

Osisko Metals Reports Preliminary Metallurgical Testwork Results From Gaspé Copper

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MONTREAL, April 16, 2024 - [Osisko Metals Inc.](#) (the "Company" or "Osisko Metals") (TSX-V: OM; OTCQX: OMZNF; FRANKFURT: 0B51) is pleased to announce preliminary metallurgical and grindability testwork results from the Gaspé Copper Project located near Murdochville in the Gaspé peninsula in Québec. Testwork was performed on eighteen composite samples of mineralized drill core from selected intersections of the 2023 drill program at Copper Mountain, and employed a conventional copper-molybdenum flotation flowsheet and reagents.

Highlights

- Copper recoveries averaged 91.9% from nineteen bulk Cu-Mo locked-cycle flotation tests (including one composite sample) and averaged 94.2% from three locked-cycle Cu-Mo separation tests.
- Copper concentrate grades averaged 24.1% Cu from nineteen bulk Cu-Mo locked-cycle flotation tests and averaged 28.0% Cu from three locked-cycle Cu-Mo separation tests.
- Molybdenum recoveries averaged 84.3% and concentrate grades averaged of 1.18% Mo from nineteen locked-cycle Cu-Mo bulk tests. Molybdenum recoveries averaged 72.3% and concentrate grades averaged of 0.85% Mo from three bulk Cu-Mo locked-cycle Cu-Mo separation test. Molybdenum stage recoveries average 87.2% and concentrate grade averaged 58.8% Mo. The overall combined molybdenum recoveries averaged 65.2%.
- Silver recoveries averaged 71.1% from nineteen bulk Cu-Mo locked-cycle flotation tests and averaged 71.8% from the three locked-cycle Cu-Mo separation tests, with concentrate grades averaging 120 g/t Ag for all locked-cycle tests.
- Eighteen grindability tests produced an average Bond Rod Mill Work index (RWi) of 13.8 kWh/t and an average Bond Ball Mill Work Index (BWi) of 10.5 kWh/t, indicating average hardness of mineralized material.

Robert Wares, CEO and Chairman of the Board, commented: "Preliminary testwork on Copper Mountain material has produced excellent numbers. At approximately 92% average copper recoveries and 65% molybdenum recoveries, these results indicate that Gaspé Copper should produce both copper and molybdenum concentrates with excellent metal grades and a payable silver credit added to the copper concentrate. These results have surpassed expectations relative to historical numbers from past production at Copper Mountain and will provide positive input into ongoing PEA work. Pending multi-element analyses of final concentrates will provide trace element data that will establish if any smelter penalty thresholds are reached, and this additional information will be disclosed as soon as possible. Work on the updated Mineral Resource Estimate (MRE) for Copper Mountain is also progressing well and we expect to release the new MRE in the coming weeks."

Metallurgical Testwork

A bench-scale metallurgical test work program was undertaken at Base Metallurgical Laboratories located in Kamloops British Columbia. The testwork program included:

- 1) Sample Characterization;
- 2) Grindability;
- 3) Conventional flotation flowsheet and reagent schemes;
- 4) Batch and locked-cycle Cu-Mo bulk flotation tests to produce copper (Cu) and molybdenum (Mo) concentrates;
- 5) Composite Cu-Mo bulk flotation followed by Cu-Mo separation tests;
- 6) Head grades tested ranged from 0.21% to 0.90% copper, 44 to 1347 g/t molybdenum and 0.9 to 5.0 g/t silver;

Sample Selection

Eighteen composite samples, totaling of 1100 kg, produced from drill core providing a suitable range of copper grades were selected for metallurgical testing. Head assays for the eighteen composite samples ranged from 0.21% to 0.90% copper, 44 to 1347 g/t molybdenum, 0.9 to 5.0 g/t silver and 0.01 to 0.07 g/t gold. Table 1 provides drill hole intervals and composite head grades for the metallurgical samples:

Table 1 - Details of Metallurgical Sample Selection

Metallurgical Sample #	Hole ID	Interval From (m) -To (m)	Cu %	Mo (g/t)	Ag (g/t)
MGMET23-01	30-1005	225.0 - 244.5	0.43	49	2.5
MGMET23-02	30-1005	868.5 - 891.0	0.90	721	4.6
MGMET23-03	30-1003	388.5 - 405.0	0.38	21	4.0
MGMET23-04	30-1003	717.0 - 744.0	0.52	1347	3.5
MGMET23-05	30-1003	1171.5 - 1191.0	0.26	122	1.1
MGMET23-06	30-1012	513.0 - 531.0	0.47	152	2.2
MGMET23-07	30-1006	547.5 - 565.5	0.32	197	1.2
MGMET23-08	30-1008	546.0 - 564.0	0.47	486	3.2
MGMET23-09	30-1011	424.5 - 442.5	0.47	247	1.3
MGMET23-10	30-1024	702.0 - 717.0	0.29	272	0.9
MGMET23-11	30-1021A	388.5 - 408.0	0.33	312	1.4
MGMET23-12	30-1019	412.5 - 429.0	0.23	163	1.4
MGMET23-13	30-995	351.0 - 369.0	0.22	66	2.1
MGMET23-14	30-999	741.0 - 765.0	0.31	300	1.6
MGMET23-15	30-984	273.0 - 291.0	0.21	63	1.2
MGMET23-16	30-988	235.5 - 253.3	0.30	111	1.9
MGMET23-17	30-979	216.5 - 236.0	0.39	125	5.0
MGMET23-18	30-993	199.5 - 217.5	0.22	44	1.5

Testing Procedures

Composites were created based on the selected drill core intervals (Table 2). Once created each composite was stage crushed to nominal 1.5 inch (3.8 cm), representative mass was split out for SMC testing at the -31.5 mm and +26.5 mm range. Once SMC testing was completed the products were returned and the composites were again stage crushed to -½ inch (-1.3 cm) where 15 kg was removed for Rod Mill Work Index testing. The remaining mass was stage-crushed to -6 mesh. The crushed material was blended and split into 24 kg sub-lots, each sub-lot was rotary split into 2 kg charges. A single test charge was riffle split to remove 250 g for head assay. The head cuts were pulverized to 80% passing 75 µm.

Metallurgical samples comprising drill core were crushed, split and sub-sampled for comminution testwork and head assays. Samples were wet-grinded in a closed batch mill at 65% solids targeting the required grind size. Ground samples were discharged into a flotation cell and pulp-level adjusted to the appropriate volume and density for flotation testing. The pulp was conditioned with reagents before beginning flotation. A series of open-circuit batch rougher and cleaner flotation tests were undertaken to optimize flotation conditions prior to operating locked-cycle flotation tests. The combined rougher concentrate was dewatered ahead of regrinding while retaining the process water for the cleaner stage. The rougher concentrate was reground to a target size with the regrind discharge size confirmed by laser particle sizing. The reground product was cleaned in successive dilution stages. The final concentrate and intermediate tails were filtered and dried separately in a low temperature oven before assaying.

The general approach to locked cycle testing was conducted as per the batch tests. Each cycle test was completed with 5 cycles, the rougher and 1st cleaner were completed open circuit, the intermediate cleaner tailings were recirculated to the feed of each subsequent stage for the following cycle; that is the 3rd cleaner tailing of cycle A was recirculated to the 2nd cleaner Feed of cycle B, the 2nd cleaner tail A was recirculated to

the feed of the 1st cleaner Feed B. This process continued for cycles C, D and E. All final products and final intermediate streams were filtered, dried, and assayed for metallurgical balancing. Locked cycle testing provides a methodology to best estimate steady-state metallurgical projections for a full-scale operation.

Reagents used for bulk Cu-Mo flotation included lime, potassium amyl xanthate (PAX), 3418A, and methyl isobutyl carbinol (MIBC). Nitrogen sparging, fuel oil, sodium hydrosulfide (NaHS) and MIBC were used for Cu-Mo separation.

Analysis was completed on pulverized sample splits using wet digestion methods for copper, molybdenum and silver. In each case, the samples were digested by a strong oxidization using a combination of Aqua-Regia, potassium chlorate and bromine. Copper was analyzed using atomic adsorption (AA) spectroscopy, and molybdenum and silver by inductively coupled plasma - optical emission spectroscopy (ICP-OES).

Metallurgical tests assay quality is evaluated by producing material balances of all products reconciled head which is compared to the direct head for all elements in consideration.

Grindability

Grindability tests were performed on each of the metallurgical samples. The average SMC Axb value was 46.6, average Bond Ball Mill Work index (BWi) was 10.49 kWh/t, average Rod Mill Work Index (RWi) was 13.89 kWh/t and average Abrasion index (Ai) was 0.384.

Batch Flotation Tests

A composite sample was initially tested with average copper grade to determine the optimal grind size for further flotation tests. Four (4) grind sizes ranging from 80% passing (P₈₀) of 66 microns to 125 microns were tested. P₈₀ of 75 microns was selected as the primary grind size for further testing.

Bulk Cu-Mo Locked-Cycle Flotation

Cu-Mo locked cycle tests (LCT) were performed at a grind size of 75 microns for the rougher stage with regrind to a target of 30 microns for the cleaner stages. Table 2 shows the bulk Cu-Mo concentrate grades and recovery results. Copper concentrate grades ranged from 17.1% to 30.9% with recoveries ranging from 86.1% to 95.7%. Molybdenum grades ranged from 0.08% to 2.74% with recoveries ranging from 75.7% to 92.3%.

Table 2. Bulk Cu-Mo LCT Results

Test ID	Sample ID	Concentrate grade			Recovery (%)		
		Cu %	Mo %	Ag (g/t)	Cu	Mo	Ag
LCT25	LOM Comp	20.6	0.74	98	94.5	83.6	75.6
LCT66	MGMET23-01	30.4	0.35	182	94.5	88.2	85.3
LCT49	MGMET23-02	22.9	1.81	80	94.8	85.8	78.1
LCT59	MGMET23-03	24.0	0.08	193	93.3	76.3	84.4
LCT67	MGMET23-04	17.1	1.25	96	96.5	93.1	78.2
LCT60	MGMET23-05	25.5	1.06	64	95.1	85.0	66.5
LCT50	MGMET23-06	23.1	0.63	48	87.2	82.3	42.6
LCT61	MGMET23-07	24.8	1.57	47	94.6	89.8	60.4
LCT62	MGMET23-08	24.5	2.74	115	93.8	92.8	71.1
LCT51	MGMET23-09	24.8	1.17	40	92.0	86.5	47.8
LCT52	MGMET23-10	23.0	2.53	71	86.1	88.0	62.7
LCT65	MGMET23-11	17.1	1.12	67	87.1	75.7	74.0

LCT53	MGMET23-12	19.9	1.42	99	87.4	84.8	67.1
LCT56	MGMET23-13	25.3	0.61	165	90.1	79.6	70.2
LCT64	MGMET23-14	24.5	1.68	102	95.7	81.3	72.2
LCT57	MGMET23-15	29.3	1.10	139	90.4	84.3	76.2
LCT68	MGMET23-16	21.7	0.84	120	91.3	80.5	76.2
LCT54	MGMET23-17	28.0	0.75	334	94.7	75.4	86.8
LCT55	MGMET23-18	30.9	1.05	205	87.8	89.2	77.2
Average:		24.1	1.18	119	91.9	84.3	71.1

Cu-Mo Separation

To produce molybdenum concentrates, due to the low feed concentrations, metallurgical samples were combined to produce three larger composite samples (low-, medium- and high-grade copper samples) for batch bulk flotation tests and subsequent Cu-Mo separation testing. Table 3 shows the composite sample head grades. Copper head grades ranged from 0.26% to 0.55%, molybdenum grades ranged from 135 to 234 g/t and silver head were consistently 2.2 g/t.

Table 3. Composite Sample Assays for Cu-Mo Separation Tests

Composite Sample	Metallurgical Samples	Head Grades		
		Cu %	Mo (g/t)	Ag (g/t)
1	MGMET23-02, MGMET23-06, MGMET23-09	0.55 ¹	198 ¹	2.2 ¹
2	MGMET23-03, MGMET23-05, MGMET23-07, MGMET23-08, MGMET23-11, MGMET23-14, MGMET23-16	0.32	234	2.2
3	MGMET23-10, MGMET23-12, MGMET23-13, MGMET23-15, MGMET23-17, MGMET23-18	0.26	135	2.2

¹ Calculated head grade

Multiple large batch flotation tests were performed for each composite sample to produce bulk Cu-Mo concentrates followed by Cu-Mo separation tests. Three Cu-Mo separation locked-cycle tests were performed at a grind size of 30 microns for the rougher stage with regrind to a target of 15 microns for the cleaner stages. Table 4 shows final copper concentrate grades and recoveries for the locked-cycle tests. Copper grade ranged from 22.2% to 30.9% with recoveries ranging from 92.3% to 96.6%.

Table 4. Copper Concentrate Assays and Recoveries

Composite Sample	Assay			Recoveries %		
	Cu %	Mo %	Ag (g/t)	Cu	Mo	Ag
1	30.9	0.1	92	96.6	8.1	70.1
2	22.2	0.1	76	92.3	9.1	58.2
3	28.6	0.1	162	92.7	9.5	75.5

Table 5 shows final molybdenum concentrate grades and recoveries for the locked-cycle tests. Molybdenum grade ranged from 55.7% to 60.7% with recoveries ranging from 57.7% to 70.7%.

Table 5. Molybdenum Concentrate Assays and Recoveries

Sample	Composite Assay			Recoveries %		
	Cu, %	Mo, %	Ag (g/t)	Cu	Mo	Ag
1	0.35	60.0	29	0.01	57.7	0.3
2	1.03	55.7	33	0.08	67.3	0.5
3	0.55	60.7	48	0.02	70.7	0.3

Full multi-element analyses of final concentrates are pending and further testing is planned during 2024 to further optimize metallurgical performance.

Qualified Person

Christian Laroche is a consultant for Synectiq Inc. and the independent Qualified Person ("QP") responsible for the technical data related to all testing reported in this press release. Mr. Laroche is a registered member of the *Ordre des Ingénieurs du Québec*.

About Osisko Metals

[Osisko Metals Inc.](#) is a Canadian exploration and development company creating value in the critical metals space, more specifically copper and zinc. The Company is a joint venture partner with Appian Capital Advisory LLP for the advancement of one of Canada's premier past-producing zinc mining camps, the Pine Point Project, located in the Northwest Territories, for which the 2022 PEA (as defined herein) has indicated an after-tax NPV of C\$602 million and an IRR of 25%, based on long-term zinc price of US\$1.37/lb and the current mineral resource estimates that are amenable to open pit and shallow underground mining. The current mineral resource estimate in the 2022 PEA consists of 15.7 Mt grading 5.55% ZnEq of Indicated Mineral Resources and 47.2 Mt grading 5.94% ZnEq of Inferred Mineral Resources. Please refer to the technical report entitled "*Preliminary Economic Assessment, Pine Point Project, Hay River, Northwest Territories, Canada*" dated August 26, 2022 (with an effective date of July 30, 2022), which was prepared for Osisko Metals and PPML by representatives of BBA Engineering Inc., HydroRessources Inc., PLR Resources Inc. and WSP Canada Inc. (the "2022 PEA"). Please refer to the full text of the 2022 PEA, a copy of which is available on SEDAR (www.sedar.com) under the Osisko Metals' issuer profile, for the assumptions, methodologies, qualifications and limitations described therein. The Pine Point Project is located on the south shore of Great Slave Lake in the Northwest Territories, near infrastructure, with paved highway access, an electrical substation, as well as 100 kilometres of viable haulage roads.

In addition, the Company also acquired in July 2023, from Glencore Canada Corporation, a 100% interest in the past-producing Gaspé Copper Mine, located near Murdochville in the Gaspé peninsula of Québec. The Company is currently focused on resource evaluation of the Mount Copper Deposit that hosts (in accordance with National Instrument 43-101 - Standards of Disclosure for Mineral Projects) an Inferred Mineral Resource of 456Mt grading 0.31% Cu (see April 28, 2022 news release of Osisko Metals entitled "Osisko Metals Announces Maiden Resource at Gaspé Copper - Inferred Resource of 456 Mt Grading 0.31% Copper"). Gaspé Copper hosts the largest undeveloped copper resource in Eastern North America, strategically located near existing infrastructure in the mining-friendly province of Québec.

For further information on this news release, visit www.osiskometals.com or contact:

Robert Wares, Chairman & CEO of [Osisko Metals Inc.](#)

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Forward-looking information is not a guarantee of future performance and is based upon a number of estimates and assumptions of management, in light of management's experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances, including, without limitation, assumptions about; favourable equity and debt capital markets; the ability and timing for the Pine Point joint-venture parties to fund cash calls to advance the development of the Pine Point Project and pursue planned exploration and development; future spot prices of copper, zinc, lead and molybdenum; the timing and results of exploration and drilling programs; the accuracy of mineral resource estimates; production costs; political and regulatory stability; the receipt of governmental and third party approvals; licenses and permits being received on favourable terms; sustained labour stability; stability in financial and capital markets; availability of mining equipment and positive relations with local communities and groups. 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. Factors that could cause actual results to differ materially from such forward-looking information are set out in the Company's public disclosure record on SEDAR (www.sedar.com) under Osisko Metals' 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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