

# NexMetals Mining Corp. Achieves an Initial 15.2% Head Grade Increase

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## At Selebi North Using Modern Technology Demonstrating High Recoveries and Significant Waste Reduction

[NexMetals Mining Corp.](#) (TSXV: NEXM) (NASDAQ: NEXM) (the "Company" or "NEXM") reports initial results from its bulk test work using X-ray transmission ("XRT") ore sorting at its past-producing copper-nickel-cobalt ("Cu-Ni-Co") Selebi Mine in Botswana. These initial results demonstrate the potential to significantly reduce processing mass while maintaining high metal recoveries and minimal losses.

Positive Impact on the Project:

- Increase of Head Grade from Mine to Mill

Potential to reduce the amount of waste rock being sent to the mill and enhancing the head grade by over 15% from the initial tests. Ongoing testing is focused on further improving these results.

- Enhanced Process Efficiency

By removing ~15.2% of the mass before further processing, the volume directed to grinding and flotation circuits is substantially reduced, offering direct energy, reagent, and throughput benefits.

- High Metal Retention

With 98% recovery, only minimal copper and nickel are lost, demonstrating excellent selectivity and precision in sorting.

- Economic & Environmental Upside

Bulky waste is diverted pre-processing, leading to lower expected operating costs, shorter critical water usage, reduced downstream tailings, and improved project carbon footprint.

Next Steps:

Driven by these strong initial results, the Company has initiated additional XRT trials on samples from its Selebi and Selkirk projects. The work is being carried out at IMS Engineering in South Africa.

The primary objectives of these programs include:

- Reducing the amount of fines produced from the crushing circuit for the Selebi samples. Reducing the fines allows the XRT to process more of the feed increasing the overall sorting efficiency.
- Evaluating pre-concentration potential on the Selkirk sample to upgrade head feed grades before flotation.
- Assessing overall improvement in processing throughput and waste rejection.

Results from the additional XRT test programs are expected to follow in the coming months.

Morgan Lekstrom, CEO of the Company, commented: "This is a very favorable outcome to enhance the

current flowsheet and focus on higher grades with less waste feeding into the mill. These early indications emphasize that XRT technology can significantly reduce downstream processing waste while maintaining exceptional copper and nickel recoveries with minimal metal losses. If integrated into processing flowsheets, this work could allow for early waste rejection, potentially reducing downstream energy and water usage, tailings volume, and overall costs."

Defining the XRT technology and process:

Bulk samples were processed using a production-scale allmineral allsort XRT machine, which separates material based on density differences. The sulphide-rich, high-density ore is retained, while the lower-density waste is expelled. Fines smaller than 12µm bypass the sorter and are later reintegrated for overall process accounting. The sorting algorithm was optimized to achieve high metal concentrate retention with minimal loss.

Technical Highlights:

- **Enrichment Factors:** Copper and nickel grades were both upgraded by factors of 1.34, within the sorting process.
- **Mass Reduction:**
  - Sorter feed mass was reduced by up to 28.4% (see table 1), significantly decreasing material that proceeds to downstream processing.
  - Considering the entire process (including -12µm fines bypass), this translated to an overall mass reduction of 15.2% and upgrade factor of 1.15 for both copper and nickel (see table 2).
- **Metal Recovery:** Both copper and nickel recoveries reached 98%, with only 2% of each metal lost to rejects demonstrating near-complete retention of valuable material.

Table 1: All mineral bulk sort test work results

STREAM	MASS (kg)	MASS PULL	MASS GRADE		RECOVERY		ENRICHMENT RATIO	
			Ni	Cu	Ni	Cu	Ni	Cu
Ore rejects	758.0	28.4%	0.17%	0.14%	4.0%	4.1%	0.14	0.15
Upgraded ore	1 911.0	71.6%	1.62%	1.28%	96.0%	95.8%	1.34	1.34
Sorter Feed	2 669.0	100%	1.21%	0.96%	100%	100%	0.99	1.00

Table 2: All mineral bulk sort test work including -12mm fines fraction

STREAM	MASS (kg)	MASS PULL	MASS GRADE		RECOVERY		ENRICHMENT RATIO	
			Ni	Cu	Ni	Cu	Ni	Cu
Ore rejects	758.0	15.2%	0.17%	0.14%	2.1%	2.2%	0.14	0.15
Upgraded ore	1 911.0	38.4%	1.62%	1.28%	50.8%	51.5%	1.34	1.34
Sorter Feed	2 669.0	53.6%	1.21%	0.96%	53.0%	53.8%	0.99	1.00
Fines (-12mm)	2 310.5	46.4%	1.24%	0.95%	47.0%	46.2%	1.00	1.00
Upgraded ore + fines	4 221.5	84.8%	1.41%	1.10%	97.9%	97.8%	1.15	1.15
Feed	4 979.5	100.0%	1.22%	0.95%	100.0%	100.0%	1.00	1.00

Qualified Person

All scientific and technical information in this news release has been reviewed and approved by Consulting Metallurgist of the Company, Norman Lotter, Mineral Processing Engineer; Ph.D., Pr.Eng., C.Eng., P.Eng., and a "qualified person" for the purposes of National Instrument 43-101 and Subpart 1300 of Regulation S-K.

Technical Report

The MRE 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](http://www.sedarplus.ca)) and EDGAR ([www.sec.gov](http://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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