

May 3, 2022

**Kamoa-Kakula on track to become the world's third-largest copper mining complex by Q4 2024, with copper production of approximately 600,000 tonnes per year**



**Phase 3 expansion to include additional Kamoa 5 million-tonne-per-annum concentrator, adjacent to two new underground mines**



**Kamoa Copper commences earthworks on direct-to-blister smelter; on-site copper metal production expected in Q4 2024**



**Phase 2 production ramp-up to double annual copper production continues to progress smoothly**

NEW YORK CITY, NEW YORK – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) Co-Chairs Robert Friedland and Yufeng “Miles” Sun are pleased to announce today, ahead of the Goldman Sachs Copper Day, further details of the Phase 3 expansion at the Kamoa-Kakula Copper Mining Complex in the Democratic Republic of Congo. Phase 3 is expected to increase annualized copper production capacity to approximately 600,000 tonnes per year by the fourth quarter of 2024, which will position Kamoa Copper as **the world’s third-largest copper mining complex** (Figure 1), and the largest copper mining complex on the African continent.

Kamoa-Kakula's Phase 3 will consist of two new underground mines known as Kamoa 1 and Kamoa 2, as well as the initial decline development at Kakula West. A new, **5 million-tonne-per-annum concentrator plant** will be established adjacent to the two new mines at Kamoa.

Upon commencement of Phase 3 production, Kamoa Copper will have a **total processing capacity of greater than 14 million tonnes per annum**. The existing Phase 1 and 2 concentrators will be de-bottlenecked and operating at a combined throughput of 9.2 million tonnes of ore per year by the second quarter of 2023, which is expected to increase Kamoa-Kakula’s annual copper production to more than 450,000 tonnes. The associated power and surface infrastructure are being designed to support Phase 3, as well as future expansions.

Phase 3 also includes a direct-to-blister flash smelter that will incorporate leading-edge technology supplied by Metso Outotec of Espoo, Finland, with a nameplate capacity of

**500,000 tonnes per year of approximately 99%-pure blister copper. It is projected to be one of the largest, single-line copper flash smelters in the world, and the largest in Africa.**

**Kamoa-Kakula's Phase 3 expansion will also be powered by clean, green hydroelectricity. Kamoa Copper's Inga II partnership is expected to generate an additional 178 megawatts (MW) of renewable hydropower for the Democratic Republic of Congo, providing the Kamoa-Kakula Copper Mining Complex and associated smelter with sustainable electricity for Phase 3 and future expansions, while also benefitting local communities.**

**Negotiations for an amendment to Kamoa-Kakula's offtake arrangements for Phase 2 production are nearly complete, with copper product currently being shipped under existing, Phase 1 agreements.**

**Kamoa Copper's Phase 1 and Phase 2 concentrator plants have reached commercial production. Kamoa-Kakula is expected to increase production to approximately 600,000 tonnes copper by Q4 2024.**



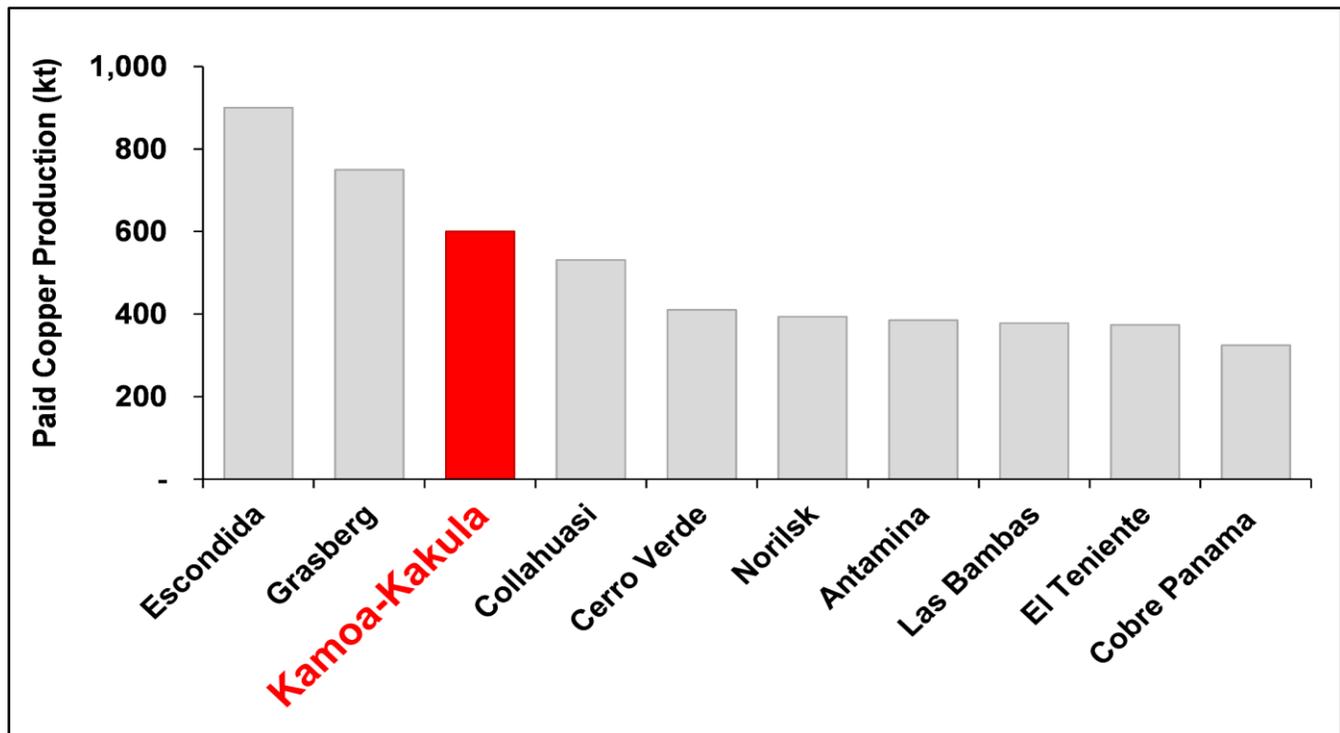
**Watch an April video highlighting Kamoa-Kakula's operations and phased expansion: <https://vimeo.com/705427431/8e94ba5768>**

Mr. Friedland commented: “Together with our joint-venture partner, Zijin Mining, we are resolved to expedite future expansion phases at Kamo-Kakula to meet rapidly rising copper demand, create profitable growth for our shareholders, and long-lasting economic and social benefits for the Congolese nation and people. The Kamo Copper team has delivered fantastic results during construction and ramp-up of Phase 1 and Phase 2, and we're confident that record of success will continue as we expand Kamo-Kakula into one of the world's largest producers of copper metal.

“We are at an inflection point for the copper industry ... one where we must determine how to meet growing demand, even as discovering and building new mines becomes ever more challenging. Humanity will likely require as much copper in the next 22 years alone as it did through this point in its history – approximately 700 million metric tonnes – just to maintain 3% GDP growth. This does not even account for rising demand related to global investment to combat climate change through aggressive electrification.

“We share Goldman Sachs' outlook on the pending supply-demand challenges in the copper market. We are looking forward to meeting with the financial and investment leaders in New York to discuss solutions, and to share the industry leading successes at Kamo-Kakula ... which at this very moment is the ‘greenest’ and fastest growing copper mine on the planet.”

Figure 1: Kamo-Kakula’s base-case, pro-forma Phase 3 copper production (after Phase 1 and 2 de-bottlenecking is complete) relative to the world’s projected top 10 producing mines in 2022 by paid copper production.



Source: Company filings, Wood Mackenzie (April 2022). Note: Kamoā-Kakula production of 600 kt copper in concentrate, is based on expected Phase 1, 2 and 3 steady state production, following de-bottlenecking of both Phase 1 and 2 concentrators, and commercial ramp-up of the Phase 3 concentrator.

**Construction progress on the new box cut and twin decline excavations is advancing quickly at the Kamoā 1 and Kamoā 2 mines.**



**Phase 3 construction works well underway, with Pre-Feasibility Study expected in the second half of 2022**

Phase 3 is making solid progress, with detailed design, budgeting and engineering advancing well. Construction progress on the new box cut excavation is advancing rapidly at the Kamoā 1 and Kamoā 2 mines, with decline development expected to start in early May 2022, which will provide access to the major Phase 3 mining areas.

The Pre-Feasibility Study for the Phase 3 expansion is well advanced and expected to be announced during the second half of this year, while first production is anticipated to commence by the end of 2024.

**Drilling the blast holes for the first blast at the Phase 3 Kamo a 1 and 2 box cut, which occurred in early April.**



**Annebel Oosthuizen, Chief Executive, Commercial, Kamo a Copper (left); and Marna Cloete, President, Ivanhoe Mines, initiate the second blast at the Kamo a 1 and 2 box cut.**



**Photo of the second blast at the Kamoia 1 and 2 box cut dated April 14, 2022.**



**Kamoia-Kakula smelter to be one of the largest, single-line blister-copper flash smelters in the world, and the largest in Africa**

**Kamoia Copper has awarded the earthworks contract for the Phase 3, 500,000-tonnes-per-annum, direct-to-blister flash smelter; and construction has commenced at the site.**

**The Kamoia-Kakula smelter will be built adjacent to the Phase 1 and Phase 2 concentrator plants, and is designed to use technology supplied by Metso Outotec and to meet the International Finance Corporation's (IFC) emissions standards. The smelter has been sized to process most of the copper concentrate forecast to be produced by Kamoia-Kakula's Phase 1, Phase 2 and Phase 3 concentrators.**

**In late 2021, Kamoia Copper awarded China Nerin Engineering Co., Ltd. (Nerin) of Jiangxi, China, with the basic engineering contract for the planned, direct-to-blister flash smelter. Nerin is an international engineering company with more than 60 years of experience in smelter engineering and construction projects globally. Nerin actively promotes the advancement of smelting technology through its own research and development, and establishing various partnerships with global industry peers, including Metso Outotec.**

**The smelter, once in operation, is expected to enable Kamoia-Kakula to reduce its C1 cash costs per pound of payable copper produced by approximately 10% to 20%, driven**

by significantly reduced transportation costs, reducing overall volumes shipped by more than half, as well as more favorable tax treatment, and the recovery and sale of sulphuric acid as a by-product revenue.

There is a strong demand and market for sulphuric acid in the Democratic Republic of Congo to recover copper from oxide ores. Copper mines in the region currently import significant volumes of sulphur used in sulphur-burning acid plants to produce sulphuric acid for the treatment of oxide copper ores. The Democratic Republic of Congo also imports sulphuric acid, primarily from Zambia.

Changdong Liu (left), Kamoia Technical Executive; and David Mitchell, Kamoia Senior Project Manager, standing in the location of the direct-to-blister flash furnace in the new smelter plant.



### **Inga II partnership to supply additional clean hydroelectric power for the Phase 3 expansion and smelter; EPC contract signed for Turbine #5 refurbishment**

In July 2021, Ivanhoe Mines Energy DRC, a sister company of Kamoia Copper tasked with delivering reliable, clean, renewable hydropower to the Kamoia-Kakula Copper Mining Complex, signed an addendum of the financing agreement under a public-private partnership with the Democratic Republic of Congo's state-owned power

company, La Société Nationale d'Electricité (SNEL), to upgrade a major turbine (#5) in the existing Inga II hydropower facility on the Congo River.

This partnership successfully refurbished and modernized the Mwadingusha hydropower plant in 2021, which now provides 78 MW to the national grid.

The Inga II project is expected to produce an additional 178 MW of renewable hydropower, providing the Kamoia-Kakula Copper Complex and associated smelter with sustainable electricity for Phase 3 and future expansions, while also benefitting local communities. The Inga II upgrade project is scheduled for completion in the fourth quarter of 2024.

The work at Turbine #5 will include the upgrade and replacement of all the unit line from intake equipment, turbine, speed governor, alternator, voltage regulator and transformers (water to wire).

The Inga II Turbine #5 project has much lower unitary cost per megawatt produced (\$0.58/MW) compared to the completed Mwadingusha project (\$1.45/MW).

The engineering, procurement, and construction (EPC) contract for the upgrading of Turbine #5 was signed in Heidenheim, Germany, on April 26, 2022, by SNEL and Voith Hydro, a leading German hydropower company.

Signing of the Turbine #5 EPC contract in Heidenheim, Germany, on April 26, 2022. (L-R) Jean-Bosco Kayombo, CEO, SNEL; Ben Munanga, General Manager, Ivanhoe Mines Energy; Heike Bergmann, Senior VP Sales, Africa, Voith Hydro; Gerhard Seyrling, President and CEO, Voith Hydro Europe.



**Interior photo of the Inga II hydropower facility on the right bank of the Congo River at Inga falls, which was originally equipped between 1977 and 1982. Inga II has eight 178-MW turbine and generator units.**



### **Kamoa Copper breaks ground on the Kamoa Centre of Excellence facility**

**Construction now is underway at the Kamoa Center of Excellence, which once in operation, aims to create a sustainable and community-centered learning environment in the heart of the Democratic Republic of Congo. Kamoa Copper’s leadership team hosted the groundbreaking ceremony in December 2021.**

**A recent survey indicated that the current situation regarding the local Kolwezi high school learners’ desire to study “abroad” must improve for the long-term future of the country. In response, there is a desire to retain and develop local talent and to create a situation where in-country higher education becomes the norm. The Kamoa Centre of Excellence will be a world-class facility, developed on the outskirts of Kolwezi, offering degrees, diplomas and short courses in collaboration with internationally accredited institutions.**

**The project will take place over multiple phases to allow for departments, as well as sports facilities, to be added over time. Initial curriculum offerings will be aligned with the mining industry i.e., mining engineering, French-English language courses, and**

much more. Phase 1 will include just over 100 students, with enrollment to commence in 2023. Kamoā Copper has committed to fund the construction of this new facility, including interior furnishings and the technological setup.

The Kamoā Centre of Excellence will be a future-ready learning environment hosted within an adaptable campus. This community advanced, private institution of higher learning will create a legacy of collaboration, supporting local infrastructure and economic growth.

**Aerial view of the site selected for the Kamoā Centre of Excellence, where early construction works have commenced.**



**Architectural renderings of the proposed Kamoia Centre of Excellence campus, located just outside of Kolwezi. Student enrollment is scheduled to begin in 2023.**



## **Ivanhoe Mines reports logistics ongoing as usual**

Heavy rains and flooding forced a brief suspension of operations at the Port of Durban in South Africa's KwaZulu-Natal province in mid-April. The brief suspension at the Port of Durban has had no material impacts on Ivanhoe Mines' business, and operations resumed at the port on April 17, 2022.

## **Ivanhoe Mines to issue Q1 2022 financial results and host conference call for investors on May 10**

Ivanhoe Mines will report its Q1 2022 financial results before market open on Tuesday, May 10, 2022.

The company will hold an investor conference call to discuss the Q1 2022 financial results at 10:30 a.m. Eastern time / 7:30 a.m. Pacific time on the same day. The conference call dial-in is +1-647-794-4605 or toll free 1-888-204-4368, quote "Ivanhoe Mines Q1 2022 Financial Results" if requested. Media are invited to attend on a listen-only basis.

Link to join the live audio webcast: <https://bit.ly/3DTATay>

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).

The team with Kongo River Construction, a civil engineering and contract mining services company in the Democratic Republic of Congo, building the decline ramp at the Kamoia 1 and 2 box cut.



Aerial photo of progress Kamoia 1 and Kamoia 2 box cut and decline ramp.



## Qualified Persons

Disclosures of a scientific or technical nature at the Kamo-Kakula Project 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 the Head of the Kamo-Kakula Project. Mr. Amos has verified the technical data disclosed in this news release.

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

- Kamo-Kakula 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 Kamo-Kakula Project 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 development of major new, mechanized, underground mines at the Kamo-Kakula copper discoveries in the Democratic Republic of Congo and at the Platreef palladium-rhodium-platinum-nickel-copper-gold discovery in South Africa; and the extensive redevelopment and upgrading of the historic Kipushi zinc-copper-germanium-silver mine, also in the Democratic Republic of Congo.

Kamo-Kakula is the world's fastest growing major copper mine. Kamo-Kakula began producing copper concentrates in May 2021 and, through phased expansions, is positioned to become one of the world's largest copper producers. Kamo-Kakula is being powered by clean, renewable hydro-generated electricity and is projected to be among the world's lowest greenhouse gas emitters per unit of metal produced. Ivanhoe Mines has pledged to achieve net-zero operational greenhouse gas emissions (Scope 1 and 2) at the Kamo-Kakula Copper Mine. Ivanhoe also is exploring for new copper discoveries on its Western Foreland exploration licences in the Democratic Republic of Congo, near the Kamo-Kakula Mining Complex.

## About the Kamo-Kakula Copper Mining Complex

**Kamo-Kakula is the world's fastest growing and highest-grade major copper mining complex. Based on independent benchmarking, the project's phased expansion scenario to 19 million tonnes per annum would position Kamo-Kakula as the world's second-largest copper mining complex, with peak annual copper production of more than 800,000 tonnes. Copper production from the Kamo Copper's first two phases is projected to exceed 450,000 tonnes per year by Q2 2023, positioning Kamo Copper as the world's fourth largest copper producer.**

**A 2020 independent audit of Kamo-Kakula's greenhouse gas intensity metrics performed by Hatch Ltd. of Mississauga, Canada, confirmed that the project will be foremost among the world's lowest greenhouse gas emitters per unit of copper produced.**

**The Kamo-Kakula Mining Complex is a joint venture between Ivanhoe Mines (39.6%), Zijin Mining Group (39.6%), Crystal River Global Limited (0.8%) and the Government of the Democratic Republic of Congo (20%).**

### Information contact

Matthew Keevil +1.604.558.1034

Website [www.ivanhoemines.com](http://www.ivanhoemines.com)

### 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 H2 2022; (ii) statements regarding Kamo-Kakula becoming the world's third-largest copper mining complex by Q4 2024, with copper production of approximately 600,000 tonnes per year; (iii) statements regarding first copper production from Phase 3 expected in Q4 2024; (iv) statements regarding the Phase 1 and 2 de-bottlenecking program increasing combined throughput to 9.2 million tonnes of ore per year by Q2 2023 and increasing annual copper production to more than 450,000 tonnes; (v) statements regarding the Kamo-Kakula's phased expansion scenario to 19 Mtpa would position Kamo-Kakula as the world's second-largest copper mining complex, with peak annual copper

production of more than 800,000 tonnes; (vi) statements regarding Kamoia-Kakula will be among the world's lowest greenhouse gas emitters per unit of copper produced; (vii) statements on achieving net-zero operational greenhouse gas emissions (Scope 1 and 2) at the Kamoia-Kakula Copper Mine; (viii) statements regarding the Phase 3 expansion to include third 5 million-tonne-per-annum concentrator, adjacent to two new underground mines; (ix) statements regarding Kamoia Copper's first copper metal production from on-site flash smelter expected in Q4 2024; (x) statements regarding the associated power and surface infrastructure for Phase 3 will be designed to support future expansions; (xi) statements regarding the Kamoia-Kakula smelter nameplate capacity of 500,000 tonnes a year of approximately 99%-pure blister copper; (xii) statements regarding the smelter enabling Kamoia-Kakula to reduce its C1 cash costs per pound of payable copper produced by approximately 10 to 20%; (xiv) statements regarding the recovery and sale of sulphuric acid as a by-product revenue; and (xv) statements regarding the Inga II Turbine #5 project being complete by Q4 2024, and providing 178 MW of hydropower to the grid.

As well, all of the results of the Kakula definitive feasibility study, the Kakula-Kansoko pre-feasibility study and the Kamoia-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 Kamoia-Kakula Project, 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 or not 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 as a result of the factors set forth below in the "Risk Factors" section in the company's 2021 Q4 and Year-End MD&A and its current annual information form.