July 27, 2023

Ivanhoe Mines announces highly promising preliminary testwork for improving copper recoveries at Kamoa-Kakula

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Results indicate a significant improvement in total recoveries can be achieved by liberating copper from tailings stream

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Based on these results, Kamoa-Kakula can further increase production, revenues and cash flow

KOLWEZI, DEMOCRATIC REPUBLIC CONGO – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) Executive Co-Chair Robert Friedland and President Marna Cloete are pleased to provide an update on preliminary test work conducted to improve copper recovery at the Kamoa-Kakula Copper Complex.

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

"Despite the Phase 1 and 2 concentrators exceeding the nameplate recovery rate, the grade of copper in Kamoa-Kakula's tailings is still much higher than that of most major copper mines globally. This is a direct consequence of Kamoa-Kakula being the highest-grade major copper mine globally. However, we are leaving a significant amount of copper behind… copper that this planet so desperately needs right now for our energy transition.

"If we can recover this copper, the production profile following the Phase 3 expansion could be in excess of 700,000 tonnes per annum. Not only would this provide additional revenue and cash flow, but also it would reduce even further our tailings footprint.

"We are targeting total copper recoveries in the mid-nineties from this breakthrough as well as from the other concurrent workstreams. Our experienced team, with a proven track record of execution and delivery, are leaving no stone unturned to improve the efficiency of extraction from this incredible endowment."

Kamoa-Kakula is the highest-grade major copper mine; further improvement in recoveries can result in significantly increased copper production

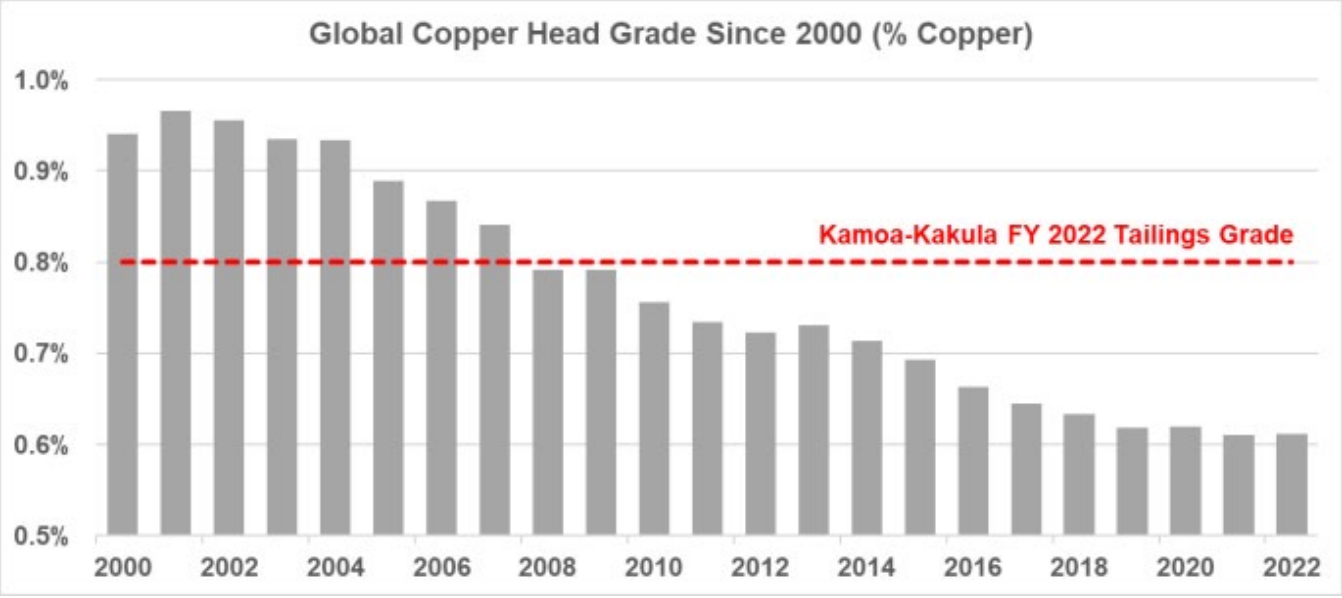
In 2022, Kamoa Copper's process engineering team, together with a number of internationally recognized external metallurgy specialists, initiated work to investigate ways to economically recover additional copper units from the tailings stream of the Phase 1 and 2 concentrators.

During 2022, the Kamoa-Kakula Copper Complex milled approximately 7.1 million tonnes of ore at an average feed grade of 5.5% copper, producing 333,497 tonnes of copper in concentrate. Based on the metallurgical recovery of 86% copper, which was in line with design parameters, in excess of 50,000 tonnes of copper was not recovered into concentrate and diverted to the tailings storage facility, or used underground as backfill. The grade of Kamoa-Kakula's tailings in 2022 averaged approximately 0.8% copper. For comparison, the average head grade of the copper mines globally was 0.6% in 2022, according to Bank of Montreal (BMO) research. See Figure 1.

Kamoa-Kakula's ore contains fine-grained copper sulphides (chalcocite), which to fully liberate from the host rock requires grinding of the ore to fine particle size. Grinding rock to an ever-finer particle size is exponentially energy intensive. During the original flowsheet development, a trade-off was struck between recovery and energy intensity. The Phase 1 and 2 concentrator design has primary grinding to 80% passing less than 53 microns (-53 µm). This grind size is already significantly finer than most copper concentrators globally.

Copper recoveries from the Phase 1 and 2 concentrators have improved year-to-date, averaging 87.1% during H1 2023, and periodically achieving as high as 90%. However, any further sustained improvement in copper recoveries presents a significant opportunity to generate additional revenue at Kamoa-Kakula.

Figure 1. Global average copper head grade since 2000, compared with the average copper grade of Kamoa-Kakula's tailings during 2022.



Source: BMO Research, Wood Mackenzie

To date, 13 workstreams with separate entities have been initiated leveraging various technologies to improve copper recoveries. This includes the recently announced collaboration with I-Pulse Inc., as announced on June 15, 2023.

Read full details here: https://ivanhoemines.com/news/2023/ivanhoe-mines-replaces-outstanding-76-million-loan-receivable-from-high-power-exploration-with-equity-investment-in-i-pulse-its/

More recently, promising preliminary results were received from work conducted by Expert Process Solutions (XPS) of Falconbridge, Canada. XPS has worked with Kamoa-Kakula since project inception, conducting metallurgical testwork during the study phases before construction. Therefore, XPS has a high degree of experience working with both the Kamoa and Kakula deposits.

Preliminary test results indicate a significant improvement in total copper recoveries can be achieved

XPS was reappointed for a dedicated scope of work focused on grinding and reprocessing the tailings stream from the Phase 1 and 2 concentrators. Initial preliminary results indicate that with a feed grade of less than 1% copper, approximately 65% of the contained copper can be recovered from the tailings stream. The results generated a saleable concentrate with a grade of approximately 40% copper that could be processed on-site at the 500,000 tonnes-per-annum direct-to-blister flash copper smelter that is currently under construction. For comparison, the copper concentrate grade from the Phase 1 and 2 concentrators is currently approximately 50%.

The test program consisted of fine-grinding the tailings stream to a particle size of 80% -12 µm, before conventional flotation, thickening and filtration.

Aerial view of the conventional flotation, thickening and filtration circuits installed on Kamoa-Kakula's Phase 1 (left) and Phase 2 (right) concentrators.

Additional copper recovery from tailings stream increases production, revenue and cash flow, improving overall economics

DRA Global of Johannesburg, South Africa, a company that has also been working with Kamoa-Kakula since project inception, was appointed to design a process based on the initial metallurgical results. DRA conducted a desktop study on the construction of a dedicated, stand-alone processing plant to treat the entire tailings stream from the Phase 1 and 2 concentrators. The circuit design for the stand-alone processing plant uses conventional technology, such as high-intensity grinding mills and Jameson cells (Glencore-owned technology) for the flotation, as well as additional thickening capacity.

DRA has also determined preliminary, high-level capital expenditure and operating costs associated with the construction and operation of the tailings recovery plant and the economics are significantly positive.

Further metallurgical test work by XPS and engineering by DRA will continue to verify and optimize the process design, with the view to advancing the project to an investment decision.

Concurrently, the other 12 workstreams will continue to explore the most suitable option that will be implemented. The workstreams, among others, consist of conventional leaching, glycine leaching, ion exchange, as well as pulsed-power technology by I-Pulse Inc. to crush rock. Pulsed power technology consists of high-intensity bursts of electrical energy that can quickly and efficiently shatter rocks and mineral ores by targeting the tensile weakness of rocks.

Qualified Persons

Disclosures of a scientific or technical nature at the Kamoa-Kakula Copper 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.

Ivanhoe has prepared an independent, NI 43-101-compliant technical report for the Kamoa-Kakula Copper Complex, which is available on the company's website and under the company's SEDAR profile at www.sedar.com:

- **Kamoa-Kakula Integrated Development Plan 2023 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

Copper 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-nickel-platinum-rhodium-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 2,400km^2 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 that the preliminary testwork results for improving copper recoveries at Kamoa-Kakulalts indicate a significant improvement in total recoveries can be achieved by liberating copper from the tailings stream; (ii) statements that based the preliminary testwork results , Kamoa-Kakula can further increase production, revenues and cash flow, and improve overall economics; (iii) statements that the production profile following the Phase 3 expansion could be

in excess of 700,000 tonnes per annum, which would not only provide additional revenue and cash flow, but also would reduce even further the company's tailings footprint; (iv) statements that the company is targeting total copper recoveries in the mid-nineties from this breakthrough as well as from the other concurrent workstreams; (v) statements that Kamoa-Kakula is the highest-grade major copper mine; (vi) statements that further improvement in recoveries can result in significantly increased copper production; (vii) statements that any further sustained improvement in copper recoveries presents a significant opportunity to generate additional revenue at Kamoa-Kakula; (viii) statements that the results generated a saleable concentrate with grade of approximately 40% copper that could be processed on-site at the 500,000 tonnes-per-annum direct-to-blister flash copper smelter; (ix) statements that the circuit design for the stand-alone processing plant uses conventional technology, such as high-intensity grinding mills and Jameson cells (Glencore-owned technology) for the flotation, as well as additional thickening capacity; (x) statements that DRA have also determined the capital expenditure and operating costs associated with the construction and operation of the tailings recovery plant and the economics are significantly positive; (xi) statements that further metallurgical test work by XPS and engineering design by DRA will continue to verify and optimize the process design, with the view to making an investment decision in the fourth quarter; and (xii) statements that the other 12 workstreams will continue to explore the most suitable option that will be implemented, and the particulars of such workstreams..

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 forward-looking statements because of the factors set forth below in the "Risk Factors" section in the company's MD&A for the three months ending March 31, 2023, and its current annual information form.