

October 5, 2022

**Kamoa Copper reports record quarterly production of 97,820 tonnes of copper in Q3 2022**



**Kamoa-Kakula Mining Complex milled approximately 2.1 million tonnes of ore during the quarter at an average grade of 5.6% copper**



**Kamoa Copper has produced more than 240,000 tonnes of copper year-to-date**



**Phase 3 expansion progressing well, with box cut for the new Kamoa 1 and 2 mines now complete and decline development underway**



**Ivanhoe Mines to issue Q3 2022 financial results and host conference call for investors on November 14**

**KOLWEZI, DEMOCRATIC REPUBLIC OF CONGO – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) Co-Chairs Robert Friedland and Yufeng “Miles” Sun are pleased to announce that the Kamoa-Kakula Mining Complex in the Democratic Republic of Congo has set a new quarterly production record in the third quarter of 2022, with **97,820 tonnes of copper in concentrate produced**.**

**Kamoa-Kakula’s Phase 1 and 2 concentrator plants **set a monthly production record in September 2022 of 33,484 tonnes of copper in concentrate**, and continue to regularly surpass the combined throughput design capacity of 7.6 million tonnes per annum, following the early commissioning of Phase 2 in April 2022.**

**Kamoa-Kakula's Phase 1 and 2 concentrator plants milled approximately **2.1 million tonnes of ore during the third quarter at an average feed grade of 5.6% copper**. This included high-grade, run-of-mine ore from the Kakula Mine, supplemented with ore from the surface stockpiles to meet the throughput in excess of design capacity. In line with design parameters, copper recoveries averaged approximately 86% during the quarter.**

Ongoing mining optimization work at the Kakula Mine successfully targeted higher head grades during the third quarter, with the goal of increasing head grades up to 6% copper. Kamo Copper continues to evaluate additional material handling capacity at the Kakula Mine to increase mining rates to feed the de-bottlenecked Phase 1 and 2 processing capacity of 9.2 million tonnes per year. Further details will be incorporated into the Phase 3 expansion pre-feasibility study, scheduled for year-end.

To date, **a total of 118.3 kilometres (73.5 miles) of underground development has been mined across the mining complex.** While the ongoing expansion of underground infrastructure at the Kakula Mine takes place, ore will be drawn periodically from the stockpile to maximize copper production, as the concentrators are currently operating in excess of design capacity. Kamo-Kakula's total high- and medium-grade ore surface stockpiles totaled approximately **4.2 million tonnes at an estimated grade of 4.15% copper for a total of over 174,000 tonnes of contained copper,** as of the end of September 2022.

The Phase 1 and Phase 2 concentrator plants now are operating at an annualized production rate of approximately 400,000 tonnes of copper in concentrate, and have periodically exceeded this rate daily during the third quarter. The de-bottlenecking program is on track to boost Kamo Copper's annual production to approximately **450,000 tonnes of copper in concentrate** by the second quarter of 2023.

Management continues to anticipate that the early commissioning of the Phase 2 concentrator plant in March 2022, approximately four months ahead of schedule, will enable Kamo Copper to **deliver in the upper range of its increased 2022 production guidance of 310,000 to 340,000 tonnes of copper in concentrate.**

Ivanhoe Mines' Founder and Executive Co-Chairman, Robert Friedland commented: "Kamo-Kakula has effectively doubled its copper production rate to approximately 400,000 tonnes per year since the first quarter, and is expected to be producing at an annualized rate of 450,000 tonnes per year by the second quarter of 2023. This all has been achieved ahead of schedule and on budget ... a true pink unicorn in the mining industry and a great credit to the operating team at Kamo Copper and our joint-venture partner, Zijin Mining.

"This success is built upon Ivanhoe Mines' industry-leading history of mineral discovery, which will play a pivotal role in the company's future. We remain committed to discovering and developing tier-one ore bodies ... to provide a supply of metals critically needed for the electrification of the world economy ... and reduction of greenhouse gases throughout the supply chain."

**Watch a September fly-over of mining and expansion activities at Kamo-Kakula:** <https://vimeo.com/756832174/5e0fc76a83>



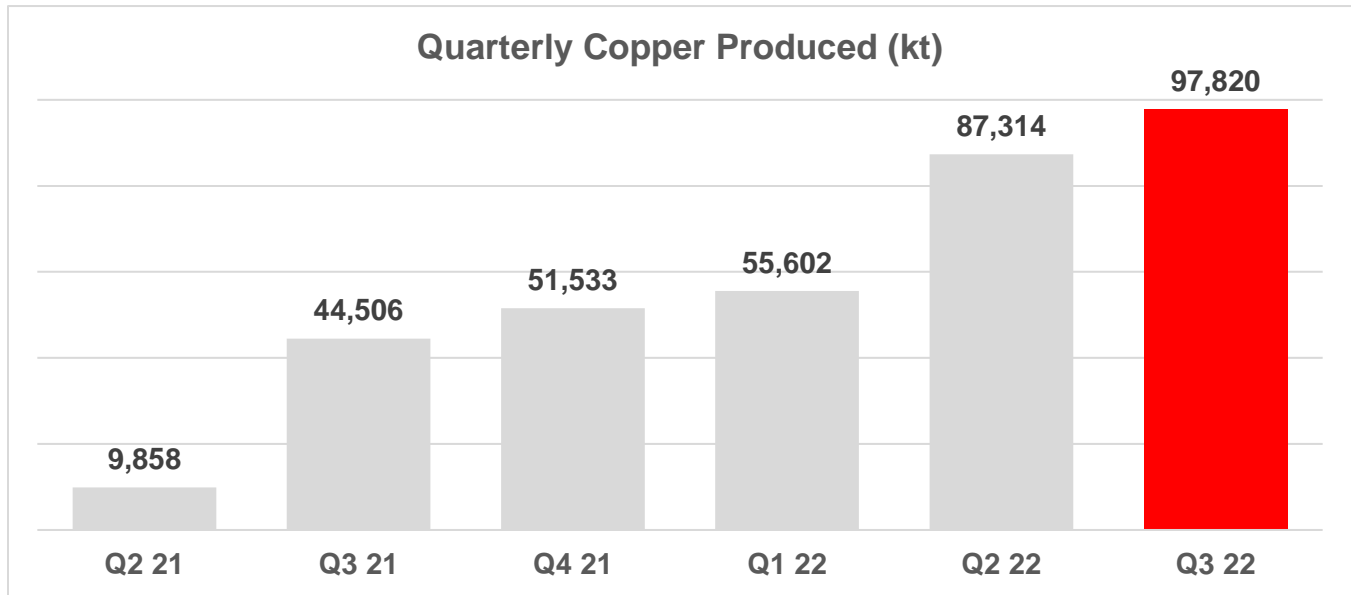
**Construction of an additional scavenger-cleaner flotation cell at the Phase 2 concentrator, which is part of the de-bottlenecking program designed to boost copper production to approximately 450,000 tonnes per annum by Q2 2023.**



**Also part of the de-bottlenecking program, construction of the additional concentrate thickener is advancing well.**



**Figure 1: Quarterly copper production since first production at Kamoia-Kakula in May 2021. Over 345,000 tonnes of copper have been produced to September 30, 2022.**



### **Kamoia-Kakula reports record quarterly production of 97,820 tonnes copper for Q3 2022**

Commercial production from Kamoia-Kakula's Phase 2 concentrator plant was declared on April 7, 2022, while steady state production was achieved at the end of May 2022.

The Kamoia-Kakula Mining Complex milled approximately 5.0 million tonnes of ore at an average feed grade of 5.6% copper year-to-date, and produced approximately **240,736 tonnes of copper in concentrate** through September 30, 2022. A total of 2.1 million ore tonnes were milled during the third quarter at an average feed grade of 5.6% copper.

**Kamoia-Kakula set a new quarterly production record in the third quarter of 2022 with 97,820 tonnes of copper in concentrate produced**, up from 87,314 tonnes produced in the second quarter and 55,602 tonnes produced in the first quarter.

Kamoia-Kakula achieved a daily record of 26,361 tonnes of ore milled per day on the last day of the quarter. In addition, a **daily production record of 1,426 tonnes of copper in concentrate** was achieved on September 3, 2022.

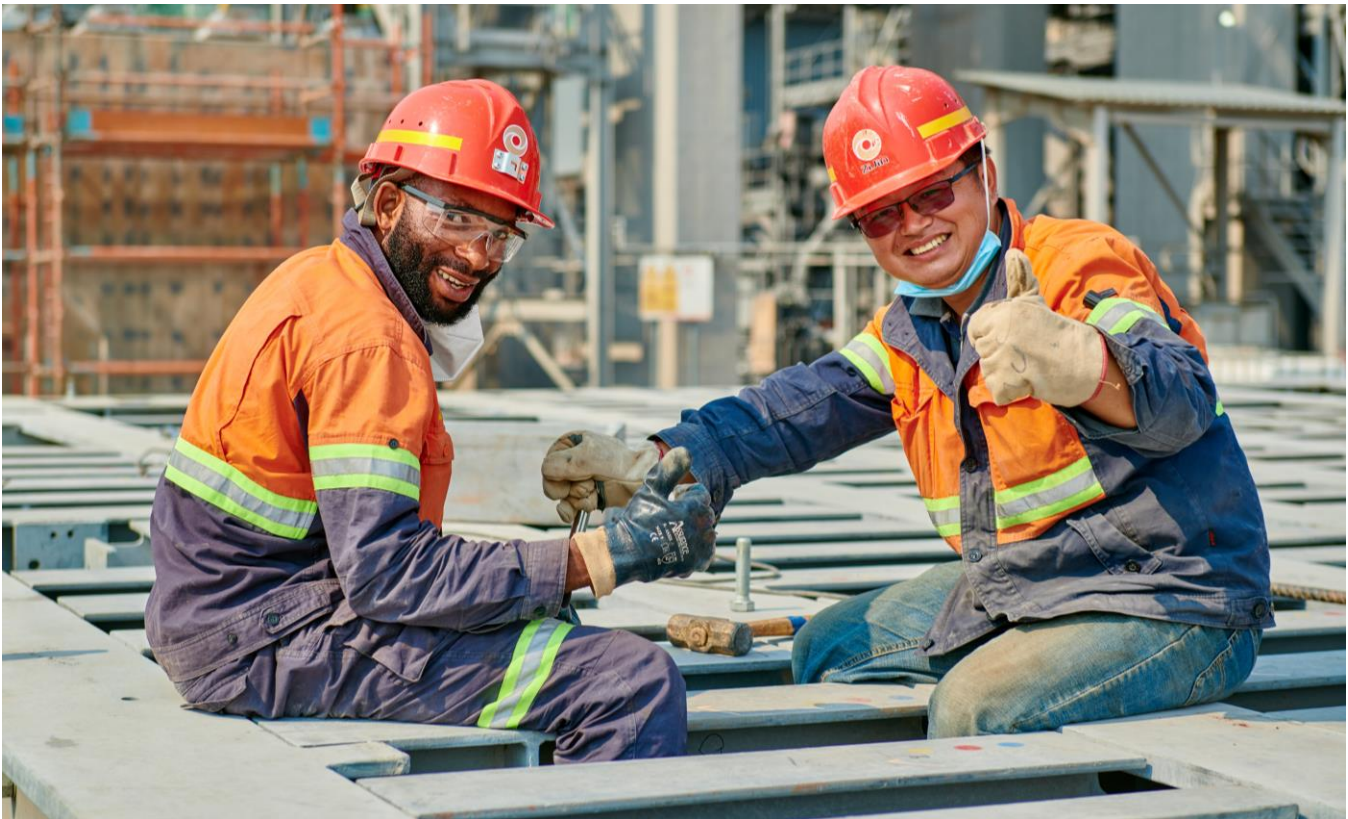
**Over 100,000 tonnes of copper were floated during the quarter**, including the contained copper that has been floated, but not yet filtered. As at September 30, 2022, there was a balance of **approximately 4,800 tonnes of contained copper in the circuit**.



The difference between floated and filtered copper arises from the current bottleneck in concentrate filter capacity, as the Phase 1 and 2 milling and flotation circuit continues to operate in excess of design capacity. Floated copper is temporarily stored as a slurry in a fully lined pond, which will be reclaimed into the concentrate thickener and filter press once the fourth Larox filter press is installed as part of the de-bottlenecking program.

The fourth Larox filter press, from Metso Outotec of Espoo, Finland, is expected to arrive on site by year-end and will be commissioned in January 2023. In the meantime, Kamo Copper is working on initiatives to maximize the capacity of the existing three filter presses.

(L-R) Mbbuti Romain, KKCC General Mounter; and Wang Lei, KKCC Riveter, on the assembly platform for the new scavenger-cleaner flotation cells, which are being installed as part of the de-bottlenecking program at the Phase 1 concentrator.



Kamo Copper's previously announced de-bottlenecking program is progressing on schedule to increase the combined design processing capacity of the Phase 1 and Phase 2 concentrator plants to approximately 9.2 million tonnes per annum.

After successfully operating the Phase 1 concentrator, the Kamo-Kakula team identified several relatively minor modifications that are expected to increase ore throughput by approximately 20%, from the design capacity of 475 tonnes per hour to approximately 580 tonnes per hour. These modifications include increasing the diameter of several pipes, replacing several motors and pumps with larger ones and installing additional flotation, concentrate-thickening, concentrate-filtration and tailings-disposal capacity. The total capital requirement for the de-bottlenecking program is \$50 million.

Once completed in the second quarter of 2023, the de-bottlenecking program will enable the copper production from Kamo-Kakula's first two phases to reach approximately **450,000 tonnes per year, positioning the Kamo-Kakula Mining Complex as the world's fourth largest copper producing operation.**

The Kamo Copper process engineering team, together with a number of internationally-recognized external metallurgy specialists, is investigating new technologies to economically recover additional copper units from the tailings stream of the Phase 1 and 2 concentrators, thereby potentially increasing overall recovery above the design target of 86%.

### **Lualaba Copper Smelter restarts following scheduled maintenance**

The Lualaba Copper Smelter, located approximately 50 kilometres from Kamo-Kakula, completed its scheduled maintenance in early September. The transportation of copper concentrates to the facility has resumed, as well as the export of its blister copper (approximately 99% contained copper). The Lualaba Copper Smelter is expected to treat approximately 120,000 tonnes of copper concentrates from Kamo Copper in 2022.

In line with previous disclosures, Kamo Copper is in the process of implementing several initiatives to optimize the transportation of copper products, following higher logistics costs announced in Q2 2022 due to a significant increase in volumes shipped.

The restart of the Lualaba Copper Smelter will assist in reducing overall shipping volumes, as the export of blister copper incurs lower logistics costs per unit of copper compared to copper concentrate. While the logistics optimization initiatives are underway, Kamo Copper and other operators have continued to experience disruption including periodic border congestion and occasional industrial action by truck drivers.

A close-up of a blister copper ingot, containing approximately 99% copper, and its identification tag at the Lualaba Copper Smelter, near Kolwezi.



### **Kamoa 1 and Kamoa 2 box cut and decline ramp now complete, Phase 3 twin decline excavation well underway**

Kamoa-Kakula's Phase 3 will consist of two new underground mines known as Kamoa 1 and Kamoa 2, located 10 kilometres north of the existing Phase 1 and Phase 2 concentrator plants. A new, 5-million-tonne-per-annum concentrator plant will also be established adjacent to the two new Kamoa mines. In addition, a 500,000-tonne-per-annum, direct-to-blister flash smelter will be constructed adjacent to the existing Phase 1 and Phase 2 concentrator plants. The associated power and surface infrastructure constructed for Phase 3 will be designed to support future expansions of the Kamoa-Kakula Mining Complex.

Construction now is complete on the Phase 3 box cut and decline ramp at the Kamoa 1 and Kamoa 2 underground mines, while excavation of the twin declines to access the new mining areas is advancing well. Construction works for the ramp, cut-off drains, and water-collection sumps also now is complete.

Basic engineering design for the entire Phase 3 expansion project is complete, with procurement activities well advanced. Bush clearing and terracing work for the 5-million-tonne-per-annum concentrator plant and associated surface infrastructure has started. Earthworks and civils contracts have been placed.

Upon commencement of Phase 3 production, the Kamoa-Kakula Mining Complex will have a processing capacity in excess of 14 million tonnes per annum. Phase 3 is



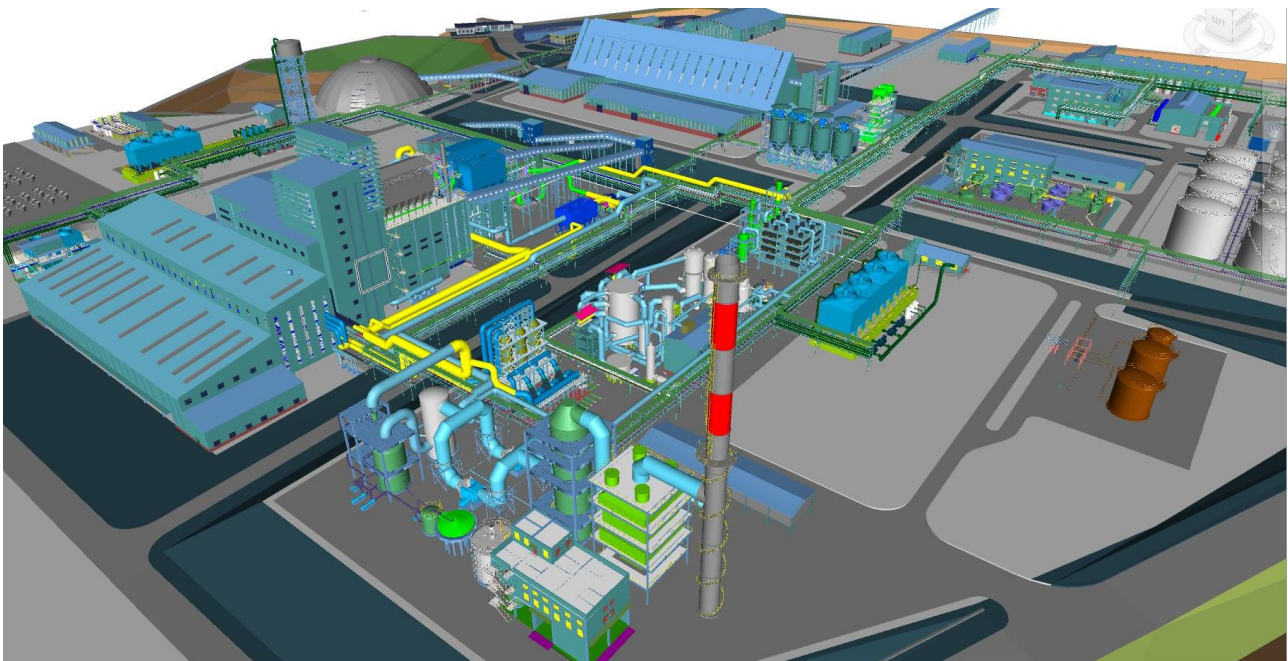
expected to increase copper production capacity to approximately **600,000 tonnes per annum, with commissioning expected by the fourth quarter of 2024**. This production rate will position the Kamoā-Kakula Mining Complex as the third-largest copper mining operation in the world.

Kamoā-Kakula's Phase 3 expansion also includes the refurbishment of turbine #5 at the Inga 2 hydroelectric power station. The turbine will supply an additional 178-megawatts of clean hydroelectric power to the national grid, which is sufficient to meet the power requirements of the Phase 3 concentrator, the direct-to-blister flash smelter, as well as providing spare capacity for future expansions. The blister anode copper produced from Kamoā-Kakula's smelter is expected to be one of the lowest carbon emitters per tonne of copper produced in the world.

The Kamoā-Kakula smelter is designed to use technology supplied by Metso Outotec of Espoo, Finland, and to meet the International Finance Corporation's (IFC) emissions standards. The smelter has been sized to process much of the copper concentrate that is expected to be produced by Kamoā-Kakula's Phase 1, 2 and 3 concentrators.

Earthworks excavation is now approximately 60% complete and progressing well at the smelter site, adjacent to Kamoā-Kakula's Phase 1 and Phase 2 concentrator plants. Civil works have also commenced.

**3D model of the direct-to-blister flash copper smelter site, located adjacent to the Phase 1 and 2 concentrators. Construction continues on schedule, with commissioning expected by the end of 2024.**





## **Ivanhoe Mines to issue Q3 2022 financial results and host conference call for investors on November 14**

Ivanhoe Mines will report its Q3 2022 financial results, and a detailed update on its operations, before market open on Monday, November 14, 2022.

The company will hold an investor conference call to discuss the Q3 2022 financial results at 10:30 a.m. Eastern time / 7:30 a.m. Pacific time on the same day.

An audio webcast recording of the conference call, together with supporting presentation slides, will be available on Ivanhoe Mines' website at [www.ivanhoemines.com](http://www.ivanhoemines.com).

After issuance, the Financial Statements and Management's Discussion and Analysis will be available at [www.ivanhoemines.com](http://www.ivanhoemines.com) and at [www.sedar.com](http://www.sedar.com).

### **Qualified Persons**

Disclosures of a scientific or technical nature at the Kamoakakula Mining Complex in this news release have been reviewed and approved by Steve Amos, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Mr. Amos is not considered independent under NI 43-101 as he is Ivanhoe Mines' Executive Vice President, Projects. Mr. Amos has verified the technical data disclosed in this news release.

Other disclosures of a scientific or technical nature regarding the stockpiles in this news release have been reviewed and approved by George Gilchrist, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Mr. Gilchrist is not considered independent under NI 43-101 as he is the Vice President, Resources of Ivanhoe Mines. Mr. Gilchrist has verified the other technical data regarding the surface stockpiles disclosed in this news release.

Ivanhoe has prepared an independent, NI 43-101-compliant technical report for the Kamoakakula Project, which is available on the company's website and under the company's SEDAR profile at [www.sedar.com](http://www.sedar.com):

- Kamoakakula Integrated Development Plan 2020 dated October 13, 2020, prepared by OreWin Pty Ltd., China Nerin Engineering Co., Ltd., DRA Global, Epoch Resources, Golder Associates Africa, KGHM Cuprum R&D Centre Ltd., Outotec Oyj, Paterson and Cooke, Stantec Consulting International LLC, SRK Consulting Inc., and Wood plc.

The technical report includes relevant information regarding the assumptions, parameters and methods of the mineral resource estimates on the Kamoia-Kakula Mining Complex cited in this news release, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this news release.

## About Ivanhoe Mines

Ivanhoe Mines is a Canadian mining company focused on advancing its three principal projects in Southern Africa: the newly expanded, mechanized, underground mines at the Kamoia-Kakula Mining Complex in the Democratic Republic of Congo, the development of the Platreef palladium-rhodium-platinum-nickel-copper-gold discovery in South Africa; and the restart of the historic Kipushi zinc-copper-germanium-silver mine, also in the Democratic Republic of Congo.

Kamoia-Kakula Mining Complex is one of the highest-grade and fastest growing major copper mining operations in the world. Copper concentrates were first produced in May 2021 and, through on-going phased expansions, it is positioned to become one of the world's largest copper producing operations. Kamoia-Kakula's 2022 production guidance is between 310,000 to 340,000 tonnes of copper in concentrate

The Kamoia-Kakula Mining Complex is powered by clean, renewable hydro-generated electricity and is among one of the world's lowest greenhouse gas emitters per tonne of copper metal produced.

The Kamoia-Kakula Mining Complex is operated by Kamoia Copper, a joint venture between Ivanhoe Mines (39.6%), Zijin Mining Group (39.6%), Crystal River Global Limited (0.8%) and the DRC government (20%).

Ivanhoe Mines is also exploring for new copper discoveries across its circa 2,400km<sup>2</sup> of wholly-owned exploration licences in the Western Foreland, which are located adjacent to the Kamoia-Kakula Mining Complex in the Democratic Republic of Congo.

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## Forward-looking statements

Certain statements in this release constitute “forward-looking statements” or “forward-looking information” within the meaning of applicable securities laws. Such statements and information involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company, its projects, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Such statements can be identified by the use of words such as “may”, “would”, “could”, “will”, “intend”, “expect”, “believe”, “plan”, “anticipate”, “estimate”, “scheduled”, “forecast”, “predict” and other similar terminology, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved. These statements reflect the company’s current expectations regarding future events, performance and results and speak only as of the date of this release.

Such statements include without limitation: (i) statements that an updated pre-feasibility study for Phase 3 is scheduled for year-end 2022; (ii) statements regarding Kamo-a-Kakula’s copper production guidance for 2022, which currently is estimated at between 310,000 tonnes and 340,000 tonnes of copper in concentrate; (iii) statements regarding first copper production from Phase 3 expected in the end of 2024; (iv) statements regarding the de-bottlenecking program will enable the copper production from Kamo-a Copper’s first two phases to exceed 450,000 tonnes per year by Q2 2023; (v) statements regarding ongoing mine optimization work at Kamo-a-Kakula targeting improved grades towards 6% copper and additional material handling capacity; (vi) statements that the de-bottlenecking program is expected to expand ore throughput at Kamo-a-Kakula’s Phase 1 and Phase 2 concentrators to 9.2 Mtpa by Q2 2023; (vii) statements regarding the establishment of a new 5-Mtpa concentrator plant adjacent to the two new mines at Kamo-a; (viii) statements that at commencement of Phase 3, Kamo-a-Kakula will have processing capacity greater than 14 Mtpa and is expected to increase annualized copper production capacity to approximately 600,000 tpa by Q4 2024; (ix) statements regarding Kamo-a-Kakula will be among the world’s lowest greenhouse gas emitters per unit of copper produced; and (x) statements regarding ore being periodically drawn from Kamo-a-Kakula’s surface stockpiles; (xi) statements regarding shipments of copper concentrate to the Lualaba Copper Smelter, blister copper exports and associated impacts on cash costs; (xii) statements regarding Kamo-a-Kakula’s 500-ktpa smelter facility being commissioned by the fourth quarter of 2024; (xiii) statements regarding the refurbishment of Turbine #5 at the Inga II hydropower facility; (xiv) statements regarding the associated power and surface infrastructure constructed for Phase 3 will be designed to support future expansions.

As well, all of the results of the Kakula definitive feasibility study, the Kakula-Kansoko Pre-Feasibility Study and the Kamo-a-Kakula Preliminary Economic Assessment, constitute forward-looking statements or information, and include future estimates of internal rates of return, net present value, future production, estimates of cash cost, proposed mining plans and methods, mine life estimates, cash flow forecasts, metal recoveries, estimates of capital and operating costs and the size and timing of phased development of the projects. Furthermore, with respect to this specific forward-looking information concerning the development of the Kamo-a-Kakula Mining Complex, the company has based its assumptions and analysis on certain factors that are inherently uncertain. Uncertainties include: (i) the adequacy of infrastructure; (ii) geological characteristics; (iii) metallurgical characteristics of the mineralization; (iv) the ability to develop adequate processing capacity; (v) the price of copper; (vi) the availability of equipment and facilities necessary to complete development; (vii) the cost of consumables and mining and processing equipment; (viii) unforeseen technological and engineering problems; (ix) accidents or acts of sabotage or terrorism; (x) currency fluctuations; (xi) changes in regulations; (xii) the compliance by joint venture partners with terms of agreements; (xiii) the availability



and productivity of skilled labour; (xiv) the regulation of the mining industry by various governmental agencies; (xv) the ability to raise sufficient capital to develop such projects; (xvi) changes in project scope or design; and (xvii) political factors.

Forward-looking statements and information involve significant risks and uncertainties, should not be read as guarantees of future performance or results and will not necessarily be accurate indicators of whether such results will be achieved. A number of factors could cause actual results to differ materially from the results discussed in the forward-looking statements or information, including, but not limited to, the factors discussed below and under "Risk Factors", and elsewhere in this release, as well as unexpected changes in laws, rules or regulations, or their enforcement by applicable authorities; the failure of parties to contracts with the company to perform as agreed; social or labour unrest; changes in commodity prices; and the failure of exploration programs or studies to deliver anticipated results or results that would justify and support continued exploration, studies, development or operations.

Although the forward-looking statements contained in this release are based upon what management of the company believes are reasonable assumptions, the company cannot assure investors that actual results will be consistent with these forward-looking statements. These forward-looking statements are made as of the date of this release and are expressly qualified in their entirety by this cautionary statement. Subject to applicable securities laws, the company does not assume any obligation to update or revise the forward-looking statements contained herein to reflect events or circumstances occurring after the date of this release.

The company's actual results could differ materially from those anticipated in these forward-looking statements because of the factors set forth below in the "Risk Factors" section in the company's 2022 Q3 MD&A and its current annual information form.