

# IVANHOE MINES

Dated May 2, 2023



MANAGEMENT DISCUSSION AND ANALYSIS  
FOR THE THREE MONTHS ENDED MARCH 31, 2023

## INTRODUCTION

This management's discussion and analysis (MD&A) should be read in conjunction with the unaudited condensed consolidated interim financial statements of Ivanhoe Mines Ltd. ("Ivanhoe", "Ivanhoe Mines" or the "Company"), for the three months ended March 31, 2023, which have been prepared in accordance with International Accounting Standard 34 - Interim Financial Reporting (IAS 34) and the audited consolidated financial statements of Ivanhoe for the years ended December 31, 2022 and 2021, which have been prepared in accordance with International Financial Reporting Standards (IFRS). All dollar figures stated herein are in U.S. dollars, unless otherwise specified. References to "C\$" mean Canadian dollars and references to "R" mean South African Rands.

The effective date of this MD&A is **May 2, 2023**. Additional information relating to the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com). Certain statements contained in the MD&A are forward-looking statements that involve risks and uncertainties. See "*Forward-Looking Statements*" and "*Risk Factors*".

This MD&A includes references to earnings before interest, tax, depreciation and amortization (EBITDA), and "Cash costs (C1) per pound" which are non-GAAP financial performance measures. For a detailed description of each of the non-GAAP financial performance measures used in this MD&A, and a detailed reconciliation to the most directly comparable measure under IFRS, please refer to the non-GAAP Financial Performance Measures section of this MD&A starting on page 40. The non-GAAP financial performance measures set out in this MD&A are intended to provide additional information to investors and do not have any standardized meaning under IFRS, and therefore may not be comparable to other issuers, and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

## FIRST QUARTER HIGHLIGHTS

- Production at the Kamo-a-Kakula Copper Complex ("Kamo-a-Kakula") for the first quarter of 2023 was 93,603 tonnes of copper in concentrate, compared to 92,761 tonnes in Q4 2022 and 55,602 tonnes in Q1 2022.
- During Q1 2023, Kamo-a-Kakula sold 86,777 tonnes of payable copper and recognized record revenue of \$689 million, with an operating profit of \$416 million and record quarterly EBITDA of \$452 million.
- Kamo-a-Kakula's cost of sales per pound (lb.) of payable copper sold was \$1.25/lb. for Q1 2023 compared with \$1.08/lb. and \$1.08/lb. in Q4 2022 and Q1 2022 respectively. Cash costs (C1) per pound of payable copper produced in Q1 2023 totalled \$1.42/lb., compared to \$1.42/lb. and \$1.21/lb. in Q4 2022 and Q1 2022 respectively.
- Debottlenecking program of Kamo-a-Kakula's Phase 1 and Phase 2 concentrators completed ahead of schedule, increasing nameplate processing capacity by 22% to a combined total of 9.2 million tonnes of ore per annum and copper production capacity to 450,000 tonnes per annum.
- Ivanhoe Mines recorded a profit of \$82 million for Q1 2023, compared to a profit of \$22 million for the same period in 2022. The profit in the quarter includes Ivanhoe Mines' share of profit and finance income from the Kamo-a-Kakula joint venture of \$130 million for Q1 2023.
- Adjusted EBITDA for the Ivanhoe Mines group of \$168 million recorded for Q1 2023 compared to \$145 million for the same period in 2022, and \$162 million for Q4 2022, which includes an attributable share of EBITDA from Kamo-a-Kakula.
- Ivanhoe Mines has a strong balance sheet with cash and cash equivalents of \$497 million on hand as at March 31, 2023, and expects Kamo-a-Kakula's Phase 1 and Phase 2 cash flow to be sufficient to fund the Phase 3 expansion capital cost requirements at current copper prices.

- Ivanhoe continues its expansive copper exploration program on its Western Foreland licences that cover approximately 2,407 square kilometres adjacent to Kamo-Kakula. The 2023 exploration program is budgeted at approximately \$19 million and includes up to 70,000 metres of total drilling.

## **KAMOA-KAKULA COPPER COMPLEX**

The Kamo-Kakula Copper Complex operated as the Kamo Holding joint venture between Ivanhoe Mines and Zijin Mining, has been independently ranked as the world's third-largest copper deposit by international mining consultant Wood Mackenzie in 2027. The project is approximately 25 kilometres southwest of the town of Kolwezi and about 270 kilometres west of Lubumbashi. Kamo-Kakula Copper Complex's Phase 1 concentrator began producing copper in May 2021 and achieved commercial production on July 1, 2021. The Phase 2 concentrator, which doubled nameplate production capacity, was commissioned in April 2022.

Ivanhoe sold a 49.5% share interest in Kamo Holding Limited (Kamo Holding) to Zijin Mining and a 1% share interest in Kamo Holding to privately owned Crystal River in December 2015. Kamo Holding holds an 80% interest in the project. Ivanhoe and Zijin Mining each hold an indirect 39.6% interest in Kamo-Kakula, Crystal River holds an indirect 0.8% interest, and the DRC government holds a direct 20% interest. Kamo-Kakula's employee workforce is currently 97% Congolese.

**Photo: Aerial view of Kamo-Kakula's Copper Complex, which is now operating at a recently increased processing capacity of 9.2 million tonnes per annum, and production capacity of up to 450,000 tonnes of copper per annum.**



***Kamoa-Kakula summary of operating and financial data***

	<b>Q1 2023</b>	<b>Q4 2022</b>	<b>Q3 2022</b>	<b>Q2 2022</b>	<b>Q1 2022</b>
<b>Ore tonnes milled (000's tonnes)</b>	<b>1,930</b>	<b>2,006</b>	2,082	1,950	1,083
<b>Copper ore grade processed (%)</b>	<b>5.42%</b>	<b>5.40%</b>	5.60%	5.44%	5.91%
<b>Copper recovery (%)</b>	<b>87.1%</b>	<b>86.1%</b>	85.9%	84.0%	87.1%
<b>Copper in concentrate produced (tonnes)</b>	<b>93,603</b>	<b>92,761</b>	97,820	87,314	55,602
<b>Payable copper sold (tonnes)</b>	<b>86,777</b>	<b>92,208</b>	93,812	85,794	51,919
<b>Cost of sales per pound (\$ per lb.)</b>	<b>1.25</b>	<b>1.08</b>	1.05	1.15	1.08
<b>Cash cost (C1) (\$ per lb.)</b>	<b>1.42</b>	<b>1.42</b>	1.43	1.42	1.21
<b>Realized copper price (\$ per lb.)</b>	<b>4.04</b>	<b>3.54</b>	3.50	4.34	4.51
<b>Sales revenue before remeasurement (\$'000)</b>	<b>659,529</b>	<b>619,997</b>	570,504	699,381	467,453
<b>Remeasurement of contract receivables (\$'000)</b>	<b>29,594</b>	<b>53,473</b>	(110,031)	(205,248)	52,142
<b>Sales revenue after remeasurement (\$'000)</b>	<b>689,123</b>	<b>673,470</b>	460,473	494,133	519,595
<b>EBITDA (\$'000)</b>	<b>452,422</b>	<b>451,371</b>	254,423	286,313	399,391
<b>EBITDA margin (% of sales revenue)</b>	<b>66%</b>	<b>67%</b>	55%	58%	77%

All figures in the above tables are on a 100%-project basis. Metal reported in concentrate is before refining losses or deductions associated with smelter terms. This MD&A includes "EBITDA", "Adjusted EBITDA", "EBITDA margin" and "Cash costs (C1)" which are non-GAAP financial performance measures. For a detailed description of each of the non-GAAP financial performance measures used herein and a detailed reconciliation to the most directly comparable measure under IFRS, please refer to the non-GAAP Financial Performance Measures section of this MD&A starting on page 40.

**C1 cash cost per pound of payable copper produced can be further broken down as follows:**

		Q1 2023	Q4 2022	Q3 2022	Q2 2022	Q1 2022
Mining	(\$ per lb.)	0.41	0.40	0.41	0.39	0.30
Processing	(\$ per lb.)	0.19	0.16	0.12	0.14	0.15
Logistics charges (delivered to China)	(\$ per lb.)	0.46	0.50	0.56	0.51	0.36
Treatment, refining and smelter charges	(\$ per lb.)	0.23	0.23	0.21	0.21	0.20
General and administrative expenditure	(\$ per lb.)	0.13	0.13	0.13	0.17	0.20
<b>C1 cash cost per pound of payable copper produced</b>	<b>(\$ per lb.)</b>	<b>1.42</b>	<b>1.42</b>	<b>1.43</b>	<b>1.42</b>	<b>1.21</b>

C1 cash costs are prepared on a basis consistent with the industry standard definitions by Wood Mackenzie cost guidelines but are not measures recognized under IFRS. In calculating the C1 cash cost, the costs are measured on the same basis as the Company's share of profit from the Kamoā Holding joint venture that is contained in the financial statements. C1 cash costs are used by management to evaluate operating performance and include all direct mining, processing, and general and administrative costs. Smelter charges and freight deductions on sales to the final port of destination, which are recognized as a component of sales revenues, are added to C1 cash cost to arrive at an approximate cost of delivered, finished metal. C1 cash costs exclude royalties and production taxes and non-routine charges as they are not direct production costs.

**Photo: John Katumbwe, Scooptram (LHD) driver, developing the twin decline to the new Kamoā 1 and Kamoā 2 underground mines, which will be the source of copper ore for Kamoā-Kakula's Phase 3 concentrator. Total copper production from Kamoā-Kakula is expected to increase to 600,000 tonnes per annum in Q4 2024.**



***Kamoā-Kakula produced 93,603 tonnes of copper in Q1 2023, including a record 34,915 tonnes of copper in March 2023***

Kamoā-Kakula's 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 2023, increasing production capacity up to 450,000 tonnes of copper in concentrate per annum. All figures are on a 100% project basis and metal reported in concentrate is

before refining losses or deductions associated with smelter terms.

Following the completion of the debottlenecking program in February, Kamoakakula's Phase 1 and 2 concentrators had a record-breaking month in March for copper production, including a monthly production record of 34,915 tonnes of copper in concentrate, 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, 2023. These records were achieved following two scheduled plant shutdowns during the first quarter to tie in the new debottlenecking equipment. During the month of April, strong concentrator performance continued with a record daily mill throughput achieved of 29,206 tonnes of ore.

Kamoakakula's Phase 1 and 2 concentrators milled approximately 1.93 million tonnes of ore during the first quarter at an average feed grade of 5.42% copper. This included approximately 255,000 tonnes of ore from the surface stockpiles.

**Photo: (L-R) Chris Tshibanda, Control Room Supervisor; Linda Malumda, Senior Operator Larox; Rachelle Museka, Mill Operator; Serge Mukembe, Control Room Supervisor at Kamoakakula's Phase 1 and Phase 2 concentrator facility, which is now operating at a throughput capacity of 9.2 Mtpa following the successful debottlenecking program.**



The Phase 1 and Phase 2 concentrators also substantially outperformed design specifications in terms of copper recovery during the months of March and April. Copper recoveries averaged 88% and periodically exceeded 90% over 24-hour periods. These record recoveries are significantly above Kamoakakula's nameplate 86% recovery rate.

The record monthly production in March was also achieved despite previously reported instability within the southern DRC grid.

In response to the instability in the southern DRC grid experienced since December 2022, Kamoakakula, together with DRC state-owned power company SNEL, completed a study to tackle the vulnerabilities exposed in the grid network.

Grid stability improved during the month of April, following some initial infrastructure management and maintenance initiatives that SNEL introduced with support from Kamoakakula Copper. In addition, 60MW of additional generation capacity from the recently refurbished Nseke hydroelectric power station was introduced into the DRC network. Further initiatives will continue to be implemented over the coming year, benefiting not only the Kamoakakula Copper Complex, but all users of the DRC's southern grid.

Kamoa-Kakula is also planning to protect operations from potential future grid instability with significantly increased on-site power generation capacity. The current installed backup generation capacity on-site is approximately 32 MW. Over time there is a plan to increase this to over 200 MW in a phased roll-out to achieve sufficient redundancy to meet the total power requirement for Phases 1, 2 and 3, excluding the smelter in situations where extended supply interruptions may occur.

In the roll-out plan, an additional 11 MW is expected to be commissioned in Q2 2023 with a further 49 MW planned to be delivered to site towards the end of 2023. Study work is underway on further options for additional on-site backup power capacity, including renewable options, such as solar and hydro, together with battery storage.

Discussions are well advanced to secure up to an additional 100 MW of power from Copperbelt Energy Corporation (CEC) of Zambia, via the DRC-Zambia interconnector. An agreement is expected to be in place shortly.

**Photo: (L-R) Johan Prinsloo, Mine Overseer, and Thabo Kgaladi, Foreman, inspecting newly-installed panels at the Kamoa 1 power substation.**



***Draw-down of surface ore stockpiles at Kakula continues as required; stockpiles hold approximately 4.2 million tonnes grading 3.9% copper, containing more than 161,000 tonnes of copper***

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. Excluding any stockpile material, during Q1 2023 the operation mined 2.02 million tonnes of ore from the Kakula and Kansoko mines, grading 5.2% copper. This comprised of 1.83 million tonnes of ore grading 5.6% copper from the Kakula Mine, including 0.75 million tonnes grading 6.7% copper from the mine's high-grade centre.

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

**Civil construction for the Phase 3 concentrator plant and associated infrastructure is well advanced**

Kamoa-Kakula's ongoing Phase 3 expansion is expected to be commissioned in Q4 2024 and includes a new 5.0 Mtpa concentrator at Kamoa, which is approximately 10 kilometres north of the Phase 1 and 2 concentrators.

The process design of the Phase 3 concentrator is very similar to that of the Phase 1 and 2 concentrators, only larger. The front end of the concentrator (stockpile, crushing and screening) is being built to a capacity of 10 Mtpa, double the required capacity for Phase 3, in anticipation of the future Phase 4 expansion. This follows the same construction approach as that of Phase 1 and Phase 2. The bulk of the equipment is the same or similar to that installed in the Phase 1 and 2 concentrators, resulting in a commonality of spare parts, while leveraging prior operational and maintenance experience. Detailed design is nearing completion and procurement activities are advancing on schedule with all major equipment ordered and the first steel erection expected around June 2023. Earthworks are essentially complete and civil construction is well-advanced. The structural steel, piping and plate work (SMPP) construction contract is expected to be rewarded shortly.

**Photo: Erection of Kamoa-Kakula's Phase 3 high-pressure grinding rolls (HPGR) building is well underway.**



Following the commissioning of Phase 3, Kamoa-Kakula will have a total design processing capacity of 14.2 Mtpa. The completion of Phase 3 is expected to increase annualized copper production to an average of approximately 620,000 tonnes per year over the next ten years, which will position Kamoa Copper as the world's third-largest copper mining complex in 2027, and the largest copper mine on the African continent.

Construction of the twin declines to the Kamoa 1 and Kamoa 2 underground mines and excavation to access the Phase 3 mining areas is advancing well. The Kamoa 1 and Kamoa 2 mines share a single box cut with a twin service-and-conveyor decline. Over 2,000 metres of development across both declines has been completed to date and access to the Kamoa 2 mine has been achieved. Underground mining activities are expected to commence at Kamoa 1 in late 2023 and Kamoa 2 in 2025, which will both involve the same mechanized drift-and-fill mining methods used at the Kakula Mine.



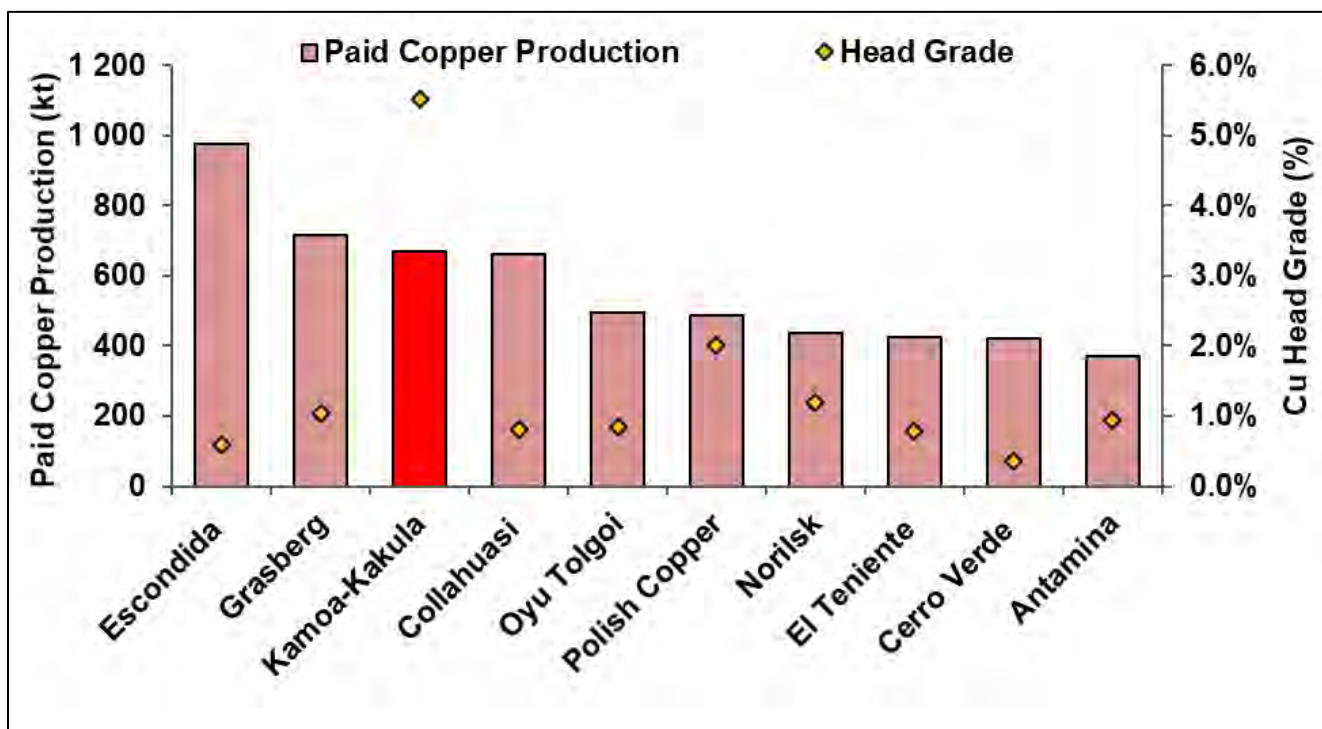
**Photo: Civil construction on the foundation for Kamoia-Kakula's Phase 3 flotation cells is also advancing well.**



**Photo: Kamoia 1 underground mining crew installing geotechnical support to the roof of an advancing development drive. The mining crews developing the new Kamoia 1 and 2 mines, as part of the Phase 3 expansion, recently achieved 365 lost-time-injury-free days.**



Figure 1: World’s projected top 10 copper mines in 2027, by key metrics.



Note: Kamo-Kakula production and grade are based on the Kamo-Kakula 2023 PFS. The ‘Cu Head Grade’ for the projects benchmarked by Wood Mackenzie reflects the average reserve grade.

Source: Wood Mackenzie, 2023 (based on public disclosure, the Kamo-Kakula 2023 PFS has not been reviewed by Wood Mackenzie).

**Construction activities for Kamo-Kakula’s direct-to-blister flash copper smelter and the refurbishment of the Inga II hydroelectric facility are advancing on schedule**

Kamo-Kakula’s Phase 3 expansion includes a direct-to-blister flash copper smelter that will incorporate leading-edge technology supplied by Metso Outotec of Espoo, Finland. The smelter is projected to be one of the largest, single-line copper flash smelters in the world, and the largest in Africa, with a production capacity of 500,000 tonnes per annum of 99+%-pure blister copper anodes. The 100-hectare smelter complex is being constructed adjacent to the Phase 1 and Phase 2 concentrator plants and is designed to meet the International Finance Corporation’s (IFC) emissions standards.

Smelter engineering, procurement and fabrication are advancing well and on schedule, with all major equipment currently being fabricated. Construction activities on the direct-to-blister flash copper smelter are advancing on schedule and the overall project is approximately 42% complete. The bulk of the terracing earthworks for the smelter complex were completed in 2022 and the civil construction is now well advanced, with the erection of structural steel well underway. The first batch of furnace steel arrived on site in January 2023. The smelter is on schedule for commissioning by the end of 2024.

The smelter will have a processing capacity of approximately 1.2 Mtpa of dry concentrate feed and is designed to run on a blend of concentrate produced from the Kakula (Phase 1 and 2) and Kamo (Phase 3 and future Phase 4) concentrators. Under the Kamo-Kakula 2023 PFS, the smelter is projected to accommodate approximately 80% of Kamo-Kakula’s total concentrate production, including that from Phase 3 and the future Phase 4 expansion. Kamo-Kakula will continue to toll-treat concentrates under the 10-year agreement with the Lualaba Copper Smelter, located near the town of Kolwezi approximately 50 kilometres from Kamo-Kakula, which is expected to account for approximately 150,000 tonnes of copper concentrate annually. The balance of copper production will be exported as concentrate.

**Photo: Construction of the smelter building, which will house Kamoakakula's direct-to-blister furnace, is progressing well.**



As a by-product, the smelter will also produce between 650,000 and 800,000 tonnes per annum of high-strength sulphuric acid that is expected to be sold in the domestic DRC market.

The on-site smelter will offer transformative financial benefits for the Kamoakakula Copper Complex, most notably of which is a material reduction in logistics costs, and to a lesser extent reduced concentrate treatment charges and local taxes, as well as revenue from the acid sales. Logistics costs alone accounted for 32% of Kamoakakula's total cash costs (C1) during Q1 2023, and the volume of shipments per unit of copper will be more than halved by selling 99+%-pure blister copper anodes instead of copper concentrate. According to the Kamoakakula 2023 PFS, smelter commissioning is expected to drive a decrease in average cash costs (C1) over the first five years (from 2025) to approximately \$1.15/lb. of copper, a 21% reduction from the midpoint of the 2023 guidance of \$1.45/lb. of payable copper produced.

Kamoakakula's Phase 3 expansion also includes the replacement of Turbine #5 at the Inga II hydroelectric power station. The turbine replacement will supply an additional 178 megawatts (MW) of clean hydroelectric power to the national grid and provide power for Phase 3.

Rehabilitation work at the Inga II facility is advancing well, with the team from lead-contractor Voith Hydro mobilized to the Inga II site in Q4 2022. Dismantling works on the existing alternator are ongoing, as well as the fabrication of a new runner. Study work is also progressing well to upgrade the transmission capacity of the existing grid infrastructure between the Inga II hydropower facility and the Kamoakakula site.

**Photo: Manufacturing is underway on Kamo-Kakula's anode furnace shell for the direct-to-blister smelter.**



***Outstanding economic results of updated, independent Integrated Development Plan (2023 IDP) for world-leading Kamo-Kakula Copper Complex***

Ivanhoe Mines announced the results of an updated independent Integrated Development Plan (2023 IDP) for the Kamo-Kakula Copper Complex on January 30, 2023. The 2023 IDP consists of a Pre-Feasibility Study (Kamo-Kakula 2023 PFS) for the Phase 3 and Phase 4 expansions of the Kamo-Kakula Copper Complex over a 33-year mine life, as well as an updated Preliminary Economic Assessment (Kamo-Kakula 2023 PEA) that includes a life-of-mine extension case to 42 years overall.

The Kamo-Kakula 2023 PFS (Phase 3 and 4 expansion) plans for a staged increase in nameplate processing capacity from the current combined capacity of 9.2 Mtpa, up to a total of 19.2 Mtpa. The Phase 1 and 2 concentrators will continue to process ore from the Kakula Mine, as well as the new adjacent Kakula West Mine from 2029. The Phase 3, 5.0 Mtpa concentrator, which is under construction and on target for the first concentrate in Q4 2024, will be fed with ore from the existing Kansoko Sud Mine (formerly Kansoko Mine), as well as new mines currently under development in the Kamo area, known as Kamo 1 and 2. The Phase 4 expansion consists of an additional 5.0 Mtpa concentrator that will take the total processing capacity of the Kamo-Kakula Copper Complex up to 19.2 Mtpa. The Phase 4 concentrator will be fed by new mines in the Kamo area.

The completion of the Phase 3 expansion in Q4 2024 is planned to coincide with the commissioning of an on-site, direct-to-blister flash copper smelter capable of producing 500,000 tonnes per annum of copper anode.

Highlights of the Kamo-Kakula 2023 PFS (Phase 3 and 4 expansion) include:

- Phase 1 and 2 at steady-state throughput (9.2 Mtpa) for the first two years, following the completion of the debottlenecking program by Q2 2023, generating cash flow to fund the ongoing capital expenditures.

- Phase 3 expansion to 14.2 Mtpa processing capacity from late 2024 drives a significant increase in copper production, which is forecast to average 620,000 tonnes during the first ten years.
- Commissioning of the 500,000 tonne-per-annum smelter in conjunction with Phase 3 results in a significant improvement in operating cost.
- A significant period of cash flow generation in the first five years following Phase 3 (2025 to 2029) with copper production averaging approximately 650,000 tonnes at a cash cost (C1) of \$1.15/lb.
- Phase 4 expansion, ramping up 19.2 Mtpa processing capacity after 2030, will allow sustained copper production of over 500,000 tonnes per year through 2047.
- The remaining Phase 3 capital cost, including contingency, is \$3.04 billion, excluding \$255 million already spent through December 2022. Of the \$3.04 billion, \$2.53 billion is spent during 2023 and 2024 up to the commissioning of the Phase 3 concentrator, with the remaining capital cost for the continuing ramp-up of the mining operations thereafter.
- After-tax NPV, at an 8% discount rate, of \$19.1 billion and a mine life of 33 years at a long-term copper price of \$3.70/lb.

The Kamo-Kakula 2023 PEA (Life-of-mine extension case) projects a nine-year mine life extension of the Kamo-Kakula Copper Complex, in addition to the Kamo-Kakula 2023 PFS. This case includes the addition of four new underground mines in the Kamo area (called Kamo 3, 4, 5 and 6) to maintain the overall throughput rate of up to 19.2 Mtpa.

Highlights of the Kamo-Kakula 2023 PEA (Life-of-mine extension case) include:

- Life-of-mine extension case shows the potential to maintain the processing rate at up to 19.2 Mtpa for an additional 9 years beyond the 33 years in the Kamo-Kakula 2023 PFS.
- The sequential ramp-up of four new underground mines in the Kamo area (called Kamo 3, 4, 5 and 6) providing an additional 181.2 Mt of feed to the Kamo and Kakula concentrators at an average grade of 3.1% copper, producing an additional 4.8 Mt of contained copper in concentrate.
- After-tax NPV, at an 8% discount rate, of \$20.2 billion and mine life of 42 years.

The Kamo-Kakula 2023 PEA is preliminary and includes an economic analysis that is based, in part, on Inferred Mineral Resources. Inferred Mineral Resources are considered too speculative geologically for the application of economic considerations that would allow them to be categorized as Mineral Reserves – and there is no certainty that the results will be realized. Mineral Resources do not have demonstrated economic viability and are not Mineral Reserves.

The Kamo-Kakula 2023 PFS and Kamo-Kakula 2023 PEA were independently prepared by OreWin Pty Ltd. of Adelaide, Australia; China Nerin Engineering Co., Ltd., of Jiangxi, China; DRA Global of Johannesburg, South Africa; Epoch Resources of Johannesburg, South Africa; Golder Associates Africa of Midrand, South Africa; Metso-Outotec Oyj of Helsinki, Finland; Paterson and Cooke of Cape Town, South Africa; SRK Consulting Inc. of Johannesburg, South Africa; and MSA Group of Johannesburg, South Africa. The National Instrument 43-101 technical report dated March 6, 2023, was filed on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Ivanhoe Mines website at [www.ivanhoemines.com](http://www.ivanhoemines.com).

## **COPPER PRODUCTION AND CASH COST GUIDANCE FOR 2023**

### **Kamo-Kakula 2023 Guidance**

<b>Contained copper in concentrate (tonnes)</b>	<b>390,000 to 430,000</b>
<b>Cash cost (C1) (\$ per pound)</b>	<b>1.40 to 1.50</b>

The figures are on a 100%-project basis and metal reported in concentrate is before refining losses or deductions associated with smelter terms. Kamoā-Kakula's 2023 guidance is based on several assumptions and estimates and involves estimates of known and unknown risks, uncertainties and other factors that may cause the actual results to differ materially.

Production guidance is based on assumptions about the disruption of power supply, among other things. The Kamoā-Kakula joint venture produced a total of 333,497 tonnes of copper in concentrate for the year ending December 31, 2022, and 93,603 tonnes in the first quarter of 2023 including 34,915 tonnes of copper in concentrate in March 2023.

Cash costs (C1) per pound of payable copper amounted to \$1.42 for Q1 2023 and to \$1.42 for the fourth quarter of 2022.

Cash cost (C1) guidance is based on assumptions including, among other things, prevailing logistics costs based on estimated regional trucking capacity, particularly as regional idled operations are expected to come online, as well as increased benchmark treatment and refining charges, and inflation in consumables and other inputs.

C1 cash cost is a non-GAAP measure used by management to evaluate operating performance and includes all direct mining, processing, stockpile rehandling charges, and general and administrative costs. Smelter charges and freight deductions on sales to the final port of destination (typically China), which are recognized as a component of sales revenues, are added to C1 cash cost to arrive at an approximate cost of delivered finished metal.

For historical comparatives, see the non-GAAP Financial Performance Measures section of this MD&A.

## PLATREEF PROJECT

The Platreef Project is owned by Ivanplats (Pty) Ltd (Ivanplats), which is 64%-owned by Ivanhoe Mines. A 26% interest is held by Ivanplats' historically disadvantaged, broad-based, black economic empowerment (B-BBEE) partners, which include 20 local host communities with approximately 150,000 people, project employees and local entrepreneurs. A Japanese consortium of ITOCHU Corporation, Japan Oil, Gas and Metals National Corporation, and Japan Gas Corporation, owns a 10% interest in Ivanplats, which it acquired in two tranches for a total investment of \$290 million.

The Platreef Project hosts an underground deposit of thick, platinum-group metals, nickel, copper, and gold mineralization on the Northern Limb of the Bushveld Igneous Complex in Limpopo Province – approximately 280 kilometres northeast of Johannesburg and eight kilometres from the town of Mokopane.

On the Northern Limb, platinum-group metals mineralization is primarily hosted within the Platreef, a mineralized sequence traced for more than 30 kilometres along the strike. Ivanhoe's Platreef Project, within the Platreef's southern sector, is comprised of two contiguous properties: Turfspruit and Macalacaskop. Turfspruit, the northernmost property, is contiguous with, and along strike from, Anglo Platinum's Mogalakwena group of mining operations and properties.

**Photo: Aerial photo dated April 2023 of the Platreef mine site, with Shaft 1 on the right and Shaft 2, which has reached 79 metres in height, on the left.**



Since 2007, Ivanhoe has focused its exploration and development activities on defining and advancing the down-dip extension of its original discovery at Platreef, now known as the Flatreef Deposit, which is amenable to highly mechanized, underground mining methods. With Shaft 1, the initial access to the deposit, now in operation and hoisting development rock from underground, Ivanhoe is focusing on

construction activities to bring Phase 1 of Platreef into production by Q3 2024.

Platreef development is currently funded by \$300-million stream financing, with efforts to finalize an additional senior debt facility targeted for completion in mid-2023.

***Surface construction activities and lateral underground mine development are progressing well***

Underground development work has been focused on the vertical development of waste passes between the 750-metre, 850-metre and 950-metre levels, and lateral development towards the orebody, as well as lateral development required for underground infrastructure on each level including access to the bottom of Shaft 3 on the 950-metre level. Shaft 3, with a diameter of 5.1 metres, is currently being reamed with approximately 150 metres of 950 metres completed to date, with planned completion in Q4 2023. More than 1,700 metres of lateral development has been completed to date across all three levels, as well as over 200 metres of vertical development between the three levels.

**Photo: Construction for Platreef's Phase 1 concentrator has commenced, including the concentrate thickener and tailings thickener (on the left) and the flotation cells (on the right).**



Construction for Platreef's Phase 1 concentrator has commenced, with the first production on schedule for Q3 2024. Earthworks and civils are well advanced and progressing on schedule. Long-lead equipment orders were placed with the majority of items scheduled for delivery in Q3 2023. The SMPP contractor has been appointed and mobilization to the site has commenced. Over 800 tonnes of structural steel are in fabrication, with over 160 tonnes ready for delivery. The electrical, control & instrumentation (EC&I) contract award is planned for mid-2023 with site mobilization expected in Q3 2023.

The 10-metre diameter Shaft 2 currently under construction will have a hoisting capacity of 8 Mtpa. Shaft 2 will be utilized in subsequent development phases and will be among the largest hoisting shafts in the world. The Shaft 2 headgear concrete structure has been completed to a height of approximately 79 metres. Shaft 2's overall height will be approximately 100 metres above ground, including the steel structure housing the main winders.



Drilling of the pilot drill in Shaft 2 down to the shaft bottom commenced in Q1 2023. A total of 680 metres have already been completed with drilling on schedule to finish during Q2 2023, whereafter reaming of a 3.1-metre diameter hole is planned.

Construction of Platreef's first 5 MW solar-power plant commenced in Q4 2022 with commissioning expected later this year. The power generated by this plant will support development activities and operations, together with other renewable energy sources to be introduced over time.

**Photo: Mining crew underground on Platreef's 950-metre level, where mine development is underway ahead of Phase 1 first production, which is expected in Q3 2024.**



***Optimization work is underway to potentially accelerate Platreef's Phase 2 expansion***

Ivanhoe has initiated optimization work to identify value-accretive options for installing hoisting capacity in Shaft 3. Shaft 3, originally planned as a ventilation and second escape shaft, is currently under construction and is now planned to be equipped for hoisting, which will provide additional hoisting capacity to remove ore and waste from the underground mine. This has the benefit of de-risking the development and ramp-up of the Phase 1 mine and may be used to accelerate the ramp-up of underground mining activities for Phase 2, in advance of the completion of Shaft 2, which is expected in 2027.

The Shaft 3 design and engineering order has been placed and the required rock winder for Shaft 3 has been secured.

***Outstanding results of Platreef 2022 Feasibility Study***

On February 28, 2022, Ivanhoe Mines announced the results of a new independent feasibility study for the Platreef Project (Platreef 2022 FS). The Platreef 2022 FS is based on a two-phased development to a steady-state production rate of 5.2 Mtpa, and is the current execution plan for the Platreef Project.

Highlights of the Platreef 2022 FS include:

- The Platreef 2022 FS evaluates the phased development of Platreef, with an initial 700,000- tonne-per-annum underground mine and a 770,000-tonne-per-annum capacity concentrator, targeting high-grade mining areas close to Shaft 1, with an initial capital cost of \$488 million.
- First concentrate production for Phase 1 is planned for Q3 2024, with the Phase 2 expansion based on the commissioning of Shaft 2 in 2027, followed by the commissioning of two 2.2-million- tonne-per-annum concentrators in 2028 and 2029. This would increase the steady-state production to 5.2 Mtpa by using Shaft 2 as the primary production shaft.
- Expansion capital cost for Phase 2 is estimated at \$1.5 billion, which may be partially funded by cash flows from Phase 1 and a project-financing package.
- Ivanplats' dedicated engineering teams and leading consultants are evaluating optimizations to further accelerate the availability of shafts for hoisting, which may fast track the overall development timeline.
- Phase 1 average annual production of 113,000 ounces (oz.) of palladium, rhodium, platinum, and gold (3PE+Au), plus 5 million pounds of nickel and 3 million pounds of copper.
- Phase 2 average annual production of 591,000 oz. of 3PE+Au, plus 26 million pounds of nickel and 16 million pounds of copper, which would rank Platreef as the fifth largest primary PGM producer on a palladium equivalent basis.
- Life-of-mine cash cost of \$514 per ounce of 3PE+Au, net of by-products, and including sustaining capital costs, would rank Platreef as the industry's lowest cost primary PGM producer.
- After-tax net present value at an 8% discount rate (NPV8%) of \$1.7 billion and an internal rate of return (IRR) of 18.5%, based on long-term consensus prices.

The Platreef 2022 FS is based on a steady-state production rate of 5.2 Mtpa, as well as an accelerated ramp-up to a steady state through the earlier development of Shaft 2. The Platreef 2022 FS is based on the detailed design and engineering scenario first presented in the 2020 PEA, confirming the viability of a new phased-development pathway to fast-track Platreef into production by Q3 2024.

***Platreef development currently funded by \$300-million stream financing, with efforts to finalize additional senior debt facility well underway***

As announced on December 8, 2021, Ivanplats' \$300 million in stream-financing agreements are with Orion Mine Finance and Nomad Royalty Company (which was subsequently acquired by Sandstorm Gold Royalties). This includes a \$200 million gold-streaming facility and a \$100 million palladium and platinum streaming facility. The first prepayment of \$75 million was received upon the closing of the transaction in December 2021, with the final \$225 million instalment received in September 2022.

The stream facilities are subordinated to any future senior secured financing. Ivanplats remains flexible to raise additional debt or equity and has pre-agreed inter-creditor arrangements with the stream purchasers for future senior debt. The stream facilities are guaranteed by Ivanplats and secured over its assets, as well as Ivanhoe's and the Japanese consortium's shares of Platreef.

The fully realized stream agreements allow Ivanplats to advance Platreef's ongoing Phase 1 construction activities, with an initial capital cost of \$488 million as set out in the Platreef feasibility study announced in February 2022.

In addition, Ivanplats continues to progress the senior debt facility of \$150 million with its mandated lead arrangers, Société Générale and Nedbank. The facility is targeted to close mid-2023.

### ***Long-term supply of bulk water for the Platreef Mine***

The water requirement for the Phase 1 operation is projected to peak at approximately three million litres per day, which will then increase to nine million litres per day once the Phase 2 expansion is complete. In January 2022, Ivanplats signed new agreements for the rights to receive local, treated water to supply the bulk water needed for the phased development plan at Platreef. These agreements replace those originally signed in 2018.

Under the terms of a new offtake agreement, the Mogalakwena Local Municipality (MLM) has agreed to supply at least three million litres per day of treated effluent, up to a maximum of 10 million litres per day for 32 years, from the date of first production, sourced from the town of Mokopane's Masodi Wastewater Treatment Works, currently under construction.

Ivanplats also has signed a sponsorship agreement where Ivanplats has undertaken the commitment to complete the partially constructed Masodi Wastewater Treatment Works, which was halted in 2018. Ivanplats anticipates spending approximately ZAR 215 million (\$13 million) to complete the works. Ivanplats will purchase the treated water at a reduced rate of ZAR 5 per thousand litres. The construction works of the water treatment works plant is progressing well towards completion in Q3 2023.

## KIPUSHI PROJECT

The Kipushi zinc-copper-germanium-silver-lead mine in the DRC is adjacent to the town of Kipushi, approximately 30 kilometres southwest of Lubumbashi on the Central African Copper Belt. Kipushi is approximately 250 kilometres southeast of the Kamo-Kakula Copper Complex and less than one kilometre from the Zambian border. Ivanhoe acquired its 68% interest in the Kipushi Project in November 2011, through Kipushi Holding which is 100%-owned by Ivanhoe Mines. The balance of 32% in the Kipushi Project is held by the state-owned mining company, Gécamines.

The 2022 feasibility study focuses on the mining of Kipushi's zinc-rich Big Zinc and Southern Zinc zones, with an estimated 11.8 million tonnes of Measured and Indicated Mineral Resources grading 35.3% zinc. Kipushi's exceptional zinc grade is more than twice that of the world's next-highest-grade zinc project, according to Wood Mackenzie, a leading, international industry research and consulting group.

On April 27, 2023, Ivanhoe Mines announced the signing of a tri-partite off-take and financing term sheet between Kipushi Corporation SA, Gécamines and Glencore International AG (Glencore) to return the historic Kipushi zinc-copper-lead-germanium mine to production.

The off-take is for 100% of Kipushi's zinc concentrates; between 400,000 and 600,000 dry metric tonnes per annum over a five-year term. The off-take term sheet contains standard, international commercial terms, including payables and treatment charges based on the zinc industry's annual benchmark. The concentrate produced by Kipushi is expected to contain approximately 55% zinc and low levels of impurities. The buyer will purchase the concentrate at the Kipushi Mine on a free-carrier basis, meaning the buyer will be responsible for arranging freight and shipment to the destination, with such costs reimbursed by Kipushi.

**Photo: (L-R) Olivier Binyingo, SVP Public Affairs DRC, Ivanhoe Mines; Placide Nkala Basadilua, GM, Gécamines; Marna Cloete, President, Ivanhoe Mines; and Guy-Robert Lukama Nkunzi, Chairman, Gécamines, during an underground visit to Kamo-Kakula Copper Complex, following the signing of the off-take and financing term sheet at Kipushi.**



The \$250 million term financing facility will be split into two tranches and drawn down quarterly, subject to conditions precedent. The facility will bear an annual interest rate of the Secured Overnight Financing Rate (SOFR) plus 7% and shall be repaid, following a 24-month grace period from signing, in quarterly instalments over 36 months.

The off-take and financing term sheet is subject to the execution of final, binding agreements, which are expected to be concluded in conjunction with the new Kipushi joint-venture agreement.

As previously reported, Kipushi Holding and Gécamines signed a new agreement to return the ultra-high-grade Kipushi Mine to commercial production in Q1 2022, which sets out the commercial terms that will form the basis of a new Kipushi joint-venture agreement establishing a robust framework for the mutually beneficial operation of Kipushi for years to come and are subject to execution of definitive documentation. Once the agreement is concluded, it is anticipated that Ivanhoe Mines' ownership in the Kipushi Project will reduce to 62%, with Gécamines holding the balance of 38%.

Highlights of the new agreement include:

- Kipushi Holding will transfer 6% of the share capital and voting rights in the Kipushi Project to Gécamines, after which Kipushi Holding and Gécamines will hold 62% and 38%, respectively.
- From January 25, 2027, 5% of the share capital and voting rights in the Kipushi Project will be transferred from Kipushi Holding to Gécamines, after which Kipushi Holding and Gécamines will hold 57% and 43%, respectively.
- If, after the 6% and 5% transfers, part of the Kipushi Project's share capital is required to be transferred to the State or any third party pursuant to an applicable legal or regulatory provision, Gécamines will transfer the number of the Kipushi Project shares required, and Kipushi Holding will retain 57% ownership in the Kipushi Project.
- Once a minimum of the current proven and probable reserves and up to 12 million tonnes have been mined and processed, an additional 37% of the share capital and voting rights in the Kipushi Project will be transferred from Kipushi Holding to Gécamines, after which Kipushi Holding and Gécamines will hold 20% and 80%, respectively.
- A new supervisory board and executive committee will be established with appropriate shareholder representation.
- Initiatives will be implemented, focusing on the development of Congolese employees, including individual development, the identification of future leaders, succession planning and the promotion of gender equality across the workforce.
- Kipushi Holding will continue to fund the Kipushi Project with the shareholder loan and/or procure financing from third parties for the development of the project. The interest on the shareholder loan will be 6%, which will be applicable from January 1, 2022, on the existing balance and any further advances. Under the terms of the current shareholder loan agreement, the shareholder loan carries interest of LIBOR plus 4%, which applies to 80% of the advanced amounts with the remaining 20% interest-free. As of March 31, 2023, the balance of the shareholder loan owing to Kipushi Holding, including accrued interest, was approximately \$661 million.

### ***Surface construction activities are advancing on schedule to return Kipushi to production in Q3 2024***

Detailed design for the Kipushi concentrator and associated surface infrastructure is effectively complete, with procurement activities well advanced. Fabrication is advancing well and on schedule with all major equipment currently being fabricated. The bulk of the earthworks and civil works is nearing completion and steel erection has started. The ball mill, currently being fabricated by CITIC Heavy Industries in China, is on track and site delivery is planned for Q3 2023. First concentrate is on schedule to occur in Q3 2024.

**Photo: Civil work on Kipushi's processing plant is nearing completion, with site and steel erection now underway.**



***Underground development work at Kipushi advancing ahead of schedule, access drive development focused around the top of the Big Zinc orebody***

Underground mine development around Kipushi's Big Zinc orebody is advancing ahead of schedule. Stope perimeter drives are being developed on the 1,245m, 1,260m, 1,290m and 1,320m levels, with stope access development at the 1,335-metre level advancing well. Waste rock and low-grade mineralized rock from the advancement of the perimeter and access drives are being hoisted to the surface through Shaft 5 and stockpiled.

A total of 682 metres of underground development was completed within the mining footprint area during Q1 2023. Underground development continued along the critical path whilst additional resources are being mobilized. The first two Epiroc double boom drill rigs arrived on site and have safely been delivered underground and assembled in the workshop on the 1,150-metre level.

Shaft 5 is planned to be the main production shaft once operations commence, with a maximum hoisting capacity of up to 1.8 Mtpa. The bottom of Shaft 5 provides primary access to the lower levels of the mine, including the Big Zinc orebody, along the 1,150-metre haulage level.

Mining will be conducted using highly productive, mechanized methods. Cemented rock fill, utilizing discarded material from the Dense Media Separation (DMS) plant, will be used to backfill open stopes, this will reduce surface tailings volumes and maximize ore extraction.

Stoping of the Big Zinc orebody is expected to commence in early 2024, to build a high-grade ore stockpile ahead of processing plant commissioning in Q3 2024.

**Image: 3D rendering of the Kipushi 800,000 tonnes-per-annum concentrator scheduled to produce first concentrate in Q3 2024.**



**Photo: Eutyclus Phiri, Drill Operator, operating a drilling rig on Kipushi's 1,335-metre level. At the end of the first quarter, underground development was advancing ahead of schedule.**



**Photo: Mechanics Ndaye Ngoie and Banza Ngoie perform routine maintenance at Kipushi's 1,200-metre-level pump station.**



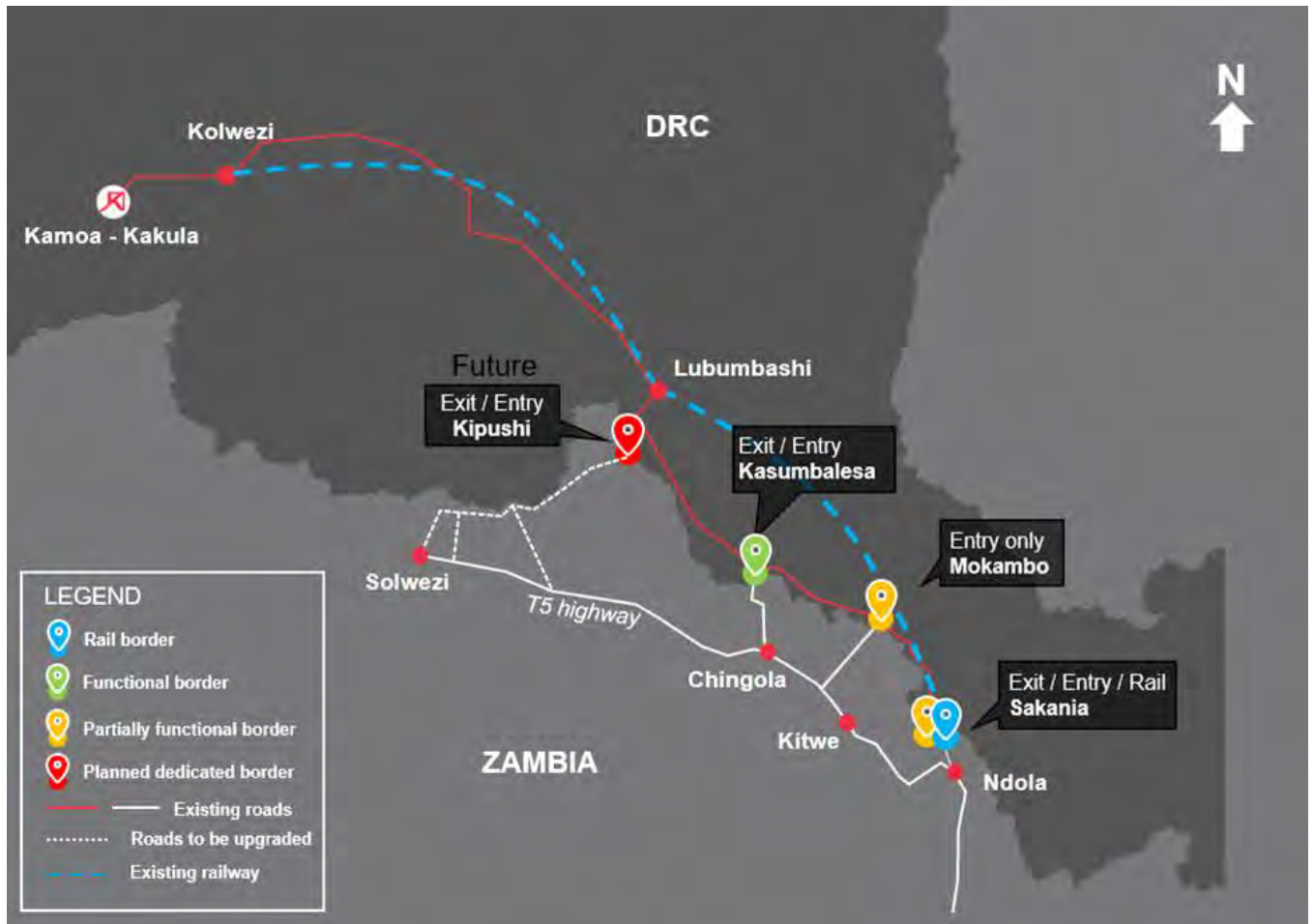
***Dedicated Kipushi commercial border crossing to unlock direct access to Zambia***

Kasumbalesa and Sakania, in Haut-Katanga, are the two commercial border crossings that currently handle most imports and exports originating from the DRC Copperbelt. They are located 110 kilometres and 230 kilometres by road southeast of Kipushi, respectively. The Kasumbalesa border experienced significant congestion in 2022 and Ivanhoe Mines has been working with the provincial government of Haut-Katanga on a series of initiatives to reduce border congestion and streamline the process of clearing mineral products for export.

One such initiative included a Memorandum of Understanding (MOU), signed in Q3 2022, between the province of Haut-Katanga and Ivanhoe Mines, to study options for a new commercial DRC-Zambia border crossing at the town of Kipushi.



**Figure 2: Map of the current and planned commercial DRC-Zambia border infrastructure.**



A new commercial DRC-Zambia border crossing at Kipushi will not only benefit the Kipushi Mine but also Kamoia-Kakula as an additional route for exporting concentrate products. In addition, the border crossing will provide socio-economic benefits to the local community of Kipushi and Lubumbashi, the capital of Haut-Katanga province, which is less than 20 kilometres away.

Initial studies have been completed and the various options presented are currently under review by the provincial government of Haut-Katanga and are being discussed with the national authorities in the DRC. Concurrently, a study is underway to upgrade roads for commercial traffic on the Zambian side of the border, connecting the T5 highway to the Kipushi border (See Figure 2). The Zambian government has already commenced improvements on some sections, with further infrastructure upgrades and all-weather proofing planned to take place over the next 12 to 18 months.

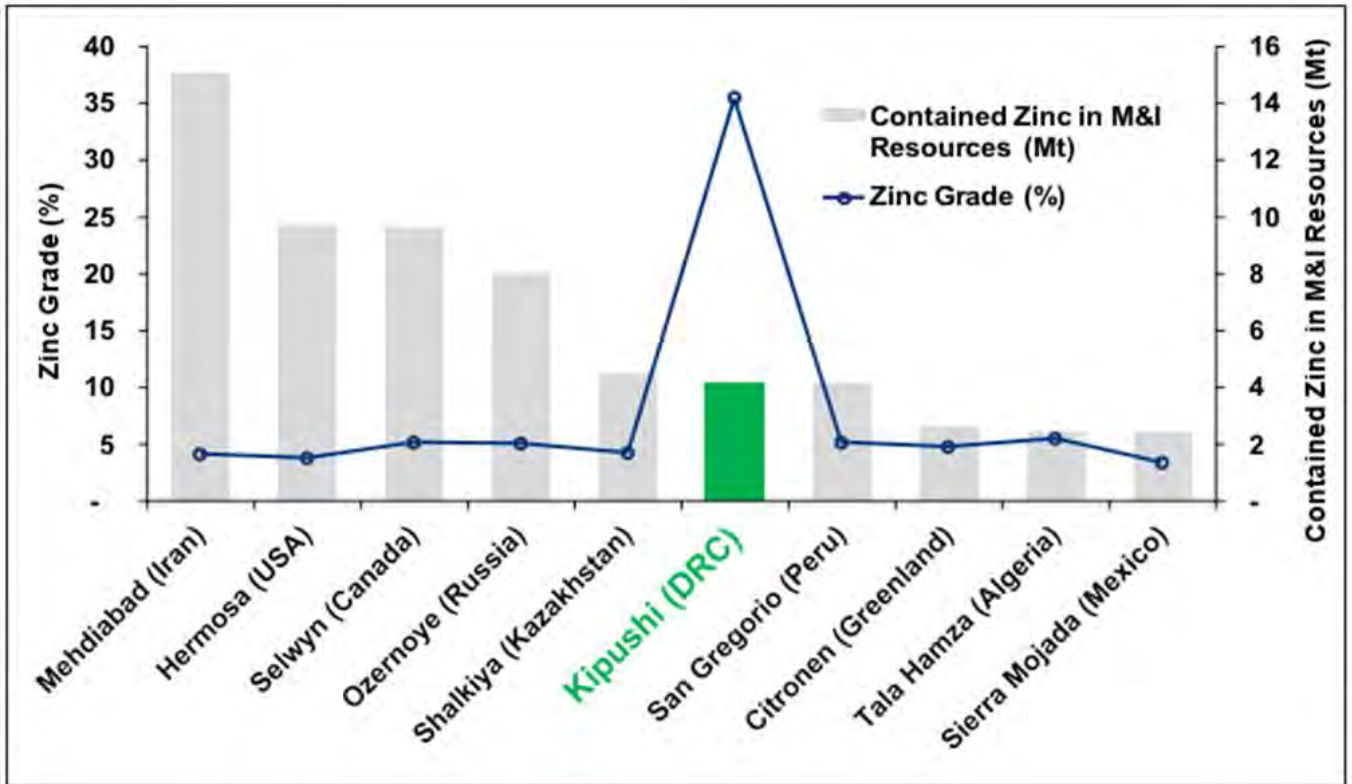
***Kipushi feasibility study issued, heralding the planned re-start of the historic mine, with a two-year development timeline and exceptional economic results***

On February 14, 2022, Ivanhoe Mines announced the positive findings of an independent, feasibility study for the planned resumption of commercial production at Kipushi.

The Kipushi 2022 feasibility study builds on the results of the pre-feasibility study published by Ivanhoe Mines in January 2018. The redevelopment of Kipushi is based on a two-year construction timeline, which utilizes the significant existing surface and underground infrastructure to allow for substantially lower capital costs than comparable development projects.

The 2022 feasibility study focuses on the mining of Kipushi’s zinc-rich Big Zinc and Southern Zinc zones, with an estimated 11.8 million tonnes of Measured and Indicated Mineral Resources grading 35.3% zinc. Kipushi’s exceptional zinc grade is more than twice that of the world’s next-highest-grade zinc project, according to Wood Mackenzie, a leading, international industry research and consulting group.

**Figure 3: World's top 10 zinc projects, by contained zinc.**



Source: Wood Mackenzie, January 2022. Note: All tonnes and metal grades of individual metals used in the equivalency calculation of the above-mentioned projects (except for Kipushi) are based on public disclosure and have been compiled by Wood Mackenzie. All metal grades have been converted by Wood Mackenzie to a zinc equivalent grade at Wood Mackenzie's respective long-term price assumptions.

The Kipushi 2022 Feasibility Study envisages the recommencement of underground mining operations, and the construction of a new concentrator facility on the surface with an annual processing capacity of 800,000 tonnes of ore, producing on average 240,000 tonnes of zinc contained in concentrate over 14 years at life-of-mine average C1 cash cost of \$0.65/lb.

Highlights of the 2022 feasibility study results for the Kipushi Mine include:

- The Kipushi 2022 Feasibility Study evaluates the development of an 800,000-tonne-per-annum underground mine and concentrator, with an increased resource base compared to the pre-feasibility study, extending the mine life to 14 years.
- Existing surface and underground infrastructure allow for significantly lower capital costs than comparable development projects, with the principal development activity being the construction of a conventional concentrator facility and new supporting infrastructure on surface in a two-year timeline.
- Pre-production capital costs, including contingency, estimated at \$382 million.
- Life-of-mine average zinc production of 240,000 tonnes per annum, with a zinc grade of 32%, is expected to rank Kipushi among the world's major zinc mines, once in production, with the highest grade by some margin.
- Life-of-mine average C1 cash cost of \$0.65/lb. of zinc is expected to rank Kipushi, once in production, in the second quartile of the cash cost curve for zinc producers globally.
- At a long-term zinc price of \$1.20/lb., the after-tax net present value (NPV) at an 8% real discount rate is \$941 million, with an after-tax real internal rate of return (IRR) of 40.9% and project payback period of 2.3 years.

The Kipushi 2022 Feasibility Study was independently prepared on a 100%-project basis by OreWin Pty. Ltd., MSA Group (Pty.) Ltd., SRK Consulting (Pty) Ltd. and METC Engineering.

## **WESTERN FORELAND EXPLORATION PROJECT**

Ivanhoe's DRC exploration group is targeting Kamo-Kakula-style copper mineralization on its Western Foreland exploration licences. The 17 licences in the Western Foreland cover a combined area of 2,407 square kilometres to the north, south and west of the Kamo-Kakula Copper Complex. The exploration group is using models that successfully led to the discoveries of Kakula, Kakula West, and the Kamo North Bonanza Zone on the Kamo Copper SA mining licence. The group is composed of a mixture of the same exploration geologists responsible for the previous discoveries and others with experience in the greater Copper Belt.

Diamond drilling began in early January with a single contractor rig, which was increased to three rigs by the end of March, together with an Ivanhoe Land Cruiser mounted diamond drill rig. A total of 4,883 meters of diamond core was drilled during the quarter, which was the wet season.

No ground geophysics data acquisition was carried out in the quarter due to the wet season, but density, magnetic susceptibility and conductivity data have been collected from core samples. Significant advances have been made in understanding ground gravity collected in 2022 and how this can be used as a targeting tool in the Western Foreland shelf. Exploration activities will now be entering the dry season, until Q4 2023 when the wet season occurs.

An update of the Makoko stratigraphic model was completed in Q1 2023 in preparation for the Mineral Resource estimate for the Western Foreland's Makoko and Kiara high-grade copper discoveries, planned for mid-year.

Western Foreland's 2023 exploration program is budgeted at approximately \$19 million, including up to 70,000 metres of drilling.

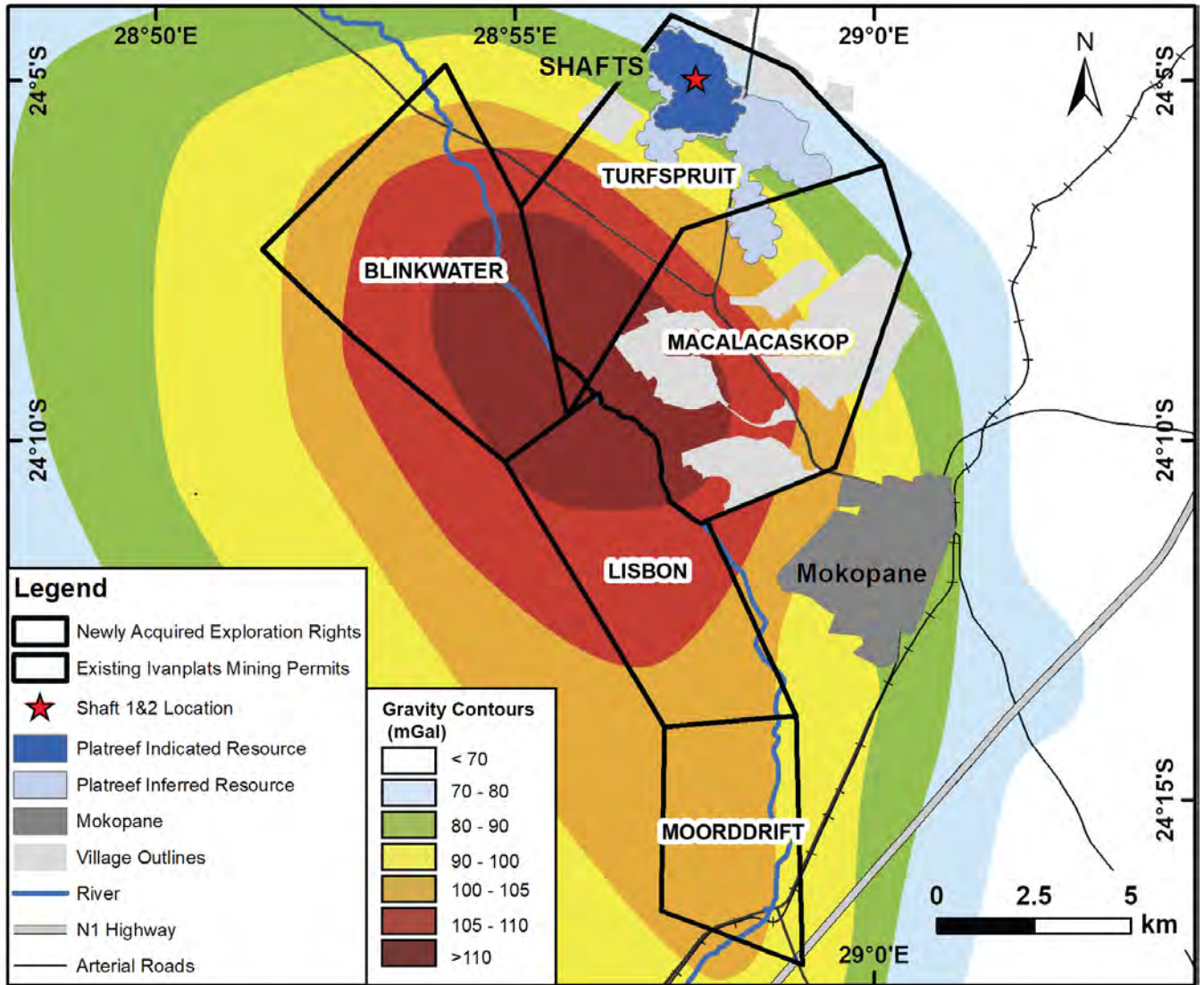
## **THE MOKOPANE FEEDER EXPLORATION PROJECT**

Three new 100%-owned exploration rights were granted on the Northern Limb of the Bushveld complex in South Africa during Q4 2022. The three new exploration rights (Blinkwater 244KR, Moordrift 289KR and Lisbon 288KR) cover 80 square kilometres forming a continuous block situated on the southwest border of the existing Platreef Project's mining rights.

The three new exploration rights together with Ivanhoe's existing properties cover a large geophysical gravity anomaly that was previously identified from a widely spaced regional ground gravity survey. Academic studies based on historical data hypothesize that the anomaly represents a primary feeder zone to the Rustenburg Layered Suite of the Northern Limb of the Bushveld Complex. Significant thickening of the Rustenburg Layered Suite, particularly of the more-dense Lower Zone units, is necessary to explain the large gravity anomaly. The proximity of the proposed feeder to the regional-scale crustal faults (the Ysterberg-Planknek and the Zebediela faults), as well as the anomalously thick zones of platinum-group metals mineralization at the Platreef Deposit, lead Ivanhoe to believe there is significant potential for mineralization to be associated with this gravity feature.

A detailed high-resolution, airborne-magnetic and gradiometer-gravity geophysical survey is currently being flown to better understand the conceptual target. Two separate surveys, a high-resolution magnetic and a wider-spaced Falcon gravity survey, are being flown. The magnetic survey was 50% complete at quarter end, with the gravity survey to follow thereafter. Diamond drilling will be conducted later in the year on targets identified from the results of the two surveys.

**Figure 4: Image of the Platreef and Mokopane Feeder licences overlaid on the gravity geophysics anomaly.**



## SAFETY AND SUSTAINABILITY

Kamoa-Kakula recorded one lost time injury during Q1 2023 with a Total Recordable Injury Frequency Rate (TRIFR) (total injuries recorded per 1,000,000 hours worked) of 1.01. The Platreef Project recorded zero lost time injuries in the quarter and reached 1,049,350 hours worked free of a lost-time injury with a TRIFR of 1.56, and the Kipushi Project also recorded zero lost time injuries in the quarter and reached 1,469,552 hours worked free of a lost-time injury with a TRIFR of 1.20.

Ivanhoe Mines published its sixth annual Sustainability Report on April 13, 2023, summarizing the Company's sustainability activities, performance, and results for 2022 and underscoring its ongoing commitment to "mining with a greater purpose" and its pursuit to be a global leader of sustainable mining.

Ivanhoe Mines has published its First Quarter 2023 Sustainability Update on the Company's website. The update can be viewed here: <https://ivanhoemines.com/investors/sustainability-report/>

Ivanhoe invites its investors and stakeholders to learn more about its exceptional sustainability efforts, by reading and experiencing the 2022 Sustainability Report at: <https://ivanhoemines.com/investors/sustainability-report/>

## SELECTED QUARTERLY FINANCIAL INFORMATION

The following table summarizes selected financial information for the prior eight quarters. Ivanhoe had no operating revenue in any financial reporting period. All operating revenue from commercial production at Kamo-Kakula is recognized within the Kamo Holding joint venture. Ivanhoe did not declare or pay any dividend or distribution in any financial reporting period.

	<b>Three months ended</b>			
	March 31, 2023	December 31, 2022	September 30, 2022	June 30, 2022
	\$'000	\$'000	\$'000	\$'000
Share of profit from joint venture	82,659	83,324	34,057	49,690
Finance income	57,826	58,477	46,720	38,596
Deferred tax recovery (expense)	926	(3,839)	4,252	114,184
(Loss) gain on fair valuation of embedded derivative liability	(30,900)	(66,600)	(27,700)	183,600
Finance costs	(10,465)	(10,457)	(10,223)	(10,013)
General administrative expenditure	(8,571)	(11,870)	(9,199)	(8,957)
Share-based payments	(7,702)	(7,809)	(7,381)	(4,637)
Exploration and project evaluation expenditure	(3,381)	(3,887)	(4,312)	(13,470)
Loss on fair valuation of financial asset	(1,595)	(1,170)	(2,873)	(2,942)
Profit (loss) attributable to:				
Owners of the Company	86,637	41,884	26,344	316,242
Non-controlling interests	(4,157)	(4,705)	(2,477)	35,278
Total comprehensive income (loss) attributable to:				
Owners of the Company	74,154	53,078	4,588	306,381
Non-controlling interest	(5,420)	(3,621)	(4,678)	34,495
Basic profit per share	0.07	0.03	0.02	0.26
Diluted profit per share	0.07	0.03	0.02	0.26

	<b>Three months ended</b>			
	March 31, 2022	December 31, 2021	September 30, 2021	June 30, 2021
	\$'000	\$'000	\$'000	\$'000
Share of profit (loss) from joint venture	87,109	78,391	41,404	(9,960)
Finance income	31,505	27,978	26,437	25,095
(Loss) gain on fair valuation of embedded derivative liability	(66,400)	(88,500)	54,900	(85,700)
Finance costs	(7,391)	(10,539)	(10,451)	(10,110)
Share-based payments	(7,389)	(7,490)	(5,117)	(4,068)
General administrative expenditure	(6,238)	(10,658)	(6,731)	(13,165)
Deferred tax (expense) recovery	(1,347)	74,069	(50)	978
Profit (loss) attributable to:				
Owners of the Company	26,394	45,833	89,806	(104,452)
Non-controlling interests	(4,854)	2,333	(4,456)	(4,161)
Total comprehensive income (loss) attributable to:				
Owners of the Company	45,495	29,774	72,470	(92,793)
Non-controlling interest	(2,858)	632	(6,277)	(2,901)
Basic profit (loss) per share	0.02	0.04	0.07	(0.09)
Diluted profit (loss) per share	0.02	0.04	0.07	(0.09)

## DISCUSSION OF OPERATING RESULTS

*Review of the three months ended March 31, 2023 vs. March 31, 2022*

The Company recorded a profit for Q1 2023 of \$82 million compared to a profit of \$22 million for the same period in 2022. The total comprehensive income for Q1 2023 was \$69 million compared to \$43 million for Q1 2022.

The Kamo-a-Kakula Copper Complex sold 86,777 tonnes of payable copper in Q1 2023 realizing revenue of \$689 million for the Kamo-a Holding joint venture, compared to 51,919 tonnes of payable copper sold for revenue of \$520 million for the same period in 2022. The Company recognized income in aggregate of \$130 million from the joint venture in Q1 2023, which can be summarized as follows:

	Three months ended March 31,	
	2023	2022
	\$'000	\$'000
Company's share of profit from joint venture	82,659	87,109
Interest on loan to joint venture	47,592	28,289
<b>Company's income recognized from joint venture</b>	<b>130,251</b>	<b>115,398</b>

The Company's share of profit from the Kamo-a Holding joint venture was \$4 million less in Q1 2023 compared to the same period in 2022 and is broken down in the following table:

	Three months ended March 31,	
	2023	2022
	\$'000	\$'000
Revenue from contract receivables	659,529	467,453
Remeasurement of contract receivables	29,594	52,142
<b>Revenue</b>	<b>689,123</b>	<b>519,595</b>
Cost of sales	(239,577)	(123,370)
<b>Gross profit</b>	<b>449,546</b>	<b>396,225</b>
General and administrative costs	(30,646)	(15,768)
Amortization of mineral property	(2,596)	–
<b>Profit from operations</b>	<b>416,304</b>	<b>380,457</b>
Finance costs	(88,673)	(54,643)
Finance income and other	110	5,504
<b>Profit before taxes</b>	<b>327,741</b>	<b>331,318</b>
Current tax expense	(76,473)	(5,215)
Deferred tax (expense) recovery	(39,617)	(104,829)
<b>Profit after taxes</b>	<b>211,651</b>	<b>221,274</b>
Non-controlling interest of Kamo-a Holding	(44,663)	(45,295)
Total comprehensive income for the period	166,988	175,979
<b>Company's share of profit from joint venture (49.5%)</b>	<b>82,659</b>	<b>87,109</b>

The realized and provisional copper prices used for the remeasurement (mark-to-market) of contract receivables, can be summarized as follows.

	<b>Three months ended</b>	
	<b>March 31,</b>	
	<b>2023</b>	<b>2022</b>
	<b>\$'000</b>	<b>\$'000</b>
<b><i>Realized during the period - open at the start of the period</i></b>		
Open forward price <sup>(1)</sup>	3.79	4.42
Realized price <sup>(1)</sup>	4.07	4.51
Payable copper tonnes sold	51,178	53,065
Remeasurement of contract receivables (\$'000)	32,625	11,057
<b><i>Realized during the period - new copper sold in the current period</i></b>		
Provisional price <sup>(1)</sup>	4.08	-
Realized price <sup>(1)</sup>	4.01	-
Payable copper tonnes sold	56,121	-
Remeasurement of contract receivables (\$'000)	(8,551)	-
<b><i>Open at the end of the period - open at the start of the period</i></b>		
Opening forward price <sup>(1)</sup>	3.79	4.40
Closing forward price <sup>(1)</sup>	4.05	4.69
Payable copper tonnes sold	6,625	36,920
Remeasurement of contract receivables (\$'000)	3,748	23,112
<b><i>Open at the end of the period - new copper sold in current period</i></b>		
Provisional price <sup>(1)</sup>	4.02	4.53
Closing forward price <sup>(1)</sup>	4.05	4.69
Payable copper tonnes sold	30,307	51,919
Remeasurement of contract receivables (\$'000)	1,772	17,973
<b>Total remeasurement of contract receivables (\$'000)</b>	<b>29,594</b>	<b>52,142</b>

<sup>(1)</sup> Calculated on a weighted average basis

Of the \$89 million (Q1 2022: \$55 million) finance costs recognized in the Kamo Holding joint venture for Q1 2023, \$74 million (Q1 2022: \$48 million) relates to shareholder loans where each shareholder funded Kamo Holding in an amount equivalent to its proportionate shareholding interest before generating sufficient operational cashflow. Of the remaining finance costs, \$12 million (Q1 2022: \$5 million) relates to the provisional payment facility available under Kamo-Kakula's offtake agreements, while \$2 million (Q1 2022: \$2 million) relates to the equipment financing facilities.

Exploration and project evaluation expenditure amounted to \$3 million in Q1 2023 and \$12 million for the same period in 2022. Exploration and project evaluation expenditure for Q1 2023 related to exploration at Ivanhoe's Western Foreland exploration licences, while Q1 2022 also included amounts spent at the Kipushi Project, for which expenditure was capitalized in Q1 2023 due to the recommencement of the development of the project.

Finance income for Q1 2023 amounted to \$58 million and was \$26 million more than for the same period in 2022 (\$32 million). Included in finance income is the interest earned on loans to the Kamoia Holding joint venture to fund past development which amounted to \$48 million for Q1 2023, and \$28 million for the same period in 2022, and increased due to the higher LIBOR rates and higher accumulated loan balance. The Company earns interest on the loan at USD 12-month LIBOR +7%. The average USD 12-month LIBOR rate for the 3 months ended March 31, 2023 was 5.44% compared to 1.23% for the same period in 2022.

The Company recognized a loss on the fair valuation of the embedded derivative financial liability of \$31 million for Q1 2023, compared to a loss on the fair valuation of the embedded derivative financial liability of \$66 million for Q1 2022, which is further explained in the accounting for the convertible notes section on page 36.

*Financial position as at March 31, 2023 vs. December 31, 2022*

The Company's total assets increased by \$94 million, from \$3,969 million as at December 31, 2022, to \$4,063 million as at March 31, 2023. The main reason for the increase in total assets was attributable to the increase in the Company's investment in the Kamoia Holding joint venture by \$130 million and the increase in property, plant and equipment of \$50 million as project development continued at the Platreef and Kipushi projects, which was partly offset by the decrease in cash and cash equivalents.

The Company's investment in the Kamoia Holding joint venture increased by \$130 million from \$2,047 million as at December 31, 2022, to \$2,177 million as at March 31, 2023. The Company's investment in the Kamoia Holding joint venture can be broken down as follows:

	<b>March 31, 2023</b>	<b>December 31, 2022</b>
	<b>\$'000</b>	<b>\$'000</b>
Company's share of net assets in joint venture	593,099	510,439
Loan advanced to joint venture	1,584,193	1,536,601
<b>Total investment in joint venture</b>	<b>2,177,292</b>	<b>2,047,040</b>

The Company's share of net assets in the Kamoia Holding joint venture can be broken down as follows:



	March 31, 2023		December 31, 2022	
	100%	49.5%	100%	49.5%
	\$'000	\$'000	\$'000	\$'000
<b>Assets</b>				
Property, plant and equipment	2,975,903	1,473,072	2,733,176	1,352,922
Mineral property	787,293	389,710	789,888	390,995
Cash and cash equivalents	389,624	192,864	365,633	180,988
Indirect taxes receivable	326,517	161,626	279,385	138,296
Other receivables	296,171	146,604	212,221	105,049
Consumable stores	288,248	142,683	257,434	127,430
Non-current inventory	274,804	136,028	246,424	121,980
Long-term loan receivable	257,041	127,235	252,523	124,999
Trade receivables	59,553	29,479	63,196	31,282
Current inventory	24,638	12,196	27,011	13,370
Right-of-use asset	8,662	4,288	11,549	5,717
Prepaid expenses	8,266	4,092	9,216	4,562
Non-current deposits	1,872	927	2,272	1,125
Deferred tax asset	665	329	710	351
<b>Liabilities</b>				
Shareholder loans	(3,199,499)	(1,583,752)	(3,103,381)	(1,536,174)
Trade and other payables	(327,454)	(162,090)	(309,710)	(153,306)
Deferred tax liability	(313,458)	(155,162)	(273,841)	(135,551)
Equipment finance facility	(112,331)	(55,604)	(102,890)	(50,931)
Income taxes payable	(65,986)	(32,631)	(14,600)	(7,227)
Other provisions	(48,791)	(24,152)	(26,675)	(13,204)
Rehabilitation provision	(45,162)	(22,355)	(45,231)	(22,389)
Provisional payment facility	(42,607)	(21,090)	(38,866)	(19,239)
Lease liability	(10,113)	(5,006)	(13,243)	(6,555)
Non-controlling interest	(335,676)	(166,160)	(291,012)	(144,051)
<b>Net assets of the joint venture</b>	<b>1,198,180</b>	<b>593,099</b>	<b>1,031,189</b>	<b>510,439</b>

Before commencing commercial production in July 2021, the Kamo Holding joint venture principally used loans advanced to it by its shareholders to advance the Kamo-Kakula Copper Complex through investing in development costs and other property, plant and equipment. No additional shareholder loans were advanced in 2022 or 2023 with joint venture cashflow funding its operations and expansions. The joint venture had a healthy cash position as at March 31, 2023, with cash and cash equivalents of \$390 million on hand.

The Kamo-Kakula's Phase 1 and 2 operations are anticipated to generate significant operating cash flow to fund Phase 3 capital cost requirements at current copper prices and the joint venture is arranging short-term financing facilities should a shortfall occur due to a significant decrease in copper prices.

The cash flows of the Kamo Holding joint venture can be summarized as follows:

	<b>Three months ended</b>	
	<b>March 31,</b>	
	<b>2023</b>	<b>2022</b>
	<b>\$'000</b>	<b>\$'000</b>
Net cash generated from operating activities	273,421	224,519
Net cash used in investing activities	(253,156)	(107,016)
Net cash generated from financing activities	2,398	2,028
Effect of foreign exchange rates on cash	1,328	(1,567)
<b>Net cash inflow</b>	<b>23,991</b>	<b>117,964</b>
Cash and cash equivalents - beginning of the year	365,633	22,031
<b>Cash and cash equivalents - end of the period</b>	<b>389,624</b>	<b>139,995</b>

The Kamoia Holding joint venture's net increase in property, plant and equipment from December 31, 2022, to March 31, 2023, amounted to \$243 million and can be further broken down as follows:

	<b>Three months ended</b>	
	<b>March 31,</b>	
	<b>2023</b>	<b>2022</b>
	<b>\$'000</b>	<b>\$'000</b>
<b>Kamoia Holding joint venture</b>		
Expansion capital	209,824	106,611
Sustaining capital	46,250	25,709
Initial capital	-	9,009
	256,074	141,329
Depreciation capitalized	8,401	2,556
Total capital expenditure	264,475	143,885
Borrowing costs capitalized	22,588	8,904
Total additions to property, plant and equipment for Kamoia Holding	287,063	152,789
Less depreciation, disposals and foreign exchange translation	(44,336)	(24,628)
<b>Net increase in property, plant and equipment of Kamoia Holding</b>	<b>242,727</b>	<b>128,161</b>

Ivanhoe's cash and cash equivalents decreased by \$100 million, from \$597 million as at December 31, 2022, to \$497 million as at March 31, 2023. The Company spent \$70 million on project development and acquiring other property, plant and equipment and used \$24 million in its operating activities.

The net increase in property, plant and equipment amounted to \$50 million, with additions of \$74 million to project development and other property, plant and equipment. Of this total, \$45 million pertained to development costs and other acquisitions of property, plant and equipment at the Platreef Project, while \$28 million pertained to development costs and other acquisitions of property, plant and equipment at the Kipushi Project as set out on page 35.

The main components of the additions to property, plant and equipment – including capitalized development costs – at the Platreef and Kipushi projects for the three months ended March 31, 2023, and for the same period in 2022, are set out in the following table:

**Three months ended**

**March 31,**

	<b>2023</b>	<b>2022</b>
	<b>\$'000</b>	<b>\$'000</b>

**Platreef Project**

Phase 1 construction	22,692	9,589
Phase 2 construction works	10,346	2,256
Salaries and benefits	3,407	3,053
Administrative and other expenditure	1,924	1,224
Depreciation	1,713	155
Site costs	980	861
Studies and contracting work	886	985
Social and environmental	403	222
Total development costs	42,351	18,345
Other additions to property, plant and equipment	2,830	108
Total additions to property, plant and equipment for Platreef	45,181	18,453

**Three months ended**

**March 31,**

	<b>2023</b>	<b>2022</b>
	<b>\$'000</b>	<b>\$'000</b>

**Kipushi Project**

Mine construction costs	14,168	–
Salaries and benefits	4,269	2,969
Administration and overheads	2,995	–
Depreciation - development	2,031	–
Electricity	1,872	909
Studies and contracting work	1,718	529
Other expenditure	1,220	2,288
Other additions to property, plant and equipment	200	295
Depreciation - exploration and project evaluation	–	1,871
Total project expenditure	28,473	8,861

*Accounted for as follows:*

Additions to property, plant and equipment	14,368	295
Development costs capitalized to property, plant and equipment	14,105	–
Exploration and project evaluation expenditure in the loss from operating activities	–	8,566
Total project expenditure	28,473	8,861

The Company's total liabilities increased by \$18 million to \$1,146 million as at March 31, 2023, from \$1,128 million as at December 31, 2022, with the increase mainly due to the loss on the fair valuation of the embedded derivative liability of \$31 million.

### *Accounting for the convertible notes closed in March 2021*

The Company closed a private placement offering of \$575 million of 2.50% convertible senior notes maturing in 2026 on March 17, 2021. Upon conversion, the convertible notes may be settled, at the Company's election, in cash, common shares or a combination thereof. Due to this election right and conversion feature, the convertible notes have an embedded derivative liability that is measured at fair value with changes in value being recorded in profit or loss, as well as the host loan that is accounted for at amortized cost.

The convertible senior notes are senior unsecured obligations of the Company which will accrue interest payable semi-annually in arrears at a rate of 2.50% per annum and will mature on April 15, 2026, unless earlier repurchased, redeemed or converted. The initial conversion rate of the notes is 134.5682 Class A common shares of the Company per \$1,000 principal amount of notes or an initial conversion price of approximately \$7.43 per common share.

Holders of the notes may convert the notes, at their option, in integral multiples of \$1,000 principal amount, or in excess thereof, at any time until the close of business on the business day immediately preceding October 15, 2025, but only under the following circumstances:

- During any calendar quarter commencing after the calendar quarter ending on June 30, 2021 (and only during such calendar quarter), if the last reported sale price of the Company's Class A common shares for at least 20 trading days (whether consecutive) during a period of 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; or
- During the five consecutive business day period after any ten consecutive trading day period (the "measurement period") in which the trading price per \$1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of the Company's Class A common shares and the conversion rate on each such trading day; or
- If the Company calls any or all the notes for redemption in certain circumstances or upon the occurrence of certain corporate events.

On or after October 15, 2025, until the close of business on the second scheduled trading day immediately preceding the maturity date, holders may convert all or any portion of their notes, in multiples of \$1,000 principal amount, at the option of the holder regardless of the foregoing conditions.

The convertible notes will not be redeemable at the Company's option before April 22, 2024, except upon the occurrence of certain tax law changes. On or after April 22, 2024, and on or before the 41st scheduled trading day immediately preceding the maturity date, the notes will be redeemable at the Company's option if the last reported sale price of the Company's common shares has been at least 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately preceding the date on which the Company provides notice of redemption at a redemption price equal to 100% of the principal amount of the convertible notes to be redeemed, plus accrued and unpaid interest to, but excluding the redemption date.

Since upon conversion, the notes may be settled, at the Company's election, in cash, common shares or a combination thereof, the conversion feature is an embedded derivative liability. The effect of this is that the host liability will be accounted for at amortized cost, with an embedded derivative liability being measured at fair value with changes in value being recorded in profit or loss.

The effective interest rate of the host liability was deemed to be 9.39% and the interest recognized on the convertible notes amounted to \$11 million in 2023, before capitalization of borrowing costs on the notes of \$1 million. No repayments of coupon interest were payable during Q1 2023. The carrying value of the host liability was \$476 million as at March 31, 2023, up from \$465 million as at December 31, 2022.

The embedded derivative liability had a fair value of \$151 million on the closure of the convertible notes offering and increased to \$221 million as at December 31, 2022, and increased to \$252 million as at March 31, 2023, resulting in a loss on fair valuation of embedded derivative liability of \$31 million for the three months ended March 31, 2022. The change in the fair value of the embedded derivative liability is largely due to an increase in the Company's share price from December 2022 to March 2023.

The following key inputs and assumptions were used in determining the fair value of the embedded derivative liability:

	<b>March 31, 2021</b>	<b>December 31, 2021</b>	<b>March 31, 2022</b>	<b>December 31, 2022</b>	<b>March 31, 2023</b>
Share price	C\$7.00	C\$10.32	C\$11.66	C\$10.70	C\$12.21
Credit spread (basis points)	630	356	277	419	140
Volatility	42%	40%	40%	40%	40%
Borrowing costs (basis points)	50	25	50	25	25
Fair value of embedded derivative liability (\$'million)	\$151	\$244	\$151	\$221	\$252

Transaction costs on the convertible notes offering relating to the embedded derivative liability amounted to \$4 million and were expensed and included in the profit and loss for Q1 2021.

## LIQUIDITY AND CAPITAL RESOURCES

The Company had \$497 million in cash and cash equivalents as at March 31, 2023. At this date, the Company had consolidated working capital of approximately \$514 million, compared to \$595 million at December 31, 2022.

The Company's planned capital expenditure for 2023 and 2024 can be summarized as follows:

<b>Capital Expenditure</b>	<b>Q1 2023 Actuals</b>	<b>2023 Guidance</b>	<b>2024 Guidance</b>
	(\$' million)	(\$' million)	(\$' million)
<b>Kamoa-Kakula</b>			
Phase 3 expansion	142	1,400 – 1,800	1,100 – 700
Phase 2 and other expansion capital	68	120	–
Sustaining capital	46	180	80
	<b>256</b>	<b>1,700 – 2,100</b>	<b>1,180 – 780</b>
<b>Platreef</b>			
Phase 1 initial capital	30	190 – 240	200 – 150
Phase 2 capital	13	60	40
	<b>43</b>	<b>250 – 300</b>	<b>240 – 190</b>
<b>Kipushi</b>			
Initial capital	<b>26</b>	<b>200 – 250</b>	<b>180 – 130</b>

All capital expenditure figures are presented on a 100%-project basis.

The ranges provided reflect uncertainty in the timing of Kamoa-Kakula Phase 3 expansion, Platreef Phase 2 capital and Kipushi cash flows between calendar years 2023 and 2024. The 2024 capital expenditure guidance for Platreef and Kipushi excludes sustaining capital required in 2024 post-initial production.

As documented in the Kamoa-Kakula 2023 Integrated Development Plan (IDP 2023) announced on January 30, 2023, the remaining capital cost for the total Phase 3 expansion is estimated at \$3.0 billion, including the mine, concentrator, smelter, infrastructure and investment in off-site hydropower infrastructure. The Phase 1 and 2 operations are anticipated to generate significant operating cash flow in 2023 and 2024 and are expected to fund capital cost requirements at current copper prices. The joint venture had cash and cash equivalents of \$390 million on hand at the end of March 2023.

Construction for Platreef's Phase 1 Mine is underway, with the first production on track for Q3 2024. The planned Phase 2 capital expenditure at Platreef represents mainly the continuation of sinking Shaft 2 and the construction of the Shaft 2 headframe, as well as the initial optimization study at Platreef to potentially accelerate production from the Phase 2 expansion, which is currently under consideration.

Construction of the Kipushi Mine is also underway, with the processing plant scheduled for completion by Q3 2024. Long-lead equipment items have been ordered and manufacturing is underway, and earthworks and civil construction activities are taking place on the surface. A tri-partite off-take and financing term sheet between Kipushi Corporation SA, Gécamines and Glencore has been signed to return the historic Kipushi zinc-copper-lead-germanium mine to production. The \$250 million term financing facility will be split into two tranches and drawn down quarterly, subject to conditions precedent. The facility will bear an annual interest rate of SOFR plus 7% and shall be repaid, following a 24-month grace period from signing, in quarterly installments over 36 months. The off-take and financing term sheet is subject to the execution of final, binding agreements, which are expected to be concluded in conjunction with the new Kipushi joint-venture agreement.

Exploration activities at the Western Foreland exploration project in the DRC, the Mokopane Feeder exploration project in South Africa and other targets will continue in 2023, with an initial budget of \$31 million.

On March 17, 2021, the Company closed a private placement offering of \$575 million of 2.50% convertible senior notes maturing in 2026. The convertible senior notes are senior unsecured obligations of the Company which will accrue interest payable semi-annually in arrears at a rate of 2.50% per annum and will mature on April 15, 2026, unless earlier repurchased, redeemed or converted. The notes will be convertible at the option of holders, before the close of business on the business day immediately preceding October 15, 2025, only under certain circumstances and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the notes may be settled, at the Company's election, in cash, common shares or a combination thereof. The carrying value of the host liability was \$476 million and the fair value of the embedded derivative liability was \$252 million as at March 31, 2023.

The Company has a mortgage bond outstanding on its offices in London, United Kingdom, of £3.2 million (\$4.0 million). The bond is fully repayable on August 28, 2025, secured by the property, and incurs interest at a rate of 1 month Sterling Overnight Index Average (SONIA) plus 1.90% payable monthly in arrears. Only interest will be payable until maturity.

In 2013, the Company became a party to a loan payable to ITC Platinum Development Limited, which had a carrying value of \$37 million as at March 31, 2023, and a contractual amount due of \$36 million. The loan is repayable once the Platreef Project has residual cash flow, which is defined in the loan agreement as gross revenue generated by the Platreef Project, less all operating costs attributable thereto, including all mining development and operating costs. The loan incurs interest of USD 3-month LIBOR plus 2% calculated monthly in arrears. Interest is not compounded.

The Company has an implied commitment in terms of spending on work programs submitted to regulatory bodies to maintain the good standing of exploration and exploitation permits at its mineral properties. The following table sets forth the Company's long-term obligations:

<b>Contractual obligations as at March 31, 2023</b>	<b>Payments due by period</b>				
	<b>Total \$'000</b>	<b>Less than 1 year \$'000</b>	<b>1-3 years \$'000</b>	<b>4-5 years \$'000</b>	<b>After 5 years \$'000</b>
Convertible notes	581,577	6,577	–	575,000	–
Debt	40,793	–	–	3,972	36,821
Lease commitments	1,827	353	781	693	–
<b>Total contractual obligations</b>	<b>624,197</b>	<b>6,930</b>	<b>781</b>	<b>579,665</b>	<b>36,821</b>

Debt in the above table represents the mortgage bond owing to Citibank and loan payable to ITC Platinum Development Limited, as described above.

## NON-GAAP FINANCIAL PERFORMANCE MEASURES

Kamoa-Kakula's C1 cash costs and C1 cash costs per pound

C1 cash costs and C1 cash costs per pound are non-GAAP financial measures. These are disclosed to enable investors to better understand the performance of Kamoa-Kakula in comparison to other copper producers who present results on a similar basis.

C1 cash costs are prepared on a basis consistent with the industry standard definitions by Wood Mackenzie cost guidelines but are not measures recognized under IFRS. In calculating the C1 cash cost, the costs are measured on the same basis as the Company's share of profit from the Kamoa Holding joint venture that is contained in the financial statements. C1 cash costs are used by management to evaluate operating performance and include all direct mining, processing, and general and administrative costs. Smelter charges and freight deductions on sales to the final port of destination, which are recognized as a component of sales revenues, are added to C1 cash cost to arrive at an approximate cost of finished metal. C1 cash costs and C1 cash costs per pound exclude royalties and production taxes and non-routine charges as they are not direct production costs.

*Reconciliation of Kamoa-Kakula's cost of sales to C1 cash costs, including on a per pound basis:*

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
<b>Cost of sales</b>	<b>239,577</b>	<b>123,370</b>
Logistics, treatment and refining charges	111,444	48,841
General and administrative expenditure	30,646	15,768
Royalties and production taxes	(53,812)	(28,576)
Depreciation	(38,488)	(15,236)
Power rebate	(4,493)	-
Movement in finished goods inventory	(688)	3
General and administrative expenditure of other group entities	(324)	(228)
<b>C1 cash costs</b>	<b>283,862</b>	<b>143,942</b>
Cost of sales per pound of payable copper sold (\$ per lb.)	1.25	1.08
C1 cash costs per pound of payable copper produced (\$ per lb.)	1.42	1.21
Payable copper produced in concentrate (tonnes)	90,561	53,795

Figures in the above table are for the Kamoa-Kakula joint venture on a 100% basis.

*EBITDA, Adjusted EBITDA and EBITDA margin*

EBITDA and Adjusted EBITDA are non-GAAP financial measures. Ivanhoe believes that Kamoa-Kakula's EBITDA is a valuable indicator of the mine's ability to generate liquidity by producing operating cash flow to fund its working capital needs, service debt obligations, fund capital expenditures and distribute cash to its shareholders. EBITDA and Adjusted EBITDA are also frequently used by investors and analysts for valuation purposes. Kamoa-Kakula's EBITDA and the EBITDA and Adjusted EBITDA for the Company are intended to provide additional information to investors and analysts and do not have any standardized definition under IFRS and should not be considered in isolation or as a substitute for measures of performance prepared per IFRS. EBITDA and Adjusted EBITDA excludes the impact of cash costs of financing activities and taxes, and the effects of changes in operating working capital balances, and therefore are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Other companies may calculate EBITDA and Adjusted EBITDA differently.



The EBITDA margin is an indicator of Kamo-Kakula's overall health and denotes its profitability, which is calculated by dividing EBITDA by revenue. The EBITDA margin is intended to provide additional information to investors and analysts, does not have any standardized definition under IFRS, and should not be considered in isolation, or as a substitute, for measures of performance prepared per IFRS.

*Reconciliation of profit after tax to Kamo-Kakula's EBITDA:*

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
Profit after taxes	211,651	221,274
Finance costs	88,673	54,643
Finance income	(5,076)	(1,806)
Current and deferred tax expense	116,090	110,044
Depreciation	41,084	15,236
<b>EBITDA</b>	<b>452,422</b>	<b>399,391</b>

Figures in the above table are for the Kamo-Kakula joint venture on a 100% basis.

*Reconciliation of profit after tax to Ivanhoe's EBITDA and adjusted EBITDA:*

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
Profit after taxes	82,480	21,540
Finance income	(57,826)	(31,505)
Finance costs	10,465	7,391
Current and deferred tax (recovery) expense	(881)	1,207
Depreciation	476	2,329
<b>EBITDA</b>	<b>34,714</b>	<b>962</b>
Share of profit from joint venture net of tax	(82,659)	(87,109)
Company's share of EBITDA from Kamo-Kakula joint venture <sup>(1)</sup>	178,857	158,136
Loss on fair valuation of embedded derivative liability	30,900	66,400
Non-cash share-based payments	6,538	6,253
<b>Adjusted EBITDA</b>	<b>168,350</b>	<b>144,642</b>

<sup>(1)</sup> The Company's attributable share of EBITDA from the Kamo-Kakula joint venture is calculated using the Company's effective shareholding in Kamo Copper SA (39.6%), Ivanhoe Mines Energy DRC SARL (49.5%), Kamo Holding Limited (49.5%) and Kamo Services (Pty) Ltd (49.5%).

### OFF-BALANCE SHEET ARRANGEMENTS

The Company had no off-balance sheet arrangements for the periods under review.

## TRANSACTIONS WITH RELATED PARTIES

The following tables summarize related party income earned and expenses incurred by the Company, primarily on a cost-recovery basis, with companies related by way of directors or significant shareholders in common. The tables summarize the transactions with related parties and the types of income earned and expenditures incurred with related parties. Amounts in brackets denote expenses.

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
Kamoa Holding Limited (a)	47,592	28,289
High Power Exploration Inc. (b)	2,307	1,479
Kamoa Services (Pty) Ltd. (c)	1,151	610
Kamoa Copper SA (d)	287	290
Ivanhoe Mines Energy DRC SARL (e)	48	35
Ivanhoe Electric Inc. (f)	5	–
Ivanhoe Capital Aviation Ltd. (g)	(1,125)	(1,125)
Ivanhoe Capital Services Ltd. (h)	(95)	(148)
Global Mining Management Corporation (i)	(68)	(83)
CITIC Metal Africa Investments Limited (j)	(53)	(53)
Ivanhoe Capital Pte Ltd. (k)	–	(3)
	50,049	29,291
Finance income	49,899	29,764
Cost recovery and management fee	1,461	939
Travel	(1,122)	(1,128)
Salaries and benefits	(102)	(157)
Directors fees	(53)	(53)
Office and administration	(17)	(32)
Consulting	(17)	(42)
	50,049	29,291

The transactions summarized above were in the normal course of operations and were measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

As at March 31, 2023, trade and other payables included \$0.2 million (December 31, 2022: \$0.3 million) with regards to amounts due to parties related by way of director, officers or shareholder in common. These amounts are unsecured and non-interest bearing.

Amounts included in other receivables due from parties related by way of director, officers or shareholder in common as at March 31, 2023 amounted to \$6.1 million (December 31, 2022: \$6.9 million). Of this, \$5.0 million related to receivables from the joint venture (December 31, 2022: \$6.6 million).

The directors of the Company are considered to be related parties and remuneration paid to the directors is disclosed in the Company's Management Proxy Circular available on the Company's website.

- (a) Kamoa Holding Limited ("Kamoa Holding") is a company registered in Barbados. The Company has an effective 49.5% ownership in Kamoa Holding. The Company earns interest on the loans advanced to Kamoa Holding.

- (b) High Power Exploration Inc. (“HPX”) is a private company incorporated under the laws of Delaware, USA. A director of the Company is a director and member of executive management of HPX. The Company extended a secured loan of \$50 million to HPX. The loan receivable earned interest at a rate of 8% per annum until April 25, 2021. Following the signing of an amendment to the loan agreement on June 16, 2021, the interest rate was fixed at 11% per annum compounded monthly for the period after April 25, 2021 until April 25, 2022, after which the rate at which interest is earned increased to 15% per annum compounded monthly. The Company is negotiating an updated scheduled maturity date with HPX.
- (c) Kamoas Services (Pty) Ltd. (“Kamoas Services”) is a company registered in South Africa. The Company has an effective 49.5% ownership in Kamoas Services. The Company provides administration, accounting and other services to Kamoas Services on a cost-recovery basis.
- (d) Kamoas Copper SA (“Kamoas Copper”) is a company incorporated in the DRC. The Company has an effective 39.6% ownership in Kamoas Copper. The Company provides administration, accounting and other services to Kamoas Copper on a cost-recovery basis.
- (e) Ivanhoe Mines Energy DRC Sarl (“Energy”) is a company incorporated in the DRC. The Company has an effective 49.5% ownership in Energy. The Company provides administration, accounting and other services to Energy on a cost-recovery basis.
- (f) Ivanhoe Electric Inc. (“Ivanhoe Electric”) is a company incorporated under the laws of Delaware, USA. A director of the Company is a director and member of executive management of Ivanhoe Electric. The Company provides services to Ivanhoe Electric on a cost-recovery basis.
- (g) Ivanhoe Capital Aviation Ltd. (“Aviation”) is a private company owned indirectly by a director of the Company. Aviation operates an aircraft for which the Company contributes toward the running costs.
- (h) Ivanhoe Capital Services Ltd. (“Services”) is a private company owned indirectly by a director of the Company. Services provides for salaries administration and other services to the Company in Singapore and Beijing on a cost-recovery basis.
- (i) Global Mining Management Corporation (“Global”) is a private company based in Vancouver, Canada. The Company and a director of the Company hold an indirect equity interest in Global. Global provides administration, accounting and other services to the Company on a cost-recovery basis.
- (j) Citic Metal Africa Investments Limited (“Citic Metal Africa”) is a private company incorporated in Hong Kong. Citic Metal Africa is a shareholder in the Company and nominates two directors who serve of the Company’s Board of Directors.
- (k) Ivanhoe Capital Pte Ltd. (“Capital”) is a private company owned indirectly by a director of the Company. Capital provides administration, accounting and other services in Singapore on a cost-recovery basis.

### **CRITICAL ACCOUNTING ESTIMATES**

The Company’s significant accounting policies are presented in Note 2 to the consolidated financial statements for the year ended December 31, 2022. The preparation of the consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the end of the reporting period presented and reported amounts of expenses during said reporting period. Actual outcomes could differ from these estimates. The consolidated financial statements include estimates that, by their nature, are uncertain. Such estimates have a pervasive effect on the consolidated financial statements and may require accounting adjustments based on future occurrences. Revisions to accounting estimates are recognized in the year in which the estimate is revised and future years if the revision affects both current and future years. These estimates are based on historical experience, current and future economic conditions and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Significant assumptions about the future and other sources of estimation uncertainty at the end of the reporting period, which could result in a material adjustment to the carrying amounts of assets and liabilities in the event that actual results differ from assumptions made, include, but are not limited to, the following:

#### *Recoverability of assets*

Property, plant and equipment, including capitalized development costs and finite lived intangible assets are assessed at each reporting period to determine whether there is any indication that those assets have suffered an impairment loss.

In assessing whether an impairment is required, the carrying value of the asset or cash generating unit (“CGU”) is compared with its recoverable amount. The recoverable amount is the higher of the CGU’s fair value less costs of disposal and value in use. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent, if any, of the impairment loss.

The Company assesses whether an impairment is required on loans receivables. A range of cash flow scenarios are considered, taking into account forward looking information which may impact recoverability of loan receivables.

Given the nature of the Company’s activities, information on the fair value of an asset is usually difficult to obtain unless negotiations with potential purchasers or similar transactions are taking place. Consequently, the fair value less costs of disposal for each CGU is estimated based on discounted future estimated cash flows that are expected to be generated from the continued use of the CGUs. They are estimated using market consensus-based commodity price and exchange assumptions, estimated quantities of recoverable minerals, production levels, operating costs and capital requirements, including any expansion projects, and its eventual disposal, based on the CGU development plans and latest technical reports. These cash flows were discounted using a discount rate that reflected current market assessments of the time value of money and the risks specific to the CGU.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is impaired to its recoverable amount. An impairment loss is recognized immediately in the statement of comprehensive income. The Company has concluded that there is no impairment required to any of its projects.

#### *Provisionally-priced revenue and remeasurement of contract receivables*

Sales in the Kamoia Holding Limited joint venture are provisionally priced at the average market price on the date that the products are delivered to the buyers at the Kamoia-Kakula Mine concentrate warehouse or the demarcated holding area at the Lualaba Copper Smelter premises. Revenue from the contract receivables is recognized for all the sales during the period at the average market price for the month in which the sales occurred. Revenue from contract receivables are remeasured with reference to the forward market price at each reporting date and the remeasurement of contract receivables is recognized as revenue in the statement of comprehensive income of the Kamoia Holding Limited joint venture.

#### *Technical feasibility and commercial viability of projects*

All direct costs related to the acquisition of mineral property interests are capitalized by property or project. Exploration costs are charged to operations in the period incurred, until such time as the Company determines that a property is technically feasible and commercially viable, where after development costs are capitalized. In making this determination, the Company considers whether a proposed project is capable of being developed at a sufficient return to justify the capital and managerial resources that must be committed to the project. This determination is made on a property-by-property basis and generally coincides with the finalization of a preliminary economic assessment or pre-feasibility study of the property. Exploration costs include value-added taxes incurred in foreign jurisdictions when recoverability of those taxes is uncertain.

In determining whether an exploration and evaluation property is technically feasible and commercially viable, the Company considers several criteria, including:

- a technical analysis of the basic geology of the project;
- a mine plan for accessing and exploiting the ore body;
- a process flow sheet for processing the ore generated from mining;
- projections as to the capital cost of constructing the project;
- projections as to the cost of operating the project in accordance with the mine plan;
- projections as to revenues from the concentrate or other mineral product to be generated from operations in accordance with the mine plan; and
- an economic analysis of the project based on the projected capital and operating costs and production revenues.

#### *Determination of inputs into lease accounting*

Lease payments should be discounted using the interest rate implicit in the lease unless that rate cannot be readily determined, in which case the lessee's incremental borrowing rate is used, being the rate that the individual lessee would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, security and conditions. The Company has used the risk-free interest rate adjusted for credit risk specific to the lease.

In determining the lease term, the Company considers all facts and circumstances that create an economic incentive to exercise an extension option, or not exercise a termination option. Extension options (or periods after termination options) are only included in the lease term if the lease is reasonably certain to be extended (or not terminated).

#### *Valuation of the embedded derivative liability*

The Company has used key inputs and estimates to determine the fair value of the embedded derivative liability at initial recognition and at period end date.

#### *Deferred revenue*

The advance payments received under the stream financing agreements have been accounted for as contract liabilities within the scope of IFRS 15. Under the terms of the agreements, settlement of the contracts will be executed via the delivery of credits to the purchasers. The credits to be delivered are directly linked to the metal contained in concentrate produced at the Platreef mine. The contracts are therefore not financial instruments as the contracts will not be settled in cash or another financial instrument. Performance obligations under the contracts will be satisfied through production at the Platreef mine and revenue will be recognized over the duration of the contracts. As the contracts are long term in nature and a portion of the financing was received at inception of the contracts, it has been determined that the contracts contain a significant financing component under IFRS 15.

#### *Deferred tax*

Significant judgment is required in determining whether to recognize the deferred tax asset related to the Platreef and Kipushi projects. This includes the probability that there will be sufficient taxable income in the future against which the deferred tax can be utilized. The Company recognized the previously unrecognized deferred tax asset relating to the Platreef Project in 2021 and the previously unrecognized deferred tax asset relating to the Kipushi Project in 2021. The Company considers it highly probable that the projects will have future taxable profits that will be available against which the deductible temporary differences can be utilized.

## *Provisions for tax claims*

From time to time, the Company becomes subject to claims temporary measures, legal proceedings, penalties, financial sanctions or assessments made by tax or other authorities in the ordinary course of its business. Such claims may be made against the Company, or its subsidiaries and affiliates, or its joint ventures. Given the complexity, scope and multi- jurisdictional nature of the Company's business, such claims may arise in several jurisdictions and may involve complex legal, tax or accounting matters. Some jurisdictions in which the Company operates have legislation empowering authorities to impose restrictions on the operation of the Company's bank accounts in those jurisdictions, or that have a similar effect, notably due to banks' practices, when receiving such instructions from authorities, pending the payment and/or resolution of such alleged claims, investigations, penalties, financial sanctions or assessments. These restrictions or instructions from authorities having a similar effect may be used routinely in such circumstances. Management assesses the Company's liabilities and contingencies for all tax years open to claims or assessment based upon the latest information available. The Company accrues for such claims, or makes a provision, in its financial statements, when a liability resulting from the claim is both probable and the amount can be reasonably estimated. In order to assess such likelihood management reviews claims with the benefit of internal and external legal advice where appropriate.

## **CHANGES IN ACCOUNTING POLICIES INCLUDING INITIAL ADOPTION**

### **Newly adopted accounting standards**

The following standards became effective for annual periods beginning on or after January 1, 2023, with earlier application permitted. The Company adopted these standards in the current period and they did not have a material impact on its condensed consolidated interim financial statements.

- Amendment to IAS 1 – Presentation of financial statements. The amendments clarify how to classify debt and other liabilities as current or non-current. Another amendment requires companies to disclose their material accounting policy information rather than their significant accounting policies, with additional guidance added to the Standard to explain how an entity can identify material accounting policy information with examples of when accounting policy information is likely to be material.
- Amendments to IAS 12 – Income Taxes: Deferred tax related to assets and liabilities arising from a single transaction. The amendments require companies to recognize deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences.
- Narrow scope amendments to IAS 1 – Presentation of Financial Statements, Practice statement 2 and IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors. The amendments aim to improve accounting policy disclosures and to help users of the financial statements to distinguish changes in accounting policies from changes in accounting estimates.

### **Accounting standards issued but not yet effective**

- Amendment to IFRS 16 – Leases on sale and leaseback. These amendments include requirements for sale and leaseback transactions in IFRS 16 to explain how an entity accounts for a sale and leaseback after the date of the transaction. Sale and leaseback transactions where some or all the lease payments are variable lease payments that do not depend on an index or rate are most likely to be impacted. (i)
- Amendment to IAS 1 – Non-current liabilities with covenants. These amendments clarify how conditions with which an entity must comply within twelve months after the reporting period affect the classification of a liability. The amendments also aim to improve information an entity provides related to liabilities subject to these conditions. (i)

(i) Effective for annual periods beginning on or after January 1, 2024

The Company has not yet adopted these new and amended standards.

## FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

### Fair value of financial instruments

The Company's financial assets and financial liabilities are categorized as follows:

	Level	March 31, 2023 \$'000	December 31, 2022 \$'000
<b>Financial assets</b>			
<i>Financial assets at fair value through profit or loss</i>			
Investment in Renergen	Level 1	5,792	7,947
Investment in other listed entities	Level 1	1,022	1,050
Investment in unlisted entity	Level 3	655	655
<i>Amortized cost</i>			
Loan advanced to joint venture	Level 3	1,584,193	1,536,601
Cash and cash equivalents		497,145	597,451
Loans receivable	Level 3	115,035	112,104
Promissory note receivable	Level 3	26,766	26,756
Other receivables		9,725	9,983
<b>Financial liabilities</b>			
<i>Financial liabilities at fair value through profit or loss</i>			
Convertible notes - embedded derivative liability	Level 3	252,200	244,200
<i>Amortized cost</i>			
Convertible notes - host liability	Level 3	476,185	465,323
Trade and other payables		42,766	57,356
Borrowings	Level 3	41,391	40,823
Advances payable	Level 3	3,196	3,123

IFRS 13 - "Fair value measurement", requires an explanation about how fair value is determined for assets and liabilities measured in the financial statements at fair value and established a hierarchy into which these assets and liabilities must be grouped based on whether inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions. The two types of inputs create the following fair value hierarchy:

- Level 1: observable inputs such as quoted prices in active markets;
- Level 2: inputs, other than the quoted market prices in active markets, which are observable, either directly and/or indirectly; and
- Level 3: unobservable inputs for the asset or liability in which little or no market data exists, therefore require an entity to develop its own assumptions.

## Finance income

The Company's finance income is summarized as follows:

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
Interest from loan to joint venture	47,592	28,289
Interest on bank balances	7,299	1,424
Interest on loan receivable - HPX	2,308	1,475
Interest on long term loan receivable - Gecamines	623	310
Other	4	7
	57,826	31,505

The interest from the loan to the joint venture is interest earned from the Kamoia Holding joint venture on shareholder loans advanced by the Company where each shareholder is required to fund Kamoia Holding in an amount equivalent to its proportionate shareholding interest.

## Financial risk management objectives and policies

The risks associated with the Company's financial instruments and the policies on how to mitigate these risks are set out below. Management manages and monitors these exposures to ensure appropriate measures are implemented in a timely and effective manner.

### *Foreign exchange risk*

The Company incurs certain of its expenses in currencies other than the U.S. dollar. The Company also has foreign currency denominated monetary assets and liabilities. As such, the Company is subject to foreign exchange risk as a result of fluctuations in exchange rates. The Company enters into derivative instruments to manage foreign exchange exposure as deemed appropriate.

The carrying amount of the Company's foreign currency denominated monetary assets and liabilities at the respective statement of financial position dates are as follows:

	March 31,	December 31,
	2023	2022
	\$'000	\$'000
<b>Assets</b>		
South African rand	171,830	227,987
Canadian dollar	4,954	8,875
British pounds	3,812	2,909
Australian dollar	933	958
<b>Liabilities</b>		
South African rand	(22,648)	(29,718)
British pounds	(3,610)	(2,945)
Canadian dollar	(80)	(5,911)
Australian dollar	(30)	-



## Foreign currency sensitivity analysis

The following table details the Company's sensitivity to a 5% increase or decrease in the U.S. dollar against the foreign currencies presented. The sensitivity analysis includes only outstanding foreign currency denominated monetary items not denominated in the functional currency of the Company or the relevant subsidiary and adjusts their translation at the end of the period for a 5% change in foreign currency rates. A positive number indicates a decrease in loss for the year where the foreign currencies strengthen against the U.S. dollar. The opposite number will result if the foreign currencies depreciate against the U.S. dollar.

	Three months ended	
	March 31,	
	2023	2022
	\$'000	\$'000
Canadian dollar	244	267
Australian dollar	45	61
South African rand	(303)	(118)
British pounds	(2)	–

### *Credit risk*

Credit risk is the risk of an unexpected loss if a customer or third party to a financial instrument fails to meet its contractual obligations. Credit risk for the Company is primarily associated with the loan to the joint venture, promissory note receivable, long-term loans receivable, other receivables and cash and cash equivalents.

The Company reviews the recoverable amount of their financial assets at each statement of financial position date to ensure that adequate impairment losses are made for irrecoverable amounts. The Company has considered the requirement of IFRS 9 to recognize a loss allowance for expected credit losses on financial assets. The general approach was applied to these financial assets, where the 12-month expected credit losses are calculated. The Company did not apply lifetime expected credit losses as there has not been a significant increase in credit risk in the period.

A significant increase in credit risk would include:

- Existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant change in the borrower's ability to meet its debt obligations.
- An actual or expected significant change in the operating results of the borrower.
- Significant increases in credit risk on other financial instruments of the same borrower.
- An actual or expected significant adverse change in the regulatory, economic, or technological environment of the borrower that results in a significant change in the borrower's ability to meet its debt obligations.
- Significant changes in the value of the collateral supporting the obligation or in the quality of third-party guarantees or credit enhancements, which are expected to reduce the borrower's economic incentive to make scheduled contractual payments or to otherwise have an effect on the probability of a default occurring.

The Company assesses whether an impairment is required on loan receivables. A range of cash flow scenarios are considered, taking into account forward-looking information which may impact recoverability of loan receivables.

The loan advanced to the joint venture will be repaid as and when there is residual cash flow in Kamo Holding. Due to the positive results of Kamo-Kakula's definitive feasibility study and good development and production progress, repayment of the loan is deemed to be highly probable.

The promissory note receivable will be repaid using proceeds from the sale of Crystal River's 1% stake in Kamo Holding.

The principal amount of the long-term loan receivable from HPX and accrued interest thereon is convertible in whole, or part, by the Company at its sole discretion into shares of treasury common stock of HPX.

Repayment of the social development loan will be made by offsetting the loan against future royalties and dividends payable to Gécamines which arise from future profits to be earned at Kipushi.

The credit risk on cash and cash equivalents is limited because the cash and cash equivalents are composed of deposits with major banks who have investment-grade credit ratings assigned by international credit ratings agencies and have low risk of default.

The Company continues to monitor its credit risk and assess expected credit losses. The identified impairment loss in 2022 is negligible.

#### *Market risk*

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and other price risk, such as equity price risk. Financial instruments affected by market risk include the convertible notes, loan advanced to the joint venture and borrowings.

The Company measures the embedded derivative liability portion of the convertible notes at fair value at each reporting date, recognizing changes in the fair value in the statements of comprehensive income. This requirement to “mark-to-market” the derivative features could significantly affect the results in the statement of comprehensive income. If the Company’s share price had been C\$1.00 higher than it was on March 31, 2023, the fair value of the embedded derivative liability would have increased by \$42.9 million, which would have resulted in the Company recording a loss on the fair valuation of the embedded derivative liability of \$73.8 million instead of the loss of \$30.9 million.

#### *Interest rate risk*

The Company’s interest rate risk arises mainly from long-term borrowings, the long-term loan receivable and the loan advanced to the joint venture. The Company’s main exposure to interest rate risk arises from the fact that the Company earns and incurs interest on interest rates linked to LIBOR. If interest rates (including applicable LIBOR rates) had been 50 basis points higher or lower and all other variables were held constant the Company’s profit for the period ended March 31, 2023 would have increased or decreased by \$5 million (March 31, 2022: \$5 million).

#### *Liquidity risk*

In the management of its liquidity risk, the Company maintains a balance between continuity of funding and flexibility through the use of borrowings. Management closely monitors the liquidity position with the goal of maintaining adequate sources of funding to finance the Company’s projects and operations.

The following table details the Company’s expected remaining contractual maturities for its financial liabilities. The table is based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Company can be required to satisfy the liabilities.

	Less than 1 month \$'000	1 to 3 months \$'000	3 to 12 months \$'000	More than 12 months \$'000	<b>Total undiscounted cash flows \$'000</b>
<b>As at March 31, 2023</b>					
Convertible notes	6,577	–	–	575,000	<b>581,577</b>
Non-current borrowings	–	–	–	40,793	<b>40,793</b>
Trade and other payables	37,068	1,000	4,698	–	<b>42,766</b>
<b>As at December 31, 2022</b>					
Convertible notes	3,033	–	–	575,000	<b>578,033</b>
Non-current borrowings	–	–	–	40,226	<b>40,226</b>
Trade and other payables	51,689	987	4,680	–	<b>57,356</b>

Trade and other payables in the above table excludes payroll tax, other statutory liabilities and indirect taxes payable.

### DESCRIPTION OF CAPITAL STOCK

As at May 2, 2023, the Company's capital structure consists of an unlimited number of Class A common shares without par value (the "Class A Shares"). At this date 1,217,793,432 Class A shares were issued and outstanding. On June 28, 2022, the Company's capital structure was amended by deleting the Class B common shares without par value, and preferred shares without par value, none of which were outstanding.

The Company granted 1,259,090 options in 2022 and 1,081,713 options in 2023 to date. As at May 2, 2023, there were 13,944,502 options outstanding issued in terms of the Equity Incentive Plan exercisable into 13,944,502 Class A Shares.

The Company granted 639,343 restricted share units (RSUs) in 2023 to date and 1,375,041 RSUs in 2022 per the Company's Share Unit Award Plan (formerly the Restricted Share Unit Plan). As at May 2, 2023, there were 4,855,922 RSUs which may vest into 4,855,922 Class A shares.

The Company granted 438,163 performance share units (PSUs) in 2023 to date and 372,113 PSUs in 2022 per the Company's Share Unit Award Plan (formerly the Restricted Share Unit Plan). As at May 2, 2023, there were 810,276 PSUs which may vest into 810,276 Class A shares.

The Company granted 179,570 deferred share units (DSUs) in 2023 to date and 200,991 DSUs in 2022 per the Company's Deferred Share Unit Plan. As at May 2, 2023, there were 832,925 DSUs which may vest into 832,925 Class A shares.

## **DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROL OVER FINANCIAL REPORTING**

Management is responsible for the design and operation of disclosure controls and procedures (DC&P) and internal control over financial reporting (ICFR) in order to provide reasonable assurance that material information related to the Company, including its consolidated subsidiaries, is made known to the Company's certifying officers. The Company's President, in the capacity of Chief Executive Officer (CEO) and Chief Financial Officer (CFO) have each evaluated the design effectiveness of the Company's DC&P and ICFR as of March 31, 2023 and, in accordance with the requirements established under National Instrument 52-109 - Certification of Disclosure in Issuer's Annual and Interim Filings, the President and CFO have concluded that these controls and procedures have been designed to provide reasonable assurance that material information relating to the Company is made known to them by others within the Company and that the information required to be disclosed in reports that are filed or submitted under Canadian securities legislation are recorded, processed, summarized and reported within the time period specified in those rules.

The Company's President and CFO have used the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework to evaluate the design of the Company's ICFR as of March 31, 2023 and have concluded that these controls and procedures have been designed effectively to provide reasonable assurance that financial information is recorded, processed, summarized and reported in a timely manner. Management of the Company was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures. The result of the inherent limitations in all control systems means design and operation of controls cannot provide absolute assurance that all control issues and instances of fraud will be detected.

During the three months ended March 31, 2023, there were no changes in the Company's DC&P or ICFR that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## **RISK FACTORS**

The Company has summarized its foreign exchange risk, credit risk, interest rate risk and liquidity risk under the "Financial risk management objectives and policies" sub-heading under the "Financial instruments and other instruments" section in this MD&A. Additional risks and uncertainties are discussed in the Company's Annual Information Form filed with Canadian provincial regulatory authorities and available at [www.sedar.com](http://www.sedar.com).

## **DISCLOSURE OF TECHNICAL INFORMATION**

Disclosures of a scientific or technical nature in this MD&A regarding the Kamo-Kakula Copper Complex (other than stockpiles estimation), the Platreef Project and the Kipushi Project 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 Executive Vice President, Projects, at Ivanhoe Mines. Mr. Amos has verified the technical data related to the foregoing disclosed in this MD&A.

Disclosures of a scientific or technical nature regarding the Kamo-Kakula stockpiles in this MD&A 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, at Ivanhoe Mines. Mr. Gilchrist has verified the technical data regarding the Kamo-Kakula stockpiles disclosed in this MD&A.

Disclosures of a scientific or technical nature regarding the Western Foreland Project in this MD&A have been reviewed and approved by Stephen Torr, who is considered, by virtue of his education, experience and professional association, a Qualified Person under the terms of NI 43-101. Mr. Torr is not considered independent under NI 43-101 as he is the Vice President, Geosciences, at Ivanhoe Mines. Mr. Torr has verified the technical data regarding the Western Foreland Project disclosed in this MD&A.

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

- Kamoakakula 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 Kipushi 2022 Feasibility Study dated February 14, 2022, prepared by OreWin Pty Ltd., MSA Group (Pty) Ltd., SRK Consulting (South Africa) (Pty) Ltd, and METC Engineering.
- The Platreef 2022 Feasibility Study dated February 28, 2022, prepared by OreWin Pty Ltd., Mine Technical Services, SRK Consulting Inc., DRA Projects (Pty) Ltd and Golder Associates Africa.

These technical reports include relevant information regarding the effective dates and the assumptions, parameters and methods of the mineral resource estimates on the Platreef Project, the Kipushi Project and the Kamoakakula Copper Complex cited in this MD&A, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this MD&A in respect of the Platreef Project, Kipushi Project and Kamoakakula Copper Complex.

The Kamoakakula 2023 PFS and Kamoakakula 2023 PEA were independently prepared by OreWin Pty Ltd. of Adelaide, Australia; China Nerin Engineering Co., Ltd., of Jiangxi, China; DRA Global of Johannesburg, South Africa; Epoch Resources of Johannesburg, South Africa; Golder Associates Africa of Midrand, South Africa; Metso-Outotec Oyj of Helsinki, Finland; Paterson and Cooke of Cape Town, South Africa; SRK Consulting Inc. of Johannesburg, South Africa; and MSA Group of Johannesburg, South Africa.

For the recently announced Kamoakakula 2023 IDP (including the Kamoakakula 2023 PFS and Kamoakakula 2023 PEA), a new, independent NI 43-101 technical report was filed on SEDAR at [www.sedar.com](http://www.sedar.com) and the Ivanhoe Mines website at [www.ivanhoemines.com](http://www.ivanhoemines.com) on March 16, 2023.

## FORWARD-LOOKING STATEMENTS

Certain statements in this MD&A 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 using 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 MD&A.

Such statements include without limitation, the timing and results of: (i) statements regarding Kamoakakula's Phase 3 expansion targeted for Q4 2024 completion, which is expected to increase copper production to a ten-year average of 620,000 tonnes per annum, at C1 cash cost of \$1.22/lb, which expansion includes a new 5.0 Mtpa concentrator; (ii) statements regarding the ultra-high-grade Kipushi zinc-copper-germanium-silver mine being on track for first production in Q3 2024, and project financing being near completion; (iii) statements regarding the Platreef palladium, nickel, platinum, rhodium, copper and gold project in South Africa being scheduled for first production in Q3 2024; (iv) statements that the Kamoakakula 1 and Kamoakakula 2 mines will become the main providers of copper ore for Kamoakakula's Phase 3 expansion to over 600,000 tonnes of copper production annually by Q4 2024; (v) statements regarding the installation of a state-of-the-art static compensation unit at the Kolwezi converter station to stabilize the entire southern grid network and provide a significantly improved electricity supply to Kamoakakula; (vi) statements regarding the over-time increase of backup generation capacity on-site at Kamoakakula to over 200 MW in a phased roll-out to achieve sufficient redundancy to meet the total power requirement of the mine in situations where extended supply interruptions may occur, with additional 11MW expected in Q2 2023 and a further 49MW expected delivered to site toward the end of 2023, all of which is expected

to be sufficient power for Phases 1, 2 and 3, excluding the smelter; (vii) statements regarding an agreement to secure up to an additional 100 MW of power from CEC of Zambia, via the DRC-Zambia interconnector, for Kamoia Kakula; (viii) statements that while the ongoing expansion of underground infrastructure at the Kakula mine takes place, ore will be drawn as required from the stockpile to maximize copper production; (ix) statements that commissioning of Phase 3 at Kamoia-Kakula will result in total processing capacity of over 14.2 Mtpa and that this will position Kamoia Copper as the world's third largest copper mining complex and the largest copper mine on the African continent; (x) statements regarding the 2023 exploration program at Western Foreland being approximately \$19 million and including up to 70,000 meters of total drilling; (xi) statements regarding the planned release of a maiden Mineral Resource estimate for its Makoko and Kiala high-grade copper discoveries in the Western Foreland in mid-2023; (xii) statements regarding the optimization study at its Tier-One Platrief palladium, nickel, platinum, rhodium, copper and gold mine in South Africa potentially accelerating production from the Phase 2 expansion, which has the benefit of de-risking the development and ramp-up of the Phase 1 mine and may be used to accelerate the ramp-up of underground mining activities for Phase 2, in advance of the completion of Shaft 2, which is expected in 2027; (xiii) statements that the Lualaba Copper Smelter will produce between 650,000 and 800,000 tonnes per annum of high-strength sulphuric acid that is expected to be sold in the domestic DRC market; (xiv) statements that the on-site smelter will offer transformative financial benefits for the Kamoia-Kakula Copper Complex, most notably of which is a material reduction in logistics costs (which volume of shipments per unit of copper are expected to be more than halved by selling 99+%-pure blister copper anodes instead of copper concentrate), and to a lesser extent reduced concentrate treatment charges and local taxes, as well as revenue from the acid sales; (xv) statements regarding smelter commissioning being expected to drive a decrease in average cash costs (C1) over the first five years (from 2025) to approximately \$1.15/lb. of copper, a 21% reduction from the midpoint of the 2023 guidance of \$1.45/lb. of payable copper produced; (xvi) statements regarding the Phase 3 concentrator at Kamoia-Kakula being on track for first concentrate in Q4 2024 (which is planned to coincide with the commissioning of an on-site, direct-to-blister flash copper smelter capable of producing 500,000 tonnes per annum of copper anode), and that it will be fed with ore from the existing Kansoko Sud Mine (formerly Kansoko Mine), as well as new mines currently under development in the Kamoia area, known as Kamoia 1 and 2; (xvii) statements regarding the Phase 4 expansion of the Kamoia-Kakula concentrator taking total processing capacity up to 19.2 Mtpa, and that the Phase 4 concentrator will be fed by new mines in the Kamoia area; (xix) statements that the turbine replacement will supply an additional 178-megawatts of clean hydroelectric power to the national grid, and provide power for Phase 3; (xx) statements regarding the first steel erection with respect to the Kamoia Phase 3 concentrator being expected in June 2023; (xxi) statements regarding the Kamoia-Kakula Phase 3 expansion incorporating leading-edge technology supplied by Metso Outotec, which smelter is projected to be one of the largest, single-line copper flash smelters in the world, with a production capacity of 500,000 tonnes per annum of blister copper anodes; (xxii) statements regarding the Kamoia-Kakula Phase 3 smelter having a processing capacity of 1.2Mtpa of dry concentrate feed and being designed to run a blend of concentrate produced from the Kakula (Phase 1 and 2) and Kamoia (Phase 3 and Phase 4) concentrators; (xxiii) statements that Kamoia-Kakula will continue to toll-treat concentrates under a 10-year agreement with the Lualaba Copper Smelter, which is expected to account for approximately 150,000 tonnes of copper concentrate annually, with the balance of copper production being exported as concentrate; (xxiv) statements that construction of the twin declines to the Kamoia 1 and Kamoia 2 underground mines and excavation access to Phase 3 mining areas are advancing well; (xxv) statements that underground mining activities at Kamoia 1 are expected to commence in 2023 and at Kamoia 2 in 2025, and which both involved the same mechanized drift-and-fill mining methods employed at the Kakula mine; (xxvi) statements regarding the future expansions of the Kamoia-Kakula Copper Complex being powered by clean, renewable hydro-generated electricity which will be developed in partnership with the DRC's state-owned power company SNEL; (xxvii) statements that the refurbishment of the Inga II hydropower facility on the Congo River is on schedule; (xxviii) statements that the Phase 1 and 2 concentrators will continue to process ore from the Kakula Mine, as well as the new adjacent Kakula West Mine from 2029; (xxix) statements regarding Kamoia-Kakula 2023 guidance including contained copper in concentrate of 390,000 to 430,000 tonnes and cash cost (C1) of \$1.40 to \$1.50 per lb; (xxx) statements that a senior debt facility for Platrief is targeted for completion in the first half of 2023; (xxxi) statements that Shaft 3 at Platrief is scheduled to be completed in Q4 2023; (xxxii) statements that first production at Platrief's Phase 1 concentrator is scheduled for Q3 2024, with majority long-lead equipment orders scheduled for delivery in Q3 2023; (xxxiii) statements that an additional senior credit facility for Platrief is targeted for completion in mid-2023; (xxxiv) statements that the EC&I contract award at Platrief is planned for mid-2023 with site mobilization expected in Q3 2023; (xxxv) statements that the 10-metre diameter Shaft 2 currently under construction will have a hoisting capacity of 8 Mtpa and that Shaft 2 will

be utilized in subsequent development phases and will be among the largest hoisting shafts in the world; (xxxvi) statements that the commissioning of Platreef's first solar-power plant is expected in 2023 and that the solar-generated power from the plant will be used for mine development and construction activities, and that the power generated by this plant will support development activities and operations, together with other renewable energy sources to be introduced over time; (xxxvii) statements regarding the pilot drilling required for the raise bore center hole of Platreef's Shaft 2 being scheduled to finish during Q2 2023, after which reaming of a 3.1-meter diameter hole is planned; (xxxviii) statements regarding the raise-boring of the 5.1-meter diameter ventilation shaft (Shaft 3) expected to be completed in Q4 2023; (xxxix) statements that equipping Shaft 3 at Platreef with hoisting capacity will provide alternative option to remove ore and waste from the underground mine, which may accelerate ramp-up of underground mining activities for Phase 2; (xl) statements that underground mining activities for Phase 2 at Platreef are expected in 2027; (xli) statements regarding the off-take term sheet, and the entering into definitive agreements with respect thereof, between Kipushi Corporation SA and Gécamines, and the terms of a \$250 million term financing facility for Kipushi from Glencore; (xlii) statements regarding the signed agreement between Kipushi Holding and Gécamines to return the ultra-high-grade Kipushi Mine to commercial production, which sets out the commercial terms that will form the basis of a new Kipushi joint-venture agreement establishing a robust framework for the mutually beneficial operation of Kipushi for years to come, which are subject to execution of definitive documentation; (xliii) statements regarding the impact of the joint venture agreement with Gécamines on Ivanhoe Mines' ownership in the Kipushi Project, which is expected to be reduced to 62%, with Gécamines holding the balance of 38%, and the highlights of the new agreement; (xliv) statements that long lead order equipment packages for Kipushi are expected to commence delivery to the site in late summer 2023, with the ball mill delivery planned for Q3 2023; (xlv) statements that first concentrate at Kipushi is on schedule to occur during Q3 2024; (xlvi) statements that Shaft 5 at Kipushi is planned to be the main production shaft with a maximum hoisting capacity of 1.8Mtpa; (xlvii) statements that mining at Kipushi will be performed using highly productive, mechanized methods and that cemented rock fill will be utilized to backfill open stopes with tailings from the surface to reduce surface tailings and maximize ore extraction, where ore is expected to be crushed underground and conveyed to the base of the P5 shaft where it will be hoisted to the surface and conveyed to the nearby run-of-mine stockpile, adjacent to the 800,000-tonne-per-annum concentrator; (xlviii) statements that stoping at the Big Zinc orebody is expected to commence in early 2024 to build a high-grade ore stockpile ahead of processing plant commissioning in Q3 2024; (xlix) statements that gravity survey at the Mokopane Feeder Exploration Project will commence in Q2 2023, and that diamond drilling will be conducted later in the year on targets to be identified from the results of the magnetic and gravity surveys; (l) statements that a new commercial border crossing between DRC-Zambia will provide significant advantage to Kipushi Mine as a direct means of importing materials and consumables and clearing customs, and that it will provide socio-economic benefits to the town and Province of Haut-Katanga; (li) statements that a new commercial border crossing between DRC-Zambia will benefit logistics for Kamoakakula's operations; (lii) statements that diamond drilling is expected to be conducted on the Mokopane Feeder Exploration Project in 2023; (liii) statements that Phase 1 and Phase 2 operations at Kamoakakula are anticipated to generate significant operating cash flows in 2023 and 2024, and are expected to fund capital cost requirements at current copper prices, and that the joint venture is arranging short-term financing facilities should a shortfall occur due to a significant decrease in copper prices; (liv) statements with respect to the Company's planned expenditures for 2023 and 2024; and (lv) statements that 2023 exploration activities have an initial budget of \$31 million.

As well, all of the results of the feasibility study for the Kakula copper mine, the Kamoakakula 2023 IDP, the Platreef 2022 feasibility study, and the Kipushi 2022 feasibility study 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, concerning this specific forward-looking information concerning the operation and development of the Kamoakakula Copper Complex, Platreef and Kipushi projects, 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, nickel, zinc, platinum, palladium, rhodium and gold; (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; (xvii) recoveries, mining rates and grade; (xviii) political factors; (xviii) water inflow into the mine and its potential effect on mining operations, and (xix) the consistency and availability of electric power.

This MD&A also contains references to estimates of Mineral Resources and Mineral Reserves. The estimation of Mineral Resources is inherently uncertain and involves subjective judgments about many relevant factors. Estimates of Mineral Reserves provide more certainty but still involve similar subjective judgments. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The accuracy of any such estimates is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation (including estimated future production from the Company's projects, the anticipated tonnages and grades that will be mined and the estimated level of recovery that will be realized), which may prove to be unreliable and depend, to a certain extent, upon the analysis of drilling results and statistical inferences that ultimately may prove to be inaccurate. Mineral Resource or Mineral Reserve estimates may have to be re-estimated based on: (i) fluctuations in copper, nickel, zinc, platinum group elements (PGE), gold or other mineral prices; (ii) results of drilling; (iii) metallurgical testing and other studies; (iv) proposed mining operations, including dilution; (v) the evaluation of mine plans after the date of any estimates and/or changes in mine plans; (vi) the possible failure to receive required permits, approvals and licences; and (vii) changes in law or regulation.

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. Many 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 above and under the "Risk Factors", and elsewhere in this MD&A, 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 MD&A 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 MD&A 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 MD&A.

The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of the factors outlined in the "Risk Factors" section beginning on page 52 and elsewhere in this MD&A.

### **ADDITIONAL INFORMATION**

Additional information regarding the Company, including the Company's Annual Information Form, is available on SEDAR at [www.sedar.com](http://www.sedar.com).