in a Memorandum of Agreement dated January 9, 2021 (press release January 11, 2021) and Exploration Agreement signed April 13, 2022 (press release April 14, 2022).

The Company appreciates the opportunity to work in these territories and remains committed to the recognition and respect of those who have lived, traveled, and gathered on the lands since time immemorial. Clean Air Metals is committed to stewarding Indigenous heritage and remains committed to

building, fostering and encouraging a respectful relationship with First Nations and Métis peoples based upon principles of mutual trust, respect, reciprocity and collaboration in the spirit of reconciliation.

About Clean Air Metals Inc.

Clean Air Metals' flagship asset is the 100% owned, high grade Thunder Bay North Project, a platinum, palladium, copper, nickel project located near the City of Thunder Bay, Ontario and the Lac des Iles Mine owned by Impala Platinum. The Thunder Bay North Project hosts the twin magma conduit bodies which host the Current and Escape deposits forming the basis for the new mineral resource estimate subsequently reported on May 4, 2023.

President and CEO Jim Gallagher, P.Eng. and COO Mike Garbutt, P.Eng. lead an experienced technical team studying the economics of a sustainable mining operation at Thunder Bay North.

ON BEHALF OF THE BOARD OF DIRECTORS

"*Jim Gallagher*"
Jim Gallagher, CEO of Clean Air Metals Inc.

For further information, please contact:
Jim Gallagher, CEO of Clean Air Metals Inc.
Phone: 705-690-7997
Email: jgallagher@cleanairmetals.ca
Web: www.cleanairmetals.ca

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Cautionary Note

The information contained herein contains “forward-looking statements” within the meaning of applicable securities legislation, including statements regarding the potential of the Thunder Bay North Critical Metals Project and the Escape and Current deposits and timing of technical studies and mineral resource estimates. Forward-looking statements relate to information that is based on assumptions of management, forecasts of future results, and estimates of amounts not yet determinable. Any statements that express predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance are not statements of historical fact and may be “forward-looking statements.” Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation: political and regulatory risks associated with mining and exploration; risks related to the maintenance of stock exchange listings; risks related to environmental regulation and liability; the potential for delays in exploration or development activities or the completion of feasibility studies; the uncertainty of profitability; risks and uncertainties relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits; risks related to the inherent uncertainty of production and cost estimates and the potential for unexpected costs and expenses; results of prefeasibility and feasibility studies, and the possibility that future exploration, development or mining results will not be consistent with the Company’s expectations; risks related to commodity price fluctuations; and other risks and uncertainties related to the Company’s prospects, properties and business detailed elsewhere in the Company’s disclosure record. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in

forward-looking statements. Investors are cautioned against attributing undue certainty to forward-looking statements. These forward-looking statements are made as of the date hereof and the Company does not assume any obligation to update or revise them to reflect new events or circumstances, except in accordance with applicable securities laws. Actual events or results could differ materially from the Company’s expectation or projection.

SOURCE: Clean Air Metals, Inc.