

NexMetals Mining Corp. Announces Selebi Mines Metallurgical Breakthrough

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Unlocks Ability to Produce Separate High-Grade Saleable Copper & Nickel-Cobalt Concentrates

[NexMetals Mining Corp.](#) (TSXV: NEXM) (NASDAQ: NEXM) (the "Company" or "NEXM") announces outstanding results from the recently completed comprehensive bulk sample-based metallurgical program at its past-producing copper-nickel-cobalt ("Cu-Ni-Co") Selebi Mines in Botswana.

These breakthrough results represent a significant milestone for the Company. The optionality to produce both a saleable copper concentrate and a saleable nickel concentrate with cobalt supports potential restart scenarios with significantly lower capital intensity and decreased execution risk. Based on these results, the Company now has an alternative path forward in which an on-site smelter or hydrometallurgical facility may not be required, significantly derisking the capital requirements and operational complexity of future production at the Selebi Mines. For the first time since production began, the Selebi Mines will benefit from a flowsheet design that results in lower energy requirements and a substantially reduced environmental footprint when compared to historical operations. Overall, the Selebi Mines are now potentially positioned for a faster and more efficient restart.

Highlights, What This Means:

- **Alternative Development Option:** These results suggest that an on-site smelter or hydrometallurgical plant may not be required, reducing a major capital and execution risk for the Selebi Mines.
- **Streamlined, Sustainable Operations:** A smaller land footprint, lower energy demand, and no need for specialized smelter/hydrometallurgical skillsets significantly reduce operational complexity.
- **Baseline Results with Upside:** Mineralogical studies and flowsheet optimization underway with the objective of improving recoveries.
- **Commercial Advantage:** High-grade concentrates materially expand the commercial pathways available to the Company, providing flexibility in future potential offtake negotiations.

Major Milestone Achieved:

- **Metallurgical breakthrough:** These results could significantly strengthen Selebi Mines' project, potentially creating a low-capital, low execution risk option for future production.
- **Excellent Initial Recoveries with the Objective to Increase Recoveries:**
 - Copper concentrate - 87.0% Cu recovery
 - Nickel concentrate - 55.9% Ni recovery and 64.7% Co recovery
- **High-Grade Saleable Concentrates:**
 - Copper concentrate - 27.6% Cu
 - Nickel concentrate - 10.5% Ni and 0.59% Co

Next Steps

- Complete mineralogical studies on copper rougher tailings and nickel cleaner tailings streams to better understand nickel losses.
- Assess finer regrind opportunities to improve nickel liberation and recovery.
- Conduct batch tests on Selebi Main and Selebi North material individually.
- Use results to optimize the flowsheet and mining sequence to drive higher overall recoveries.
- A concentrate quality assessment is underway with assay results expected in the coming weeks.

Morgan Lekstrom, CEO of the Company, commented: "This is the largest transformational step forward for

the Selebi Mines that could materially change this asset. We now have the optionality to generate two separate saleable copper and nickel-cobalt concentrates, which may reduce or remove the need for capex to build a smelter / hydrometallurgy plant. This was a full underground bulk sample from both the Selebi North and Selebi Main deposits, representing what an operational profile would look like, another choice we made to derisk the future of this asset. This breakthrough reduces execution risk, broadens offtake opportunities, and provides a pathway to a potential restart of the project with significantly lower capital costs. Results from this new metallurgical direction, together with ongoing resource expansion drilling, will be incorporated into an updated mineral resource estimate which we anticipate will demonstrate a significant improvement over the previous estimate. This is a key milestone that unlocks significant value for our shareholders."

Technical Details

The metallurgical testing was carried out by Blue Coast Research, in Parksville, British Columbia, Canada, to evaluate the metallurgical performance of the Selebi material. The metallurgical flowsheet used is conventional, with a primary grind size of 75 microns (P80), sequential flotation with simple chemistry, and a regrind of 35 microns (P80). The current testwork is appropriate for a future economic study, with further optimization expected as the project progresses. Additional variability testing on Selebi Main and Selebi North (N2/N3/South Limb) will support sequencing and help enable a path forward for a potential future restart.

Locked cycle testing achieved a nickel recovery of 55.9%. Of the nickel not recovered, 2.5% reported to the copper concentrate, which is not payable, while the remainder was lost to copper rougher tailings (24%) and nickel cleaner tailings (17.6%), as presented in Table 1. Losses in the cleaning stage were higher than typical for sequential circuits, suggesting opportunities to improve recovery. Some of these losses are likely due to fine pentlandite grains locked within pyrrhotite, which could be liberated with finer regrinding. Mineralogical studies are underway to confirm this, and future flotation optimization testwork is planned to target higher nickel recoveries. Note, the calculated head grade in the locked cycle test is above the MRE head grade for Selebi Mine which may result in higher recovery, this will be checked in the aforementioned variability testing.

Table 1: Lock Cycle Test -1 Metallurgical Results

Product	Assays					% Distribution				
	Cu (%)	Ni (%)	Co (%)	Fe (%)	S (%)	Cu	Ni	Co	Fe	S
Cu Cleaner 3 Conc	27.6	0.64	0.03	36.5	35.0	87.0	2.5	2.2	5.4	10.3
Ni Cleaner 3 Conc	2.43	10.5	0.59	51.0	36.5	10.5	55.9	64.7	10.4	14.8
Ni Cleaner 1 Tail	0.05	1.16	0.04	58.8	35.8	0.6	17.6	12.8	34.2	41.3
Rougher Tail	0.05	0.46	0.02	25.2	8.53	1.9	24.0	20.4	50.0	33.6
Calculated Head	1.62	1.31	0.06	34.3	17.3	100.0	100.0	100.0	100.0	100.0

Qualified Persons

All scientific and technical information in this news release has been reviewed and approved by Norman Lotter, P.Eng., Pr.Eng., C.Eng., FSAIMM, FIMM, Consulting Engineer, and by Sharon Taylor, Vice President Exploration of the Company, who are "qualified persons" for the purposes of NI 43-101 a "qualified person" for the purposes of National Instrument 43-101 and Subpart 1300 of Regulation S-K.

Technical Report

The mineral resource estimate on the Selebi Mine is supported by the technical report entitled "Technical Report, Selebi Mines, Central District, Republic of Botswana" and dated September 20, 2024 (with an effective date of June 30, 2024) (the "Selebi Technical Report"), and prepared by SLR Consulting (Canada) Ltd. for NEXM. Reference should be made to the full text of the Selebi Technical Report, which was prepared in accordance with NI 43-101 and Subpart 1300 of Regulation S-K and is available on SEDAR+ (www.sedarplus.ca) and EDGAR (www.sec.gov), in each case, under NEXM's issuer profile.

About NexMetals Mining Corp.

NexMetals Mining Corp. is a mineral exploration and development company that is focused on the

redevelopment of the previously producing copper, nickel and cobalt resources mines owned by the Company in the Republic of Botswana.

NexMetals is committed to governance through transparent accountability and open communication within our team and our stakeholders. NexMetals' team brings extensive experience across the full spectrum of mine discovery and development. Collectively, the team has contributed to dozens of projects, including work on the Company's Selebi and Selkirk mines. Senior team members each have on average, more than 20 years of experience spanning geology, engineering, operations, and project development.

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This news release contains "forward-looking statements" within the meaning of the United States federal securities laws and "forward-looking information" within the meaning of applicable Canadian securities legislation (collectively, "forward-looking information") based on expectations, estimates and projections as at the date of this news release. Forward-looking information involves risks, uncertainties and other factors that could cause actual events, results, performance, prospects and opportunities to differ materially from those expressed or implied by such forward-looking information. For the purposes of this release, forward-looking information includes, but is not limited to: the expectation that the Company will not be required to build a smelter or hydrometallurgical facility on the Selebi Mines to meet its business objectives; the expectation that the proposed flow sheet design in respect of the Selebi Mines will result in lower energy requirements and a substantially reduced environmental footprint; the Company's anticipation of a faster and more efficient potential restart of the Selebi Mines; anticipated flexibility in future potential offtake negotiations; the implementation of the objectives, goals and future plans of the Company including the proposed advancement of the Selebi Mines as currently contemplated, including mineralogical studies, batch tests and flowsheet optimization; the expectation that exploration activities will accurately predict mineralization; the Company's expectation that the mineral resource estimate will be materially improved; the expectation that the Company will implement its drilling, geoscience and metallurgical work on its properties and work plans generally; management's belief that the historical resource could be indicative of the presence of mineralization on the deposits; and the anticipated benefits of the Company's approach to the resource development plan. These forward-looking statements, by their nature, require the Company to make certain assumptions and necessarily involve known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied in these forward-looking statements. Factors that could cause actual results to differ materially from such forward-looking information include, but are not limited to, capital and operating costs varying significantly from estimates; the metallurgical test results disclosed in this news release are subject to further optimization and testing; the derisking and reduced capex and energy requirements of the Selebi Mines may not be as anticipated; the Selebi Mines may not restart or re-enter production on the timing anticipated or at all; the Company may not enter into future offtake agreements; the ability of exploration and metallurgical results to predict mineralization, prefeasibility

or the feasibility of mine production; the risk that the mineralized corridor will not continue at depth; the risk that assay results will not be as anticipated or received when anticipated; delays in obtaining or failures to obtain required governmental, environmental or other project approvals; uncertainties relating to the availability and costs of financing needed in the future; changes in equity markets; inflation; fluctuations in commodity prices; delays in the development of projects; the other risks involved in the mineral exploration and development industry; and those risks set out in the Company's filings with the U.S. Securities and Exchange Commission on EDGAR (www.sec.gov) and public disclosure record on SEDAR+ (www.sedarplus.ca), in each case, under NEXM's issuer profile. Although the Company believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. The Company disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law.

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