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Ivanhoe Mines reports Q1 2023 production of 93,603 tonnes of copper from Kamoa-Kakula Copper Complex

Kamoa-Kakula produced record 34,915 tonnes of copper in March

Kamoa-Kakula reported weekly production record of 9,016 tonnes of copper and daily production record of 1,563 tonnes of copper in March

Phase 1 and 2 concentrators reached new daily average milling record of over 29,000 tonnes

Kamoa-Kakula achieved record average copper recoveries exceeding 88% in March

Kamoa-Kakula milled approximately 1.93 million tonnes of ore during the quarter at average grade of 5.4% copper

Ivanhoe Mines to issue sixth annual Sustainability Report on April 13, highlighting the company's commitment to mining with a greater purpose

KOLWEZI, DEMOCRATIC REPUBLIC OF CONGO – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) Executive Co-Chair Robert Friedland and President Marna Cloete are pleased to announce that the Kamoa-Kakula Copper Complex in the Democratic Republic of Congo (DRC) produced 93,603 tonnes of copper in concentrate during the first quarter of 2023.

The Phase 1 and 2 concentrators are now regularly operating at the increased processing rate of 9.2 million tonnes per annum (Mtpa), following the completion of the debottlenecking program. The \$50-million Phase 1 and 2 concentrator debottlenecking program was completed on-budget and ahead of schedule in late

February, increasing production capacity up to 450,000 tonnes of copper in concentrate per annum.

Following the completion of the debottlenecking, Kamoa-Kakula's Phase 1 and 2 concentrators had a record-breaking March. A production record of 34,915 tonnes of copper in concentrate was achieved during the month, in addition to a weekly production record of 9,016 tonnes in mid-March, and a daily production record of 1,563 tonnes on March 25. These records were achieved following two scheduled plant shutdowns during the first quarter to tie in the new debottlenecking equipment.

Kamoa-Kakula's Phase 1 and 2 concentrators milled approximately 1.93 million tonnes of ore during the first quarter at an average feed grade of 5.4% copper. This included approximately 255,000 tonnes of ore from the surface stockpiles.

The Phase 1 and Phase 2 concentrators also substantially outperformed design specifications in terms of copper recovery during the month, with copper recoveries averaging 88.3% and periodically achieving 90%, significantly above Kamoa-Kakula's nameplate 86% recovery rate.

The record monthly production in March was also achieved despite previously reported instability within the DRC's southern power grid. Ivanhoe Mines maintains its 2023 annual production guidance for Kamoa-Kakula at between 390,000 to 430,000 tonnes of copper in concentrate.

Ivanhoe Mines' Founder and Executive Co-Chairman, Robert Friedland commented:

"The operating performance at Kamoa-Kakula continues to impress as the team focuses on optimizing the concentrator plant following the successful completion of the Phase 1 and Phase 2 debottlenecking program, once again ahead of schedule and on budget, during the first quarter. We're particularly excited about the improving trends in copper recovery, which saw the concentrator plants operating at recoveries as high as 90% in March ... driving record production numbers into the end of the month.

"With the Phase 3 expansion well on track for 2024, Kamoa-Kakula represents a truly rare, high-margin growth story across the copper industry. Kamoa-Kakula is one of the world's largest, highest-grade copper complexes, and a major economic engine that generates leading returns on capital and exceptional free cash flow. As the rainy season in the Democratic Republic of Congo ends our geological team will also be ramping up exploration activities on Ivanhoe's 90-100%-owned Western Foreland Exploration Project next door, where we expect to drill around 75,000 metres this year. We're looking forward to the many successes to come with our partners and shareholders in 2023 and beyond."

All figures are on a 100% project basis and metal reported in concentrate is before refining losses or deductions associated with smelter terms.

Kamoa-Kakula produced 93,603 tonnes of copper during the first quarter of 2023, compared to 92,761 tonnes of copper in the fourth quarter of 2022.

Ivanhoe Mines announced the ahead-of-schedule and on-budget completion of Kamoa-Kakula's Phase 1 and Phase 2 debottlenecking program on February 27, 2023. The debottlenecking program increased the nameplate ore processing capacity by 22% from 7.6 to 9.2 million tonnes of ore per annum, increasing production capacity up to approximately 450,000 tonnes per annum of copper in concentrate.

Following the subsequent ramp-up, several operational records were achieved during March, including a record daily milling rate of 29,003 dry metric tonnes on March 18; a record daily production rate of 1,563 tonnes of copper on March 25; a weekly production record of 9,016 tonnes of copper between March 24 and 30; and a monthly production record of 34,915 tonnes of copper in concentrate.

Two scheduled plant shutdowns were completed during the first quarter to tie in the new debottlenecking equipment. The shutdown of the Phase 1 concentrator took place in late January 2023, and the shutdown of the Phase 2 concentrator plant was completed in late February 2023. The new debottlenecking equipment consists of new hydrocyclones, new scavenger-cleaner flotation cells, a new concentrate thickener and a new Larox filter press, as well as upsized piping and pumping capacity.

The Phase 1 concentrator started operating at its new, sustained nameplate capacity of 580 dry tonnes per hour on January 25, 2023. On February 25, 2023, within 12 hours of restarting, the Phase 2 concentrator also ramped up to its new, sustained nameplate capacity of 580 dry tonnes per hour. Thereby, achieving the targeted combined throughput of 9.2 million tonnes per annum. Subsequently, both concentrators have been able to deliver, over limited periods, in excess of 600 dry tonnes per hour.

Kamoa-Kakula milled approximately 1.93 million tonnes of ore during the first quarter at an average feed grade of 5.4% copper.

While the ongoing expansion of underground infrastructure at the Kakula Mine takes place, ore continues to be drawn as required from surface stockpile to maximize copper production.

Kamoa-Kakula's high- and medium-grade ore surface stockpiles totaled approximately 4.2 million tonnes at an estimated grade of 3.9% copper as of the end of March 2023. The operation mined 2.0 million tonnes of ore grading 5.2% copper in Q1 2023, which was comprised of 1.8 million tonnes grading 5.6% copper from the Kakula mine, including 0.8 million tonnes grading 6.7% copper from the mine's high-grade centre.

(L-R) Rachelle Museka, Mill Operator; Linda Malumda, Senior Larox Filter Operator and Fancy Katuma, Sand Filter Operator standing in front the debottlenecked Phase 2 concentrator. The additional Larox filter capacity, as part of the debottlenecking program, increases Kamoa-Kakula's production capacity up to 450,000 tonnes per annum.



Copper recoveries from the Phase 1 and Phase 2 concentrators also improved during the quarter. The average recovery rate for the quarter was approximately 87%; however, concentrator recoveries in late March averaged 88.3% and periodically reached 90%, well above Kamoa-Kakula's 86% design rate. The Kamoa Copper process engineering team, together with several internationallyrecognized external metallurgy specialists, continue to investigate the feasibility of new technologies to further increase overall processing recoveries. The recently commissioned concentrate thickener that was constructed as part of the debottlenecking program, was completed ahead-of-schedule and on-budget in late February. Kamoa-Kakula's Phase 1 and 2 concentrators set a monthly production record of 34,915 tonnes of copper in concentrate during March 2023.



Kamoa-Kakula is working closely with the DRC's state-owned power utility, La Société Nationale d'Electricité (SNEL) in identifying potential improvements to the regional grid infrastructure. Kamoa-Kakula is also assisting with the delivery of these improvements.

In addition, Kamoa Copper is independently installing sufficient redundancy to isolate Kamoa-Kakula's Phases 1, 2 and 3 operations from any potential future power intermittencies. In the near term, a phased increase of on-site, installed backup generation capacity is planned, from 32 megawatts (MW) to 132 MW. An additional 11 MW is expected to be commissioned in the second quarter, with a further 73 MW to be installed towards the end of 2023. Concurrently, discussions are advancing to secure additional power via the Zambian interconnector. Longer term, the total power redundancy capacity is expected to be up to 200MW.

Surface earthworks for Phase 3 concentrator plant and associated infrastructure well advanced, with first flotation cells delivered in March

Kamoa-Kakula's Phase 3 expansion will consist of two new underground mines known as Kamoa 1 and Kamoa 2, located approximately 10 kilometres north of the existing Kakula underground mine, and the Phase 1 and Phase 2 concentrators. A new, 5-million-tonne-per-annum concentrator is under construction adjacent to the new Kamoa mines, which are also under development.

The concrete foundations under construction for the Phase 3 concentrator flotation cells. Construction of Phase 3 concentrator is advancing on schedule.



First production from the Phase 3 concentrator is scheduled and expected by the fourth quarter of 2024. Overall work on the Phase 3 concentrator was approximately 24% complete as at the end of March.

In late March, Kamoa Copper took onsite delivery of the first of its Phase 3 flotation cells, manufactured by Metso Outotec of Espoo, Finland. Initial steel deliveries have arrived in South Africa and are en route to the project site. In addition, the cyclones and electrical motors have been shipped from their respective manufacturers, while the first of the two ball mills, manufactured by CITIC Heavy Industries, is now ready for shipment from China. The concrete foundations of the direct-to-blister furnace building, as part of the 500,000 tonnes per annum direct-to-blister flash copper smelter. The construction of the smelter is advancing on schedule.



3D rendering of the furnace and off-gas handling building (RHS), and acid production facility (LHS). All smelter off-gas streams, including the acid plant tail gas, will be treated through the de-sulphurisation plant. The plant will produce 650,000 to 800,000 tonnes of high-strength sulphuric acid per annum, which will be sold domestically within the DRC Copperbelt.



Construction activities on the direct-to-blister flash copper smelter are advancing on schedule and are approximately 36% complete. Earthworks are 100% complete and civil works now well underway. The direct-to-blister and electric slagcleaning furnaces foundation construction is complete, with structural steel installation having commenced in March. Foundation construction for the smelting building, as well as the anode-refining furnace building are also principally complete.

The smelter site is adjacent to Kamoa-Kakula's Phase 1 and Phase 2 concentrator plants and will be fed by a mix of copper concentrate produced from Phase 1, 2 and 3 concentrators.

3D rendering of the 100-hectare smelter project site. The smelter will be constructed to meet the highest environmental and safety standards, as set by the International Finance Corporation (IFC) Performance Standards and the World Bank Group Environmental Health and Safety (EHS) Guidelines.



Qualified Persons

Disclosures of a scientific or technical nature at the Kamoa-Kakula 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 Kamoa-Kakula Project, which is available on the company's website and under the company's SEDAR profile at <u>www.sedar.com</u>:

 Kamoa-Kakula 2023 IDP Technical Report dated March 6, 2023, prepared by OreWin Pty Ltd.; China Nerin Engineering Co. Ltd.; DRA Global; Epoch Resources; Golder Associates Africa; Metso Outotec Oyj; Paterson and Cooke; SRK Consulting Ltd.; and, The MSA Group.

The technical report includes relevant information regarding the assumptions, parameters and methods of the mineral resource estimates on the Kamoa-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 expansion of the Kamoa-Kakula Copper Complex in the DRC, the construction of the tier-one Platreef palladium-rhodiumplatinum-nickel-copper-gold project in South Africa; and the restart of the historic ultra-high-grade Kipushi zinc-copper-germanium-silver mine, also in the DRC.

Ivanhoe Mines also is exploring for new copper discoveries across its circa 2,400km² of 90-100% owned exploration licences in the Western Foreland, located adjacent to, or in close proximity to, the Kamoa-Kakula Copper Complex in the DRC.

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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 regarding ramping up exploration activities on Western Foreland Exploration Project, with 75,000 metres of exploration drilling this year; (ii) statements regarding Kamoa-Kakula's copper production guidance for 2023, which currently is estimated at between 390,000 to 430,000 tonnes of copper in concentrate; (iii) statements regarding first copper production from Phase 3 expected in the end of 2024; (iv) statements regarding the installation of addition onsite power generation capacity and improvements in DRC power infrastructure, including longer term target to increase total power redundancy capacity up to 200MW; (v) statements regarding expected average copper grades at Kamoa-Kakula; (vi) statements regarding the establishment of a new 5-Mtpa concentrator plant adjacent to the two new mines at Kamoa; (vii) statements regarding ore being periodically drawn from Kamoa-Kakula's surface stockpiles; (viii) statements regarding the expected manufacturing and delivery schedule of Phase 3 equipment, including for the 500,000-tpa smelter facility; and, (xv) statements regarding Kamoa-Kakula's smelter de-sulphurisation plant that will capture between 650,000 and 800,000 tonnes of high-strength sulphuric acid per annum, which will be sold domestically within the DRC Copperbelt.

All of the results of the 2023 Pre-Feasibility Study and 2023 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 Kamoa-Kakula Copper 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 forwardlooking statements because of the factors set forth below in the "Risk Factors" section in the company's MD&A for year-ended 2022 and its current annual information form.