

September 7, 2021

**Kamoa-Kakula Phase 1 concentrator plant approaching steady-state-design performance**

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**14,815 tonnes of copper produced in August, bringing the year-to-date production to more than 36,700 tonnes**

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**Installation of an additional concentrate filter expected by end of October 2021, further boosting copper production**

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**Phase 2 concentrator plant construction now 44% complete**

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**Mining crews delivered 220,000 tonnes of ore grading a record 6.03% copper from August 1 to 20, including 85,000 tonnes grading 7.55% copper from the centre of the Kakula Mine**

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**Surface ore stockpiles continue to grow; now hold 3.59 million tonnes grading 4.77% copper, containing more than 171,000 tonnes of copper**

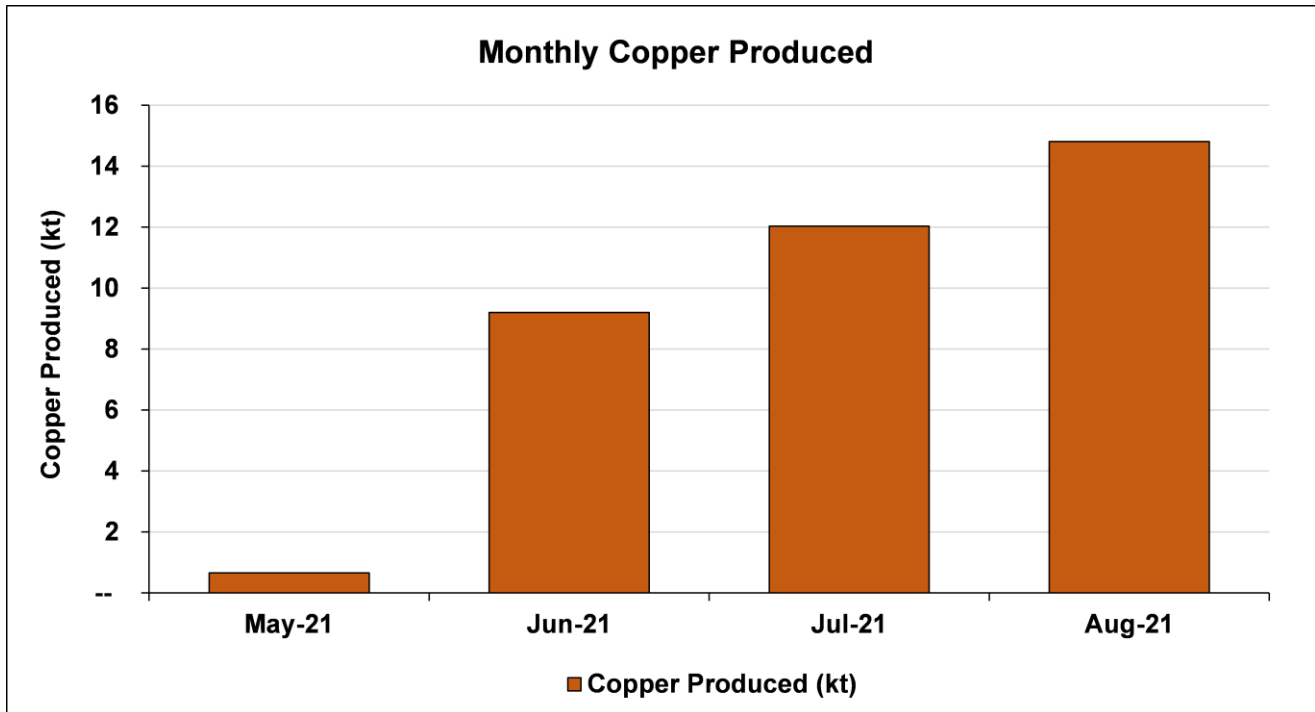
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**All six new turbines at the Mwadingusha hydropower plant now operational and generating clean electricity for Kamoa-Kakula**

**KOLWEZI, DEMOCRATIC REPUBLIC OF CONGO – Ivanhoe Mines (TSX: IVN; OTCQX: IVPAF) Co-Chairs Robert Friedland and Yufeng “Miles” Sun are pleased to announce that hot commissioning and ramp-up of Kamoa-Kakula’s Phase 1, 3.8 million-tonne-per-annum (Mtpa) concentrator plant is progressing well and approaching nameplate steady-state-design performance.**

**During August, the plant achieved an average milling rate of more than 9,000 tonnes per day at an **average feed grade of more than 6.0% copper**. On August 29, the Phase 1 concentrator plant produced in excess of 600 tonnes of copper in filtered concentrate, which is the plant’s steady-state-design daily production rate.**

During August, the concentrator plant produced concentrate **containing 14,815 tonnes of copper**. As of August 31, a total of **36,712 tonnes of copper** had been produced year-to-date for delivery to either the Lualaba Copper Smelter near Kolwezi, or to international markets. All concentrate produced to date has been loaded onto trucks (either bulk for the Lualaba Smelter or in bags for international markets) and the concentrate backlog at the mine site has been cleared.

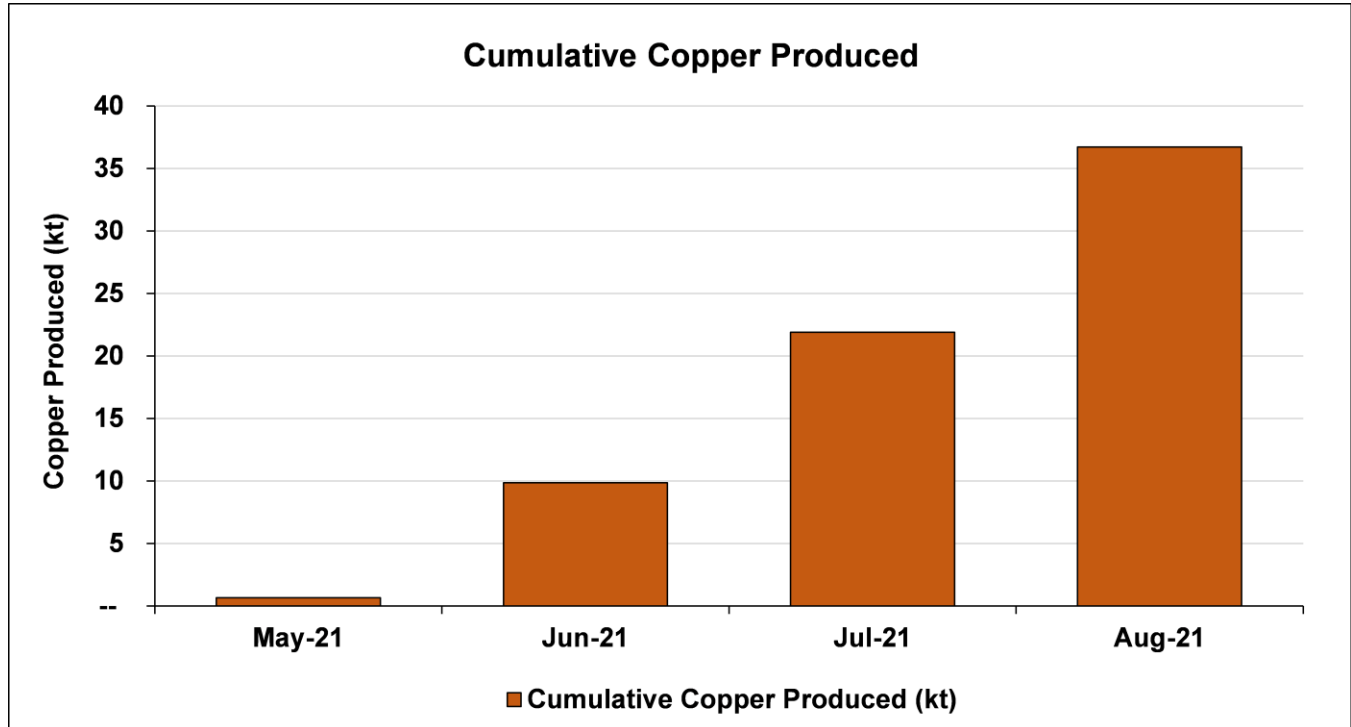
**Chart 1: Monthly tonnes of copper produced May 2021 to August 2021.**



Steve Amos, Kamo Copper’s Head of Projects, commented: “The hot commissioning and ramp-up of the Phase 1 concentrator plant is going very well, with no significant issues encountered to date. Fast tracking of an additional concentrate filter will enable us to produce more concentrate and take advantage of the exceptional ore grades coming from the Kakula Mine, as well as any additional milling throughput in excess of design capacity. A third concentrate filter is being procured and will be incorporated into the Phase 2 plant.”

Copper recoveries improved to an average of 83% during August, with recoveries in excess of 86% achieved on multiple occasions. The Phase 1, steady-state-design copper recovery is approximately 86%.

**Chart 2: Cumulative tonnes of copper produced May 2021 to August 2021.**



Ivanhoe’s production guidance for contained copper in concentrate at Kamoā-Kakula in 2021 is **80,000 to 95,000 tonnes**. The figures are on a 100%-project basis and metal reported in concentrate is prior to refining losses or deductions associated with smelter terms. The guidance assumes ramp-up from first production continues in line with published technical disclosures.

Daily concentrate grades in excess of the steady-state-design grade of approximately 57% copper also have been achieved on several occasions, with the monthly average exceeding 48% copper. The current focus of the commissioning team is on balancing and optimizing the flotation and regrind milling areas. This work is expected to further improve the consistency of concentrate grade and copper recoveries.

Commissioning and operation of the concentrator plant’s regrind mills is well underway. The regrind mills are the final pieces of equipment to be commissioned in the Phase 1 concentrator.

Kamoā-Kakula is fast tracking the installation of an additional concentrate filter, which already has been delivered to the mine site, to be able to take advantage of copper feed grades and milling rates in excess of design parameters. The additional concentrate filter is expected to be installed by the end of October 2021, enabling the Phase 1 concentrator to produce more copper than its design capacity of approximately 200,000 tonnes per year.

**Watch a new video showcasing the ramp-up of copper production at Kamoakakula and the production of blister copper at the local Lualaba Copper Smelter: <https://vimeo.com/597748095/3e0676cb41>**

**In early August, Ben Munanga, Kamoakakula Copper's Chairman (right), welcomed Princess Adèle Kayinda Mahina, the Democratic Republic of Congo's Minister of Portfolio, to the Kamoakakula Copper Project. The DRC government's 20% interest in the Kamoakakula Copper Project is managed by the Portfolio Ministry.**



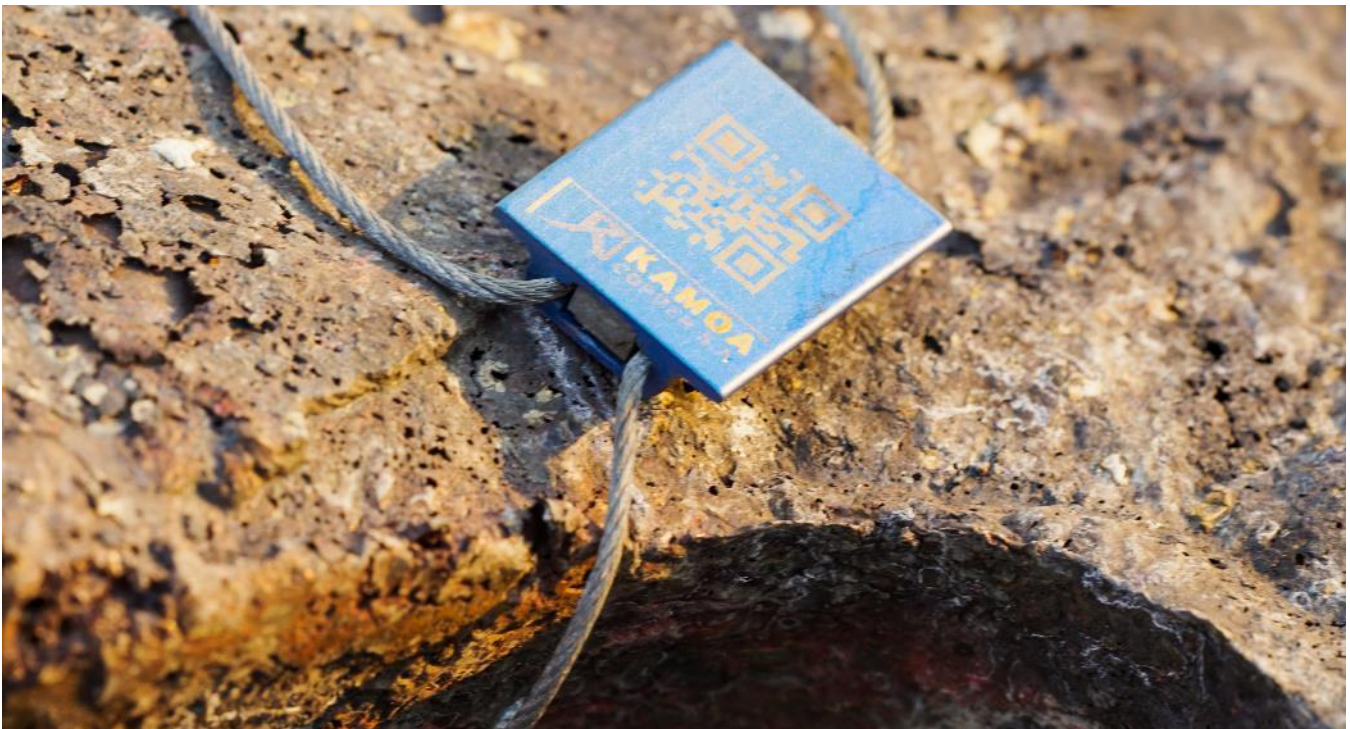
**Princess Adèle Kayinda Mahina (left) and Marna Cloete, Ivanhoe's President and CFO, inside a scooptram bucket during an underground visit of the Kakula Mine.**



**Pouring Kamoia Copper blister ingots, containing approximately 99% copper, at the Lualaba Copper Smelter near Kolwezi, Democratic Republic of Congo.**



**An electronic chip affixed to a Kamoia Copper blister copper ingot for tracking and security.**



**Phase 2 overall project 44% complete, with civil works effectively complete and structural steel, mechanical, piping and platework (SMPP) erection and installation well underway**

Construction of the second 3.8-Mtpa concentrator plant (Phase 2) is progressing well, with the overall project 44% complete; engineering and procurement activities are nearing completion. Civil construction works also is nearing completion with the focus now on erection of structural steel and the installation of platework and equipment. The primary and secondary ball mill discharge sumps, as well as the mill base plates, are being installed; mill installation is on the critical path. SMPP construction is on-going in all areas.

Deliveries of structural steel, platework and mechanical equipment continue daily with more than 321 truckloads already delivered to site and another 126 en-route. Manufacturing of all long-lead items of equipment now is complete with several items already delivered to site and the remainder en-route. The final major contract for electrical, control and instrumentation (EC&I) supply and installation, has been awarded. The Phase 2 concentrator remains on track for completion in Q3 2022.

**Lifting the Phase 2 flotation conditioning tank into position.**



**The Phase 2 concentrator plant under construction in the foreground, with the operating Phase 1 concentrator plant in the background.**



**The side-by-side Phase 1 and Phase 2 concentrator plants.**



**Chen Hong Tao (left) and Wang Pengfei installing the Phase 2 flotation base plates.**



**Shells for the Phase 2 ball mills arriving at Kamoakakula.**





**Installation of the second Larox concentrate filter press, manufactured by Outotec, of Finland.**



**Mechanic Gretta Lusa Ngoie repairing a wheel at the Kakula Mine.**



## Mining continues ahead of schedule, adding to the surface ore stockpiles

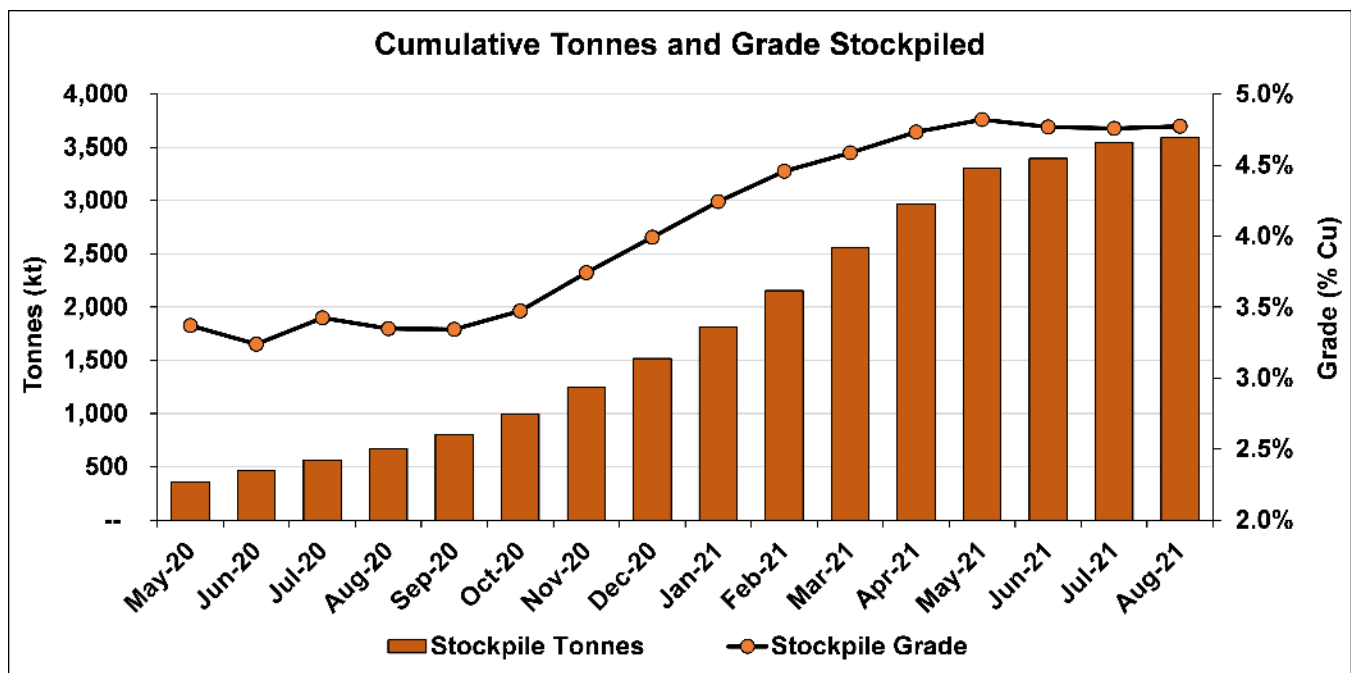
An alignment of reporting dates for the mines and the concentrator has resulted in a truncated reporting period this month, from August 1 to 20. A total of **220,000 tonnes grading 6.03% copper** was mined during this shortened period, and comprised **204,000 tonnes grading 6.16% copper** from the Kakula Mine, including **85,000 tonnes grading 7.55% copper** from the mine's high-grade centre, and **16,000 tonnes grading 4.31% copper** from the Kansoko Mine. For the month-long period from July 21 to August 20, **378,000 tonnes was mined grading 5.82% copper**, a portion of which was included in last month's total.

The project's surface stockpiles now contain approximately **3.59 million tonnes** of high-grade and medium-grade ore at an estimated, blended average of **4.77% copper**. Contained copper in the stockpiles at the end of August now totals more than **171,000 tonnes** (the current copper price is approximately US\$9,400 per tonne).

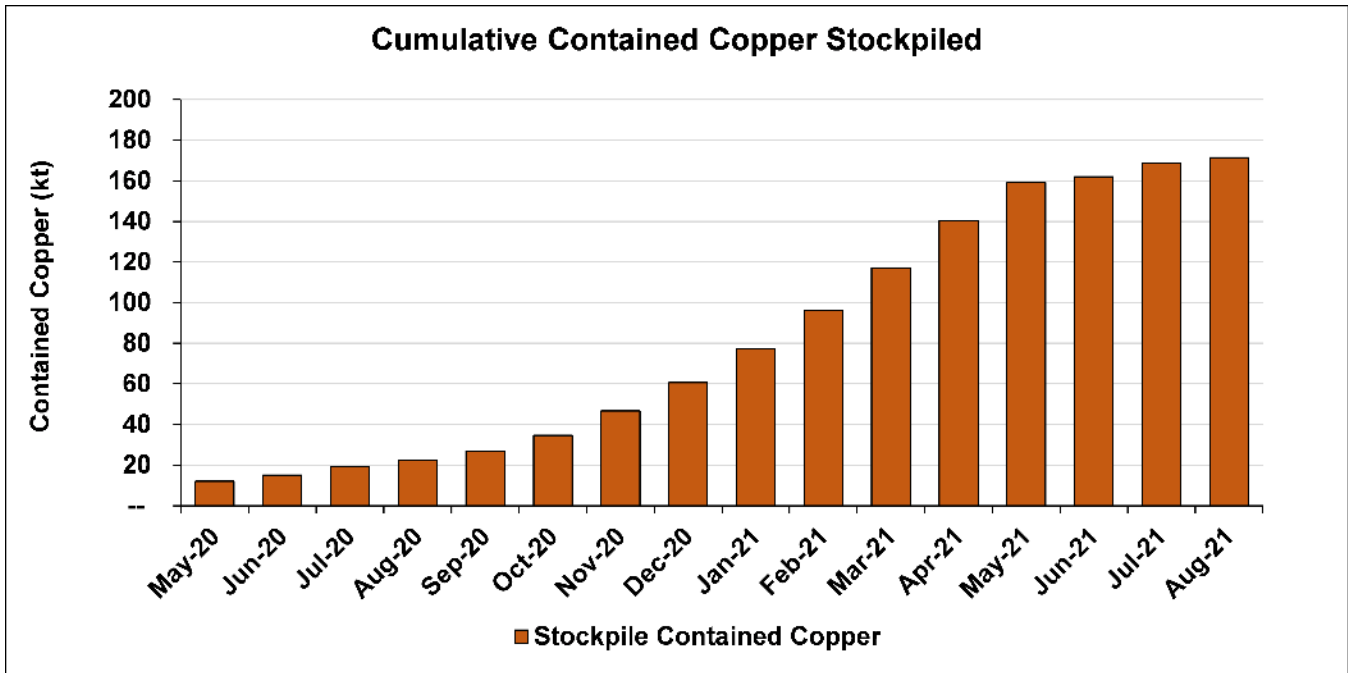
As the plant ramps up to full Phase 1 design capacity, and the mine toward Phase 2 production capacity, the surface stockpiles are expected to continue to build at a reduced rate.

## Surface ore stockpiles total 3.59 million tonnes grading 4.77% copper

Chart 3: Cumulative tonnes and grade of ore stockpiles at the Kakula and Kansoko mines – May 2020 to August 2021.



**Chart 4: Growth in contained copper in ore stockpiles at the Kakula and Kansoko mines – May 2020 to August 2021.**



**Aerial view of the Kakula Mine, concentrator plant and accommodations with the main stockpiles at Kakula’s northern declines (in red circle). The blended stockpiles currently contain approximately **1.76 million tonnes grading 5.03% copper**.**



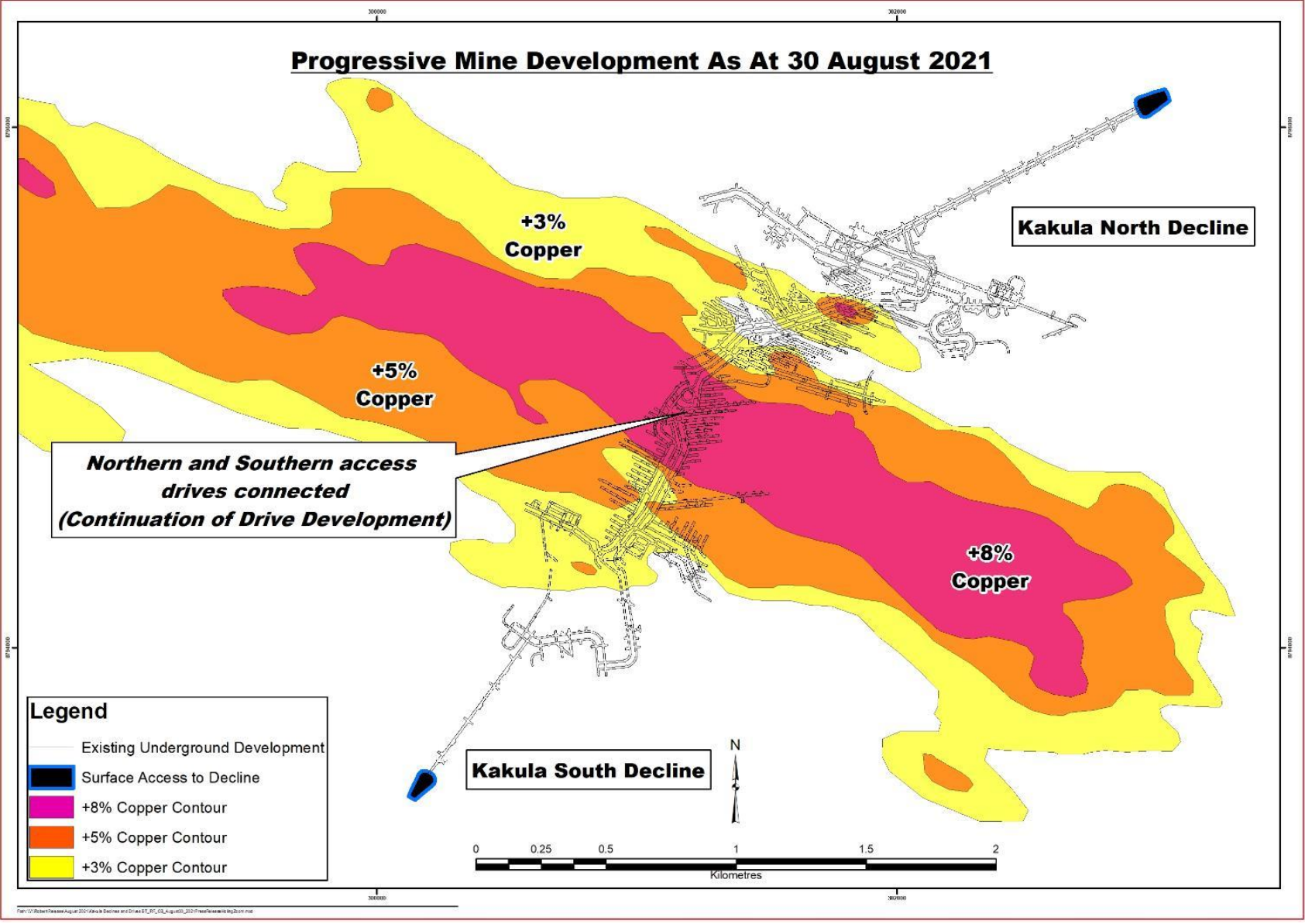
Aerial view of the Kakula south decline and ore stockpiles containing a combined **1.34 million tonnes grading 4.77% copper** (consisting of **663,000 high-grade tonnes @ 6.14% copper** and **682,000 medium-grade tonnes @ 3.44% copper**).



Aerial view of the Kansoko Mine and ore stockpiles containing a combined **485,000 tonnes grading 3.83% copper** (consisting of **142,000 high-grade tonnes @ 5.88% copper** and **343,000 medium-grade tonnes @ 2.98% copper**).



Figure 1: Underground development completed at Kakula Mine to August 30, 2021 (in black).



Kakula is projected to be the world's highest-grade major copper mine, with an initial mining rate of 3.8 Mtpa at an estimated, average feed grade of more than 6.0% copper over the first five years of operations, and 5.9% copper over the initial 10 years of operations. Phase 1 is expected to produce approximately 200,000 tonnes of copper per year, while the Phase 2 expansion is forecast to increase production to approximately 400,000 tonnes of copper annually. The project is on track to complete the Phase 2 expansion in Q3 2022. Based on independent benchmarking, the project'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.

The Kamo-Kakula Copper Project 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%). 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 among the world's lowest greenhouse gas emitters per unit of copper produced.

Phase 2 high-pressure-grinding-rolls (HPGR) tower and green feed bin (in red circle) installed.



Hot commissioning of the backfill plant is proceeding well, with the first paste backfill delivered to the underground mining areas in August. The backfill plant will be used to mix tailings from the processing plant with cement to produce paste backfill. This backfill will be pumped back into the mine and used to help support mined-out areas. Approximately one half of the mine's tailings will be sent back underground, significantly reducing the surface tailings storage.

**Kamoa Copper's commissioning team at the backfill plant now delivering approximately 50% of the tailings to mined out areas in the Kakula Mine.**



### **Study work underway to accelerate Phase 3 mine and concentrator expansion**

Study work for the Phase 3 mine and concentrator expansion is underway, which includes optimization work to determine mining production capacity and costs at the various mining areas on the Kamoa-Kakula complex, including expanded facilities at the Kansoko Mine, Kamoa North (including the Bonanza Zone) and Kakula West.

This work also will inform the optimal sizing of the Phase 3 concentrator, which was outlined as a further expansion of 3.8 Mtpa in the Kamoa-Kakula Integrated Development Plan announced in September 2020. In addition, the studies will take into consideration the plans to upgrade turbine 5 at the Inga II hydropower complex to provide 162 megawatts of renewable hydropower, as well as the construction of a direct-to-blister smelter.

Once the optimization work is completed, Kamoa Copper will advance into a more detailed phase of design and engineering work with its objective to accelerate the Phase 3 concentrator expansion.

## **All six new turbines at the Mwadingusha hydropower plant now operational and generating clean electricity**

All six new turbines at the Mwadingusha hydropower plant now have been synchronized to the national electrical grid, with each generating unit producing approximately 13 megawatts (MW) of power, for a combined output of approximately 78 MW.

Mwadingusha powerhouse with all six generating units fully assembled and generating 78 MW of clean, sustainable electricity.



In early August, Kamoakakula's Energy company announced that it had signed an extension of the existing financing agreement with the Democratic Republic of Congo's state-owned power company SNEL to upgrade turbine 5 at the Inga II hydropower complex. Since June 2021, rehabilitation scoping works and technical visits have been conducted by Stucky Ltd., of Renens, Switzerland, the Engineering, Procurement and Construction Management (EPCM) company. Turbine 5 is expected to produce 162 MW of renewable hydropower, providing the Kamoakakula Copper Complex and associated smelter with abundant, sustainable electricity for future expansions.



Engineers from Kamo-Kakula's Energy company, SNEL, Stucky, Voith and Zijin Mining conducting an inspection of the Inga II hydropower complex. The Congo River, Inga dam, Inga I turbines and the channel feeding water to the Inga II turbines, are circled in red.



The Inga II electrical substation and transmission lines.



## **Kamoa Copper partnership continues COVID-19 vaccination efforts for employees and residents who live in host communities**

Kamoa-Kakula has successfully focused on prevention, preparation, and mitigation in managing the risks associated with COVID-19. Large-scale testing, combined with focused preventative measures, ensured that positive cases were quickly identified, isolated, and treated, with cross contamination kept to a minimum. Maintaining this high standard of risk management remains the main focus to prevent future cases.

With the support of the Democratic Republic of Congo government, UNICEF and other stakeholders, Kamoa Copper SA completed its first round of COVID-19 vaccinations on June 24, 2021. In conjunction with the DRC government's extended program of vaccinations, the second round of COVID-19 vaccinations at Kamoa-Kakula commenced in mid-August. The vaccine will be available for all Kamoa Copper employees, contractors and residents living in the mine's host communities.

The Kamoa COVID-19 hospital continues to treat patients when required, as construction progresses well for the expansion and upgrade of the primary healthcare wing. Kamoa-Kakula's highly experienced medical team applies the latest medical treatments, supported by a world-leading emergency response and paramedic team.

As the pandemic evolves, the medical team at the Kamoa hospital continues to review and update risk mitigation protocols, while ensuring that new medical advances are investigated and applied to protect the health and safety of employees and community members.

**Danielle Morton, Kamoa Copper Reliability Engineer, holding her vaccination certificate after receiving her second vaccination dose.**



**Celestin Kazeu Kushinga at the Kamo-a-Kakula demonstration garden, a key part of Kamo-a-Copper's program to promote sustainable development.**



**Mbangu Sangombe, one of the owners of the Katayi Community banana plantation.**



**Princess Adèle Kayinda Mahina (centre), Minister of Portfolio, visiting a local primary school that is one of Kamo Copper's community initiatives to increase education opportunities for families living near the Kamo-Kakula Project.**



**New community fish ponds constructed near the Kansoko Mine. Kamo Copper recently initiated a catfish breeding program to further enhance food security and farming capacity in the host communities.**



**Drilling rig in operation on Ivanhoe's Western Foreland exploration licences near the Kamo-Kakula Project.**



**Ivanhoe's Western Foreland, green horizons, blue sky.**



## Qualified Persons

Disclosures of a scientific or technical nature regarding development scenarios 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 Kamo Copper's Head of 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 related to the stockpiles disclosed in this news release.

The stockpile grade estimates contained in this release are based upon bulk ore sampling from material being fed to the plant from surface stockpiles, and underground vertical channel sample profiles from recent development. Channel sample profiles are cut approximately 15 metres apart in 1-metre vertical increments across the full vertical exposure using a handheld grinder, with a 100-to-150-gram sample collected. The samples are pulverized at the project's onsite laboratory and analyzed using a portable XRF (pXRF) instrument. Kamo Copper has routinely analyzed its exploration drill core for copper using pXRF, in addition to analysis at a commercial laboratory using four acid digest and ICP-OES. This data has demonstrated that pXRF results can be relied upon for grade control and run-of-mine sampling. Due to rounding, numbers presented throughout this news release may not add up precisely.

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 joint-venture projects in Southern Africa: the development of major new, mechanized, underground mines at the Kamoa-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.

Kamoa-Kakula began producing copper concentrates in May 2021 and, through phased expansions, is positioned to become one of the world's largest copper producers. Kamoa-Kakula and Kipushi will be powered by clean, renewable hydro-generated electricity and will 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 Kamoa-Kakula Copper Mine when large-scale electric, hydrogen and hybrid underground mining equipment become commercially available. Ivanhoe also is exploring for new copper discoveries on its Western Foreland exploration licences in the Democratic Republic of Congo, near the Kamoa-Kakula Project.

### Information contacts

Investors: Bill Trenaman +1.604.331.9834 / Media: Matthew Keevil +1.604.558.1034

### 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, the timing and results of: (i) statements regarding Ivanhoe's guidance for contained copper in concentrate expected to be produced by Kamoa-Kakula for the balance of 2021 is 80,000 to 95,000 tonnes; (ii) statements regarding the expectation that Phase 2 of the project's development when the Kakula concentrator processing capacity doubles to 7.6 Mtpa is to be commissioned in Q3 2022; (iii) statements regarding Kakula is projected to be the world's highest-grade major copper mine, with an initial mining rate of 3.8 Mtpa at an estimated, average feed grade of more than 6.0% copper over the first five years of operations and 5.9% copper over the initial 10 years

of operations; (iv) statements regarding Kamo-a-Kakula's Phase 1 is expected to produce approximately 200,000 tonnes of copper per year, and Phases 1 and 2 combined are forecast to produce approximately 400,000 tonnes of copper per year; (v) statements regarding based on independent benchmarking, the project's phased expansion scenario to 19 Mtpa would position Kamo-a-Kakula as the world's second largest copper mining complex, with peak annual copper production of more than 800,000 tonnes; (vi) statements regarding Kamo-a-Kakula will be among the world's lowest greenhouse gas emitters per unit of copper produced; (vii) statements regarding Kamo-a-Kakula Phase 2 expansion civil works and structural steel erection tracking ahead of schedule; (viii) statements regarding approximately one half of the mine's tailings will be sent back underground; (ix) statements regarding an upgraded turbine 5 at Inga II is expected to produce 162 megawatts of renewable hydropower, providing the Kamo-a-Kakula Copper Complex and associated smelter with abundant sustainable electricity for future expansions; and (x) statements regarding as the plant ramps up to full Phase 1 design capacity, and the mine toward Phase 2 production capacity, the surface stockpiles are expected to continue to build at a reduced rate.

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 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 Q2 MD&A and its current annual information form.