



JINCHUAN 金川

Jinchuan Group International Resources Co. Ltd

金川集團國際資源有限公司

(Incorporated in the Cayman Islands with limited liability 於開曼群島註冊成立之有限公司)
(Stock Code 股份代號: 2362)

Our Shared Future >>>

>>> 齊心開拓 共享未來

年報 **2021**
Annual Report

5G



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Geographic Location of JCI Mines 金川國際礦區地理位置分佈

Operating Mines 營運礦場

1. Ruashi Mine/ Ruashi礦場:

Ruashi Mine is an open pit mining operation located in the DRC, and has been producing copper cathode and cobalt hydroxide since 2009. Copper cathode and cobalt hydroxide are sold to global commodities traders. Ruashi Mine produced 33,063 tonnes of copper and 3,379 tonnes of cobalt respectively in 2021.

Ruashi礦場是位於剛果（金）的露天礦場，自二零零九年起生產電解銅及氫氧化鈷，並將其出售予全球大宗商品貿易商。Ruashi礦場於二零二一年分別生產33,063噸銅及3,379噸鈷。



2. Kinsenda Mine/ Kinsenda礦場:

Kinsenda Mine is an underground mine located in the DRC which produces high grade copper concentrate. Produced 28,197 tonnes of copper content in concentrates in 2021. Kinsenda Mine is one of the world's highest grade copper deposits with an average reserves grade of 5.6%.

Kinsenda礦場為地下礦場，位於剛果（金），生產高品位銅精礦。於二零二一年生產28,197噸銅含量精礦。Kinsenda礦場作為全球品位最高的銅礦床之一，銅儲量平均品位為5.6%。



Development Project 開發項目

3. Musonoi Project/ Musonoi項目:

Musonoi Project is a high grade copper-cobalt deposit in the DRC, which is under construction and have acquired all outstanding internal and government approvals. According to feasibility study, Musonoi Project has a total mine life of 19 years.

Musonoi項目是位於剛果（金）之高品位銅鈷礦床，該項目正處於建設之中，並已獲得所有餘下之內部及政府批文。根據可行性研究，Musonoi項目的礦場壽命共19年。



Exploration Project 勘探項目

4. Lubembe Project/ Lubembe項目:

Lubembe Project is located in the DRC, 30km to the south of Kinsenda Mine. The optimised pre-feasibility study was updated by ENFI in 2020. Further metallurgical testwork is performed in 2021 to optimise processing circuit and LoM copper recoveries.

Lubembe項目位於剛果（金），Kinsenda礦場以南30公里。於二零二零年，恩菲更新優化預可研報告。於二零二一年進一步完成冶金測試工作，以優化加工流程及礦場開採期的銅回收率。



Mine Leased Out Under Finance Lease Agreement 融資租賃協議下出租之礦場

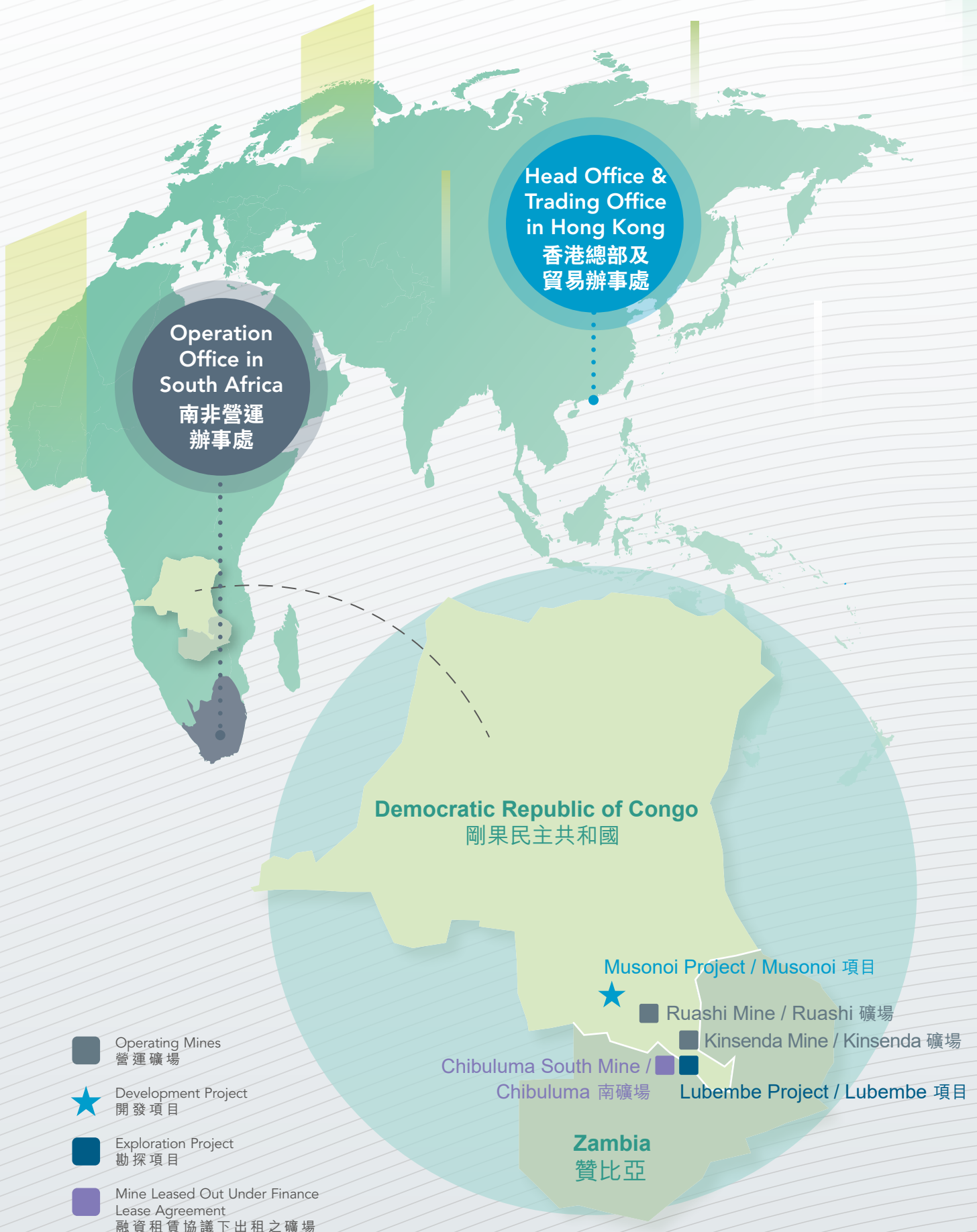
5. Chibuluma South Mine (including Chifupu Deposit)/ Chibuluma南礦場（包括Chifupu礦床）:

Chibuluma South Mine and Chifupu Deposit are located in Zambia. In December 2020, Chibuluma entered into a lease agreement with an independent third party to lease out the mining assets including the Chifupu Deposit for a fixed rental fee plus a flexible royalty fee payable calculated base on amount of copper extracted and sold.

Chibuluma南礦場及Chifupu礦床位於贊比亞。於二零二零年十二月，Chibuluma與獨立第三方訂立租賃協議，出租包括Chifupu礦床在內的採礦資產，代價為固定租賃費用外加按產出及出售每噸銅礦產計算的浮動礦權使用費。



Geographic Location of JCI Mines 金川國際礦區地理位置分佈



Corporate Information

公司資料

BOARD OF DIRECTORS

Executive Directors

Mr. GAO Tianpeng (Chief Executive Officer)
Mr. CHENG Yonghong

Non-executive Directors

Ms. CAI Juan (Chairlady of the Board)¹
Mr. ZHANG Youda (Former Chairman of the Board)²
Mr. LIU Jian
Mr. WANG Qiangzhong

Independent Non-executive Directors

Mr. WU Chi Keung³
Mr. YEN Yuen Ho, Tony
Mr. POON Chiu Kwok
Mr. YU Chi Kit⁴

COMPANY SECRETARY

Mr. WONG Hok Bun Mario (FCPA, CFA)

AUTHORISED REPRESENTATIVES

Mr. GAO Tianpeng
Mr. WONG Hok Bun Mario

AUDIT COMMITTEE

Mr. WU Chi Keung (Former Chairman)³
Mr. POON Chiu Kwok (Chairman)⁵
Mr. YEN Yuen Ho, Tony
Ms. CAI Juan¹
Mr. ZHANG Youda²
Mr. YU Chi Kit⁴

REMUNERATION AND NOMINATION COMMITTEE

Mr. WU Chi Keung (Former Chairman)³
Mr. YEN Yuen Ho, Tony (Chairman)⁵
Mr. POON Chiu Kwok
Mr. ZHANG Youda²
Ms. CAI Juan¹
Mr. GAO Tianpeng⁶
Mr. LIU Jian⁴
Mr. YU Chi Kit⁴

RISK MANAGEMENT COMMITTEE

Mr. YEN Yuen Ho, Tony (Chairman)
Ms. CAI Juan¹
Mr. ZHANG Youda²
Mr. WU Chi Keung³
Mr. GAO Tianpeng
Mr. POON Chiu Kwok
Mr. YU Chi Kit⁴

STRATEGY AND INVESTMENT COMMITTEE

Ms. CAI Juan (Chairlady)¹
Mr. ZHANG Youda (Former Chairman)²
Mr. LIU Jian
Mr. GAO Tianpeng
Mr. CHENG Yonghong

董事會

執行董事

鄧天鵬先生(行政總裁)
程永紅先生

非執行董事

蔡娟女士(董事會主席)¹
張有達先生(前董事會主席)²
劉建先生
王樞忠先生

獨立非執行董事

胡志強先生³
嚴元浩先生
潘昭國先生
余志傑先生⁴

公司秘書

黃學斌先生(FCPA, CFA)

授權代表

鄧天鵬先生
黃學斌先生

審核委員會

胡志強先生(前主席)³
潘昭國先生(主席)⁵
嚴元浩先生
蔡娟女士¹
張有達先生²
余志傑先生⁴

薪酬及提名委員會

胡志強先生(前主席)³
嚴元浩先生(主席)⁵
潘昭國先生
張有達先生²
蔡娟女士¹
鄧天鵬先生⁶
劉建先生⁴
余志傑先生⁴

風險管理委員會

嚴元浩先生(主席)
蔡娟女士¹
張有達先生²
胡志強先生³
鄧天鵬先生
潘昭國先生
余志傑先生⁴

戰略及投資委員會

蔡娟女士(主席)¹
張有達先生(前主席)²
劉建先生
鄧天鵬先生
程永紅先生

¹ appointment with effect from 19 February 2022
² resignation with effect from 19 February 2022
³ passed away on 12 October 2021
⁴ appointment with effect from 6 November 2021
⁵ appointed as the Committee's Chairman with effect from 6 November 2021
⁶ resignation with effect from 6 November 2021

¹ 委任於二零二二年二月十九日生效
² 辭任於二零二二年二月十九日生效
³ 於二零二一年十月十二日離世
⁴ 委任於二零二一年十一月六日生效
⁵ 於二零二一年十一月六日獲委任為該委員會之主席
⁶ 辭任於二零二一年十一月六日生效

REGISTERED OFFICE

Cricket Square, Hutchins Drive
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Grand Cayman KY1-1111
Cayman Islands

HEAD OFFICE AND PRINCIPAL PLACE OF BUSINESS IN HONG KONG

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95 Queensway
Hong Kong

INDEPENDENT AUDITOR

Deloitte Touche Tohmatsu
Certified Public Accountants
Registered Public Interest Entity Auditors
35/F One Pacific Place
88 Queensway
Hong Kong

CAYMAN ISLANDS PRINCIPAL SHARE REGISTRAR AND TRANSFER OFFICE

Conyers Trust Company (Cayman) Limited

HONG KONG BRANCH SHARE REGISTRAR AND TRANSFER OFFICE

Boardroom Share Registrars (HK) Limited

COMPANY WEBSITE

www.jinchuan-intl.com

INVESTOR RELATIONSHIP

Ms. Sherry TANG
ir@jinchuan-intl.com

STOCK CODE

2362

MAJOR BANKERS

China Development Bank Corporation
The Export-Import Bank of China
Bank of China (Hong Kong) Limited
Bank of China Limited, Johannesburg Branch
The Hongkong and Shanghai Banking Corporation Limited
Bank of Communications Co., Ltd
DBS Bank Limited
BNP Paribas
China Construction Bank Corporation
Standard Bank
First National Bank
Rawbank
Trust Merchant Bank
Banque Commerciale Du Congo (BCDC)
Banque Internationale Pour l'Afrique Au Congo (BIAC)
Barclays Bank (Z) Plc
Afriland First Bank
Zambia National Commercial Bank Plc
Standard Chartered Bank (Z) Plc
Standard Chartered Bank

註冊辦事處

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Cayman Islands

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獨立核數師

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執業會計師
註冊公眾利益實體核數師
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Conyers Trust Company (Cayman) Limited

股份過戶登記處香港分處

寶德隆證券登記有限公司

公司網址

www.jinchuan-intl.com

投資者關係

湯曉雪女士
ir@jinchuan-intl.com

股份代號

2362

主要往來銀行

國家開發銀行
中國進出口銀行
中國銀行(香港)有限公司
中國銀行有限公司，約翰內斯堡分行
香港上海匯豐銀行有限公司
交通銀行股份有限公司
星展銀行有限公司
法國巴黎銀行
中國建設銀行股份有限公司
標準銀行
第一國民銀行
Rawbank
信託商業銀行
剛果商業銀行
剛果非洲國際銀行
巴克萊銀行贊比亞分行
非洲第一銀行
贊比亞國家商業銀行
渣打銀行贊比亞分行
渣打銀行



Cai Juan
蔡娟

Chairlady of the Board
董事會主席

DEAR SHAREHOLDERS,

I would like to sincerely thank the shareholders who have shown their concern and support to JCI over the years. On behalf of the Board, I would like to present to the shareholders the annual report of the Company for the year 2021.

With the availability of COVID-19 vaccine in 2021, the panic caused by COVID-19 pandemic gradually tended towards stability along with the recovery of social and economic activities. However, exacerbated by Delta and Omicron variant strains unfurling its extremity, economic activities in certain countries have stagnated again. In 2021, the international prices of non-ferrous metals rose in an all-round way, with the prices of copper, aluminum, tin and other metals hitting record high. Increasing demand in new energy vehicles has also stimulated the pursue for battery metals such as nickel, cobalt and lithium, among which the prices of cobalt and lithium have correspondingly risen sharply.

各位尊敬的股東：

衷心感謝各位股東長期以來對金川國際的關注與支持。我謹代表公司董事會向各位股東呈報公司2021年年度報告。

2021年隨著疫苗接種的推進，新冠肺炎疫情帶來的恐慌情緒逐步趨於穩定，社會經濟活動回升，但是，由於德爾塔(Delta)和奧密克戎(Omicron)等變異株肆虐，一些國家的經濟活動再次陷入停滯。2021年，國際有色金屬價格全面上漲，銅、鋁、錫等金屬價格創歷史新高。新能源汽車需求增長刺激了對鎳、鈷、鋰等電池金屬的需求，鈷和鋰的價格也有較大的漲幅。

During the reporting period, the Company's production and operation remained steady, producing 61,260 tonnes of copper and 3,379 tonnes of cobalt concentrates throughout the year. The Group achieved a revenue of US\$831.9 million in the year, representing a year-on-year increase of 25%, and the company profits amounted to US\$162.4 million, representing a year-on-year increase of 282%. The construction of the Company's key project, the Musonoi Project, has been proceeding smoothly, in which the feasibility study for the intensive processing of the Project's products has been completed.

The Board will continue to work relentlessly to achieve the grand objective of building JCG Group's overseas resources flagship platform and developing the Company into a worldclass mining company. The Company will seize the favorable opportunities to develop new energy and new materials and keep deepening the major business of the Company while considering to extend the industry appropriately, and expand the Company's product scope. The Company needs to further introduce strategic investors, optimize shareholders structure and stimulate market vitality; strengthen management, reduce costs and increase efficiency, accelerate the construction and development of Musonoi Project, and improve the economic scale of existing projects. We will actively promote internal asset restructuring and integrate the Company's overseas resources. We will also continue to explore appropriate opportunities for M&A in pursue of expansion of the Company's asset scale and repeat JCG success in overseas.

In 2022, confronted with intensified geopolitical risks, the global economy will be clouded with more uncertainties and instabilities under the sharply increasing pressure arising from inflation and debts. Looking forward into 2022, we remain prudently optimistic about the prospects of the Company. In 2022, downward pressure on the prices of base metal represented by copper will increase against the backdrop of US interest rate hikes.

報告期內，公司生產經營繼續保持平穩，全年產銅61,260噸，鈷精礦3,379噸。全年本集團實現收入831.9百萬美元，同比增長25%，公司盈利162.4百萬美元，同比增長282%。公司重點項目Musonoi項目建設進展順利，完成了項目產品深加工的可研。

董事會將繼續朝著全力打造金川集團海外資源旗艦平台，將公司發展成為世界級礦業公司的宏偉目標砥礪前行。公司要抓住新能源、新材料發展的有利時機，繼續深耕公司主業，同時考慮適度延伸產業鏈，擴大公司產品範圍。進一步引進戰略投資者，優化股東結構、激發市場活力；加強管理、降本增效，加快Musonoi項目的建設開發，提升現有項目的經濟效益；積極推進內部資產重組，整合公司海外資源；繼續尋求合適的項目併購機會，擴大公司資產規模，再造海外金川。

2022年，全球經濟面臨的不確定性、不穩定性因素將會更多，通脹和債務壓力陡增，地緣政治風險加劇。展望2022年，我們對公司前景保持謹慎樂觀。2022年，在美國加息的背景下，以銅為代表的基本金屬價格下行壓力變大。

Chairlady's Statement 主席報告

I would like to thank all our shareholders, community and business partners for their tremendous support, and extend my heartfelt gratitude to all employees for their dedicated hard works.

Finally, I would like to thank the People's Government of Gansu Province for their special support to JCG Group and the Company.

CAI Juan
Chairlady of the Board

28 March 2022

本人謹此感謝各位股東、社區及業務夥伴的大力支持，並對全體員工所做出的辛勤努力表示衷心的感謝。

最後，本人謹此感謝甘肅省人民政府對金川集團及本公司的特別支持。

蔡娟
董事會主席

二零二二年三月二十八日



Gao Tianpeng
郜天鵬

Chief Executive Officer
行政總裁

DEAR SHAREHOLDERS,

On behalf of the Board of JCI, I am delighted to announce that the Group has recorded a significant jump in profit in 2021 as copper and cobalt prices having recovered from COVID-19 disruption where both copper and cobalt industries were heavily impacted in 2020 and 2021, especially in the first half of 2020.

Starting the year 2020 on a positive with the entrance of US-China Phase 1 trade deal and the hope that global trade war will end, copper price and cobalt price increased to US\$6,300 per tonne and US\$17.0 per pound respectively, representing a 2.3% and 12.6% year-to-date increase as compared to 2019 year end. However, the widespread of COVID-19 greatly disrupted the global commodities market, dragging down short-term copper and cobalt prices.

各位尊敬的股東：

本人有幸代表金川國際董事會宣佈，本集團已於二零二一年實現利潤大幅躍升，雖然銅及鈷行業於二零二零年及二零二一年受到新冠肺炎的重大影響(尤其是二零二零年上半年)，目前銅及鈷價已恢復常態。

隨著二零二零年初進入美中第一階段貿易協定的良好開局及全球貿易戰結束的期望，銅及鈷價分別升至每噸6,300美元及每磅17.0美元，較二零一九年末分別上升2.3%及12.6%。然而，新冠肺炎的廣泛傳播嚴重干擾到全球大宗商品市場，拖累短期銅及鈷價。

Copper price reached a four year low of US\$4,617.5 per tonne on 23 March 2020 when COVID-19 severely impacted the PRC industrial sector and caused disruption in shipment to the PRC. Copper price stayed below US\$6,000 per tonne thereafter till the last day of the first half of 2020 and due to the unfavourable copper price, the Group has recorded a loss attributable to shareholders of US\$28.3 million (including an impairment loss (after tax and non-controlling interest) of US\$4.5 million) in the first half of 2020.

With the number of COVID-19 cases reported in the PRC started to drop since June 2020, refineries and industrial activities started to gradually resume operations. Copper price has been on an increasing trend in the second half of 2020 and reached a high of US\$7,964 per tonne in December 2020, representing an increase of 72% from the lowest point in 2020.

With COVID-19 vaccine available to general public starting from the first quarter of 2021, economy started to recover from the disruption caused by COVID-19. Governments around the globe are launching incentive programs to revitalise their economy and more infrastructure projects and construction work are to be launched under the program. Copper, being one of the critical materials for construction and infrastructure, will definitely benefit from the incentive programs. Meanwhile, copper supply from South America is still heavily affected by COVID-19 and the copper export from Australia to the PRC was negatively affected by the deterioration of relationship between Australia and the PRC. Copper price reached an all time high of US\$10,720 per tonne in May 2021, representing an increase of 39% as compared to the end of 2020.

Copper price mostly traded within the range of US\$9,000 to US\$10,000 per tonne in the remaining period of 2021 and in the first two months of 2022 as the global copper market was tight with LME copper inventory level remained at low level caused by several production disruption in Chile and Peru, including water flood, labour strike, road blockage, etc. LME copper inventory decreased to lowest level since 1974 where available inventories have shrunk by more than 90% as order surged.

With additional COVID-19 quarantine measures causing disruption to cross border logistics arrangement, the spread between cash and three-months LME copper contract increased to more than US\$1,100 per tonne in November 2021 showing a strong near-term demand for physical copper.

With the geopolitical uncertainty between Russia and Ukraine in March 2022, downstream users have started accumulated more commodities inventory. Global commodities prices have reached new high in recent period with copper traded above US\$10,800 per tonne for the first time.

新冠肺炎對中國工業造成嚴重影響且導致發往中國的船運中斷，於二零二零年三月二十三日，銅價跌至四年來的最低點每噸4,617.5美元。直到二零二零年上半年最後一天前，銅價一直處於每噸6,000美元以下水平，因銅價處於低位，本集團於二零二零年上半年錄得股東應佔虧損28.3百萬美元(其中包括減值虧損(經扣除稅項及非控股權益)4.5百萬美元)。

中國的新冠肺炎病例自二零二零年六月開始減少，精煉廠及工業活動開始逐步恢復營運。銅價在二零二零年下半年一直呈上升趨勢，並在二零二零年十二月達到每噸7,964美元的高點，較二零二零年最低點上漲72%。

隨著從二零二一年第一季度開始向公眾提供新冠肺炎疫苗，經濟開始從新冠肺炎造成的中斷中恢復。世界各國政府都在啟動激勵計劃，致力振興本國經濟，並將根據相關計劃推進更多的基礎設施項目和工程建設工作。作為工程建設和基礎設施關鍵材料之一的銅，必將受益於該等激勵計劃。與此同時，南美銅供應仍受到新冠肺炎的嚴重影響，澳大利亞向中國的銅出口也受到中澳關係惡化的負面影響。銅價於二零二一年五月創下每噸10,720美元的歷史新高，較二零二零年底上漲39%。

於二零二一年餘下期間及二零二二年首兩個月，銅交易價格區間主要介乎每噸9,000美元至10,000美元，乃由於智利及秘魯因洪災、勞工罷工、道路堵塞等因素發生若干生產中斷，致使倫敦所銅庫存水平較低，全球銅市吃緊。倫敦所銅庫存水平跌至一九七四年以來的最低位，訂單激增的同時，可用庫存已收縮超過90%。

隨著額外新冠肺炎檢疫措施造成跨境物流安排中斷，現貨銅與三個月倫銅合約之間的差價於二零二一年十一月增至每噸1,100美元以上，顯示出現貨銅的強勁短期需求。

由於二零二二年三月俄羅斯與烏克蘭之間的地緣政治不確定性，下游用戶已開始積累更多大宗商品存貨。全球大宗商品價格近期創下新高，銅交易價格首次達到每噸10,800美元以上。

Average market copper price in 2021 was US\$9,315 per tonne, 51% above the average in 2020 of US\$6,169 per tonne, leading to a significant increase in the Group's mining segment revenue. Also, as a result of higher commodity price as compared to prior periods, there has been an upward adjustment to the provisional sales price previously recognised.

JCI will continuously monitor its exposure to market price movement and will adjust its marketing strategies accordingly. In the first half of 2020 where commodity price was low, the Group decided to send part of its copper concentrate to local DRC smelter for further refining to copper blister. As a result of the additional processing time, sales was delayed by two months at the time when copper price was low. The Group has resumed normal sales volume in May 2020 when copper price started recovering. In 2021, when copper price reached all-time high, the Group ceased treating concentrate locally and resumed exporting all copper concentrates produced, in order to speed up sales in mid 2021.

The delivery of copper products in the fourth quarter of 2021 was affected by logistics disruption as the shipping sector was experiencing high freight rates and log-jammed ports, including in China. By the end of 2021, there was around 8,000 tonnes of copper products pending for delivery in our warehouse and we target to increase our delivery once the situation improves.

The Group has successfully finance leased out the mining assets at Chibuluma since 1 April 2021. The lease agreement allows the Group to secure fixed lease payment with additional potential in future from royalties lease payments. In 2021, the Group has recorded a royalty income of approximately US\$2.4 million under the finance lease agreement.

With copper price surging, the Group commenced the construction of Ruashi Mine's magnetic floatation plant aiming to treat low grade oxide and sulphide material. This allow the Group to better utilise Ruashi Mine's low grade stockpile while potentially extending Ruashi Mine's LoM. The new plant was successfully launched in December 2021.

On the other hand, the relevant lagged behind cobalt benchmark price increased gradually over 2021. Starting the year 2021 at US\$15.3 per pound, cobalt price has increased by 119% and closed at US\$33.5 per pound by 31 December 2021. The increasing trend continued in 2022 and cobalt price reached US\$35.5 per pound by the end of February 2022. Global cobalt production reached 170,000 tonnes in 2021 according to a preliminary data released by US Geological Survey (USGS), representing a 20% increase from 142,000 tonnes produced in 2020. Boosted by the increasing demand of electric vehicle ("EV") battery, the high growth rate in cobalt industry is expected to maintain in the next few years. The new Musonoi Project will add additional cobalt producing capacity to the Group and the Group will be able to benefit from the fast increasing demand of cobalt industry.

於二零二一年，銅的平均市價為每噸9,315美元，較二零二零年的每噸6,169美元上升51%，導致本集團採礦分部收益大幅增加。此外，由於大宗商品價格較先前期間升高，故將對先前確認的暫時性銷售價格作向上調整。

金川國際將持續監測因市場價格變動而面臨的敞口，並將相應調整其營銷策略。大宗商品價格較低的二零二零年上半年，本集團決定將部分銅精礦送往剛果(金)當地的冶煉廠，進一步精煉成粗銅。由於加工耗用額外時間，銅價較低時，銷售推遲了兩個月。銅價開始恢復後，本集團於二零二零年五月恢復正常銷量。於二零二一年，正值銅價創下歷史新高之際，本集團停止於當地處理精礦並恢復出口所有生產的銅精礦，以便在二零二一年年中加快銷售。

二零二一年第四季度的銅產品交付受到物流中斷影響，乃由於包括中國在內的航運業當時面臨運費高昂及港口堵塞的問題。於二零二一年底，我們的倉庫中有約8,000噸銅產品等待交付，我們計劃於情況有所好轉時加大交付量。

自二零二一年四月一日起，本集團已成功將Chibuluma的採礦資產以融資租賃出租。租賃協議使本集團獲得固定租賃款項外，亦可從未來礦權使用費獲得額外收益。於二零二一年，本集團根據融資租賃協議錄得礦權使用費收入約2.4百萬美元。

隨著銅價飆升，本集團開始建設Ruashi礦場的磁浮選廠，旨在處理低品位的氧化物和硫化物材料。這使得本集團能夠更好地利用Ruashi礦場的低品位庫存，同時可能延長Ruashi礦場的礦場開採期。該新廠於二零二一年十二月順利投產。

另一方面，反應滯後的鈷基準價格亦於二零二一年節節攀升。較二零二一年伊始的每磅15.3美元，鈷價於二零二一年十二月三十一日收於每磅33.5美元，上漲119%。二零二二年漲勢仍在延續，到二零二二年二月底，鈷價達到每磅35.5美元。根據美國地質調查局(USGS)發佈的初步數據，二零二一年全球鈷產量達170,000噸，較二零二零年的142,000噸增加20%。在電動汽車(「**電動汽車**」)蓄電池需求持續增加的拉動下，預期鈷行業將在未來數年保持高增長率。新Musonoi項目將為本集團增加額外的鈷產能，令本集團從鈷行業高速增長的需求中受益。

The construction of the Group's core Musonoi copper-cobalt project was also in full steam in 2021. Musonoi copper-cobalt project contains a total reserves of 606kt of copper and 174kt of cobalt and the average grade of 0.9% cobalt reserves ranks Musonoi Project as one of the highest grade cobalt mines in the world. The addition of Musonoi Project to our operating portfolio will further enhance our production volume and the Group's leading cobalt producer status in the world. With the support from JCG, our parent company, in mine planning, technological design and project financing, and together with our recent successful experience in the construction of Kinsenda Mine in the DRC, we believe Musonoi Project can be completed in a cost effective and timely manner.

The exploration team completed an infill drilling program at Lubembe Project in 2021. As a result, Lubembe Project's mineral resources have increased by 6.1% to 1.91 million tonnes of contained copper, in which Lubembe Project's measured and indicated categories mineral resources have increased by 46% from 1.04 million tonnes of contained copper at 31 December 2020 to 1.51 million tonnes of contained copper at 31 December 2021.

On the financing side of the Group, the Group is gradually repaying its outstanding bank and shareholders' loans with the healthy cashflow from Ruashi Mine and Kinsenda Mine. The Group successfully secured a US\$350 million, 10 years long loan facility with CDBC for the construction of the new Musonoi Project and a total of US\$100 million was drawn from the facility in 2021.

More efforts was placed towards new business development and resources upgrading. We have assessed several merger and acquisition opportunities, in particular southern Africa which was close to our existing mines to look for synergy. We will continually, prudently and actively pursue any new business development opportunity.

During the year we (the board of directors of Jinchuan Group International Resources Co. Ltd) were deeply saddened to lose a director, the late Mr. Wu Chi Keung, and our sincere condolences go to his family.

At last, I would like to take this opportunity to express my deepest gratitude to all the shareholders, my fellow directors, management team and staff of the Group for their support and contributions to the Group throughout the year.

GAO Tianpeng
Chief Executive Officer

Hong Kong, 28 March 2022

本集團的重點Musonoi銅鈷礦項目的建設於二零二一年亦全速進行。Musonoi銅鈷礦項目的總儲量為606千噸銅及174千噸鈷。Musonoi項目儲量的平均鈷品位為0.9%，為全球品位最高的鈷礦之一。Musonoi項目投入營運後將進一步提高我們的產量並鞏固本集團在全球鈷生產商中的領先地位。憑藉我們母公司金川於礦場規劃、技術設計及項目融資方面的支持，外加我們近期於剛果(金)建設Kinsenda礦場的成功經驗，我們相信，Musonoi項目可以經濟高效且及時地完成。

勘探團隊於二零二一年在Lubembe項目完成一項加密鑽探計劃，從而令Lubembe項目礦產資源含銅量增加6.1%至1.91百萬噸，Lubembe項目的探明及控制級礦產資源量由二零二零年十二月三十一日的1.04百萬噸含銅量增長46%至二零二一年十二月三十一日的1.51百萬噸含銅量。

就本集團融資方面而言，本集團憑藉於Ruashi礦場及Kinsenda礦場產生的健康現金流逐步償還未結清的銀行及股東貸款。本集團已成功於國開行獲得350百萬美元的10年期長期貸款融資，用於建設新Musonoi項目，於二零二一年合共於該項融資提取100百萬美元。

我們繼續致力發展新業務及提升資源量。我們已評估若干併購機會，特別是在靠近我們現有礦場的非洲南部，以尋求協同發展。我們將持續、審慎及積極地尋求任何新的業務發展機會。

金川集團國際資源有限公司董事會對董事胡志強先生年內病逝深感悲痛，在此再次對其家人致以深切慰問。

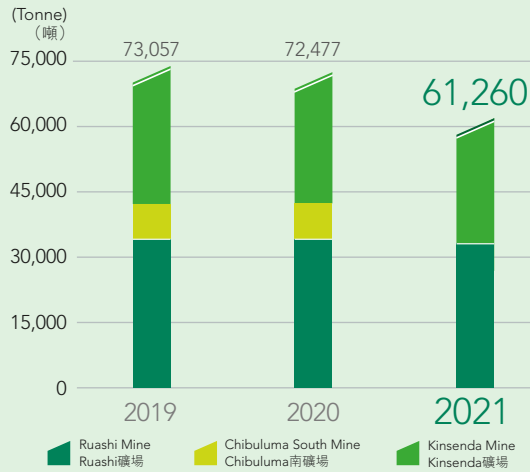
最後，本人藉此機會向全體股東、各董事、本集團管理團隊及員工於年內為本集團帶來的鼎力支持及作出的貢獻致以衷心謝意。

鄧天鵬
行政總裁

香港，二零二二年三月二十八日

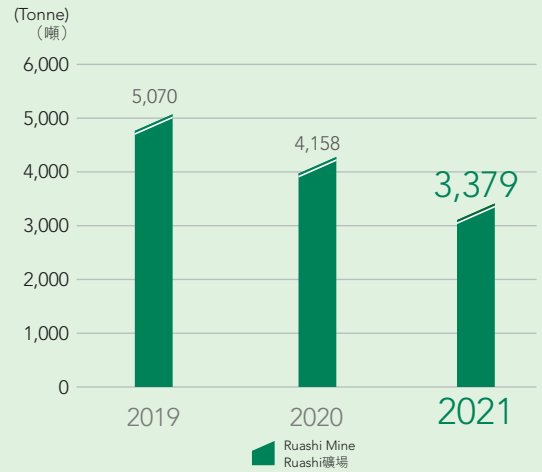
COPPER PRODUCTION

銅產出量



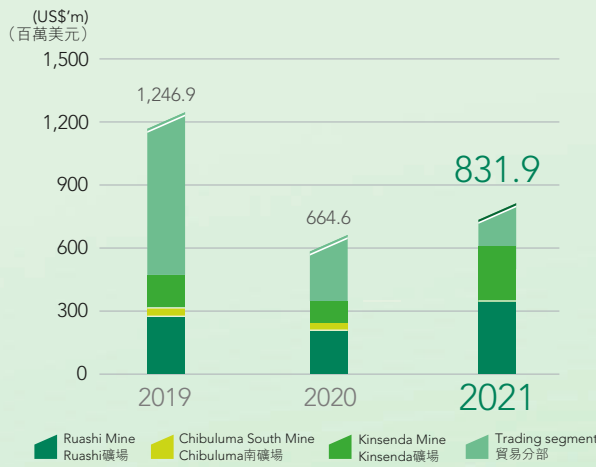
COBALT PRODUCTION

鈷產出量



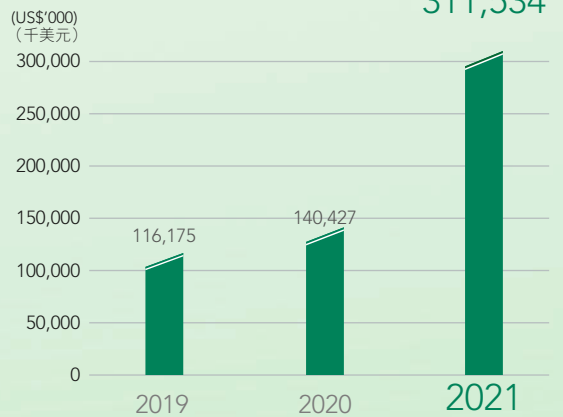
REVENUE

收益



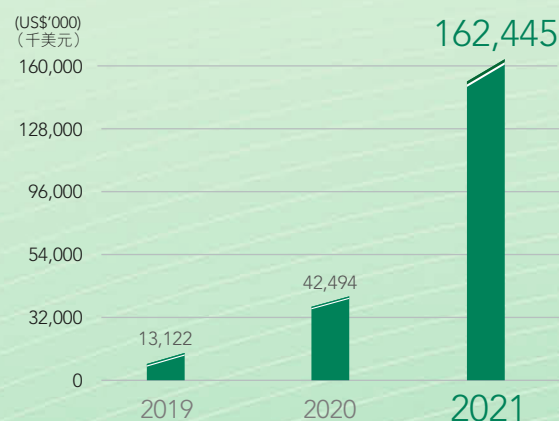
EBITDA

除息稅折舊攤銷減值前溢利



PROFIT FOR THE YEAR

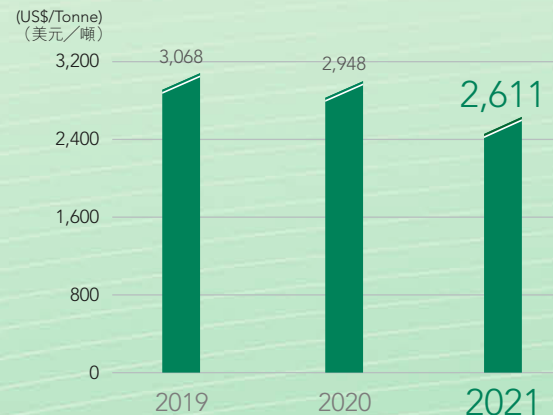
年內溢利



C1 CASH COST PER TONNE OF COPPER

(including by-product credit)

每噸銅的C1現金成本(包括副產品抵扣)



Mining Operational Review

採礦業務回顧

The Group's mining operations include two operating mines (Ruashi Mine and Kinsenda Mine), one project at development stage (Musonoi Project), one exploration project (Lubembe Project) and one mine leased out under finance lease agreement (Chibuluma South Mine (including Chifupu Deposit)).

本集團採礦業務包括兩座營運礦場(Ruashi礦場及Kinsenda礦場)一個處於開發階段的項目(Musonoi項目)、一個勘探項目(Lubembe項目)及一個根據融資租賃協議出租的礦場(Chibuluma南礦場(包括Chifupu礦床))。

OPERATING MINES

Ruashi Mine

營運礦場

Ruashi礦場



Overview

- Mine type: open-cast oxide copper and cobalt mine with sulphide potential underneath
- Location: Lubumbashi, Haut Katanga Province, the DRC
- Ownership: JCI (75%), Gécamines SA (25%)
- Processing: leach SX-EW processing
- Products: copper cathode, cobalt hydroxide
- LoM: 7 years
- Resources: 614kt Cu, 82kt Co
- Reserves: 227kt Cu, 25kt Co

概覽

- 礦場類型：露天氧化銅鈷礦，深部有潛在的硫化物
- 地點：剛果(金)上加丹加省盧本巴希
- 所有權：金川國際(75%)，Gécamines SA (25%)
- 加工：SX-EW浸出加工
- 產品：電解銅，氫氧化鈷
- 礦場開採期：7年
- 資源量：614千噸銅，82千噸鈷
- 儲量：227千噸銅，25千噸鈷

Operational Review

Ruashi Mine's copper production volume has decreased by 2% from 33,897 tonnes in the year ended 31 December 2020 to 33,063 tonnes in the year ended 31 December 2021 while cobalt production volume has decreased by 19% from 4,158 tonnes in the year ended 31 December 2020 to 3,379 tonnes in the year ended 31 December 2021 as a result of lower copper and cobalt feed grade.

Feed ore processed in 2021 was mainly from Ruashi's mine pits and inventory stockpile. Limited third party ore was processed due to the lack of available suitable ore. Ruashi Mine maximized the throughput rate and the plant utilisation to compensate for the loss of foreign ore supply.

A total of 2,054,098 tonnes of ore was mined in 2021, which was a 3% increase compared to 1,996,898 tonnes in 2020. Ruashi exposed more ore from the pits to increase the metal grade in the feed ore. Waste stripping at Ruashi exposed some mineralisation and the infill drilling had a positive variation with the grade increasing.

Production and sales summary for Ruashi Mine:

營運回顧

Ruashi礦場的銅產量由截至二零二零年十二月三十一日止年度的33,897噸減少2%至截至二零二一年十二月三十一日止年度的33,063噸，截至二零二一年十二月三十一日止年度的鈷產量為3,379噸，較二零二零年十二月三十一日止年度的4,158噸減少19%，乃由於銅及鈷入廠品位下降所致。

於二零二一年，入廠礦石大部分來自Ruashi的礦坑及庫存礦石堆。因缺乏合適之供應致使較少處理第三方礦石，為彌補外購礦石供應的短缺，Ruashi礦場最大化生產率及工廠使用率。

於二零二一年，合共採出2,054,098噸礦石，較二零二零年1,996,898噸增加3%。Ruashi從礦坑中採出更多的礦石，以提高入庫礦石中的金屬品位。Ruashi的廢石剝離工程開放更多礦體供開採，加密鑽探對品位的提升有正面影響。

Ruashi礦場的生產及銷售概要：

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年	2020 二零二零年
PRODUCTION:	產量：		
Copper (t)	銅 (噸)	33,063	33,897
Cobalt (t)	鈷 (噸)	3,379	4,158
PRODUCT SOLD:	產品銷量：		
Copper (t)	銅 (噸)	27,930	33,829
Cobalt (t)	鈷 (噸)	2,617	5,468
REVENUE – including provisional pricing adjustment:	收益 – 包括臨時定價調整：		
Copper (US\$'000)	銅 (千美元)	255,128	201,260
Cobalt (US\$'000)	鈷 (千美元)	106,613	109,529
Total (US\$'000)	總數 (千美元)	361,741	310,789
Average copper price realised (US\$/t)	平均實現銅價 (美元/噸)	9,135	5,949
Average cobalt price realised (US\$/t)	平均實現鈷價 (美元/噸)	40,738	20,031

* Ruashi's current products include copper cathode and cobalt hydroxide. The production and sales volume shown in the above table were calculated in metal content, with selling prices equivalent to the metal prices. Pricing coefficients were considered in actual sales volume.

* Ruashi的目前產品包括電解銅及氫氧化鈷。上表中顯示的產量及銷量以金屬含量計算，而銷售價格相等於金屬價格。於實際銷量中考慮定價係數。

Mining Operational Review 採礦業務回顧

Ruashi produced 33,063 tonnes (2020: 33,897 tonnes) of copper in 2021, representing a 2% decrease as compared to 2020, where processed tonnages in 2021 of 1,505,628 tonnes was slightly higher than 2020 of 1,496,796 tonnes. The average copper feed grade in 2021 was 2.72% which was 2% lower than 2020 at 2.78%. Copper recovery rate in 2021 was 80.77% which was 1% lower than 2020 of 81.54% due to the low copper solubility of feed ores.

Ruashi produced 3,379 tonnes (2020: 4,158 tonnes) of cobalt in 2021, representing a 19% decrease as compared to 2020. Processed tonnages in 2021 were 1% higher compared to 2020, offset by a lower feed grade of 0.38% in 2021 as compared to 0.43% recorded in 2020, representing a 12% decrease. The lower feed grade resulted in lower cobalt tonnages produced. Cobalt recovery rate of 59.03% in 2021 was 7% lower than 2020 at 63.79% due to the low cobalt solubility of feed ores and the unavailability of high-grade third-party ores.

The average realised copper price for 2021 was US\$9,135 per tonne (2020: US\$5,949 per tonne), which was 54% higher than 2020. The increase is in line with the increase in average market copper price of 51% in 2021 as compared to 2020.

The average realised cobalt price for 2021 was US\$40,738 per tonne (2020: US\$20,031 per tonne), which was 103% higher than 2020. The increase in average realised cobalt price was mainly contributed by the increase in market cobalt hydroxide coefficient in 2021 where MB cobalt hydroxide payable indicator jumped from approximately 64% at the beginning of 2020 to around 89% at the end of 2021. The market price of MB cobalt hydroxide also increased 119% from US\$33,730 per tonne at the beginning of 2021 to US\$73,855 per tonne at the end of 2021.

Overall revenue for 2021 was 16% higher than that in 2020. Copper revenue increased by 27% due to higher market price of copper in 2021 and was partly offset by lower volumes sold in 2021. Cobalt revenue in 2021 was 3% lower than 2020 due to lower volume sold, offset by higher realised cobalt price.

Ruashi's main mining license (PE578) was renewed for a period of 15 years, and will expire in September 2036.

The capital expenditure of Ruashi Mine in 2021 was US\$37.0 million and included US\$20.7 million for pit 3 waste stripping.

二零二一年Ruashi生產33,063噸(二零二零年：33,897噸)銅，較二零二零年減少2%。冶煉廠入廠銅礦量略高於二零二零年，其中二零二一年處理礦石量為1,505,628噸(二零二零年：1,496,796噸)。二零二一年平均銅入廠品位為2.72%，較二零二零年錄得的2.78%下降2%，而二零二一年銅回收率為80.77%，較二零二零年的81.54%下降1%，乃由於入廠礦石銅溶解度較低。

二零二一年Ruashi生產3,379噸(二零二零年：4,158噸)鈷，較二零二零年減少19%。二零二一年處理礦石量較二零二零年上升1%，但被二零二一年較低入廠品位0.38%(二零二零年：0.43%)抵銷，入廠品位較去年同期下降12%。入廠品位低導致產出鈷產品較少。二零二一年鈷回收率為59.03%，較二零二零年的63.79%低7%，乃由於入廠礦石鈷溶解度較低及未能從外採購高品位礦石。

二零二一年平均實現銅價為每噸9,135美元(二零二零年：每噸5,949美元)，較二零二零年高54%。該增加與二零二一年銅的平均市價較二零二零年上升51%一致。

二零二一年平均實現鈷價為每噸40,738美元(二零二零年：每噸20,031美元)，較二零二零年高103%。平均實現鈷價上升乃主要由於二零二一年市場氫氧化鈷計價系數提高，金屬導報氫氧化鈷計價系數指標由二零二零年年初的約64%飆升至二零二一年年末的89%左右，金屬導報市場鈷價亦由二零二一年年初的每噸33,730美元，飆升119%至二零二一年年末的每噸73,855美元。

二零二一年整體收益較二零二零年增加16%。由於二零二一年市場銅價較高，但部分被二零二一年較低銷量所抵銷，實現銅收益增加27%。二零二一年鈷收益較二零二零年減少3%，乃由於銷量下降抵銷實現鈷價提高。

Ruashi的主要採礦許可證(PE578)已重續15年，且將於二零三六年九月屆滿。

二零二一年Ruashi礦場的資本開支為37.0百萬美元，當中包括3號礦坑廢石剝離的20.7百萬美元。

Ruashi commenced the construction of a 600kt per annum floatation and magnetic separation plant which is targeted to treat low grade oxide and sulphide material via magnetic separation and the successful construction of the floatation and magnetic separation plant will further increase the mine life of Ruashi. This plant was completed at the end of 2021.

Ruashi啟動建設每年60萬噸處理量浮選及磁性分離工廠，旨在通過磁性分離處理低品位氧化物及硫化物材料，且成功建設浮選及磁性分離工廠將進一步提高Ruashi礦場壽命。該工廠於二零二一年年底完工。

Kinsenda Mine

Kinsenda礦場



Overview

概覽

- Mine type: underground copper mine
- Location: Haut Katanga Province, the DRC
- Ownership: JCI (77%), Sodimico (23%)
- Products: copper concentrates, copper blister
- LoM: 14 years
- Resources: 1,035kt Cu
- Reserves: 279kt Cu

- 礦場類型：地下銅礦
- 地點：剛果(金)上加丹加省
- 所有權：金川國際(77%)·Sodimico(23%)
- 產品：銅精礦、粗銅
- 礦場開採期：14年
- 資源量：1,035千噸銅
- 儲量：279千噸銅

Mining Operational Review

採礦業務回顧

Operational Review

Production and sales summary for Kinsenda Mine:

營運回顧

Kinsenda礦場的生產及銷售概要：

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年	2020 二零二零年
PRODUCTION: Copper (t)	產量： 銅（噸）	28,197	30,557
PRODUCT SOLD: Copper (t)	產品銷量： 銅（噸）	29,071	25,885
REVENUE – including provisional pricing adjustment: Copper (US\$'000)	收益 – 包括臨時定價調整： 銅（千美元）	258,897	167,438
Average copper price realised (US\$/t)	平均實現銅價（美元／噸）	8,906	6,469

* Kinsenda's products included copper concentrate and copper blister. The production volume shown in the above table represents the copper content in concentrates produced, the sales volume shown in the above table were calculated in metal content in concentrates and blister sold, with selling prices equivalent to the metal prices. Pricing coefficients were considered in actual sales volume.

* Kinsenda產品包括銅精礦及粗銅。上表中顯示的產量指所生產精礦的銅含量，上表中顯示的銷量以所出售銅精礦及粗銅之金屬含量計算，而銷售價格相等於金屬價格。於實際銷量中考慮定價係數。

Kinsenda Mine ranks one of the world's highest grade copper deposits and has good access to infrastructure, with a single-lane road connecting the mine to the regional highway 20 km to the west of the site. Current mine life is 14 years and there exists substantial additional ore resources that could extend the mine life to 20 years and beyond.

Kinsenda礦場是全球最高品位的銅礦床之一，貫接道路基建之情況良好（有一條單行道連接礦場至礦區西部20公里的區域高速公路）。現礦場壽命為14年，而其含大量新增礦石資源可將礦場壽命延長至20年及以上。

Kinsenda Mine managed to produce 28,197 tonnes of copper content in concentrate in 2021, a 8% decrease than 2020 of 30,557 tonnes. The decrease in production volume was mainly due to a lower average feed grade of 4.41% in 2021 as compared to 4.55% in 2020, and plant recovery rate of 97.74% in 2021 was slightly lower than 2020 of 98.14%.

Kinsenda礦場於二零二一年生產了28,197噸銅含量精礦，較二零二零年的30,557噸低8%。產量下降的主要原因是二零二一年平均入廠品位為4.41%，較二零二零年的4.55%低，另外，回收率由二零二零年的98.14%略微下降至二零二一年的97.74%。

Kinsenda Mine recorded copper revenue of US\$258.9 million in 2021, 55% higher than 2020. This was due to higher copper realised price together with a higher volume sold in 2021. Kinsenda suspended sales for two months in 2020 in order to further process copper concentrate to copper blister when copper price was low. Kinsenda Mine ceased selling copper blister to the international market from July 2021. Kinsenda Mine concluded new copper concentrate export contracts and resumed the export of copper concentrate.

Kinsenda礦場於二零二一年共錄得銅收益258.9百萬美元，較二零二零年高55%。此乃由於二零二一年實現銅價及銷量均有所提高所致。Kinsenda礦場於二零二零年銅價低位時暫停銷售兩個月以將銅精礦深加工至粗銅出售。Kinsenda礦場已於二零二一年七月停止向國際市場銷售粗銅，簽訂新的銅精礦出口合同，恢復出口銅精礦。

Kinsenda's main mining licence (PE101) was renewed for a period of 15 years, and will expire in October 2036.

Kinsenda的主要採礦許可證(PE101)已續期15年，並將於二零三六年十月到期。

Capital expenditure at Kinsenda Mine for 2021 was US\$9.7 million, primarily spent on underground development and underground dewatering.

截至二零二一年，Kinsenda礦場的資本開支為9.7百萬美元，主要用於地下開發及地下排水。

Kinsenda Mine is developing a second ramp decline from 209mL as a capital development project to open up the East Mine resource.

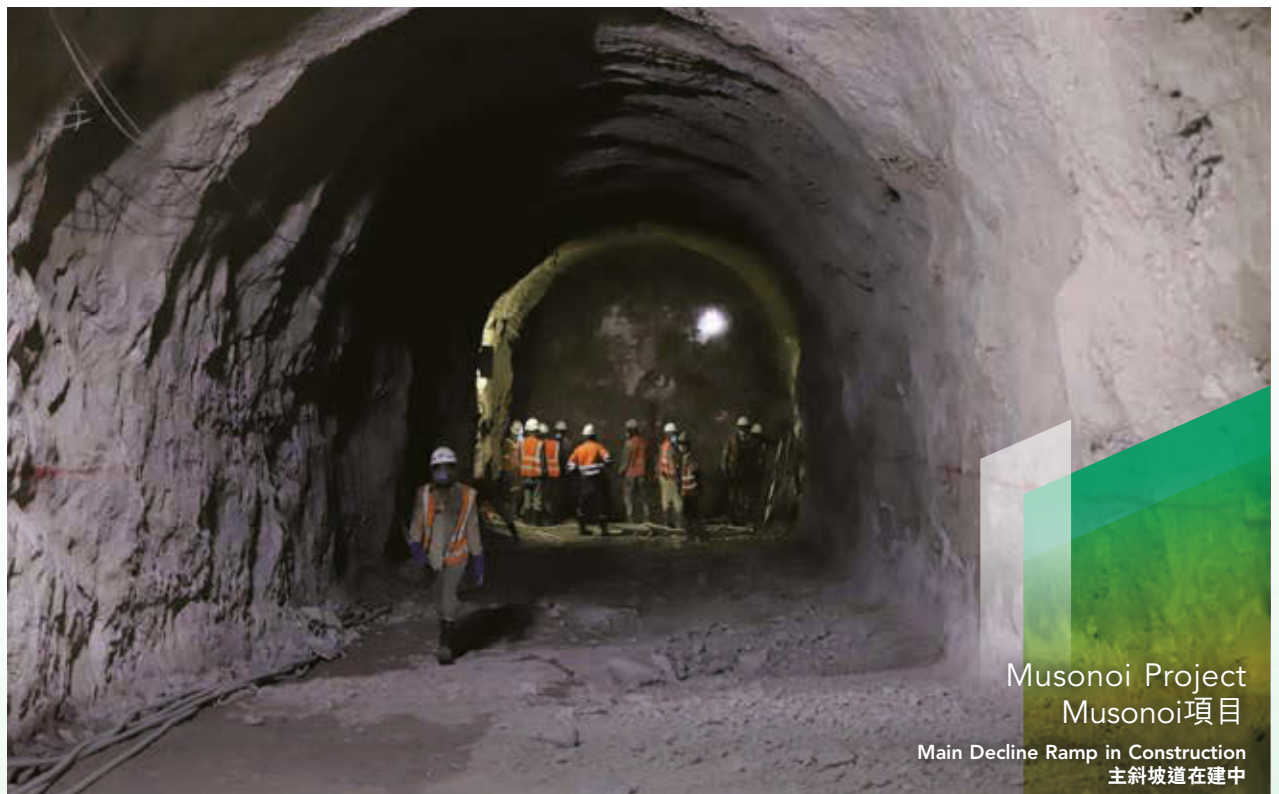
Kinsenda礦場正在開發第二條斜坡道(從209米水平傾斜)，作為開採東部礦體資源開發的資本項目。

DEVELOPMENT PROJECT

開發項目

Musonoi Project

Musonoi項目



Musonoi Project
Musonoi項目

Main Decline Ramp in Construction
主斜坡道在建中

Overview

概覽

- Location: North of Kolwezi town, Lualaba Province, the DRC
- Ownership: JCI (75%), Gécamines SA (25%)
- Progress: under construction
- LoM: 19 years according to ENFI Feasibility Study (2018)
- Resources: 1,085kt Cu, 363kt Co
- Reserves: 606kt Cu, 174kt Co

- 地點：剛果(金)盧阿拉巴省科盧韋齊鎮以北
- 所有權：金川國際(75%)，Gécamines SA (25%)
- 進度：建設階段
- 礦場開採期：19年(按恩菲可行性研究(二零一八年))
- 資源量：1,085千噸銅，363千噸鈷
- 儲量：606千噸銅，174千噸鈷

Mining Operational Review

採礦業務回顧

Development Review

Musonoi Project is a brownfield copper and cobalt project, located on the northern outskirts of Kolwezi, approximately 360km Northwest of Lubumbashi city, capital of Haut Katanga Province of the DRC.

In 2018, the ENFI Feasibility Study on optimisation studies and detailed engineering works was completed and first reserves were declared for Musonoi Project. Musonoi Project has high grade cobalt content with reserve ore grade of 0.9%. Gécamines SA approved the ENFI Feasibility Study 2018 in May 2019.

A detailed evaluation of the orebody indicates that the mineral resources are SAMREC Code compliant, with sufficient size to support a mining project. The studies indicated that the orebody occurs on the eastern end of the Dilala Syncline and is a blind deposit with high-grade mineralisation starting at between 50m and 100m below surface. The orebody has a strike length of 600m to 700m and is open ended at depth below 600m from surface and will be mined from underground using a long hole stopping mining method and a cut and fill with post pillars mining method.

The project is now in construction phase. The surface explosive magazine was completed in 2020. The main shaft construction commenced in December 2019. Works on the ventilation shafts was completed in June 2021.

The 0mL – 140mL ramp project was completed in November 2021, with a total construction of 1,473 meters. Construction commenced on the 140mL – 280mL ramp, with an estimated total length of 1,253 meters, and 257m has been constructed at 31 December 2021. The 80mL and 140mL sublevel work and oxide ore stopping project completed 452 meters.

The 320mL, 400mL, 460mL and 540mL sublevels development project contracts have been signed, and 1,639m has been completed at 31 December 2021.

The Musonoi power project (65MVA load) was completed and commissioned with initial acceptance of SNEL. The 120kV main step-down substation and 120kV transmission lines are operational and part of the load on site has been transferred to the substation. Administration offices and living camp was put into use in June 2021. The core shed and integrated warehouse was put into use from October 2021. The northern road was completed in December 2021.

Construction commenced for the integrated maintenance workshop, and the steel components of the workshop was delivered to the site.

The feasibility study for further processing copper and cobalt concentrate was completed by ENFI in 2021.

An exploration drilling campaign is ongoing at Musonoi Project. Geochemical analysis have not been completed. The relevant result was not included in Mineral Resources as at 31 December 2021.

開發回顧

Musonoi項目為一個位於科盧韋齊以北外圍的開發中銅鈷項目，距剛果(金)上加丹加省省會盧本巴希市西北約360公里。

於二零一八年，有關優化研究及詳細工程工作的恩菲可行性研究已完成，並首次確認Musonoi項目儲量。Musonoi項目擁有高品位的鈷含量，儲量礦石品位達0.9%。Gécamines SA於二零一九年五月批准恩菲可行性研究(二零一八年)。

對礦體的詳細評估表明，礦產資源符合SAMREC規則標準，且具有足夠規模，可支持採礦項目。研究表明，礦體位於Dilala Syncline的東端，是一個隱伏礦床，高品位成礦開始於地表以下50米至100米之間。礦體的走向長度為600米至700米，在距地面600米以下的深度處開口，將採用深孔空場採礦法及樁柱充填採礦法，從地下進行開採。

該項目現時正處於建設階段。地面炸藥庫已於二零二零年完成。主礦井施工於二零一九年十二月開始。通風井於二零二一年六月竣工。

0米水平至140米水平的主要斜坡道已於二零二一年十一月完工，共完成1,473米。預計總長度為1,253米的140米水平至280米水平斜坡道工程於二零二一年十二月三十一日已經完成257米。80米水平及140米水平的分層掘進工程以及氧化礦填充採礦項目已完工452米。

320米水平、400米水平、460米水平及540米水平的分層開發項目合約已經簽署。截至二零二一年十二月三十一日，該項目已經完成1,639米。

Musonoi電力項目(負載65百萬伏安)已經完成，並被SNEL初步接受。120千伏主降壓變電站及120千伏輸電線投入使用，部分供電負荷已經轉移至變電站。行政辦公室及生活區已於二零二一年六月啟用。岩心庫及綜合倉庫於二零二一年十月啟用。北部道路已於二零二一年十二月完成。

綜合維修車間已開工建設，車間鋼構件運抵現場。

恩菲於二零二一年亦完成深加工銅鈷精礦的可行性研究。

Musonoi項目正在展開勘探計劃。地球化學分析尚未完成。於二零二一年十二月三十一日，相關結果並無計入礦產資源量。

EXPLORATION PROJECT

Lubembe Project

勘探項目

Lubembe項目



Overview

- Location: Haut Katanga Province, the DRC
- Ownership: JCI (77%), Sodimico (23%)
- Progress: mining license renewed in 2016 and extended for a further 15 years to 2032. An infill drilling program was completed in 2021
- Resources: 1,909kt Cu

Development Review

In January 2021, the Group undertook a drilling program to collect metallurgical samples across the orebody for further metallurgical test work and to update the resource model. During the first 6 months of 2021, a total of 20 diamond drillholes were drilled over 6,592.36m of which 5,048.2m were used for geological and metallurgical purposes and 1,544.16m for geotechnical characterisation.

概覽

- 地點：剛果(金)上加丹加省
- 所有權：金川國際(77%)，Sodimico (23%)
- 進度：採礦許可證於二零一六年重續及進一步延長15年至二零三二年。一項加密鑽探計劃已於二零二一年完成
- 資源量：1,909千噸銅

開發回顧

於二零二一年一月，本集團開展了一項鑽探計劃，以收集整個礦體的冶金樣品，以進行進一步的冶金測試工作並更新資源模型。二零二一年前六個月共鑽探20個金剛石鑽孔，總長度超過6,592.36米，其中5,048.2米用於地質和冶金目的，1,544.16米用於岩土工程特徵分析。

Mining Operational Review

採礦業務回顧

All boreholes were surveyed using differential global positioning system (GPS) by Siteke Dior Geodesique (SDG) professional surveyors from Lubumbashi, utilizing a Differential GPS (Datum WSG84 and Projection UTM-S35).

During April to August 2021, a total of 1,164 samples including CRMs were submitted to SGS Zambia for chemical analysis and 86 samples for density assay. A total of 844 samples were sent to ENFI China for metallurgical test work and 53 duplicate pulp samples were submitted to ALS Chemex Johannesburg (referee laboratory) for inter-laboratory comparisons.

Mineral resource model was updated with the effective date for mineral resource estimation of 31 December 2021.

MINE LEASED OUT UNDER FINANCE LEASE AGREEMENT

Chibuluma South Mine (including Chifupu Deposit)

來自盧本巴希的Siteke Dior Geodesique (SDG) 公司專業測量師使用差分全球定位系統(GPS) (Datum WSG84 and Projection UTM-S35) 對所有鑽孔進行了測繪。

於二零二一年四月至八月間，將包括CRMs在內的總計1,164個樣品提交給SGS贊比亞進行化學分析，86個樣品進行密度測定。共有844個樣品被送往中國恩菲進行冶金測試工作，提交53個重複的礦漿樣品給ALS南非約翰尼斯堡實驗室進行實驗室內比較。

礦產資源模型已更新，礦產資源量估算的生效日期為二零二一年十二月三十一日。

融資租賃協議下出租之礦場

Chibuluma南礦場(包括Chifupu礦床)



Operational Review

The Group decided to lease out Chibuluma South Mine (including Chifupu Deposit) and the processing plant to an independent third party on a five years term lease in order to realise the remaining value of the mining assets.

The total lease payment payable under the lease is US\$6.5 million, payable in instalments over a two-year period starting from the date of signing of the lease agreement on 28 December 2020. Up till 31 December of 2021, US\$3.8 million had been received towards the lease amount. In addition to the lease payments, the Group is also entitled to a monthly royalty payment based on the volume of copper payable sold from Chifupu Deposit at a rate dependent on the prevailing market copper price. The lessee has the priority to renew upon the expiry of the lease agreement.

The finance lease agreement became effective since 1 April 2021. For details of the finance lease agreement, please refer to the Company's announcement dated 28 December 2020.

The lessee produced and sold 3,051 tonnes of payable copper in 2021 and the Group had recorded a royalty income of US\$2.4 million under the finance lease agreement. In 2020, Chibuluma produced 8,023 tonnes of payable copper content under the Group's operation.

Chibuluma incurred exploration expenses of US\$90,000 on Northwestern Province Exploration Projects in 2021.

營運回顧

本集團決定將Chibuluma南礦場(包括Chifupu礦床)及加工廠出租予一名獨立第三方，租期為五年，以實現採礦資產的剩餘價值。

租賃項下應付的租賃付款總額為6.5百萬美元，應於簽署租賃協議之日(即二零二零年十二月二十八日)起計兩年內分期支付。截至二零二一年十二月三十一日，本集團收到租金收入3.8百萬美元。除租賃付款外，本集團亦將有權每月收取礦權使用費，有關費用乃根據自Chifupu礦床出售的銅礦量按其當時市場銅價計算得出。承租人可於租賃協議屆滿時優先續約。

融資租賃協議於二零二一年四月一日開始生效。有關融資租賃協議之詳情，請參閱本公司日期為二零二零年十二月二十八日之公告。

承租人於二零二一年生產及出售3,051噸銅，而本集團根據融資租賃協議錄得礦權使用費收入約2.4百萬美元。於二零二零年，Chibuluma在本集團經營下生產8,023噸銅含量。

Chibuluma於二零二一年於西北省勘探項目產生勘探開支90,000美元。

Mining Operational Review

採礦業務回顧

MINING EXPLORATION, MINING DEVELOPMENT AND ORE MINING ACTIVITIES 採礦勘探、採礦開發及礦石開採活動

Expenses of exploration, development, and mining activities of the Group for the year ended 31 December 2021 are set out below:

本集團截至二零二一年十二月三十一日止年度的勘探、開發及採礦活動開支載列如下：

Unit: US\$'000	單位:千美元	Ruashi Mine Ruashi 礦場	Kinsenda Mine Kinsenda 礦場	Musonoi Project Musonoi 項目	Lubembe Project Lubembe 項目	Northwestern Province Exploration Projects 西北省勘探項目	Total 總計
Exploration activities	勘探活動						
Drilling and analysis	鑽探及分析	-	-	-	1,578	-	1,578
Others	其他	-	-	-	-	90	90
Sub-total	小計	-	-	-	1,578	90	1,668
Development activities (including mine construction)	開發活動 (包括礦場建設)						
Civil work for construction of tunnels and roads and infrastructure	建設隧道及道路及基建的土木工程	-	5,939	48,437	-	-	54,376
Electricity	電力	-	-	12,739	-	-	12,739
Stripping cost	剝採成本	20,743	-	-	-	-	20,743
Dewatering engineering work	脫水工程	-	1,924	-	-	-	1,924
Others	其他	8,701	-	-	-	-	8,701
Sub-total	小計	29,444	7,863	61,176	-	-	98,483
Mining activities (excluding ore processing)	採礦活動 (不包括礦石處理)						
Staff cost	員工成本	1,992	5,539	-	-	-	7,531
Blasting	爆破	3,070	3,873	-	-	-	6,943
Fuel, electricity, water and other services	燃料、電力、水及其他服務	340	2,545	-	-	-	2,885
Foreign ore purchase	從外購買礦石	11,497	-	-	-	-	11,497
Sub-contracting charges	分包費用	28,431	18,928	-	-	-	47,359
Depreciation	折舊	12,386	13,258	-	-	-	25,644
Others	其他	3,452	3,429	-	-	-	6,881
Sub-total	小計	61,168	47,572	-	-	-	108,740
Total	總計	90,612	55,435	61,176	1,578	90	208,891

EXECUTIVE SUMMARY

Mineral Resources and Mineral Reserves for the Group are reported on a 100 percent basis with JCI's attributable interest shown against each asset within bracket and are estimated as at 31 December 2021. All the Group's Mineral Resources and Mineral Reserves are compliant with the SAMREC Code, and are reported according to the requirements of Chapter 18 of the Listing Rules.

Mineral Resources and Mineral Reserves tables are provided on pages 27 to 32, which included the 31 December 2021 and 31 December 2020 estimates for comparison. The Measured and Indicated Mineral Resources are inclusive of Mineral Reserves.

MINERAL RESOURCES

As at 31 December 2021, the Group's Mineral Resources were estimated to contain approximately 4,643,000 tonnes of contained copper and 444,000 tonnes of contained cobalt. This represents a 0.1% increase in contained copper and a 0.7% decrease in contained cobalt as compared to the estimates as at 31 December 2020 of 4,640,000 tonnes of contained copper and 447,000 tonnes of contained cobalt.

Changes in Mineral Resources

The primary change to the Group's Mineral Resources was the decreases in Ruashi Mine's copper and cobalt resources and Kinsenda Mine's copper resources due to mining depletion during the year.

Ruashi Mine has reclassified part of run-of-mine material ("ROM") to stockpile which resulted in the increase of 26,900 tonnes of contained copper which partially offset the depletion at Ruashi Mine. This included the increases of 200 tonnes high-grade (HG) oxide resource, 4,700 tonnes low-grade (LG) oxide resource, 16,000 tonnes transitional resource and 6,000 tonnes sulphide resource.

An infill drilling campaign to improve the geological understanding and resource re-classification was carried out at Lubembe Project. A total of 20 diamond drillholes were drilled over 6,592.36m of which 5,048.2m were used for resource estimation and metallurgical purposes and 1,544.16m for geotechnical characterisation of the deposit. As a result of the campaign, total contained copper resources has increased by 108,000 tonnes and nearly 80% of total resources is in the Measured and Indicated category.

In addition, cut-off grades were revised to reflect the changes of copper and cobalt prices leading to the update of cut-off grades adopted in the resource model.

There has been no change to Musonoi Project mineral resource model. There has been no mining depletion at Musonoi Project during the year as the project remains under development.

As Chibuluma South Mine (including Chifupu Deposit) has been finance leased out since 1 April 2021, the Group thereafter ceased to report the Mineral Resources for Chibuluma South Mine (including Chifupu Deposit).

報告摘要

本集團的礦產資源量及礦產儲量按100%基準呈列，並就括號內各項資產顯示金川國際應佔權益，估計乃於二零二一年十二月三十一日作出。本集團所有礦產資源量及礦產儲量均符合SAMREC規則及根據上市規則第18章中的規定呈報。

礦產資源量及礦產儲量表載於第27至32頁，其中包括二零二一年十二月三十一日及二零二零年十二月三十一日的估計以作比較。探明及控制的礦產資源量包括礦產儲量。

礦產資源量

於二零二一年十二月三十一日，預計本集團的礦產資源量將包括銅儲量約4,643,000噸及鈷儲量約444,000噸。這表示銅儲量及鈷儲量較於二零二零年十二月三十一日的估算值4,640,000噸及447,000噸分別增加0.1%及減少0.7%。

礦產資源量變動

本集團礦產資源量主要變動為Ruashi礦場銅鈷資源及Kinsenda礦場銅資源下降，乃由於年內採礦耗減所致。

Ruashi礦場已將部分原礦石(「原礦石」)重新分類至堆儲量，導致銅儲量增加26,900噸，部分抵銷Ruashi礦場耗減。其包含增加200噸高品位氧化物資源、4,700噸低品位氧化物資源、16,000噸過渡資源及6,000噸硫化物資源。

Lubembe項目已完成一項加密鑽探計劃，旨在提高地質認識及改善資源重新分類。於超過6,592.36米的範圍內合計鑽探20個金剛石鑽孔，其中5,048.2米用於資源估算及冶煉用途，而1,544.16米則用於確定礦床的岩土工程特征，該計劃的成果為銅資源總儲量增加108,000噸，資源總量中約80%為探明及控制類別。

此外，邊界品位經修改後以反映銅鈷價的變動情況，導致資源模型中採納的邊界品位更新。

Musonoi項目礦產資源模型沒有改變。Musonoi項目仍處於開發階段，因此該項目年內沒有採礦耗減。

由於Chibuluma南礦場(含Chifupu礦床)自二零二一年四月一日起以融資租賃方式出租，故本集團此後不再呈報Chibuluma南礦場(含Chifupu礦床)的礦產資源量。

Resources and Reserves 資源量及儲量

Development

An exploration drilling campaign is ongoing at Musonoi Project. Geochemical analysis have not been completed. The relevant result was not included in this Mineral Resources statement as at 31 December 2021.

MINERAL RESERVES

As at 31 December 2021, the Group's Mineral Reserves were estimated to contain approximately 1,112,000 tonnes of contained copper and 198,000 tonnes of contained cobalt. This represents a 2% decrease in contained copper and a 1% decrease in contained cobalt as compared with the estimates as at 31 December 2020 of 1,137,000 tonnes of contained copper and 200,000 tonnes of contained cobalt.

Changes in Mineral Reserves

The Group's Mineral Reserves showed a decrease in contained copper and cobalt in 2021. The decrease in Ruashi Mine's copper and cobalt reserves and Kinsenda Mine's copper reserves were due to mining depletion during the year.

Re-classification of ROM material to stockpile partially offset the depletion of the Mineral Reserves at Ruashi Mine. Ruashi stockpile material increased by 8% (in tonnage) because of mining and tailings storage piling.

At Kinsenda, the dilution factor adopted in the estimation has been revised from 5% to 8%, leading to a slight decrease in Mineral Reserves.

The Mineral Reserves at Musonoi remained static in 2021. There has been no mining depletion at Musonoi Project during the year as the project remains under development.

No Mineral Reserves have been declared for Ruashi underground resources and Lubembe Project.

As Chibuluma South Mine (including Chifupu Deposit) has been finance leased out effective since 1 April 2021, the Group thereafter ceased to report the Mineral Reserves for Chibuluma South Mine (including Chifupu Deposit).

Development

At Ruashi Mine, a study has been carried out to re-classify part of the out-pit resources into Mineral Reserves after appropriate pit optimisation. The study is scheduled to be completed by the end of 2022.

展望

Musonoi項目正在展開勘探計劃。地球化學分析尚未完成。於二零二一年十二月三十一日，相關結果並無計入本礦產資源量報告。

礦產儲量

於二零二一年十二月三十一日，本集團的礦產儲量估算為約1,112,000噸含銅量及約198,000噸含鈷量。這表示銅儲量及鈷儲量較於二零二零年十二月三十一日的估算值1,137,000噸及200,000噸分別減少2%及減少1%。

礦產儲量變動

本集團二零二一年礦產儲量中的銅和鈷含量皆有所下跌。Ruashi礦場銅鈷儲量及Kinsenda礦場銅儲量的減少乃由於年內的採礦耗減。

原礦石重新分類至堆儲量部分抵銷Ruashi礦場礦產儲量的耗減。由於採礦及尾礦儲料堆，Ruashi堆儲原料增加8%(以噸計)。

於Kinsenda，估算所採用的貧化率已由5%修改為8%，導致礦產儲量略微下降。

於二零二一年，Musonoi的礦產儲量保持不變。由於Musonoi項目仍在開發中，因此該項目於年內並沒有採礦耗減。

並無就Ruashi地下資源量及Lubembe項目申報礦產儲量。

由於Chibuluma南礦場(含Chifupu礦床)自二零二一年四月一日起以融資租賃方式出租，故本集團此後不再呈報Chibuluma南礦場(含Chifupu礦床)的礦產儲量。

展望

於Ruashi礦場已進行一項研究，於礦坑適當優化後將部分礦井外資源重新分類為礦產儲量。預計該研究將於二零二二年年末前完成。

MINERAL RESOURCES

礦產資源量

		31 December 2021 二零二一年十二月三十一日					31 December 2020 二零二零年十二月三十一日				
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)	
Copper-Cobalt Resources	銅鈷資源量										
Ruashi Mine (oxide and mixed within ultimate pit shell)	Ruashi礦場 (設計礦場境界 範圍內氧化物及 混合礦物)										
Measured	探明	0.1	6.1	0.4	6	0	0.1	6.1	0.4	6	0
Indicated	控制	8.3	2.1	0.2	174	15	10.2	2.1	0.2	214	17
Inferred	推斷	0.6	2.3	0.2	15	1	0.9	2.2	0.2	19	2
Sub-Total	小計	9.0	2.2	0.2	195	17	11.2	2.1	0.2	240	20
Ruashi Mine (oxide stockpile and tailings)	Ruashi礦場 (氧化 物堆及尾礦)										
Measured	探明	-	-	-	-	-	-	-	-	-	-
Indicated	控制	6.0	1.5	0.2	91	14	5.5	1.2	0.2	65	14
Inferred	推斷	-	-	-	-	-	-	-	-	-	-
Sub-Total	小計	6.0	1.5	0.2	91	14	5.5	1.2	0.2	65	14
Ruashi Mine (sulphide within ultimate pit shell)	Ruashi礦場 (設計 礦場境界以內的 硫化物)										
Measured	探明	0.0	0.5	0.1	0	0	0.0	0.5	0.1	0	0
Indicated	控制	1.4	2.8	0.3	39	4	1.5	2.8	0.3	43	4
Inferred	推斷	0.4	2.6	0.3	10	1	0.4	2.7	0.3	11	1
Sub-Total	小計	1.8	2.7	0.3	49	5	2.0	2.7	0.3	53	5
Ruashi Mine (oxide and mixed outside of ultimate pit shell - potentially exploitable from underground)	Ruashi礦場 (設計 礦場境界範圍以 外的氧化物及 混合礦物 - 潛 在可地下開採 礦物)										
Measured	探明	-	-	-	-	-	-	-	-	-	-
Indicated	控制	2.8	2.5	0.3	71	8	2.8	2.5	0.3	71	8
Inferred	推斷	1.0	2.3	0.3	23	3	1.0	2.3	0.3	23	3
Sub-Total	小計	3.9	2.4	0.3	94	11	3.9	2.4	0.3	94	11

Resources and Reserves 資源量及儲量

MINERAL RESOURCES (Continued)

礦產資源量(續)

		31 December 2021 二零二一年十二月三十一日					31 December 2020 二零二零年十二月三十一日				
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)	
Ruashi Mine (sulphide outside of ultimate pit shell – potentially exploitable from underground)	Ruashi礦場 (設計礦場境界範圍以外的硫化物 – 潛在可地下開採礦物)										
Measured	探明	–	–	–	–	–	–	–	–	–	–
Indicated	控制	6.7	2.0	0.3	133	20	6.7	2.0	0.3	133	20
Inferred	推斷	3.7	1.4	0.4	52	15	3.7	1.4	0.4	52	15
Sub-Total	小計	10.3	1.8	0.3	185	35	10.3	1.8	0.3	185	35
Musonoi Project (oxide)	Musonoi項目 (氧化物)										
Measured	探明	4.7	3.1	1.0	144	48	4.7	3.1	1.0	144	48
Indicated	控制	1.2	1.9	0.8	22	9	1.2	1.9	0.8	22	9
Inferred	推斷	1.4	2.0	0.7	29	10	1.4	2.0	0.7	29	10
Sub-Total	小計	7.3	2.7	0.9	195	68	7.3	2.7	0.9	195	68
Musonoi Project (mixed and sulphide)	Musonoi項目 (混合礦物及硫化物)										
Measured	探明	12.8	2.7	0.8	339	100	12.8	2.7	0.8	339	100
Indicated	控制	13.1	2.2	0.8	292	107	13.1	2.2	0.8	292	107
Inferred	推斷	11.6	2.2	0.8	258	88	11.6	2.2	0.8	258	88
Sub-Total	小計	37.4	2.4	0.8	890	295	37.4	2.4	0.8	890	295
Summary (Copper-Cobalt Resources)	概要 (銅鈷資源量)										
Measured	探明	17.6	2.8	0.8	489	149	17.6	2.8	0.8	489	149
Indicated	控制	39.4	2.1	0.4	822	177	40.9	2.1	0.4	840	179
Inferred	推斷	18.7	2.1	0.6	387	118	19.0	2.1	0.6	393	119
Total Cu-Co Resources	銅鈷資源量總計	75.7	2.2	0.6	1,698	444	77.5	2.2	0.6	1,722	447

MINERAL RESOURCES (Continued)

礦產資源量(續)

		31 December 2021 二零二一年十二月三十一日					31 December 2020 二零二零年十二月三十一日				
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (Co) (%銅) (%鈷)		Contained Metals 含金屬量 (kt Cu) (Co) (千噸銅) (千噸鈷)		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (Co) (%銅) (%鈷)		Contained Metals 含金屬量 (kt Cu) (Co) (千噸銅) (千噸鈷)	
Copper-only Resources	僅銅資源量										
Kinsenda Mine	Kinsenda礦場										
Measured	探明	0.7	4.5	-	30	-	0.7	4.5	-	31	-
Indicated	控制	11.4	5.2	-	588	-	11.6	5.2	-	602	-
Inferred	推斷	10.2	4.1	-	417	-	10.2	4.1	-	419	-
Sub-Total	小計	22.2	4.7	-	1,035	-	22.6	4.7	-	1,052	-
Lubembe Project (oxide and sulphide)	Lubembe項目 (氧化物及硫化物)										
Measured	探明	3.5	1.2	-	44	-	-	-	-	-	-
Indicated	控制	73.8	2.0	-	1,469	-	56.5	1.8	-	1,039	-
Inferred	推斷	17.4	2.3	-	396	-	36.6	2.1	-	761	-
Sub-Total	小計	94.8	2.0	-	1,909	-	93.1	1.9	-	1,800	-
Chifupu Deposit (note 2)	Chifupu礦床(附註2)										
Measured	探明						0.0	2.2	-	0	-
Indicated	控制						0.9	2.4	-	21	-
Inferred	推斷						2.2	2.0	-	44	-
Sub-Total	小計						3.1	2.1	-	66	-
Summary Copper-only Resources	僅銅資源量概要										
Measured	探明	4.2	1.8	-	74	-	0.7	4.4	-	31	-
Indicated	控制	85.2	2.4	-	2,058	-	69.0	2.4	-	1,662	-
Inferred	推斷	27.6	2.9	-	812	-	49.0	2.5	-	1,225	-
Total Cu-only Resources	僅銅資源量總計	117.0	2.5	-	2,945	-	118.7	2.5	-	2,918	-
JCI Total Resources	金川國際總資源量										
Measured	探明	21.8			564	149	18.3			521	149
Indicated	控制	124.6			2,880	177	109.9			2,502	179
Inferred	推斷	46.3			1,199	118	68.1			1,617	119
Grand Total Resources	總資源量匯總	192.7			4,643	444	196.2			4,640	447

Resources and Reserves

資源量及儲量

MINERAL RESERVES

礦產儲量

		31 December 2021 二零二一年十二月三十一日					31 December 2020 二零二零年十二月三十一日				
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)	
Copper-Cobalt Reserves	銅鈷儲量										
Ruashi Mine (in-pit oxide and mixed)	Ruashi礦場 (境界範圍內氧化物及混合礦物)										
Proved	證實	0.1	6.1	0.4	6	0	0.1	6.1	0.4	6	0
Probable	概略	4.7	2.9	0.2	136	10	6.1	2.8	0.2	171	12
Sub-Total	小計	4.8	2.9	0.2	142	11	6.2	2.9	0.2	178	13
Ruashi Mine (oxide stockpile and tailings)	Ruashi礦場 (氧化物堆及尾礦)										
Proved	證實	-	-	-	-	-	-	-	-	-	-
Probable	概略	5.9	1.4	0.2	85	14	5.5	1.2	0.2	65	14
Sub-Total	小計	5.9	1.4	0.2	85	14	5.5	1.2	0.2	65	14
Musonoi Project (oxide)	Musonoi項目 (氧化物)										
Proved	證實	2.7	3.4	1.0	91	28	2.8	3.2	1.1	90	30
Probable	概略	0.5	3.3	0.8	16	4	0.6	2.0	0.7	12	4
Sub-Total	小計	3.2	3.3	1.0	107	32	3.4	3.0	1.0	102	34
Musonoi Project (mixed and sulphide)	Musonoi項目 (混合礦物及硫化物)										
Proved	證實	8.8	3.0	0.8	266	72	8.6	3.1	0.9	270	73
Probable	概略	8.2	2.8	0.9	233	70	8.3	2.7	0.8	222	67
Sub-Total	小計	17.0	2.9	0.8	499	142	16.9	2.9	0.8	492	140
Summary Copper-Cobalt Reserves	銅鈷儲量概要										
Proved	證實	11.6	3.1	0.9	363	100	11.5	3.2	0.9	366	103
Probable	概略	19.4	2.4	0.5	471	97	20.5	2.3	0.5	470	97
Total Cu-Co Reserves	銅鈷儲量總計	31.0	2.7	0.6	833	198	32.0	2.6	0.6	836	200

MINERAL RESERVES (Continued)

礦產儲量(續)

		31 December 2021 二零二一年十二月三十一日					31 December 2020 二零二零年十二月三十一日				
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)		Contained Metals 含金屬量 (kt Cu) (千噸銅)	
Copper-only Reserves	僅銅儲量										
Kinsenda Mine	Kinsenda礦場										
Proved	證實	0.0	5.4	-	2	-	0.0	5.4	-	2	-
Probable	概略	4.9	5.7	-	277	-	5.1	5.8	-	293	-
Sub-Total	小計	4.9	5.6	-	279	-	5.1	5.8	-	294	-
Chifupu Deposit (note 2)	Chifupu礦床(附註2)										
Proved	證實						0.0	1.8	-	0.2	-
Probable	概略						0.3	1.9	-	6	-
Sub-Total	小計						0.3	1.9	-	6	-
Summary Copper-only Reserves	僅銅儲量概要										
Proved	證實	0.0	5.4	-	2	-	0.0	4.5	-	2	-
Probable	概略	4.9	5.7	-	277	-	5.4	5.6	-	298	-
Total Cu-only Reserves	僅銅儲量總計	4.9	5.7	-	279	-	5.4	5.5	-	300	-
JCI Total Reserves	金川國際總儲量										
Proved	證實				365	100	11.5			368	103
Probable	概略				748	97	25.8			768	97
Grand Total Reserves	總儲量匯總	35.9			1,112	198	37.4			1,137	200

Resources and Reserves 資源量及儲量

Notes:

- Totals may not add up correctly due to rounding
- As detailed in the "Significant Events" section under "Management Discussion and Analysis" of this Annual Report, Chibuluma South Mine (including Chifupu Deposit) has been leased out to an independent third party under a finance lease agreement since 1 April 2021. As at 31 December 2021, Chifupu Deposit's mineral resources and mineral reserves were estimated as follows:

MINERAL RESOURCES

		31 December 2021 二零二一年十二月三十一日		
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)	Contained Metals 含金屬量 (kt Cu) (千噸銅)
Measured	探明	0.0	3.6	0
Indicated	控制	0.8	2.3	18
Inferred	推斷	2.2	2.0	44
Total	總計	3.0	2.1	62

MINERAL RESERVES

		31 December 2021 二零二一年十二月三十一日		
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)	Contained Metals 含金屬量 (kt Cu) (千噸銅)
Proved	證實	–	–	–
Probable	概略	0.3	1.9	5
Total	總計	0.3	1.9	5

附註：

- 由於約整，總數未必等於相關數字相加
- 如本年報「管理層討論及分析」中「重大事件」一節所詳述，自二零二一年四月一日起，Chibuluma南礦場（包括Chifupu礦床）以融資租賃協議出租予一名獨立第三方。於二零二一年十二月三十一日，Chifupu礦床的礦產資源量及礦產儲量估計如下：

礦產資源量

		31 December 2021 二零二一年十二月三十一日		
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)	Contained Metals 含金屬量 (kt Cu) (千噸銅)
Measured	探明	0.0	3.6	0
Indicated	控制	0.8	2.3	18
Inferred	推斷	2.2	2.0	44
Total	總計	3.0	2.1	62

礦產儲量

		31 December 2021 二零二一年十二月三十一日		
		Tonnage 噸數 (Mt) (百萬噸)	Grade 品位 (% Cu) (%銅)	Contained Metals 含金屬量 (kt Cu) (千噸銅)
Proved	證實	–	–	–
Probable	概略	0.3	1.9	5
Total	總計	0.3	1.9	5

KEY ASSUMPTIONS

Commodities prices

Mineral Reserves have been determined using long-term copper and cobalt prices of US\$7,200 per tonne and US\$20.4 per pound, and average mining and processing costs. Mineral Resources have been reported within open pit or underground stope design shells using long-term copper and cobalt prices of US\$10,800 per tonne and US\$30.6 per pound respectively (1.5 times of the copper and cobalt prices used for reserves). Price assumptions for all metals have maintained unchanged from the Resources and Reserves Report prepared as of 31 December 2020.

Processing recoveries

Average processing recoveries are shown in the table below:

關鍵假設

商品價格

礦產儲量乃按假設銅和鈷的長期價格每噸7,200美元及每磅20.4美元以及平均採礦和冶煉成本估算。礦產資源量按照露天礦或地下採礦邊界設計及銅鈷長期價格每噸10,800美元及每磅30.6美元(儲量所用銅鈷價格之1.5倍)估算。針對所有金屬的價格假設相比二零二零年十二月三十一日編製之資源量及儲量報告保持不變。

冶煉回收

下表所示為平均冶煉回收率：

Site 礦址	Product	產物	Recovery 回收率		Concentrate Moisture Assumptions 精礦水分假設
			Cu 銅	Co 鈷	
Kinsenda	Sulphide Copper Concentrate	硫化銅精礦	98%	–	12%
	Oxide Copper Concentrate	氧化銅精礦	57%	–	15%
Ruashi	Copper Cathodes	電解銅	83%	–	–
	Cobalt Hydroxide Concentrate	氫氧化鈷精礦	–	67%	15%
Musonoi	Sulphide Copper/Cobalt Concentrate	硫化銅/鈷精礦	91%	88%	11%
	Crude Copper & Cobalt Hydroxide	粗銅及氫氧化鈷	85%	80%	30%

Resources and Reserves 資源量及儲量

KEY ASSUMPTIONS (Continued)

Cut-off grades

Multiple cut-off grades adopted in the estimation of the Mineral Resources and Mineral Reserves are shown in the tables below:

Cut-off grades adopted for Mineral Resources estimation

關鍵假設(續)

邊界品位

下表所示為就礦產資源量及礦產儲量估算應用的多個邊界品位：

就礦產資源量估算應用的邊界品位

Site 礦址	Mineralisation 礦化	Likely Mining Method 可能採礦方法	Cut-off Value 邊界值	Comments 說明
Ruashi	Primary Mineral Resource (Cu & Co) 主要礦產資源 (銅和鈷)	Open-pit 露天	0.68% TCu_Eq 0.68%總銅當量	Cu_Eq = (Cu + 4 x Co): based on Long-Term Mineral Resources copper price of US\$10,800 per tonne or cobalt price of US\$67,500 per tonne (US\$30.6 per pound) and estimation is based on constrained in-situ related grades. 銅當量 = (銅 + 4 × 鈷)：基於長期礦產資源量銅價每噸10,800美元或鈷價每噸67,500美元 (每磅30.6美元)，估算乃根據限制原位相關品位作出。
	Ex-pit HG Oxide Copper 境界外高品位氧化銅	Open-pit 露天	4.27% TCu (Average) 4.27%總銅 (平均值)	All ex-pit material average grades reported are as estimated by Ruashi Grade Control Team during material re-classification and for existing stockpile reclaim. 所呈報的所有境界外物質平均品位乃由Ruashi品位監控團隊在物質重新分類期間估算，估算目的為現有堆儲量回收。
	Ex-pit HG Oxide Cobalt 境界外高品位氧化鈷		0.33% TCo (Average) 0.33%總鈷 (平均值)	
	Ex-pit LG Oxide Copper 境界外低品位氧化銅	Open-pit 露天	1.13% TCu (Average) 1.13%總銅 (平均值)	
	Ex-pit LG Oxide Cobalt 境界外低品位氧化鈷		0.22% TCo (Average) 0.22%總鈷 (平均值)	
	Ex-pit BOMZ Copper 境界外BOMZ銅	Open-pit 露天	0.61% TCu (Average) 0.61%總銅 (平均值)	
	Ex-pit BOMZ Cobalt 境界外BOMZ鈷		0.76% TCo (Average) 0.76%總鈷 (平均值)	
	Historical Tailings Copper 舊尾礦銅	Open-pit 露天	1.90% TCu (Average) 1.90%總銅 (平均值)	
	Historical Tailings Cobalt 舊尾礦鈷		0.30% TCo (Average) 0.30%總鈷 (平均值)	
	Ex-pit Mixed Copper 境界外混合銅	Open-pit 露天	5.62% TCu (Average) 5.62%總銅 (平均值)	
	Ex-pit Mixed Cobalt 境界外混合鈷		0.24% TCo (Average) 0.24%總鈷 (平均值)	
	Ex-pit Sulphide Copper 境界外硫化銅	Open-pit 露天	4.73% TCu (Average) 4.73%總銅 (平均值)	
	Ex-pit Sulphide Cobalt 境界外硫化鈷		0.07% TCo (Average) 0.07%總鈷 (平均值)	

KEY ASSUMPTIONS (Continued)

Cut-off grades (Continued)

Multiple cut-off grades adopted in the estimation of the Mineral Resources and Mineral Reserves are shown in the tables below: (Continued)

Cut-off grades adopted for Mineral Resources estimation (Continued)

關鍵假設(續)

邊界品位(續)

下表所示為就礦產資源量及礦產儲量估算應用的多個邊界品位:(續)

就礦產資源量估算應用的邊界品位(續)

Site 礦址	Mineralisation 礦化	Likely Mining Method 可能採礦方法	Cut-off Value 邊界值	Comments 說明
Musonoi	Primary Oxide Copper 原生氧化銅	Underground 地下	3.17% ASCu _{Eq} 3.17%酸溶銅當量	Cu _{Eq} = (Cu + 3.9 x Co): based on Long-Term Mineral Resources copper price of US\$10,800 per tonne or cobalt price of US\$67,500 per tonne (US\$30.6 per pound) and estimation is based on constrained in-situ related grades.
	Primary Oxide Cobalt 原生氧化鈷			
	Primary Mixed and Sulphide Copper 原生混合銅及硫化銅	Underground 地下	1.83% TCu _{Eq} 1.83%總銅當量	銅當量 = (銅 + 3.9 × 鈷) : 基於長期礦產資源量銅價每噸10,800美元或鈷價每噸67,500美元(每磅30.6美元), 估算乃根據限制原位相關品位作出。
	Primary Mixed and Sulphide Cobalt 原生混合鈷及硫化鈷			
Kinsenda	Primary Sulphide Copper 原生硫化銅	Underground 地下	1.40% TCu 1.40%總銅	In-situ copper Mineral Resources constrained within a metal price of US\$10,800 per tonne. 原位銅礦產資源量受限於金屬價格每噸10,800美元。
Lubembe	Primary Sulphide Copper 原生硫化銅	N/A 不適用	0.85% TCu 0.85%總銅	In-situ copper Mineral Resources constrained within an economical metal price. 原位銅礦產資源量受限於經濟型金屬價格。

Resources and Reserves 資源量及儲量

KEY ASSUMPTIONS (Continued)

Cut-off grades (Continued)

Cut-off grades adopted for Mineral Reserves estimation

關鍵假設(續)

邊界品位(續)

就礦產儲量估算應用的邊界品位

Site 礦址	Mineralisation 礦化	Likely Mining Method 可能採礦方法	Cut-off Value 邊界值	Comments 說明
Ruashi	Primary Oxide and Mixed Copper 原生氧化銅及混合銅	Open-pit 露天	1.17%TCu or/and 0.30%TCo	Based on Long-Term breakeven copper price of US\$7,200 per tonne or cobalt price of US\$45,000 per tonne (US\$20.4 per pound) and reserve estimation is based on constrained insitu related grades. 基於長期保本銅價每噸7,200美元或鈷價每噸45,000美元(每磅20.4美元)，儲量估算乃根據限制原位相關品位作出。 All ex-pit material average grades reported are as estimated by Ruashi Grade Control Team during material re-classification and for existing stockpile reclaim. 所呈報的所有境界外物質平均品位乃由Ruashi品位監控團隊在物質重新分類期間估算，估算目的為現有堆儲量回收。
	Primary Oxide and Mixed Cobalt 原生氧化鈷及混合鈷		1.17%總銅或/及 0.30%總鈷	
	Ex-pit HG Oxide Copper 境界外高品位氧化銅	Open-pit 露天	4.27% TCu (Average) 4.27%總銅(平均值)	
	Ex-pit HG Oxide Cobalt 境界外高品位氧化鈷		0.33% TCo (Average) 0.33%總鈷(平均值)	
	Ex-pit LG Oxide Copper 境界外低品位氧化銅	Open-pit 露天	1.13% TCu (Average) 1.13%總銅(平均值)	
	Ex-pit LG Oxide Cobalt 境界外低品位氧化鈷		0.22% TCo (Average) 0.22%總鈷(平均值)	
	Ex-pit BOMZ Copper 境界外BOMZ銅	Open-pit 露天	0.61% TCu (Average) 0.61%總銅(平均值)	
	Ex-pit BOMZ Cobalt 境界外BOMZ鈷		0.76% TCo (Average) 0.76%總鈷(平均值)	
	Historical Tailings Copper 舊尾礦銅	Open-pit 露天	1.90% TCu (Average) 1.90%總銅(平均值)	
	Historical Tailings Cobalt 舊尾礦鈷		0.30% TCo (Average) 0.30%總鈷(平均值)	
Musonoi	Ex-pit Mixed Copper 境界外混合銅	Open-pit 露天	5.62% TCu (Average) 5.62%總銅(平均值)	Based on Long-Term breakeven reserve copper price of US\$7,200 per tonne or cobalt price of US\$45,000 per tonne (US\$20.4 per pound) and estimation is constrained within 2019 optimised and scheduled stopes. 基於長期保本儲備銅價每噸7,200美元或鈷價每噸45,000美元(每磅20.4美元)，估算受限於二零一九年優化及計劃回採法。
	Ex-pit Mixed Cobalt 境界外混合鈷		0.24% TCo (Average) 0.24%總鈷(平均值)	
	Primary Oxide Copper 原生氧化銅	Underground 地下	3.80% ASCu _{Eq} 3.80%酸溶銅當量	
Musonoi	Primary Oxide Cobalt 原生氧化鈷			Based on Long-Term breakeven reserve copper price of US\$7,200 per tonne or cobalt price of US\$45,000 per tonne (US\$20.4 per pound) and estimation is constrained within 2019 optimised and scheduled stopes. 基於長期保本儲備銅價每噸7,200美元或鈷價每噸45,000美元(每磅20.4美元)，估算受限於二零一九年優化及計劃回採法。
	Primary Mixed and Sulphide Copper 原生混合銅及硫化銅	Underground 地下	2.80% TCu _{Eq} 2.80%總銅當量	
Musonoi	Primary Mixed and Sulphide Cobalt 原生混合鈷及硫化鈷			Based on Long-Term breakeven reserve copper price of US\$7,200 per tonne or cobalt price of US\$45,000 per tonne (US\$20.4 per pound) and estimation is constrained within 2019 optimised and scheduled stopes. 基於長期保本儲備銅價每噸7,200美元或鈷價每噸45,000美元(每磅20.4美元)，估算受限於二零一九年優化及計劃回採法。
	Primary Sulphide Copper 原生硫化銅	Underground 地下	2.20% TCu 2.20%總銅	
Kinsenda	Primary Sulphide Cobalt 原生硫化鈷	Underground 地下		Based on constraint within 2019 optimised and scheduled stopes at reserve breakeven metal price of US\$7,200 per tonne. 基於二零一九年優化及計劃回採法所限的儲備保本金屬價格每噸7,200美元。

COMPETENT PERSON STATEMENT

Mineral Resources and Mineral Reserves information in this statement has been compiled by Mr. Karfai Leung, Mr. Hongbo Liu and Mr. Shugang Zhao of BAW Mineral Partners Limited ("BAW"), which all of them are Competent Persons under the SAMREC Code. BAW is a consulting firm independent from the Group. BAW consent to the inclusion of the relevant information in this report in the form and context in which it appears.

Mr. Karfai Leung (MPhil, MAusIMM), as the project manager and senior geologist of BAW. He has more than fifteen years of extensive experience in the mining industry globally including project generation, prospecting, field exploration, mineral resource definition, health, safety and environment management, mineral assets valuation, project evaluation, merger and acquisition deals and initial public offering process for energy, base metals, non-ferrous metals and precious metals. He has hands-on and extensive experience in cash flow modelling, valuation, due diligence, capital raising and project management.

Mr. Hongbo Liu (M. Sc., MAusIMM), as a senior mining engineer of BAW, has more than fifteen years of underground and open pit mining experience in mine operations, constructions, project management, engineering, mine development, ground control, ventilation, backfill, haulage and technical services.

Mr. Shugang Zhao (M. Sc., MAusIMM), as a senior resource geologist of BAW, earned his Master's degree in Safety Technology and Engineering in digital mining from Central South University. He has more than ten years of extensive experience in mineral exploration, resource database management, 3D resource modelling, resource and reserve estimation, mine planning and production scheduling.

合資格人士聲明

本聲明中的礦產資源量及礦產儲量資料由BAW Mineral Partners Limited (「BAW」)的梁嘉輝先生、劉洪波先生及趙書剛先生所編制，其皆為SAMREC規則下的合資格人士。BAW為一家獨立於本集團的顧問公司，BAW同意於本報告中將有關資料按其列示的形式及涵義載入本報告。

梁嘉輝先生(MPhil, MAusIMM)，為BAW項目經理及高級地質師。彼在全球採礦業擁有超過15年的豐富經驗，包括項目生成、勘探、現場勘探、礦產資源界定、健康、安全及環境管理、礦物資產評估、項目評估、併購交易以及能源、普通金屬、有色金屬及貴金屬的首次公開招股流程。彼在現金流建模、評估、盡職審查、資金籌集和項目管理方面具有豐富的實踐經驗。

劉洪波先生(M. Sc., MAusIMM)，為BAW的高級採礦工程師，擁有超過15年的地下及露天採礦經驗，涉及礦山作業、建設、項目管理、工程、礦山開發、地面控制、通風、回填、運輸及技術服務等。

趙書剛先生(M. Sc., MAusIMM)，為BAW的高級資源地質師，彼從中南大學獲得了數位採礦安全技術和工程碩士學位。彼在礦產勘探、資源資料庫管理、3D資源建模、資源和儲量估算、礦山計劃和生產調度方面擁有十多年的豐富經驗。

Management Discussion and Analysis

管理層討論及分析

BUSINESS REVIEW

JCI and its subsidiaries are principally engaged in (i) the mining of metals, primarily copper and cobalt, in the DRC and Zambia; and (ii) the trading of mineral and metal products in Hong Kong.

The financial results of the Group show a significant improvement in 2021 which were primarily driven by the higher commodity prices. LME copper price reached an all-time high of US\$10,720 per tonne in May 2021 and closed at US\$9,550 per tonne at the end of December 2021. The Group's results were positively impacted by the higher prices which offset the impact of lower sales volumes. Compared to 2020, the average LME copper price increased by 51% from US\$6,169 per tonne to US\$9,315 per tonne.

Mining Operations

The Group has majority control over two operating mines in Africa which are Ruashi Mine, a copper and cobalt mine located in Lubumbashi, the DRC, and Kinsenda Mine, a copper mine located in Haut Katanga Province, the DRC. The Group also has ownership over a copper mine located in Zambia which has been leased out under finance lease agreement (Chibuluma South Mine including Chifupu Deposit).

In 2021, the Group produced 61,260 tonnes of copper (2020: 72,477 tonnes) and 3,379 tonnes of cobalt (2020: 4,158 tonnes) and sold 57,001 tonnes of copper (2020: 67,843 tonnes) and 2,617 tonnes of cobalt (2020: 5,468 tonnes) which generated revenue of US\$514.0 million and US\$106.6 million respectively (2020: US\$388.1 million and US\$109.5 million respectively).

Copper production was 15% lower in 2021 as compared to 2020. Ruashi Mine's copper production in 2021 of 33,063 tonnes was 2% lower as compared to 2020 of 33,897 tonnes due to lower ore feed grade and lower copper recovery rate. Kinsenda Mine reported lower copper production of 28,197 tonnes which was 8% lower than 2020 of 30,557 tonnes, as the ore grade and feed grade were lower in 2021.

The Group's cobalt production was 19% lower in 2021 as compared to 2020. The lower production was due to lower grade of cobalt ore mined and lower cobalt recoveries.

The Group also has control over Musonoi Project, a copper and cobalt project at development stage, and Lubembe Project, a copper project in exploration stage. Both projects are located in the DRC.

業務回顧

金川國際及其附屬公司主要從事(i)於剛果(金)及贊比亞開採金屬，主要為銅及鈷；及(ii)於香港進行礦產品及金屬產品貿易。

本集團於二零二一年的財務業績顯著好轉，乃主要受大宗商品價格上漲所帶動。倫金所銅價於二零二一年五月創下每噸10,720美元的歷史新高，並於二零二一年十二月底收盤時達到每噸9,550美元。價格上漲為本集團業績帶來正面影響並抵銷銷量下滑的影響。相比於二零二零年，倫金所銅平均價格由每噸6,169美元上漲51%至每噸9,315美元。

採礦業務

本集團對非洲兩個營運礦場擁有多數控制權，分別為位於剛果(金)盧本巴希之銅鈷礦Ruashi礦場及位於剛果(金)上加丹加省之銅礦Kinsenda礦場。本集團亦持有贊比亞的一個銅礦場(即包括Chifupu礦床在內的Chibuluma南礦場)的股權，其已以融資租賃協議租出。

於二零二一年，本集團生產61,260噸銅(二零二零年：72,477噸)及3,379噸鈷(二零二零年：4,158噸)，並出售57,001噸銅(二零二零年：67,843噸)及2,617噸鈷(二零二零年：5,468噸)，產生收益分別為514.0百萬美元及106.6百萬美元(二零二零年：分別為388.1百萬美元及109.5百萬美元)。

二零二一年銅產量較二零二零年下降15%。二零二一年Ruashi礦場銅產量為33,063噸，較二零二零年的33,897噸減少2%，乃由於礦石入廠品位下降及銅回收率下降所致。由於二零二一年礦石品位及入廠品位下降，Kinsenda礦場錄得較低銅產量28,197噸，較二零二零年的30,557噸減少8%。

本集團於二零二一年的鈷產量較二零二零年減少19%。產量減少乃由於開採之鈷礦石品位較低及鈷回收率較低所致。

本集團亦擁有Musonoi項目(一個處於開發階段之銅鈷礦項目)及Lubembe項目(一個處於勘探階段之銅礦項目)的控制權。兩個項目均位於剛果(金)。

Trading of Mineral and Metal Products

In 2021, the trading division of the Group recorded a turnover of US\$211.3 million (2020: US\$166.9 million) via the trading of commodities, including copper cathode, copper matte and cobalt hydroxide.

FINANCIAL REVIEW

The Group's operating results for the year ended 31 December 2021 are a consolidation of the results from the operating mines in the DRC and Zambia and the trading of mineral and metal products in Hong Kong. The analysis below comprised of both continuing operations and discontinued operations of the Group.

Revenue

The revenue for the Group's operations in 2021 was US\$831.9 million, representing an increase of 25% compared to US\$664.6 million for 2020. Reasons for the increase in revenue during the year are discussed below.

The Group's sales performance from its mining operations and trading of mineral and metal products was as follows:

礦產品及金屬產品貿易

於二零二一年，本集團的貿易分部透過包括電解銅、冰銅及氫氧化鈷等商品貿易錄得211.3百萬美元（二零二零年：166.9百萬美元）的營業額。

財務回顧

本集團截至二零二一年十二月三十一日止年度之經營業績為綜合位於剛果(金)及贊比亞之經營礦場及位於香港之礦產品及金屬產品貿易業務之業績。下文之分析包含本集團之持續經營業務及終止經營業務。

收益

於二零二一年，本集團經營業務之收益為831.9百萬美元，較二零二零年之664.6百萬美元增加25%。年內收益增加的原因於下文論述。

本集團採礦業務與礦產品及金屬產品貿易之銷售表現如下：

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年	2020 二零二零年
Mining operations:	採礦業務：		
Volume of copper sold (tonnes)	銅銷售量（噸）	57,001	67,843
Volume of cobalt sold (tonnes)	鈷銷售量（噸）	2,617	5,468
Average price realised per tonne of copper (US\$)	每噸銅平均實現售價（美元）	9,018	5,721
Average price realised per tonne of cobalt (US\$)	每噸鈷平均實現售價（美元）	40,738	20,031
Revenue from sales of copper (US\$'000)	銅銷售收益（千美元）	514,025	388,140
Revenue from sales of cobalt (US\$'000)	鈷銷售收益（千美元）	106,613	109,529
Total revenue from mining operations – including provisional pricing adjustment (US\$'000)	採礦業務總收益 – 包括臨時定價調整（千美元）	620,638	497,669
Trading of mineral and metal products: Revenue – trading of externally sourced mineral and metal products – including provisional pricing adjustment (US\$'000)	礦產品及金屬產品貿易：收益 – 向外採購礦產品及金屬產品貿易 – 包括臨時定價調整（千美元）	211,261	166,893
Total Revenue (US\$'000)	總收益（千美元）	831,899	664,562

Note: Pricing coefficients were considered in actual sales revenue

附註：於實際銷售收益中已考慮定價系數

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The average LME copper and MB cobalt prices for the year ended 31 December 2021 were US\$9,315 per tonne (2020: US\$6,169 per tonne) and US\$52,714 per tonne (2020: US\$33,954 per tonne) respectively, representing an increase of 51% and 55% respectively. The increase in benchmark copper and cobalt price in 2021 impacted positively on revenue.

Copper revenue from mining operations in 2021 increased by 32% as compared to 2020. This was due to 58% increase in the average realised copper price in 2021 as compared to 2020 partly offset by a 16% decrease in volume of copper sold in 2021 as compared to 2020.

In 2021, the Group sold 57,001 tonnes of copper content contained in copper cathode, copper concentrate and copper blister (2020: 67,843 tonnes), of which the copper sales volume of Ruashi Mine in 2021 was 27,930 tonnes, a decrease of 17% from 33,829 tonnes in 2020, and the copper sales volume of Kinsenda Mine in 2021 was 29,071 tonnes, an increase of 12% from 25,885 tonnes in 2020.

The decrease in Ruashi Mine's copper sales was due to the shortage of trucks in the DRC, which led to the delay in transport of finished product out of the mine in November and December of 2021 and has affected the Group's delivery to customers. As at 31 December 2021, Ruashi had 5,242 tonnes of copper cathode inventory on hand, which was estimated to have a market value of approximately US\$52.4 million under current copper price of approximately US\$10,000 per tonne.

Copper price hit multi year low in early 2020. The Group has decided to send copper concentrate produced by Kinsenda Mine to a local smelter for processing into copper blister starting from March 2020. Due to the additional time required for processing copper concentrate to copper blister, no sales were recorded by Kinsenda in March and April 2020. Kinsenda started selling copper blister to international market in May 2020. This resulted in lower than normal sales volume in 2020.

Upon the expiry of the processing agreement of the copper blister, Kinsenda Mine ceased to sell copper blister in June 2021. Kinsenda Mine entered into offtake agreements for exporting copper concentrates and started selling copper concentrates since July 2021.

Chibuluma South Mine (including Chifupu Deposit) sold 8,129 tonnes of copper in 2020 under the Group's operation. Starting from 2021, the operation was leased out under a finance lease agreement. The Group is entitled to fixed lease income and variable royalty income under the finance lease agreement. The lessee produced and sold 3,051 tonnes of copper in 2021 and the Group has recorded a royalty income of approximately US\$2.4 million under the finance lease agreement.

截至二零二一年十二月三十一日止年度，倫敦所銅平均價格及金屬導報鈷平均價格分別為每噸9,315美元(二零二零年：每噸6,169美元)及每噸52,714美元(二零二零年：每噸33,954美元)，分別增加51%及55%。於二零二一年，基準銅價及鈷價有所上漲，為收益帶來利好。

二零二一年來自採礦業務的銅收入較二零二零年增加32%。此乃由於二零二一年平均實現銅價較二零二零年上升58%，但被二零二一年銅銷量較二零二零年減少16%所部分抵銷。

於二零二一年，本集團售出銅含量57,001噸的電解銅、銅精礦及粗銅(二零二零年：67,843噸)，其中Ruashi礦場於二零二一年的銅銷量為27,930噸，較二零二零年的33,829噸減少17%，而Kinsenda礦場於二零二一年的銅銷量為29,071噸，較二零二零年的25,885噸增加12%。

Ruashi礦場銅銷售額下滑乃由於剛果(金)卡車短缺導致二零二一年十一月及十二月的產成品延遲運出礦場，並影響到本集團向客戶的交付。於二零二一年十二月三十一日，Ruashi擁有5,242噸電解銅庫存，按現行銅價約每噸10,000美元估算，其市場價值為約52.4百萬美元。

二零二零年初，銅價達到多年來的低位。本集團決定自二零二零年三月起將Kinsenda礦場所生產的銅精礦送至當地冶煉廠加工為粗銅。因需要額外時間將銅精礦加工為粗銅，故Kinsenda於二零二零年三月及四月並未錄得銷售。Kinsenda於二零二零年五月開始向國際市場銷售粗銅。此舉導致二零二零年銷量低於正常水平。

於粗銅加工協議屆滿後，Kinsenda礦場已於二零二一年六月停止銷售粗銅。Kinsenda礦場就出口銅精礦訂立承銷協議，並於二零二一年七月起開始銷售銅精礦。

在本集團的經營下，Chibuluma南礦場(包括Chifupu礦床)於二零二零年售出8,129噸銅。二零二一年起，該項業務根據一項融資租賃協議租出。根據該融資租賃協議，本集團有權享有固定租賃收入另加浮動礦權使用費收入。承租人於二零二一年生產及售出3,051噸銅，本集團根據該融資租賃協議錄得礦權使用費收入約2.4百萬美元。

Cobalt revenue from mining operations for 2021 decreased by 3% when compared to 2020 due to the decrease in volume of cobalt sold offset by higher average realised cobalt price. The volume of cobalt sold in 2021 was 2,617 tonnes which was 52% lower as compared to 2020, this was due to lower production level and as a result of transport delays caused by additional testing under COVID-19 and the disruption to Durban Port's operation during July 2021. The average realised cobalt price for 2021 was US\$40,738 per tonne which was 103% higher when compared to US\$20,031 per tonne in 2020.

With the voluntary liquidation of Shanghai Jinchuan Junhe, the Group started another trading business line in mid 2020. The trading of mineral and metal products segment recorded a revenue on trading of externally sourced commodities of US\$211.3 million in 2021 (2020: US\$166.9 million). For details of the voluntary liquidation of Shanghai Jinchuan Junhe, please refer to the "Significant Events" section in the Company's Annual Report 2020. The Group is also studying other trading opportunities in the commodities market.

Cost of Sales

Cost of sales represents the costs associated with the production of copper and cobalt from the Group's mining operations and the purchase cost for the trading of mineral and metal products. The major components of cost of sales are as follows:

二零二一年來自採礦業務的鈷收入較二零二零年減少3%，乃由於鈷銷量下滑被平均實現鈷價增加抵銷所致。二零二一年的鈷銷量為2,617噸，較二零二零年下降52%，此乃由於產能水平下降，以及額外新冠肺炎檢測和二零二一年七月德班港口營運受到騷亂影響造成的交通延誤。二零二一年的平均實現鈷價為每噸40,738美元，較二零二零的每噸20,031美元上漲103%。

隨著上海金川均和自願清算，本集團於二零二零年中另闢一條貿易業務線。於二零二一年，礦產品及金屬產品貿易分部錄得來自向外採購的大宗商品貿易收益211.3百萬美元（二零二零年：166.9百萬美元）。有關上海金川均和自願清算的詳情，請參閱本公司二零二零年報「重大事件」一節。本集團亦正研究大宗商品市場上之其他貿易機會。

銷售成本

銷售成本指與本集團採礦業務銅鈷生產有關之成本以及礦產品及金屬產品貿易之採購成本。銷售成本之主要組成部分如下：

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Mining operations:	採礦業務：		
Realisation costs	變現成本	7,233	17,166
Mining costs	採礦成本	63,517	57,219
Ore purchase	礦石採購	11,497	9,497
Salaries and wages	薪金及工資	50,734	49,302
Processing costs	冶煉成本	95,841	86,212
Engineering and technical costs	工程及技術成本	14,245	14,257
Safety, health, environment and community costs	安全、健康、環境及社區成本	5,130	4,452
Mine administrative expenses	礦場行政開支	34,452	30,610
Other cost	其他成本	-	271
Depreciation of property, plant and equipment	物業、廠房及設備之折舊	67,831	73,177
Depreciation of right-of-use assets	使用權資產之折舊	107	97
Amortisation of mineral rights	礦產權攤銷	14,434	15,244
Movement in inventories	庫存變動	(50,132)	17,342
Sub-total	小計	314,889	374,846
Trading of mineral and metal products:	礦產品及金屬產品貿易：		
Purchase of commodities	採購商品	216,212	166,088
Total Cost of Sales	總銷售成本	531,101	540,934

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Cost of sales for the Group's mining operations decreased to US\$314.9 million in 2021, representing a decrease of 16% as compared to US\$374.8 million in 2020. The decrease was a result of the commencement of finance lease agreement of Chibuluma South Mine (including Chifupu Deposit). Mining costs increased by 11% as Ruashi Mine increased mining activities to compensate for lower ore feed grade and the lower copper recovery rate. Processing costs were 11% higher in 2021 due to the higher reagent consumption due to acid solubility of the ore. Overall, the Group maintained tight cost control and as part of the mining resulted from in ore development mined in 2021.

During the year ended 31 December 2021, the Group's finished goods inventory has increased by 4,259 tonnes of copper and 762 tonnes of cobalt leading to part of production cost in 2021 was capitalised in year end inventory.

Cost of trading of mineral and metal products of US\$216.2 million (2020: US\$166.1 million) represented the cost of commodities purchased by our trading subsidiaries in 2021. The increase was in line with the increase of trading segment's revenue.

Royalty Payment

Royalty payment increased from US\$36.3 million in 2020 to US\$49.1 million in 2021 which was in line with the increase in commodity prices offset by lower sales volume.

Gross Profit

Gross profit of the Group's operations for 2021 has increased by 188% from US\$87.3 million in 2020 to US\$251.7 million in 2021. With copper and cobalt prices surged in 2021, the Group recorded a much improved gross profit ratio of 30% in 2021 as compared to 13% in 2020. Cost in 2021 was under control and maintained at similar level while revenue increased, leading to a much improved gross profit.

Net Finance Costs

Finance costs has decreased by 32% from US\$14.1 million in 2020 to US\$9.5 million in 2021. The Group entered into interest rate swap agreements for bank loans with principal amount of US\$194.0 million in December 2020 to swap the remaining interest payments from floating interest payments to fixed interest payments, aiming to lock down the future interest payment amount. The decrease in finance cost was due to the effective interest rate for 2021 was lower than that in 2020. Also, the Group gradually repaid its bank loans using cashflow from Kinsenda Mine, leading to a decrease in principal outstanding.

於二零二一年，本集團採礦業務銷售成本已減至314.9百萬美元，較截至二零二零年的374.8百萬美元減少16%。該減少乃由於Chibuluma南礦場(包括Chifupu礦床)的融資租賃協議開始生效。隨著Ruashi礦場增加採礦活動以彌補礦石入廠品位降低及銅回收率下降，採礦成本增加11%。由於礦石的酸溶解度導致藥劑耗用增多，冶煉成本於二零二一年增加11%。總體而言，本集團嚴格控制成本，並且於二零二一年開採的礦石集中於礦體開發。

本集團製成品庫存於截至二零二一年十二月三十一日止年度增加4,259噸銅及762噸鈷。因此，於二零二一年的部分生產成本被資本化至年末庫存。

於二零二一年，礦產品及金屬產品貿易之成本216.2百萬美元(二零二零年：166.1百萬美元)指我們貿易附屬公司所採購大宗商品的成本。該增加與貿易分部的收益增加變動一致。

礦權使用費

礦權使用費由二零二零年的36.3百萬美元增加至二零二一年的49.1百萬美元，與大宗商品價格的上漲一致，但被銷量下降所抵銷。

毛利

本集團經營毛利由二零二零年的87.3百萬美元增加188%至二零二一年的251.7百萬美元。隨著二零二一年銅及鈷價的飆升，本集團於二零二一年錄得大幅提高的毛利率30%，而二零二零年則為13%。於二零二一年，收益增加的同時，成本得到控制並保持在相似水平，導致毛利大幅提升。

淨財務成本

財務成本由二零二零年之14.1百萬美元減少32%至二零二一年之9.5百萬美元。本集團於二零二零年十二月就本金為194.0百萬美元的銀行貸款訂立利率掉期協議，將剩餘利息由浮動利息支付轉為固定利息支付，旨在鎖定未來的利息支付金額。財務成本下降是由於二零二一年的實際利率低於二零二零年。此外，本集團使用Kinsenda礦場產生之現金流逐步償還銀行貸款，導致未償還本金減少。

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		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
For the year ended 31 December	截至十二月三十一日止年度		
Finance income	財務收入	728	1,287
Finance costs	財務成本	(9,539)	(14,060)
		(8,811)	(12,773)

Other Income, Other Gains and Losses

其他收入、其他收益及虧損

The major components of other income, other gains and losses are as follows:

其他收入、其他收益及虧損的主要組成部分如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
For the year ended 31 December	截至十二月三十一日止年度		
Reversal of impairment loss	減值虧損撥回	96,000	27,000
Royalty income under finance lease agreement	融資租賃協議下的礦權 使用費收入	2,442	-
Written off of property, plant and equipment	撤銷物業、廠房及設備	(10,369)	-
Impairment loss on VAT recoverable	可收回增值稅之減值虧損	(25,900)	-
Exchange losses, net	匯兌虧損，淨額	(1,075)	(5,705)
Gain on disposal of property, plant and equipment	出售物業、廠房及設備 之收益	1,477	-
Others	其他	671	536
		63,246	21,831

Reversal of impairment loss

減值虧損撥回

The Group's mining operations recorded a reversal of impairment loss of US\$96.0 million in the year ended 31 December 2021, as compared to the reversal of impairment loss of US\$27.0 million recorded in the year ended 31 December 2020. The Group has reviewed the updated LoM model of the Group's two operating mines incorporating revised minable reserves and new commodities prices assumption, and has reversed Ruashi Mine's impairment loss recognised in prior years to reflect the changes in assumptions and mineable reserves.

本集團的採礦業務於截至二零二一年十二月三十一日止年度錄得減值虧損撥回96.0百萬美元，而截至二零二零年十二月三十一日止年度則錄得減值虧損撥回27.0百萬美元。本集團已審閱本集團兩個營運礦場的更新礦場開採期模型，包括經修訂可採儲量及新的商品價格假設，因此已撥回於過往年度確認的Ruashi礦場減值虧損，以反映假設及可採儲量的變動。

Written off of property, plant and equipment

撤銷物業、廠房及設備

Part of the Group's property, plant and equipment were replaced by new facilities, therefore the Group has written off property, plant and equipment amounted to US\$10.4 million in 2021.

本集團部分物業、廠房及設備換新，因此本集團於二零二一年撤銷物業、廠房及設備10.4百萬美元。

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Impairment loss on VAT recoverable

As a result of continued challenge by relevant government authorities in settling long outstanding VAT claims, an impairment loss of US\$25.9 million (2020: nil) was recognised on VAT recoverable in 2021.

Royalty income under finance lease agreement

The new royalty income of US\$2.4 million (2020: nil) is in respect of the lessee's sales of copper under the lease agreement of Chibuluma South Mine (including Chifupu Deposit).

Gain on disposal of property, plant and equipment

The Group recorded a gain on disposal of Chibuluma's mining assets amounted to US\$1.5 million upon the effective of Chibuluma finance lease agreement.

Selling and Distribution Costs

The costs mainly represent the off-mine costs incurred when the Group sells its copper and cobalt products under the mining operations, and they primarily comprise of transportation expenses and custom clearing expenses. The breakdown of selling and distribution costs is as follows:

For the year ended 31 December		截至十二月三十一日止年度	
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Off-mine costs:	礦場外成本：		
Clearing costs of export	出口清關成本	18,240	16,756
Transportation	運輸	3,917	6,222
Others	其他	658	159
Total Selling and Distribution Costs	總銷售及分銷成本	22,815	23,137

Selling and distribution costs decreased slightly by 1.4% from US\$23.1 million in 2020 to US\$22.8 million in 2021.

The decrease in selling and distribution costs was due to the decrease in transportation cost as the sales volume of both copper and cobalt decreased in 2021 while partly offset by the increase in clearing costs as the copper blister previously sold by our DRC operations to refineries in the DRC and now changed to sell and export copper concentrate starting from July 2021.

可收回增值稅之減值虧損

由於相關政府機關對解決長期未決增值稅申索不斷提出質疑，因此於二零二一年確認對可收回增值稅計提減值虧損25.9百萬美元(二零二零年：零)。

融資租賃協議下的礦權使用費收入

新礦權使用費收入2.4百萬美元(二零二零年：零)與承租人根據Chibuluma南礦場(包括Chifupu礦床)租賃協議出售銅相關。

出售物業、廠房及設備之收益

本集團於Chibuluma融資租賃協議生效時錄得出售Chibuluma採礦資產收益1.5百萬美元。

銷售及分銷成本

該等成本主要指本集團於銷售其採礦業務之銅及鈷產品時所產生之礦場外成本，主要包括運輸開支及清關費用。銷售及分銷成本之明細如下：

銷售及分銷成本由二零二零年的23.1百萬美元略微減少1.4%至二零二一年的22.8百萬美元。

銷售及分銷成本減少乃由於二零二一年銅、鈷產品的銷量下降而導致運輸成本下降，但部分被清關成本增加所抵銷，原因是我們的剛果(金)業務部自二零二一年七月起將經營方式由先前的出售粗銅予剛果(金)精煉廠轉變為目前的銷售及出口銅精礦所致。

Administrative Expenses

Administrative expenses in the year included a reversal of US\$6.1 million in rehabilitation provision. The provision amount is an estimate of the cost of rehabilitation work to be carried out at the time of mine closure. The Group has engaged an independent consultant to revisit the Group's rehabilitation plan and a downward revision of the overall rehabilitation estimation was made. This leads to the decrease in administrative expenses by 47% from US\$8.5 million in 2020 to US\$4.5 million in 2021.

Income Tax Expense

The Group is subject to taxes in Hong Kong, the DRC, Zambia and South Africa due to its business operations in these jurisdictions. An income tax expense of US\$116.7 million was derived in the year ended 31 December 2021 as compared to US\$22.5 million in the year ended 31 December 2020. The increase of tax expenses was due to (i) increase in profit before tax in 2021; (ii) provision of US\$3.6 million for the DRC Super Profits Tax triggered by the significant increase in copper price in 2021; and (iii) the recognition of deferred tax expenses in 2021 due to the taxable temporary difference arising from net investment loan.

Profit for the year

As a result of the above, the Group recorded a consolidated profit of US\$162.4 million for the year ended 31 December 2021 as compared to US\$42.5 million for the year ended 31 December 2020.

Profit Attributable to Shareholders

The Group recorded a profit attributable to the shareholders of the Company amounted to US\$120.5 million for the year ended 31 December 2021, as compared to the profit attributable to shareholders of the Company of US\$29.9 million for the year ended 31 December 2020.

The increase of the Group's profit attributable to shareholders of the Company for the year ended 31 December 2021 as compared to 31 December 2020 was mainly due to (i) the surge of copper and cobalt prices in 2021; (ii) the reversal of impairment loss; and offset by (iii) the impairment loss on VAT recoverable; (iv) written off of property, plant and equipment; and (v) the recognition of deferred tax expenses in 2021 due to the taxable temporary difference arising from net investment loan.

行政開支

年內行政開支包括一筆6.1百萬美元的復墾撥備撥回。撥備金額為預期於礦場關閉時將予進行的復墾工作之費用。本集團已聘請一名獨立顧問以重新審視本集團的復墾計劃，並就整體復墾估計作出下調修訂。此舉導致行政開支由二零二零年的8.5百萬美元減少47%至二零二一年的4.5百萬美元。

所得稅開支

本集團因其於香港、剛果(金)、贊比亞及南非之業務營運而須繳納該等司法權區之稅項。截至二零二一年十二月三十一日止年度的所得稅開支為116.7百萬美元，而截至二零二零年十二月三十一日止年度則為22.5百萬美元。所得稅開支增加乃由於(i)二零二一年的除稅前溢利增加；(ii)因二零二一年銅價大幅上漲而引致撥備剛果(金)超額利潤稅3.6百萬美元；及(iii)由於投資貸款淨額產生的應課稅暫時性差額，於二零二一年確認遞延稅項開支。

年內溢利

基於上述事項，本集團截至二零二一年十二月三十一日止年度錄得綜合溢利為162.4百萬美元，而截至二零二零年十二月三十一日止年度則為42.5百萬美元。

股東應佔溢利

截至二零二一年十二月三十一日止年度，本集團錄得本公司股東應佔溢利為120.5百萬美元，而截至二零二零年十二月三十一日止年度本公司股東應佔溢利29.9百萬美元。

截至二零二一年十二月三十一日止年度，本公司股東應佔本集團溢利較截止二零二零年十二月三十一日止年度增加的主要原因是(i)二零二一年銅鈷價格飆升；(ii)減值虧損撥回；並被(iii)可收回增值稅減值虧損；(iv)撤銷物業、廠房及設備；及(v)由於投資貸款淨額產生的應課稅暫時性差額，於二零二一年確認遞延稅項開支抵銷。

Management Discussion and Analysis

管理層討論及分析

Non-IFRS Financial Measure

C1 cash cost

The term "C1 cash cost" is a non-IFRS performance measure included in this "Management Discussion and Analysis" and is prepared on a per tonne of copper sold basis. The term C1 cash cost does not have any standardised meaning prescribed by IFRS and therefore may not be comparable to similar measures presented by other issuers. C1 cash cost is a common performance measure in the copper industry and is prepared and presented herein on a basis consistent with industry standard definitions. C1 cash costs include all mining and processing costs, mine site overheads, realisation costs through to refined metal and off-site costs.

The table below reconciles the Group's C1 cash costs to the statement of comprehensive income in the financial statements of the Group for the financial periods indicated.

非國際財務報告準則財務計量方法

C1現金成本

「C1現金成本」為本「管理層討論及分析」內呈報的一項非國際財務報告準則的業務表現計量方法，乃按每噸銷售的銅為基準編製。C1現金成本一詞並無於國際財務報告準則內作出標準化定義，因而該數據未必能與其他發行人所呈列的類似計量方法比較。C1現金成本乃銅行業內普遍採用的業務表現計量方法，且按業內的一貫之標準定義編製及呈列。C1現金成本包括所有採礦及選冶成本、礦場的經常性開支及直至加工精煉金屬的可變現成本及礦場外成本。

就所示財政期間而言，下表提供本集團的C1現金成本與本集團財務報表內全面收益表的對賬。

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Cash costs as reported in the income statement:	於收益表內申報的現金成本：		
Direct and indirect mining cost	直接及間接採礦成本	305,571	292,208
Adjustment for change in copper inventory	銅庫存變動的調整	(30,876)	(3,099)
C1 cash costs (excluding by-product credit)	C1現金成本 (不包括副產品抵扣)	274,695	289,109
Less: cobalt (by-product) revenue	減：鈷 (副產品) 收益	(106,613)	(109,529)
Adjustment for change in cobalt inventory	鈷庫存變動的調整	(19,256)	20,441
C1 cash costs (including by-product credit)	C1現金成本 (包括副產品抵扣)	148,826	200,021
Copper sold (tonne)	已出售銅 (噸)	57,001	67,843
C1 cash cost per tonne of copper (excluding by-product credit) (US\$/tonne)	每噸銅的C1現金成本 (不包括副產品抵扣) (美元/噸)	4,819	4,261
C1 cash cost per tonne of copper (including by-product credit) (US\$/tonne)	每噸銅的C1現金成本 (包括副產品抵扣) (美元/噸)	2,611	2,948

Earnings before interest (net finance costs), income tax, depreciation and amortisation and impairment loss ("EBITDA")

EBITDA is used by the management to evaluate the financial performance of the Group and identify underlying trends in business that could otherwise be distorted if the impact of items that do not consider indicative of the performance of the business and/or which we do not expect to be recurring are not eliminated. Companies may use different methods of depreciating assets. Management considered the impairment loss and written off of property, plant and equipment and gain on disposal of property, plant and equipment and mining rights, are non-recurring in nature and are not relevant to our core business operations. Management believes that these measures better reflect the Company's performance for the current period and are a better indication of its expected performance in future periods. EBITDA is intended to provide additional information, but does not have any standardized meaning prescribed by IFRS.

The EBITDA of the Group is derived as follows:

未計利息(淨財務成本)、所得稅、折舊及攤銷以及減值虧損前盈利(「EBITDA」)

EBITDA由管理層用於評估本集團的財務表現並識別相關業務趨勢，倘項目的影響不被視為對業務表現有指示性及／或我們預計不屬經常性的項目並未消除，則相關業務趨勢可能扭曲。不同的公司可能採用不同的方法對資產進行折舊。管理層認為減值虧損、撇銷物業、廠房及設備，以及出售物業、廠房及設備及採礦權之收益屬非經常性且與我們的核心業務運營無關。管理層認為該等指標更好地反映本公司本期的表現，為未來期間其預計表現的更好指示。EBITDA擬提供額外資料，但並無於國際財務報告準則內作出標準化的定義。

本集團EBITDA計算如下：

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Profit for the year	年內溢利	162,445	42,494
Add: Net finance costs	加：淨財務成本	8,811	12,773
Add: Income tax expense	加：所得稅開支	116,729	22,493
Add: Depreciation of property, plant and equipment	加：物業、廠房及設備折舊	67,935	73,360
Add: Depreciation of right-of-use assets	加：使用權資產之折舊	911	1,063
Add: Amortisation of mineral rights	加：礦產權攤銷	14,434	15,244
Add: Impairment loss on VAT recoverable	加：可收回增值稅之減值虧損	25,900	-
Add: Written off of property, plant and equipment	加：撇銷物業、廠房及設備	10,369	-
Less: Reversal of impairment loss recognised in respect of mineral rights	減：就礦產權確認之撥回減值虧損	(96,000)	(27,000)
EBITDA	EBITDA	311,534	140,427

The Company believes that in addition to conventional measures prepared in accordance with IFRS, certain investors will use the above tool and related information to evaluate the Company. It is intended to provide additional information and should not be considered in isolation nor as a substitute for measures of performance prepared in accordance with IFRS.

本公司認為，除根據國際財務報告準則編製的傳統計量方法外，若干投資者將採用上述工具及相關資料評估本公司。其擬提供額外資料，不應單獨考慮及被視為替代根據國際財務報告準則編製的表現計量方法。

Management Discussion and Analysis

管理層討論及分析

Issue of New Shares

During the year ended 31 December 2021 and 31 December 2020, no new shares have been issued by the Company.

Liquidity, Financial Resources and Capital Structure

As at 31 December 2021, the Group had bank balances and cash (including bank deposits) of US\$215.8 million as compared to US\$108.3 million (including bank deposits) as at 31 December 2020.

As at 31 December 2021, the Group had total bank borrowings of US\$249.7 million (2020: US\$209.7 million) in which the bank borrowings of US\$115.7 million (2020: US\$30.7 million) are due within one year, bank borrowings of US\$104.0 million (2020: US\$179.0 million) are due within 2 to 5 years and bank borrowings of US\$30.0 million due over 5 years (2020: Nil).

In December 2020, the Group entered into interest rate swap agreements with an independent commercial bank to swap the Group's LIBOR denominated bank loans with principal amount of US\$194.0 million to fixed interest rate for the remaining loan term. As at 31 December 2021, bank loans with principal amount of US\$149.0 million are carrying effective fixed interest rate for the remaining loan term ranging from 2.5% to 3.9% per annum.

As at 31 December 2021, the Group had loans from related companies of US\$108.3 million (2020: US\$136.8 million) which are due within one year.

The gearing ratio of the Group as at 31 December 2021 was 12.1% compared to 23.4% as at 31 December 2020. Gearing ratio is defined as net debt over total equity, and net debt is derived from total borrowings (including amount due to related companies) less bank balances and cash (including bank deposits). The decrease in the gearing ratio was due to the increase of bank balance and cash and repayment of bank loans and loan from related company as at 31 December 2021.

For the year ended 31 December 2021, the Group financed its operations with loan facilities provided by banks, borrowings from related companies and internally generated cash flows.

Material Acquisitions and Disposals of Investments

During the year ended 31 December 2021, there was no material acquisition or disposal of subsidiaries, associates and joint ventures.

發行新股

於截至二零二一年十二月三十一日及二零二零年十二月三十一日止年度，本公司並無發行新股。

流動資金、財務資源及資本結構

於二零二一年十二月三十一日，本集團有銀行結餘及現金(包括銀行定存) 215.8百萬美元，而於二零二零年十二月三十一日則為108.3百萬美元(包括銀行定存)。

於二零二一年十二月三十一日，本集團之總銀行借款為249.7百萬美元(二零二零年：209.7百萬美元)，其中為數115.7百萬美元(二零二零年：30.7百萬美元)之銀行借款於一年內到期，為數104.0百萬美元(二零二零年：179.0百萬美元)之銀行借款於兩至五年內到期，及為數30.0百萬美元的銀行借款於五年後到期(二零二零年：無)。

於二零二零年十二月，本集團與一間獨立商業銀行訂立利率掉期協議，以將本集團本金為194.0百萬美元的倫敦銀行同業拆息計息銀行貸款於餘下貸款期轉換為固定利率。於二零二一年十二月三十一日，本金為149.0百萬美元的銀行貸款於餘下貸款期按介乎年利率2.5%至3.9%的實際固定利率計息。

於二零二一年十二月三十一日，本集團有為數108.3百萬美元(二零二零年：136.8百萬美元)於一年內到期之關聯公司貸款。

本集團於二零二一年十二月三十一日之資產負債比率為12.1%，而於二零二零年十二月三十一日為23.4%。資產負債比率之定義為債務淨額除以總權益，債務淨額乃來自總借款(包括應付關聯公司款項)減銀行結餘及現金(包括銀行定存)。資產負債比率下降，乃由於銀行結餘及現金、銀行貸款還款及關聯公司貸款於二零二一年十二月三十一日有所增加。

於截至二零二一年十二月三十一日止年度，本集團以銀行提供之貸款融資、關聯公司提供之借款及內部產生的現金流為本集團之營運提供資金。

重大收購及出售投資

於截至二零二一年十二月三十一日止年度，並無重大收購或出售附屬公司、聯營公司及合資企業。

Significant Capital Expenditures

During the year ended 31 December 2021, the Group acquired property, plant and equipment amounting to US\$108.0 million (2020: US\$60.5 million) and incurred expenditures on exploration and evaluation assets amounting to US\$1.7 million (2020: US\$2.8 million) for the Group's mining operations. During the year ended 31 December 2021, the Group recognised additional right-of-use assets amounting to US\$2.0 million (2020: Nil). US\$61.3 million of the capital expenditure incurred in the year ended 31 December 2021 related to the construction cost of Musonoi Project.

Details of Charges on the Group's Assets

As at 31 December 2021, none of the Group's assets were pledged or subject to encumbrance to secure general banking facilities granted to the Group.

Details of Contingent Liabilities

As at 31 December 2021, the Group did not have any significant contingent liabilities.

Foreign Exchange Risk Management

The reporting currency of the Group is US\$ and the functional currencies of subsidiaries of the Group are mainly US\$. The Group is also exposed to currency change in HK\$, ZAR, CDF and ZMW. Given the exchange rate peg between HK\$ and US\$, the Group is not exposed to significant exchange rate risk of HK\$. The Group's significant assets are located in the DRC, Zambia and South Africa and the Group is exposed to fluctuation in CDF, ZMW and ZAR. The Group monitors its exposure to foreign currency exchange risk on an on-going basis.

SIGNIFICANT EVENTS

Voluntary Liquidation of Shanghai Jinchuan Junhe

On 24 March 2020, written resolutions were passed by all shareholders of Shanghai Jinchuan Junhe to voluntarily liquidate Shanghai Jinchuan Junhe. All the liquidation procedures were completed and Shanghai Jinchuan Junhe was deregistered in the first half of 2021.

重大資本開支

截至二零二一年十二月三十一日止年度，本集團購買物業、廠房及設備108.0百萬美元(二零二零年：60.5百萬美元)以及就本集團採礦業務產生勘探及評估資產開支1.7百萬美元(二零二零年：2.8百萬美元)。於截至二零二一年十二月三十一日止年度，本集團確認額外的使用權資產2.0百萬美元(二零二零年：無)。截至二零二一年十二月三十一日止年度產生的資本開支中的61.3百萬美元乃與Musonoi項目建設成本相關。

本集團抵押資產詳情

於二零二一年十二月三十一日，本集團資產概無作為本集團獲授之一般銀行融資之抵押或負有產權負擔。

或然負債詳情

於二零二一年十二月三十一日，本集團並無任何重大或然負債。

外匯風險管理

本集團之呈報貨幣為美元，本集團附屬公司之功能貨幣主要為美元。本集團亦面臨港元、南非蘭特、剛果法郎及贊比亞克瓦查的貨幣變動風險。鑒於港元與美元匯率掛鈎，本集團並無面臨港元重大匯率風險。本集團大部分資產位於剛果(金)、贊比亞及南非，本集團面臨剛果法郎、贊比亞克瓦查及南非蘭特的波動風險。本集團持續監察其所承受之外幣匯兌風險。

重大事件

上海金川均和之自願清算

於二零二零年三月二十四日，上海金川均和全體股東通過書面決議案自願清算上海金川均和。於二零二一年上半年，所有清算程序均告完成，上海金川均和撤銷登記。

Management Discussion and Analysis

管理層討論及分析

Financing for Musonoi Project

On 18 December 2020, Ruashi (as borrower), a non wholly-owned subsidiary of the Company and the owner of the Musonoi Project, entered into a facility agreement (the “**Ruashi Facility Agreement**”) with CDDBC Gansu Branch (as lender) in relation to a term loan facility in an amount of US\$350.0 million for financing the development and construction of Musonoi Project. For details of the Ruashi Facility Agreement, please refer to the section “Disclosures Pursuant to Rule 13.21 of the Listing Rules” under “Other Information” of this Annual Report and the Company’s announcement dated 18 December 2020. The first tranche of the Ruashi Facility Agreement of US\$100.0 million was drawn in June 2021.

Lease Agreement in respect of Zambia’s Assets

On 28 December 2020, Chibuluma (as lessor), an indirect non wholly-owned subsidiary of the Company, entered into a lease agreement with an independent third party (as lessee) for a 5-year term lease in respect of Chifupu Deposit and the plant and equipment thereof. For details of the lease agreement, please refer to the section “Chibuluma South Mine (including Chifupu Deposit)” under “Mining Operational Review” of this Annual Report and the Company’s announcement dated 28 December 2020. On 1 April 2021, the operating rights of the related mining assets were handed over to the lessee.

Musonoi項目融資

於二零二零年十二月十八日，本公司之非全資附屬公司及Musonoi項目之持有人Ruashi(作為借款人)與國開行甘肅省分行(作為貸款人)訂立一項融資協議(「**Ruashi融資協議**」)，內容有關金額為350.0百萬美元之有期貸款融資為Musonoi項目的發展及建設融資。有關Ruashi融資協議的詳情，請參閱本年報「其他資訊」下「根據上市規則第13.21條規定進行的披露」一節以及本公司日期為二零二零年十二月十八日之公告。Ruashi融資協議下的第一筆款項100.0百萬美元於二零二一年六月提取。

贊比亞資產租賃協議

於二零二零年十二月二十八日，本公司之間接非全資附屬公司Chibuluma(作為出租人)與一名獨立第三方(作為承租人)就Chifupu礦床以及廠房及設備簽訂一份租賃協議，租期為5年。有關租賃協議的詳情，請參閱本年報「採礦業務回顧」下「Chibuluma南礦場(包括Chifupu礦床)」一節以及本公司日期為二零二零年十二月二十八日之公告。於二零二一年四月一日，相關採礦資產已移交予承租人營運。

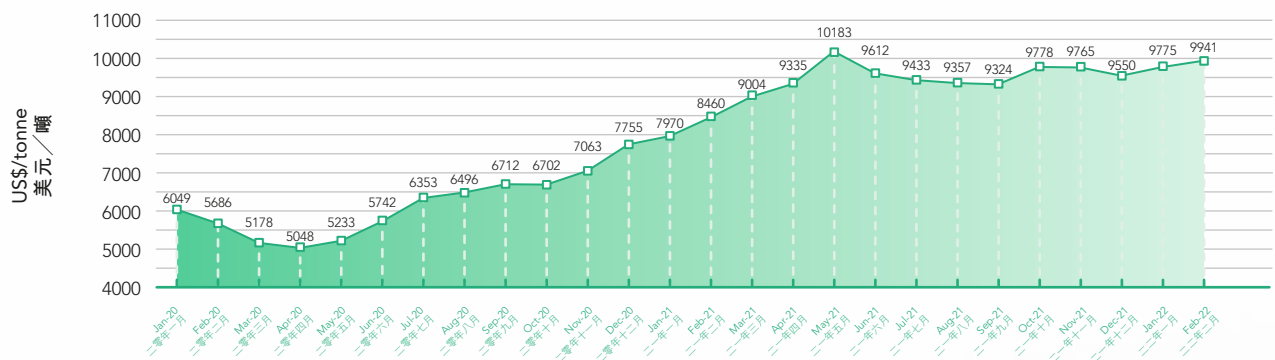
PROSPECT

Affected by the disruption caused by COVID-19, global mining industry underwent severe challenges in the past two years. Commodities price has been in a roller coaster since the beginning of 2020 and likely to remain volatile in the short-term future.

展望

受新冠肺炎疫情肆虐的影響，全球採礦行業在過去兩年面臨嚴峻挑戰。大宗商品價格自二零二零年初以來處於過山車狀態及預期於未來短期內可能仍不穩定。

LME COPPER PRICE (JAN 2020 TO FEB 2022)
倫敦金所銅價（二零二零年一月至二零二二年二月）



Copper price is highly susceptible to swings in global policy and economic uncertainty. With the disruption caused by COVID-19 to PRC refinery industry, LME copper price reached a bottom of as low as US\$4,617.5 per tonne in March 2020 with COVID-19 under control in the PRC, copper price has gradually rebounded to a historical high of US\$10,720 per tonne in May 2021. LME copper price closed 2021 at US\$9,692 per tonne by the end of December 2021, representing a gain of 25.2% compared to 31 December 2020 and a gain of 109.9% compared to the lowest point in 2020.

銅價極易受到全球政策及經濟不確定性的波動影響。隨著新冠肺炎對中國精煉廠行業造成中斷，倫敦金所銅價於二零二零年三月觸底，跌至每噸4,617.5美元的低位。及後隨中國新冠肺炎疫情的好轉，銅價漸漸反彈至二零二一年五月的歷史高點每噸10,720美元。到二零二一年十二月底，二零二一年倫敦金所銅價收於每噸9,692美元，較二零二零年十二月三十一日上漲25.2%，較二零二零年最低點上漲109.9%。

The average LME copper price for the last eight quarters ended 31 March 2020, 30 June 2020, 30 September 2020, 31 December 2020, 31 March 2021, 30 June 2021, 30 September 2021 and 31 December 2021 was (US\$ per tonne) 5,638, 5,341, 6,521, 7,713, 8,479, 9,711, 9,372 and 9,698 respectively, showing a gradual upward trend in global copper market.

截至二零二零年三月三十一日、二零二零年六月三十日、二零二零年九月三十日、二零二零年十二月三十一日、二零二一年三月三十一日、二零二一年六月三十日、二零二一年九月三十日及二零二一年十二月三十一日止最後八個季度的倫敦金所平均銅價分別為（按美元／噸計算）5,638、5,341、6,521、7,713、8,479、9,711、9,372及9,698，全球銅市場呈現穩步向好趨勢。

Since the start of 2021, there was a series of disruptions caused by ongoing labour issues, community opposition and the spread of COVID-19 leading to delays of shipments of copper concentrates out of key South American loading ports. LME copper inventory has recorded multi years low in 2021 and inventory dropped to level below 100,000 tonnes in a prolonged period. Treatment and refining charges (TC/RC) paid to smelters for processing ores/concentrates into metal, are at decade-low levels last seen in 2011, where demand for copper from China was rapidly outpacing supply.

自二零二一年初起，持續的勞工問題、社區反對造成一連串中斷，以及新冠肺炎蔓延導致銅精礦延遲從南美主要裝運港口運出。倫敦金所銅庫存於二零二一年錄得多年來的新低，存貨水平長期處於100,000噸以下。就冶煉礦石／精礦為金屬而支付予冶煉廠的粗煉及精煉費用(TC/RC)創下二零二一年以來的十年最低，中國的銅需求迅速趕超供應。

Management Discussion and Analysis 管理層討論及分析

Following the release of copper reserves by the PRC Government and the resumption of South American mines operation, LME inventory level returned to level above 200,000 tonnes in July 2021 and copper price was traded mainly in a range between US\$9,000 per tonne to US\$10,000 per tonne since then.

With COVID-19 still causing disruption in the two largest copper producing countries Peru and Chile, and the longer global logistics turnover time caused by additional quarantine requirements, PRC copper smelters are struggling to secure enough concentrates from the world and LME inventories have fallen to historical low level. Meanwhile, Russia produced around 3.5% of global copper production in 2021 according to US Geological Survey (USGS) and any potential disruption to Russia's copper production will also lead to copper price shock. Copper market forecasted to remain tight in the short-term future.

While the precise timing of COVID-19 to be contained is still unknown, copper fundamental factors are still strong and copper price is expected to stay strong after COVID-19 is contained.

With the availability of COVID-19 vaccine, copper, as a critical commodity used in construction and infrastructure, will definitely benefit from the economic recovery. Since September 2020, nations around the globe have initiated the strategic target of carbon neutral. Copper, as the most commonly used conductible material, will be used more frequently in areas including solar, wind, power storage, new energy and distribution with the enhance of carbon neutral era, the demand for copper will further increase.

According to market research, EV industry worldwide will need 250% more copper in 2030 for charging stations compared to 2019, and each EV consumes quadruple copper as compared to conventional internal combustion engine-powered vehicle, copper will benefit from the modest growth of the electric vehicle industry in the long term.

Bank of America Global Research analysts expect global copper market to return to deficit from 2025 onwards after completion of current projects' construction. With exploration activity relatively limited in recent years, supply increase will be slow from 2025 onwards. Global commodities trader Trafigura sees a significant deficit in the region of ten million tonnes of copper by 2030, and will require building eight projects the size of Escondida, the world's largest copper mine, to close the gap.

隨中國政府釋放銅儲備及南美礦場運營恢復後，倫金所存貨水平於二零二一年七月恢復至200,000噸以上，自此之後，銅交易價格區間主要介乎每噸9,000美元至每噸10,000美元。

由於新冠肺炎仍對兩個最大銅產國秘魯和智利影響嚴重，額外檢疫規定導致全球物流運轉時間增加，中國銅冶煉廠竭力從全球獲取足夠精礦，倫金所庫存跌至歷史低位。與此同時，根據美國地質調查局(USGS)的數據，俄羅斯於二零二一年佔全球銅產量近3.5%，俄羅斯的銅生產一旦出現任何中斷，亦將對銅價造成衝擊。銅市場預計將在短期內保持收緊。

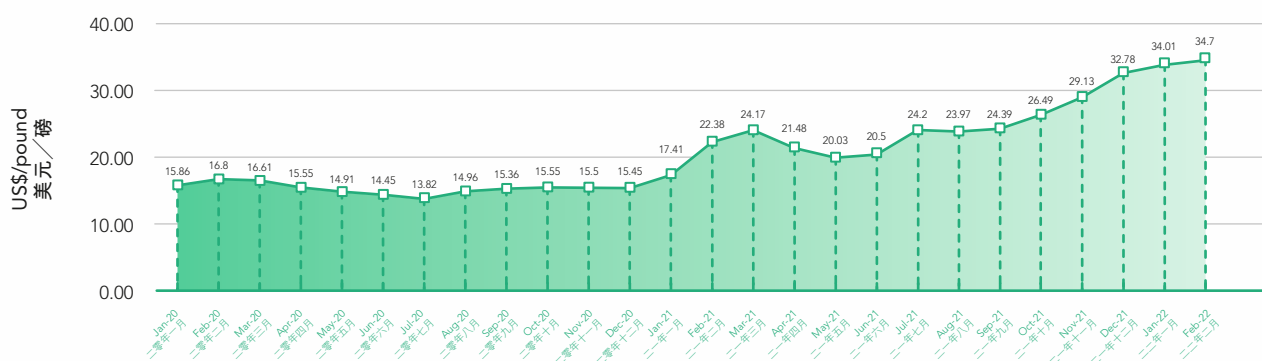
儘管新冠肺炎得到遏制的確實時間還不得而知，但銅的基本面因素仍然強勁，銅價預計在新冠肺炎得到遏制後保持穩健。

隨著新冠肺炎疫苗普及，銅(作為用於建築及基建的重要商品)無疑將從經濟復甦中受益。自二零二零年九月起，全球各國發起碳中和戰略目標。銅作為最常用的傳導材料，隨著碳中和時代的推進，將更加頻繁用於太陽能、風能、能量儲備、新能源及配電等領域，銅需求將進一步增長。

根據市場調查，全世界的電動汽車行業於二零三零年對銅的需求(用於充電站)將比二零一九年增加250%，每台電動汽車的銅耗用量將為傳統內燃機汽車的四倍，銅將受益於電動汽車行業長遠平穩增長。

美國銀行全球研究分析師預計，於當前在建項目完成後，全球銅市場將自二零二五年起恢復赤字狀態。由於近年來的勘探活動相對較少，二零二五年以後的供應增加將較為緩慢。全球大宗商品貿易商拓克預期到二零三零年將嚴重缺乏千萬噸銅，需要新建相當於8個全球最大的Escondida銅礦場才能彌補短缺。

MB COBALT PRICE (JAN 2020 TO FEB 2022)
金屬導報鈷價 (二零二零年一月至二零二二年二月)



In the case of cobalt, since retreating by more than 70% from the all-time high of US\$43.7 per pound recorded in April 2018 to US\$12.1 per pound by the end of July 2019, cobalt price has stayed at a relatively low level in 2020, transacting within the range of US\$13.75 per pound to US\$17.0 per pound in 2020. In 2021, cobalt price has gradually rebounded and reached US\$33.5 per pound by the end of December 2021. The increase in cobalt price continued in 2022 and has reached US\$38.7 per pound by mid March 2022.

就鈷而言，價格自於二零一八年四月創下歷史新高的每磅43.7美元以來回撤超過70%至二零一九年七月底的每磅12.1美元，鈷價於二零二零年保持較低水平，二零二零年的交易價格區間為每磅13.75美元至每磅17.0美元。於二零二一年，鈷價逐步反彈，並於二零二一年十二月底達到每磅33.5美元。鈷價在二零二二年延續漲勢，並於二零二二年三月中旬達到每磅38.7美元。

On supply side of cobalt, according to preliminary data released by US Geological Survey, global cobalt production has increased by 20% from 142,000 tonnes in 2020 to 170,000 tonnes in 2021, in which production from the DRC alone has increased from 98,000 tonnes in 2020 to 120,000 tonnes in 2021. One of the largest cobalt mines in the DRC has suspended operation since August 2019 and the mine has announced that they will be restarting operation from 2022, providing extra supply in cobalt market. Meanwhile, Gécamines SA, DRC state-owned entity, has established a new subsidiary to purchase, process and sell cobalt produced by artisanal miners and small scale miners in the DRC starting from 2022 as part of the DRC Government's measures to implement stricter control to regulate artisanal and illegal cobalt mining in the DRC. Global cobalt supply will be more regulated and will increase gradually to meet the fast growing demand of cobalt.

於鈷的供應端，根據美國地質調查局發佈的初步數據，全球鈷產量由二零二零年的142,000噸增加20%至二零二一年的170,000噸，其中僅來自剛果(金)的產量便由二零二零年的98,000噸增至二零二一年的120,000噸。剛果(金)的最大鈷礦之一已自二零一九年八月起暫停經營，該礦場已宣佈其將於二零二二年開始恢復經營，為鈷市場提供額外供應量。與此同時，剛果(金)國有企業Gécamines SA已成立一間新附屬公司，以從二零二二年起收購、冶煉及出售剛果(金)人工採礦者及小規模礦山所生產的鈷，作為剛果(金)政府對剛果(金)手工和違法鈷礦開採實施嚴格管控的舉措之一環。全球鈷供貨量將受到更多規管，並將逐步增加以滿足鈷的快速增長需求。

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On demand side, the two main usage of cobalt is for the manufacturing of alloy and industrial chemical and for the manufacturing of batteries. China's EV production in 2021 surged 136% year-on-year to 3.95 million units, accounting for 13.5% of the total auto market in China. China Association of Automobile Manufacturers estimates that EV sales will grow to 5 million units in 2022, accounting for 18% of total domestic auto sales. Globally, Adamas Intelligence estimates that global passenger EV registration jumped 62% in the second half of 2021 to 5.84 million as compared to the same period of 3.6 million in 2020. Major auto makers were launching more EV models in 2021 and Ford estimates that 40% of motor vehicle sold will be EVs by 2030 and Bloomberg estimates that half of motor vehicle sold will be EVs by 2040. Analyst forecasts cobalt demand to expand at a compound annual growth rate of 7% to 2030.

Copper and cobalt market experienced fluctuation in 2020 and 2021 and will continue to be difficult to operate in the near future. The Group will continue to monitor all factors causing market fluctuation and will ensure the Group is able to respond to any market changes in a prepared and timely manner.

The Group's focus in the near future is the construction of the Musonoi copper-cobalt mine in Kolwezi, the DRC. Construction work at Musonoi Project has progressed well in 2021. Also, a resource evaluation drilling campaign is ongoing at Musonoi Project.

Since the Group's business spans different regions and countries, our overseas business is therefore susceptible to the stability of and changes in the local government policies, social and economic environments, and international relations. If there are any material adverse changes in the aforesaid factors, our business, financial condition and operating results may be adversely affected. We endeavour to closely monitor the aforesaid situation and to promptly adjust our strategies in response thereto.

To be a world-class mineral corporation is the ultimate goal of the Group. Apart from the existing operations in Africa, the Group will actively look into the market and seek for investment opportunities which can provide the Group with growth and synergies while strictly comply with the regional regulations in order to give investors and shareholders confidence in supporting the Group.

Also, with the continuous support of JCG and prudent strategic planning of the Board, the Group remains confident that the performance of the Group will overcome the disadvantages and stand out from the crowd under such unfavorable market conditions and create values for the stakeholders of the Company.

於需求端，鈷的兩大用途為合金及工業化學品製造以及電池的生產。二零二一年中國電動汽車產量同比激增136%至395萬輛，佔中國汽車市場總額的13.5%。中國汽車製造商協會估計，電動汽車銷量將於二零二二年繼續向500萬輛靠攏，佔國內汽車總銷售額的18%。放眼全球，Adamas Intelligence估計全球乘用電動汽車登記數量於二零二一年下半年達到584萬輛，較二零二零年同期的360萬輛躍升62%。各大主要汽車製造商於二零二一年相繼推出更多電動汽車車型，Ford估計到二零三零年電動汽車將佔到售出汽車的40%，而彭博估計，到二零四零年電動汽車將佔到售出汽車的半數。分析師預測，鈷需求將以複合年增長率7%保持增長到二零三零年。

銅鈷市場於二零二零年及二零二一年面臨波動，並且短期內仍將難以為繼。本集團將持續監控所有造成市場波動的因素及確保本集團能夠以準備充分、從容及時的姿態應對任何市場變動。

本集團近期重點將放在剛果(金)科盧韋齊Musonoi銅鈷礦的建設。Musonoi項目的建設工作於二零二一年全面推展。此外，在Musonoi項目正開展整體資源評價勘探項目。

由於本集團的業務跨越不同地域與國家，因此，我們的境外業務易受當地政府政策、社會民生、經濟環境及國際關係的穩定性與變化等狀況所影響。倘前述因素出現任何重大不利變化，則我們的業務、財務狀況及經營業績可能會受到不利影響。我們致力密切留意上述形勢及迅速調整應對的策略。

本集團的最終目標是成為世界級礦產企業。除了非洲現有業務，本集團也將積極研究市場及尋求投資機會，在嚴格遵守地區法規的同時，為本集團帶來增長及協同效應，給予投資者及股東支持本集團發展的信心。

此外，在金川的持續支持及董事會審慎的策略規劃下，本集團有信心，本集團的表現將可克服劣勢，並在該等不利的市場條件下脫穎而出，為本公司持份者創造價值。

More efforts had been put towards new business development, in particular in identifying opportunities at Southern Africa which was close to our existing mines to look for synergy. We will continually, prudently and actively pursue any new business development opportunity.

We will continue to improve quality, efficiency and production. The Company strives to continuously reduce production costs, with its strategy of "Improvement on Cobalt and Maintaining Growth on Copper" to increase production and sales and achieve better profitability.

EMPLOYEES

As at 31 December 2021, the Group had 1,575 (31 December 2020: 1,564) permanent workers and 2,741 (31 December 2020: 2,758) contractor's employees. Employees of the Group receive competitive remuneration packages including salary and medical and other benefits. Key staff may also be entitled to performance bonuses and grant of option shares of the Company.

我們繼續致力發展新業務，特別是在靠近我們現有礦場的非洲南部物色機會，以尋求協同發展。我們將持續、審慎而積極地開拓任何新的業務發展機會。

我們將繼續提高質量、效率及產量。本公司致力持續降低生產成本，按照「提鈷保銅」策略，提高產量及銷量，更好的提高盈利能力。

僱員

於二零二一年十二月三十一日，本集團擁有1,575名（二零二零年十二月三十一日：1,564名）固定員工及2,741名（二零二零年十二月三十一日：2,758名）合約僱員。本集團僱員收取的具競爭性薪酬組合包括薪資及醫療以及其他福利。主要僱員亦可收取績效花紅及獲授本公司期權股份。

Directors and Senior Management 董事及高級管理層

EXECUTIVE DIRECTORS 執行董事

GAO Tianpeng (Chief Executive Officer) | 郜天鵬(行政總裁)

Mr. Gao Tianpeng, aged 50, BEng and EMBA, was appointed as the Chief Executive Officer and an executive director of the Company since August 2017. He was previously the non-executive director of the Company for the period from 30 November 2010 to 21 March 2014. During his 29-year career in JCG, he has been overseeing various matters including cost management, financial management, international trading management, risk management, foreign exchange business, capital operation and equity division reform of JCG and daily affairs of the board of directors. He was also a manager of the Cost Branch of Financial Department of JCG, manager of Financial Department of International Trading, general manager of Risk Management Department, general manager of Capital Operation Department, the general manager of International Department of Resources Capital, vice general manager of China Jinchuan Investment Holding Limited and the director of Metorex, successively. He has extensive experience in financial cost management, risk management and asset management.

郜天鵬先生，50歲，工學學士、高級管理人員工商管理碩士(EMBA)，自二零一七年八月起獲委任為本公司行政總裁及執行董事。彼曾經於二零一零年十一月三十日至二零一四年三月二十一日期間擔任本公司的非執行董事。加入金川29年來，他一直監察各項事務，包括成本管理、財務管理、國際貿易管理、風險管理、外匯業務、資本運營、金川股改上市及董事會日常事務等工作。彼亦先後擔任金川財務部成本室經理、國際貿易公司財務部經理、風險管理部總經理、資產運營部總經理、資源資本國際部總經理、中國金川投資控股公司副總經理、Metorex董事等職，具有豐富的財務成本管理、風險管理及資產管理經驗。

CHENG Yonghong | 程永紅

Mr. Cheng Yonghong, aged 52, was appointed as an executive Director with effect on 21 April 2020. Mr. Cheng graduated in 1992 from University of Science and Technology Beijing with a degree in Ferrous Metallurgy. During his 29-year career, Mr. Cheng has served in various positions in JCG including as the Deputy Plant Manager of the Smelter of JCG (from February 2010 to December 2011), the Deputy Plant Manager of the Nickel Plant of JCG (from December 2011 to January 2013), the Plant Manager of the Copper Plant of JCG (January 2013 to April 2015). Mr. Cheng joined the Group as a director of Metorex in April 2015 and served as the General Manager of Ruashi from April 2015 to March 2020. Since 1 April 2020, Mr. Cheng serves as the Chairman and Chief Executive Officer of Metorex, and also the Head of the African Region of JCG. He is a technical professional with extensive operational management experience in nonferrous pyrometallurgy and hydrometallurgy.

程永紅先生，52歲，於二零二零年四月二十一日獲委任為執行董事。程先生於一九九二年畢業於北京科技大學，獲鋼鐵冶金學士學位。參加工作29年以來，程先生一直在金川工作，曾先後擔任金川冶煉廠副廠長(二零一零年二月至二零一一年十二月)、金川鎳冶煉廠副廠長(二零一一年十二月至二零一三年一月)、金川銅冶煉廠廠長(二零一三年一月至二零一五年四月)。程先生於二零一五年四月加入本集團出任Metorex之董事，並於二零一五年四月至二零二零年三月期間出任Ruashi總經理。程先生自二零二零年四月一日起擔任Metorex之董事長兼行政總裁，並擔任金川駐非洲區總監。彼在有色火法、濕法治煉領域具有較高的專業技術水準和豐富的經營管理經驗。

NON-EXECUTIVE DIRECTORS
非執行董事

CAI Juan (Chairlady) | 蔡娟(主席)

Ms. Cai Juan, aged 50, currently the chairlady of the Board, a non-executive Director and the chairlady of the Strategy and Investment Committee, a member of the Audit Committee, the Risk Management Committee and the Remuneration and Nomination Committee of the Company. She obtained a postgraduate degree at 中央黨校 (Central Party School*) and is a national accountant, a national senior auditor, a Certified Public Accountant and a Certified Internal Auditor. She served as the deputy director of audit department, the general manager of the audit and risk control department, the general manager of the audit and risk control and legal department, director of the office of the board of supervisors and deputy general counsel of JCG. Ms. Cai also served as the secretary of the party committee, the secretary of the discipline inspection committee and the chairlady of the Labour Union of 金川集團工程建設有限公司 (Jinchuan Group Engineering and Construction Co., Ltd.*), the chief accountant and the secretary of the party committee of 廣西金川有色金屬有限公司 (Guangxi Jinchuan Nonferrous Metals Co., Ltd.*). Ms. Cai has 32 years of working experience, and is the chief financial officer of JCG since June 2020.

蔡娟女士，50歲，現任董事會主席、非執行董事及戰略及投資委員會主席，同時擔任本公司審核委員會、風險管理委員會及薪酬及提名委員會委員，中央黨校研究生學歷，為一名全國會計師、全國高級審計師、註冊會計師、國際註冊內部審計師。蔡女士曾任金川之審計部副主任、審計與風險管理部總經理、審計風控法務部總經理、監事會辦公室主任及副總法律顧問。蔡女士亦曾任金川集團工程建設有限公司之黨委書記、紀檢書記、工會主席及廣西金川有色金屬有限公司之總會計師、黨委書記。蔡女士擁有32年工作經驗，並自二零二零年六月起出任金川之財務總監。

LIU Jian | 劉建

Mr. Liu Jian, aged 49, obtained a bachelor's degree in Accounting from the Lanzhou University of Technology of the PRC in 2005. He is currently the general manager of the Finance Department of JCG, the ultimate shareholder of the Company. Since 1994, he had worked in various positions within JCG and its subsidiaries, including the deputy general manager of costing department, internal audit and risk management department of JCG, general manager and financial controller of Guangxi Jinchuan Nonferrous Metals Co. Ltd* (廣西金川有色金屬有限公司), the financial controller of Lanzhou Jinchuan Keliyuan Battery Co. Limited* (蘭州金川科力遠電池有限公司), etc. He has been a director of Lanzhou Jinchuan New Materials Technology Co., Ltd.* (蘭州金川新材料科技股份有限公司) since 17 December 2021 (which company's shares were quoted on the National Equities Exchange and Quotations until 17 March 2022). He has extensive experience in financial reporting and management.

劉建先生，49歲，於二零零五年從位於中國的蘭州理工大學獲得本科學歷，主修會計專業。彼現任本公司最終股東金川財務部總經理。自一九九四年起，彼於金川及其附屬公司擔任不同崗位，當中包括金川財務部成本科副科長及內部審計與風險管理部副總經理、廣西金川有色金屬有限公司總經理及財務總監及蘭州金川科力遠電池有限公司財務總監。彼自2021年12月17日起於蘭州金川新材料科技股份有限公司(該公司股票自2022年3月17日起終止在全國中小企業股份轉讓系統掛牌)擔任董事。彼在財務報告及管理方面有豐富經驗。

Directors and Senior Management 董事及高級管理層

WANG Qiangzhong | 王樞忠

Mr. Wang Qiangzhong, aged 57, with qualification of senior engineer, graduated from Jiangxi Metallurgy Academia (now known as Jiangxi University of Science and Technology) in July 1986, major in mining engineering. He obtained a diploma in financial management for listed companies from Shanghai University of Finance and Economics in June 2001 and his master degree of business administration from Lanzhou University in June 2011. From 2005 to 2014, he served at various positions in Gansu Lantuo Group Limited* (甘肅蘭駝集團有限責任公司), including general manager and chairman of the board of directors. During his tenure in Gansu Lantuo Group Limited*, he was also appointed as a researcher of the board of supervisors of the Gansu Provincial State-owned Assets Supervision and Administration Commission. Since July 2015, he has acted as the chairman of the board of directors of Gansu Province Xinye Asset Management Co. Ltd.* (甘肅省新業資產經營有限責任公司). He currently serves as the director of Baiyin Nonferrous Group Co., Ltd., the shares of which are listed on the Shanghai Stock Exchange (Stock Code: 601212). He has extensive experience in financial management and operation management.

王樞忠先生，57歲，具有高級工程師資格，於一九八六年七月畢業於江西冶金學院(現稱江西理工大學)，主修採礦工程。彼於二零零一年六月於上海財經大學獲得有關上市公司財務管理的文憑並於二零一一年六月於蘭州大學獲得工商管理碩士學位。於二零零五年至二零一四年間，彼在甘肅蘭駝集團有限責任公司擔任包括總經理、董事長等多個職位。在甘肅蘭駝集團有限責任公司任職期間，彼同時獲委任為甘肅省國有資產監督管理委員會監事會的調研員。自二零一五年七月起，彼於甘肅省新業資產經營有限責任公司擔任董事長。彼現時擔任白銀有色集團股份有限公司(其股份於上海證券交易所上市，股份代碼：601212)的董事職務。彼於財務管理及營運管理方面擁有豐富經驗。

INDEPENDENT NON-EXECUTIVE DIRECTORS
獨立非執行董事

YEN Yuen Ho, Tony | 嚴元浩

Mr. Yen Yuen Ho, Tony, aged 74, was appointed as an independent non-executive director of the Company since August 2010. He is a solicitor of Hong Kong and the United Kingdom. He is also a barrister and solicitor of Australia, and was a member of The Law Reform Commission of Hong Kong. Mr. Yen has been practicing law in Hong Kong since 1983 and was the Law Draftsman of the Department of Justice in Hong Kong from 1995 to 2007. Currently, Mr. Yen is an Adjunct Professor of the Beijing Normal University and an Honorary Court Member of the court of the Hong Kong University of Science and Technology. He was an Adjunct Professor of the City University of Hong Kong from July 2011 to June 2014. He is a Director of the Hong Kong Institute for Public Administration and an Honorary Legal Adviser to the Friends of Scouting, Scout Association of Hong Kong. Additionally, Mr. Yen serves as the Director of two secondary schools, the Chairman of the Neighbourhood Advice Action Council and a Member of Heep Hong Society's Executive Council. He is also an Honorary Adviser to the Pok Oi Hospital, Honorary Adviser to the Hong Kong Academy of Nursing and the Honorary Legal Adviser to the Shanghai Fraternity Association. Mr. Yen was appointed as an Honorary Fellow of the School of Education, University of Hong Kong in 2014. In the past years, he was appointed by the HKSAR Government as a member of the Education Bureau's Panel of Review Board on School Complaints and as the Vice-Chairman of the Social Welfare Lump Sum Grant Independent Complaints Handling Committee. Mr. Yen also serves as a guest speaker to various universities in Hong Kong. He is an independent non-executive director of Alltronics Holdings Limited and WWPKG Holdings Company Limited (the shares of which are listed on the Stock Exchange). He also served as an independent non-executive director of Beijing Energy International Holding Co., Ltd. (from 6 April 2011 to 18 June 2021). Mr. Yen was in October 2015 appointed by China Minsheng Jiaye Investment Co. Limited as an independent director.

嚴元浩先生，74歲，自二零一零年八月起獲委任為本公司獨立非執行董事。彼乃香港及英國律師。彼亦為澳洲大律師及事務律師，並曾任香港法律改革委員會委員。嚴先生自一九八三年起為香港執業律師，於一九九五年至二零零七年期間，彼於香港政府律政司擔任法律草擬專員一職。現時，嚴先生為北京師範大學特聘教授及香港科技大學顧問委員會榮譽委員。彼曾於二零一一年七月至二零一四年六月期間任香港城市大學兼任教授。彼為香港公共行政學院之董事及香港童軍總會童軍之友社之義務法律顧問。此外，嚴先生在兩間中學擔任校董，嚴先生同時亦為香港鄰舍輔導會主席及香港協康會的執行委員會委員。彼亦為香港博愛醫院的名譽顧問、香港護理專科學院的名譽顧問及香港上海總會的名譽法律顧問。嚴先生在二零一四年獲香港大學教育學院頒授為榮譽院士。於過往年度，彼曾獲香港特區政府委任為教育局學校投訴覆檢委員會的委員及社會福利整筆撥款獨立處理投訴委員會的副主席。嚴先生亦在香港多所大學講課。彼為於聯交所上市公司華訊股份有限公司及縱橫遊控股有限公司之獨立非執行董事。彼也曾擔任北京能源國際控股有限公司的獨立非執行董事(二零一一年四月六日至二零一一年六月十八日)。嚴先生於二零一五年十月獲中民嘉業投資有限公司委任為獨立董事。

Directors and Senior Management 董事及高級管理層

POON Chiu Kwok | 潘昭國

Mr. Poon Chiu Kwok, aged 59, was appointed as an independent non-executive director of the Company since March 2017, holds a master's degree in international accounting, a post-graduate diploma in laws, a bachelor's degree in laws and a bachelor's degree in business studies. He has years of experience in regulatory affairs, corporate finance, listed companies governance and management. He is an executive director, vice president and company secretary of Huabao International Holdings Limited, whose shares are listed on the Stock Exchange. He currently serves as an independent non-executive director of the following companies listed on the Stock Exchange: AUX International Holdings Limited, Changan Minsheng APLL Logistics Co., Ltd., Greentown Service Group Co. Ltd., Sany Heavy Equipment International Holdings Company Limited, Sunac China Holdings Limited, Yuanda China Holdings Limited and Yanguang Energy Group Company Limited. He is also an independent non-executive director of Tonly Electronics Holdings Limited (whose shares were formerly listed on the Stock Exchange until 8 March 2021). He also served as an independent non-executive director of Honghua Group Limited (from 15 June 2017 to 1 December 2021) and an independent non-executive director of TUS International Limited (now known as Titan Invo Technology Limited) (from 1 September 2015 to 17 July 2020). Mr. Poon is a fellow member of CPA Australia Ltd., The Chartered Governance Institute (formerly known as The Institute of Chartered Secretaries and Administrators), The Hong Kong Institute of Chartered Secretaries and a member of its Technical Consultation Panel, Mainland China Focus Group. He is also a fellow member and Associate Instructor of the Hong Kong Securities and Investment Institute.

潘昭國先生，59歲，自二零一七年三月起獲委任為本公司獨立非執行董事，持有國際會計學碩士學位、法學深造文憑、法學學士學位和商業學學士學位。彼於規管事宜、企業融資、上市公司管治及管理方面擁有多年經驗。彼為一間在聯交所上市的公司華寶國際控股有限公司的執行董事、副總裁及公司秘書。彼現時於以下聯交所上市公司擔任獨立非執行董事：奧克斯國際控股有限公司、重慶長安民生物流股份有限公司、綠城服務集團有限公司、三一重裝國際控股有限公司、融創中國控股有限公司、遠大中國控股有限公司及兗礦能源集團股份有限公司。彼亦擔任通力電子控股有限公司(該公司股份先前於聯交所上市直至二零二一年三月八日退市)的獨立非執行董事。彼也曾擔任宏華集團有限公司的獨立非執行董事(二零一七年六月十五日至二零二一年十二月一日)及啟迪國際有限公司(現名為泰坦智華科技有限公司)的獨立非執行董事(由二零一五年九月一日至二零二零年七月十七日)。潘先生為澳洲會計師公會有限公司之資深註冊會計師、特許公司治理公會(原稱為英國特許秘書及行政人員公會)資深會員、香港特許秘書公會資深會員以及其技術諮詢小組、中國內地關注小組之成員。彼亦是香港證券及投資學會資深會員及特邀導師。

YU Chi Kit | 余志傑

Mr. Yu Chi Kit, aged 42, was appointed as an independent non-executive director of the Company since November 2021, holds a bachelor's degree in business administration from The Chinese University of Hong Kong. He is also a member of the Hong Kong Institute of Certified Public Accountants. He is the chief financial officer, company secretary and authorized representative of Xiwang Special Steel Company Limited (Stock Code: 1266) and Xiwang Property Holdings Company Limited (Stock Code: 2088), whose shares are listed on the Main Board of the Stock Exchange since 1 November 2019. He was previously the company secretary and authorized representative of China Development Bank International Investment Limited (Stock Code: 1062) from 20 June 2016 to 25 April 2019 and South China Assets Holdings Limited (Stock Code: 8155) from 1 April 2010 to 10 January 2011, whose shares are listed on the Main Board and GEM of the Stock Exchange respectively. He has extensive experience in accounting, auditing and company secretarial practice in Hong Kong.

余志傑先生，42歲，自二零二一年十一月起獲委任為本公司獨立非執行董事，持有香港中文大學工商管理學士學位。彼亦為香港會計師公會會員。自二零一九年十一月一日起彼為西王特鋼有限公司(股份代號：1266)及西王置業控股有限公司(股份代號：2088)之財務總監、公司秘書及授權代表，其股份於聯交所主板上市。彼曾於二零一六年六月二十日至二零一九年四月二十五日擔任國開國際投資有限公司(股份代號：1062)及於二零一零年四月一日至二零一一年一月十日擔任南華資產控股有限公司(股份代號：8155)的公司秘書及授權代表，其股份分別於聯交所主板及GEM上市。彼於香港會計、審計及公司秘書實務方面擁有豐富經驗。

* for identification purposes only
* 僅供識別

SENIOR MANAGEMENT

CHIEF EXECUTIVE OFFICER

GAO Tianpeng

For details of Mr. Gao Tianpeng's biography, please see the sub-section headed "Executive Directors" on page 56.

CHIEF FINANCIAL OFFICER

WONG Hok Bun Mario

Mr. Wong joined the Company in August 2018 and has been acting as, among others, the company secretary and authorised representatives of the Company since 5 September 2018. Mr. Wong holds a Bachelor of Economics and Finance from The University of Hong Kong and is a fellow member of the Hong Kong Institute of Certified Public Accountants (FCPA). He is a CFA charterholder and a member of The Australasian Institute of Mining and Metallurgy (MAusIMM). He has over 19 years of experience in auditing, accounting, financial management and corporate finance. Mr. Wong is currently an independent non-executive director of Good Resources Holdings Limited (Stock Code: 109). Mr. Wong was previously an executive director, chief financial officer, authorised representative (for the period from 31 December 2015 to 12 August 2018) and company secretary (for the period from 14 July 2015 to 12 August 2018) of Theme International Holdings Limited (Stock Code: 990).

CHIEF RISK OFFICER

WANG Jinxing

Mr. Wang joined the Group as chief risk officer in 2020. He has been working in JCG Group since 2004, and he is familiar with financial management, risk management, overseas project investment and financing management, international trade etc. He has worked in the Philippines and Indonesia for more than 10 years and served as, among other positions, chief financial officer and deputy general manager of Philippine Jinchuan Mining Company, and finance director of PT. Wanatiara Persada of JCG Group.

高級管理層

行政總裁

郜天鵬

有關郜天鵬先生之詳細履歷，請參閱第56頁「執行董事」分節。

首席財務官

黃學斌

黃先生於二零一八年八月加入本公司並自二零一八年九月五日起出任(其中包括)本公司之公司秘書及授權代表。黃先生擁有香港大學經濟金融學學士學位，並為香港會計師公會資深會員(FCPA)。彼為特許財務分析師(CFA)及澳大利亞礦業與冶金學會會員(MAusIMM)。彼擁有逾19年的審計、會計、財務管理及企業融資經驗。黃先生現為天成國際集團控股有限公司(股份代號：109)之獨立非執行董事。黃先生亦曾為榮暉國際集團有限公司(股份代號：990)之執行董事、首席財務官、授權代表(於二零一五年十二月三十一日至二零一八年八月十二日期間)及公司秘書(於二零一五年七月十四日至二零一八年八月十二日期間)。

風控總監

王金星

王先生於二零二零年加入本集團出任風控總監。彼自二零零四年起在金川集團工作，熟悉財務管理、風險管理、海外項目投資、融資管理、國際貿易等領域。彼在菲律賓，印尼工作超過10年，先後任金川集團之菲律賓金川礦業公司財務總監、副總經理，PT. Wanatiara Persada財務總監等職。

Directors and Senior Management 董事及高級管理層

CHAIRMAN OF METOREX

CHENG Yonghong

For details of Mr. Cheng Yonghong's biography, please see the sub-section headed "Executive Directors" on page 56.

CHIEF FINANCIAL OFFICER OF METOREX

YIN Weiwu

Mr. Yin Weiwu was appointed as the CFO of Metorex since January 2018. He joined JCG in July 1997 and his duties involved risk control, auditing and financial management. He was formerly the financial manager of JCG Nickel Smelter and Jinchuan Group Marketing Company.

CHAIRMAN AND GENERAL MANAGER OF CHIBULUMA

XU Yingpei

Mr. Xu, a senior engineer, joined the Group in October 2016 as the deputy general manager of Kinsenda. He is currently the chairman and general manager of Chibuluma. Mr. Xu holds a bachelor's degree in engineering from Jiangxi Institute of Metallurgy, and has over 30 years of experience in mining, geology, surveying, mine construction, project management, etc., and served, among other positions, as deputy general manager of the engineering quality management department of JCG and deputy general manager of mining area (zone two).

GENERAL MANAGER OF RUASHI

WANG Tao

Mr. Wang, a senior engineer, joined the Group in November 2016 as the deputy general manager of Ruashi. He is currently the general manager of Ruashi and a director of Metorex. Mr. Wang studied electrical engineering as an in-service graduate student at Xi'an University of Technology. He has more than 30 years of experience in non-ferrous smelting production, technology and engineering management. He has served, among other positions, as the deputy plant manager of the nickel smelter and the deputy plant manager of the copper smelter of JCG.

METOREX主席

程永紅

有關程永紅先生之詳細履歷，請參閱第56頁「執行董事」分節。

METOREX財務總監

尹緯武

尹緯武先生自二零一八年一月起獲委任為Metorex財務總監。彼於一九九七年七月加入金川，從事過風險控制、審計、財務管理工作。彼曾任金川鎳冶煉廠及金川集團營銷公司財務經理。

CHIBULUMA董事長及總經理

許瀛沛

許先生，高級工程師，於二零一六年十月加入本集團，擔任Kinsenda副總經理。彼現任Chibuluma董事長、總經理。許先生擁有江西冶金學院工學學士學位，擁有逾30年礦山採礦、地質、測量、礦山建設、項目管理等方面的經驗，先後擔任金川工程質量管理部副總經理、二礦區副礦長等職務。

RUASHI總經理

王濤

王先生，高級工程師，於二零一六年十一月加入本集團，擔任Ruashi副總經理。彼現任Ruashi總經理及Metorex董事。王先生曾就讀西安理工大學在職研究生電氣工程專業。彼擁有30多年的有色冶煉生產、技術和工程管理工作經驗。彼先後擔任金川鎳冶煉廠副廠長、銅冶煉廠副廠長等職務。

GENERAL MANAGER OF KINSENDA

QIN Guoyu

Mr. Qin, a senior engineer, joined the Group in April 2015 as the general manager of Kinsenda. Mr. Qin holds a bachelor's and master's degree in mining engineering from Xi'an University of Science and Technology. He has over 15 years of working experience in non-ferrous metal mining services, and is experienced in mining technology and mine management. He had served as the deputy head of Longshou Mine of JCG.

GENERAL MANAGER OF MUSONOI PROJECT

LI Yanlong

Mr. Li, a senior engineer, joined the Group in May 2012 as the deputy general manager of Ruashi and is currently the general manager of Musonoi Project. Mr. Li holds a bachelor's degree in mining engineering from Southern Institute of Metallurgy, has more than 30 years of mining technology and mine management experience, and has extensive experience in mine production organisation and project management. He once served as the deputy head of Longshou Mine of JCG.

KINSENDA總經理

秦國玉

秦先生，高級工程師，於二零一五年四月加入本集團，擔任Kinsenda總經理。秦先生擁有西安科技大學採礦工程學士和碩士學位。彼擁有逾15年有色金屬礦山服務的工作經驗，在採礦技術和礦山管理方面經驗豐富。彼曾經擔任過金川龍首礦副礦長職務。

MUSONOI項目總經理

李彥龍

李先生，高級工程師，於二零一二年五月加入本集團，擔任Ruashi副總經理，現任Musonoi項目總經理。李先生擁有南方冶金學院採礦工程學士學位，擁有30多年的礦山技術及礦山管理經驗，在礦山的生產組織、項目管理方面豐富的經驗。彼曾經擔任過金川龍首礦副礦長職務。

Report of the Directors

董事會報告

The Directors present their report and the audited financial statements of the Company and the Group for the year ended 31 December 2021.

PRINCIPAL ACTIVITIES

The Company is an investment holding company. The principal activities of its subsidiaries are set out in note 41 to the consolidated financial statements. During the year, there were no significant changes in the nature of the Group's principal activities.

BUSINESS REVIEW

A fair review of the Group's business and a description of the principal risks and uncertainties being faced by the Group are provided in the "Chairlady's Statement", "CEO's Report" and "Management Discussion and Analysis" sections of this Annual Report. Indication of likely future development in the Group's business can also be found in these sections and this "Report of the Directors". An analysis of the Group's performance during the year using financial key performance indicators is set out on page 13 and in "Management Discussion and Analysis" section on pages 38 to 55. A discussion on the Company's environmental policies and performance can be found in the "Sustainability Report", which was prepared in accordance with the Environmental, Social and Governance Reporting Guide under Appendix 27 of the Listing Rules, on pages 108 to 138. An account of the Group's relationship with its shareholders and investors can be found on pages 102 to 107. These discussions form part of this "Report of the Directors".

COMPLIANCE WITH LAWS AND REGULATIONS

As announced by the Company on 15 October 2021, following the passing away of Mr. Wu Chi Keung, among others, the total number of independent non-executive directors of the Company was less than three and accounted for less than one-third of board members, and hence the Company failed to meet certain requirements in relation to board composition under the Listing Rules. The Company has complied with the Listing Rules relevant to the board composition following the appointment of Mr. Yu Chi Kit, an independent non-executive director of the Company, on 6 November 2021.

Save as disclosed and as far as the Board is aware, there was no material breach of or non-compliance with the Cayman Islands Companies Law, Listing Rules, SFO and other applicable laws and regulations that have a significant impact on the Group's business and operation by the Group.

RESULTS AND DIVIDENDS

The Group's results for the year ended 31 December 2021 and the state of affairs of the Company and the Group at that date are set out in the financial statements on pages 146 to 261.

董事謹提呈截至二零二一年十二月三十一日止年度之董事會報告以及本公司及本集團之經審核財務報表。

主要業務

本公司乃一間投資控股公司，其附屬公司之主要業務載於綜合財務報表附註41。於年內，本集團的主要經營業務活動性質並未出現任何重大變動。

業務回顧

本集團業務的公允回顧及本集團正面臨的主要風險及不確定因素的概述載於本年報「主席報告」、「行政總裁報告」以及「管理層討論及分析」中。本集團業務的可能未來發展方向亦載於該等章節及本「董事會報告」內。採用財務關鍵績效指標對本集團於年內的表現作出的分析載於第13頁及第38至55頁的「管理層討論及分析」一節。就本公司的環保政策及表現的討論載於第108至138頁的「可持續發展報告」（按上市規則附錄27《環境、社會及管治報告指引》編製）。本集團與其股東及投資者的關係論述載於第102至107頁。該等討論構成本「董事會報告」之一部分。

遵守法律及法規

誠如本公司二零二一年十月十五日所公告，於胡志強先生離世後，存在(其中包括)本公司獨立非執行董事總人數少於三人；及佔董事會成員不足三分之一等情況，故本公司未能符合上市規則就有關董事會組成的相關規定。於二零二一年十一月六日，隨著余志傑先生獲委任為本公司的獨立非執行董事，本公司符合了就有關董事會組成的上市規則。

除已披露及就董事會所知，本集團並無嚴重違反或不遵守開曼群島公司法、上市規則、證券及期貨條例，以及其他適於用本集團且對本集團業務及運作構成重大影響的法例及法規。

業績及股息

本集團截至二零二一年十二月三十一日止年度之業績以及本公司及本集團於該日之業務狀況載於第146至261頁之財務報表。

The Directors recommended the payment of a 2021 final dividend of HK0.2 cent per share (2020: HK0.1 cent per share), totaling HK\$25,220,000 (2020: HK\$12,610,000). Subject to obtaining the approval at the forthcoming annual general meeting, the final dividend is expected to be paid on or before 29 June 2022.

FIVE-YEAR FINANCIAL SUMMARY

A summary of the published results and of the assets, liabilities and non-controlling interests of the Group for the last five financial years, as extracted from the Group's audited financial statements and restated as appropriate, is set out on page 262. The summary does not form part of the audited financial statements.

PROPERTY, PLANT AND EQUIPMENT

Details of the movements in the property, plant and equipment of the Company and the Group during the year are set out in note 16 to the consolidated financial statements.

BANK BORROWINGS

Particulars of bank borrowings of the Group as at 31 December 2021 are set out in note 28 to the consolidated financial statements.

DISCLOSURES PURSUANT TO RULE 13.21 OF THE LISTING RULES

On 29 May 2014, Kinsenda (as borrower), a 77% owned subsidiary of the Company, and JCG (as guarantor) entered into a facility agreement ("**Kinsenda Facility Agreement**") with China Development Bank Corporation (now known as "**CDBC**") (as lender) in relation to a term loan facility in an amount of US\$225,000,000. The final repayment date of the term loan facility will be the date falling 10 years from the date of the first drawdown of such facility, which had taken place on 30 May 2014.

Pursuant to the Kinsenda Facility Agreement, JCG, the controlling shareholder of the Company, is required, at all times, to (directly or indirectly) own more than 50% of the shares of Kinsenda (the "**Specific Performance Obligation**"). However, for sake of future development, the Group had obtained a waiver from strict compliance with the Specific Performance Obligation from CDBC in August 2017.

董事建議派付二零二一年度末期股息每股0.2港仙(二零二零年：每股0.1港仙)，合共25,220,000港元(二零二零年：12,610,000港元)。待於應屆股東週年大會上取得批准後，預期末期股息將於二零二二年六月二十九日或之前派付。

五年財務概要

本集團過往五個財政年度之已公佈業績及資產、負債及非控股權益概要載於第262頁，摘錄自本集團經審核財務報表及已重新編列(如適用)。有關概要並不構成經審核財務報表之一部分。

物業、廠房及設備

本公司及本集團於年內之物業、廠房及設備之變動詳情載於綜合財務報表附註16。

銀行借款

本集團於二零二一年十二月三十一日之銀行借款詳情載於綜合財務報表附註28。

根據上市規則第13.21條規定進行的披露

於二零一四年五月二十九日，本公司持股77%的附屬公司Kinsenda(作為借款人)及金川(作為擔保人)與國家開發銀行股份有限公司(現稱為「國開行」)(作為貸款人)訂立一項融資協議(「**Kinsenda融資協議**」)，內容有關金額為225,000,000美元之有期貨款融資。該筆有期貨款融資之最後還款日期將為首次提取該筆融資當日起計十年，而該筆融資已於二零一四年五月三十日動用。

根據Kinsenda融資協議，本公司控股股東金川須於所有時候直接或間接擁有Kinsenda超過50%股份(「**特定履約責任**」)。然而，考慮到未來發展，本集團於二零一七年八月從國開行取得毋須嚴格遵守特定履約責任的豁免。

On 18 December 2020, Ruashi, a 75% owned subsidiary of the Company and the owner of the Musonoi Project, entered into a facility agreement (the “**Ruashi Facility Agreement**”) with CDBC Gansu Branch (as lender) in relation to a term loan facility in an amount of US\$350,000,000 for financing the development and construction of Musonoi Project. The final repayment date of the term loan facility will be the date falling 10 years from the date of the first drawdown of such facility, which utilisation should take place within 48 months from the date of the Ruashi Facility Agreement. The first drawdown of such facility had taken place on 11 June 2021.

Pursuant to the Ruashi Facility Agreement, the term loan facility may be cancelled and all the outstanding amounts may become immediately due and payable if (i) JCG (as guarantor), the controlling shareholder of the Company, ceases directly or indirectly to own and control 55% of the issued shares capital of the Company or the control of the Company; (ii) the State-owned Assets Supervision and Administration Commission of Gansu Province ceases directly or indirectly to legally or beneficially own and control 51% of the issued share capital of JCG; or (iii) the Company ceases directly or indirectly to own 75% of the issued share capital of Ruashi or the control of Ruashi except where the issued share capital of Ruashi or any part thereof is required to be transferred or sold down to comply with the requirements of the applicable mining legislation the DRC in connection with or arising from the renewal of the exploitation permit under the project in Kolwezi, Lualaba Province of the DRC provided that, however, after the renewal of the exploitation permit, the Company still directly or indirectly owns and controls 70% of Ruashi’s issued share capital.

SHARE CAPITAL

Details of movements in the Company’s share capital during the years ended 31 December 2021 and 2020 are set out in note 33 to the consolidated financial statements.

EQUITY-LINKED AGREEMENTS

Save as (i) the Company’s share option scheme disclosed in the section headed “Share Option Scheme” and note 34 to the consolidated financial statements; (ii) the Company’s share incentive scheme disclosed in the section headed “Share Incentive Scheme”; and (iii) the PSCS disclosed in note 35 to the consolidated financial statements, no equity-linked agreements that will or may result in the Company issuing shares were entered into by the Company during the year and subsisted at the end of the year.

於二零二零年十二月十八日，本公司持股75%的附屬公司及Musonoi項目之持有人Ruashi與國開行甘肅省分行(作為貸款人)訂立一項融資協議(「**Ruashi融資協議**」)，內容有關金額為350,000,000美元之有期貸款融資，為Musonoi項目的發展及建設融資。有期貸款融資之最後還款日期將為首次提取該筆融資當日起計十年，而該筆融資須於Ruashi融資協議日期起計48個月之內動用。該筆融資已於二零二一年六月十一日首次提取。

根據Ruashi融資協議，倘(i)本公司之控股股東金川(作為擔保人)不再直接或間接擁有及控制本公司55%之已發行股本或對本公司之控制權；(ii)甘肅省國有資產監督管理委員會不再直接或間接擁有及控制金川51%之已發行股本的法定權益及實益擁有權；或(iii)本公司不再直接或間接擁有Ruashi 75%之已發行股本或對Ruashi之控制權，惟因須遵守剛果(金)相關礦業的法定規定於剛果(金)盧阿拉巴省科盧韋齊項目的開採許可證續期時而予以轉讓或出售Ruashi之已發行股本或其任何部分(惟於開採許可證續期後，本公司仍直接或間接擁有及控制Ruashi 70%之已發行股本)除外，則該筆有期貸款融資可能會被註銷，而所有未償還款項可能會即時到期及須予償還。

股本

本公司於截至二零二一年及二零二零年十二月三十一日止年度內之股本變動詳情載於綜合財務報表附註33。

股權掛鈎協議

除(i)於「購股權計劃」一節及綜合財務報表附註34內披露之本公司購股權計劃；(ii)於「股份激勵計劃」一節披露之本公司股份激勵計劃；及(iii)於綜合財務報表附註35披露之永久次級可換股證券外，本公司並無於年內訂立且於年結日存續之股權掛鈎協議將會或可能令本公司發行股份。

CONTRACT OF SIGNIFICANCE

Apart from disclosed in the sections headed “Connected Transactions” and “Continuing Connected Transactions”, no contract of significance has been entered into between the Company or any of its subsidiaries and the controlling shareholder or any of its subsidiaries during the year.

PURCHASES, SALES OR REDEMPTION OF LISTED SECURITIES OF THE COMPANY

Neither the Company nor any of its subsidiaries had purchased, sold or redeemed any of the Company’s listed securities during the year ended 31 December 2021.

RESERVES

Details of movements in the reserves of the Company and the Group during the year are set out in note 42 to the consolidated financial statements and in the consolidated statement of changes in equity, respectively.

DISTRIBUTABLE RESERVES

The Company’s reserves available for distribution to shareholders as at 31 December 2021, representing the aggregate of share premium account, contributed surplus and accumulated losses, amounted to US\$689,438,000 (2020: US\$692,276,000).

DIRECTORS

The Directors of the Company during the year and up to the date of this report were:

Executive Directors

Mr. GAO Tianpeng (*Chief Executive Officer*)
Mr. CHENG Yonghong

Non-executive Directors

Ms. CAI Juan (*Chairlady of the Board*)¹
Mr. ZHANG Youda (*Chairman of the Board*)²
Mr. LIU Jian
Mr. WANG Qiangzhong

重大合約

除「關連交易」及「持續關連交易」兩節披露者外，本公司或其任何附屬公司於年內並無與控股股東或其任何附屬公司訂立任何重大合約。

購買、出售或贖回本公司上市證券

截至二零二一年十二月三十一日止年度，本公司或其任何附屬公司概無購買、出售或贖回本公司任何上市證券。

儲備

本公司及本集團於年內之儲備變動詳情已分別載於綜合財務報表附註42及綜合權益變動表。

可供分派儲備

本公司可供分派予股東之儲備相當於股份溢價賬、實繳盈餘及累計虧損之總和，其於二零二一年十二月三十一日為689,438,000美元(二零二零年：692,276,000美元)。

董事

年內及截至本報告日期止期間之本公司董事如下：

執行董事

郜天鵬先生(行政總裁)
程永紅先生

非執行董事

蔡娟女士(董事會主席)¹
張有達先生(董事會主席)²
劉建先生
王檣忠先生

Report of the Directors

董事會報告

Independent Non-executive Directors

Mr. WU Chi Keung³
Mr. YEN Yuen Ho, Tony
Mr. POON Chiu Kwok
Mr. YU Chi Kit⁴

- ¹ appointment with effect from 19 February 2022
² resignation with effect from 19 February 2022
³ passed away on 12 October 2021
⁴ appointment with effect from 6 November 2021

Pursuant to Article 16.18 of the Articles of Association, at every annual general meeting of the Company, one-third of the Directors for the time being shall retire from office by rotation provided that every Director shall be subject to retirement by rotation at least once every three years.

Pursuant to Article 16.2 of the Articles of Association, any Director appointed by the Board to fill a casual vacancy shall hold office only until the next following general meeting of the Company and be subject to re-election at such meeting.

CHANGE IN INFORMATION OF DIRECTORS

Pursuant to Rule 13.51B(1) of the Listing Rules, the changes in the information of the Directors are set out below:

Mr. Poon Chiu Kwok resigned as an independent non-executive director of Honghua Group Limited with effect from 1 December 2021. The shares of Honghua Group Limited are listed on the Main Board of the Stock Exchange.

Mr. Liu Jian has been a director of Lanzhou Jinchuan New Materials Technology Co., Ltd.* (蘭州金川新材料科技股份有限公司) since 17 December 2021 (which company's shares were quoted on the National Equities Exchange and Quotations until 17 March 2022).

DIRECTORS' SERVICE CONTRACTS

None of the Directors being proposed for re-election at the Company's forthcoming annual general meeting has service contracts with the Company or any of its subsidiaries which is not terminable by the Group within one year without payment of compensation (other than statutory compensation).

DIRECTORS' RIGHTS TO ACQUIRE SHARES AND DEBENTURES

Save as disclosed in the section headed "Share Option Scheme" and "Share Incentive Scheme" below, neither at the end of nor at any time during the year there subsisted any arrangement to which the Company or any of its subsidiaries or its parent companies or its fellow subsidiaries was a party and the objectives of or one of the objectives of such arrangement are/is to enable the Directors, their respective spouse or children under the age of 18 to acquire benefits by means of the acquisition of shares in or debentures of the Company or any other body corporate.

獨立非執行董事

胡志強先生³
嚴元浩先生
潘昭國先生
余志傑先生⁴

- ¹ 委任於二零二二年二月十九日生效
² 辭任於二零二二年二月十九日生效
³ 於二零二一年十月十二日離世
⁴ 委任於二零二一年十一月六日生效

根據組織章程細則第16.18條，於本公司每次股東週年大會，時任董事中之三分之一應輪值退任，惟每名董事須每三年輪值退任至少一次。

根據組織章程細則第16.2條，董事會委任以填補臨時空缺之任何董事，其任期將於本公司下屆股東大會舉行時屆滿，並有資格於該大會上重選。

董事資料變動

以下載列根據上市規則第13.51B(1)條有關董事資料之變動：

潘昭國先生自二零二一年十二月一日起辭任宏華集團有限公司獨立非執行董事。宏華集團有限公司的股票於聯交所主板上市。

劉建先生自2021年12月17日起於蘭州金川新材料科技股份有限公司(該公司股票自2022年3月17日起終止在全國中小企業股份轉讓系統掛牌)擔任董事。

董事服務合約

概無於本公司應屆股東週年大會膺選連任之董事與本公司或其任何附屬公司訂有任何不可由本集團於一年內終止而毋須作出賠償(法定賠償除外)之服務合約。

董事購買股份及債券之權利

除下文「購股權計劃」及「股份激勵計劃」一節所披露者外，於年結日及年內任何時間，本公司或其任何附屬公司或其母公司或其同系附屬公司概無訂有任何安排，而有關安排之目的或其中一項目的為使董事、其各自之配偶或十八歲以下之子女能以收購本公司或任何其他法人團體之股份或債券之方式獲得利益。

DIRECTORS' INTERESTS IN TRANSACTIONS, ARRANGEMENTS OR CONTRACTS

No contracts, transactions or arrangements of significance, to which the Company, its subsidiaries, its holding company or any of its subsidiaries was a party and in which a Director or entity connected with a Director had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

MANAGEMENT CONTRACTS

No contracts concerning the management and administration of the whole or any substantial part of the business of the Group were entered into or existed during the year ended 31 December 2021.

PERMITTED INDEMNITY PROVISION

The Company's articles of association state that every Director is entitled to be indemnified out of the assets of the Company against all losses or liabilities incurred or sustained by him as a Director in defending any proceedings, whether civil or criminal, in which judgment is given in his favour, or in which he is acquitted. The Company has arranged for appropriate insurance cover for potential liabilities of Directors and officers of the Company to third parties arising out of their corporate activities. All Directors have the benefit of directors' and officers' liability insurance.

This permitted indemnity provision was in force for the benefit of the Directors during the financial year ended 31 December 2021, and remains to be in force as at the date of this "Report of the Directors".

SHARE OPTION SCHEME

A share option scheme of the Company (the "2019 Share Option Scheme") was approved and adopted by the shareholders of the Company at the extraordinary general meeting held on 19 June 2019. As of the date of this report, the 2019 Share Option Scheme is the only existing share option scheme of the Company. The 2019 Share Option Scheme, unless otherwise terminated or amended, will remain in force for a period of 10 years from 19 June 2019. No options were granted or exercised under the 2019 Share Option Scheme during the year ended 31 December 2021. The Company had no share option outstanding as at 31 December 2021. A summary of the 2019 Share Option Scheme is set out below:

董事於交易、安排或合約之權益

於年結日或年內任何時間，本公司、其附屬公司、其控股公司或其任何附屬公司概無訂有董事或與董事有關連的實體直接或間接擁有重大權益之重大合約、交易或安排。

管理合約

截至二零二一年十二月三十一日止年度，本集團並無訂立或存續任何涉及管理及行政管理其全部或任何主要部分業務的合約。

獲准許之彌償條文

本公司組織章程細則訂明，每位董事均可獲本公司以其資產彌償其作為董事因就任何民事或刑事訴訟作出抗辯(限於其獲判勝訴或無罪之訴訟)而招致或蒙受之一切損失或負債。本公司已為董事及高級職員安排合適保險保障，針對因進行公司業務而可能需向第三方承擔的責任。所有董事均享有董事及高級職員責任保險保障。

前述准許的裨益董事的彌償條文在截至二零二一年十二月三十一日止財政年度中有效，且在本「董事會報告」刊發日期仍然有效。

購股權計劃

本公司股東在二零一九年六月十九日舉行之股東特別大會上已批准及採納本公司購股權計劃(「二零一九年購股權計劃」)。於本報告日期，二零一九年購股權計劃為本公司唯一現存之購股權計劃。除非以其他方式予以終止或修訂，否則二零一九年購股權計劃由二零一九年六月十九日起計十年內維持生效。於截至二零二一年十二月三十一日止年度，概無購股權根據二零一九年購股權計劃獲授出或行使。於二零二一年十二月三十一日，本公司亦無購股權尚未獲行使。二零一九年購股權計劃之摘要載列如下：

(1) Purpose

To provide incentive or reward to the participants (as defined in paragraph (2) below) for their contribution to, and continuing efforts to promote the interests of, the Group and for such other purposes as the Board may approve from time to time.

(2) Participants

Any Director (whether executive or non-executive, including any independent non-executive director); and employee (whether full time or part time) of the Group.

(3) Total number of shares available for issue

- (a) Mandate Limit – Subject to paragraph (b) below, the total number of shares in the Company, which may be issued upon exercise of all options to be granted under the 2019 Share Option Scheme and any other share option schemes of the Company must not in aggregate exceed 10% of the Company's issued shares as of 19 June 2019, being 1,260,987,305 shares.
- (b) Overriding Limit – The Company may by ordinary resolutions of its shareholders refresh the Mandate Limit as referred to in the above paragraph (a) provided that the Company shall issue a circular to its shareholders before such approval is sought. The overriding limit on the number of shares in the Company, which may be issued upon exercise of all outstanding options granted and yet to be exercised under the 2019 Share Option Scheme and any other share option schemes of the Company must not exceed 30% of the Company's issued shares from time to time.
- (c) As of the date of this report, the total number of shares in the Company available for issue under the 2019 Share Option Scheme was 1,260,987,305 shares.

(1) 目的

旨在獎勵或酬謝為本集團作出貢獻及努力不懈地促進本集團利益之參與人士(定義見下文第(2)段)，以及用於董事會不時批准之有關其他用途。

(2) 參與人士

任何董事(無論執行或非執行董事，包括任何獨立非執行董事)；及本集團僱員(無論全職或兼職)。

(3) 可予發行之股份總數

- (a) 授權限額 – 在下文(b)段之規限下，根據二零一九年購股權計劃及本公司任何其他購股權計劃將予授出之購股權獲全數行使時可予發行之本公司股份總數合共不可超逾本公司於二零一九年六月十九日之已發行股份之10%，即1,260,987,305股。
- (b) 主要限額 – 本公司可透過其股東通過普通決議案更新上文(a)段所述之授權限額，惟於尋求此批准前，本公司須向其股東發出通函。根據二零一九年購股權計劃及本公司任何其他購股權計劃授出而尚未行使之購股權於獲全數行使時可予發行之本公司股份數目之主要限額為不得超逾本公司之不時已發行股份之30%。
- (c) 於本報告日期，根據二零一九年購股權計劃可予發行之本公司股份總數為1,260,987,305股。

(4) Maximum entitlement of each participant

The total number of shares of the Company issued and to be issued upon exercise of options (whether exercised or outstanding) in any 12-month period granted to each participant must not exceed 1% of the shares of the Company in issue, or, if the grantee is a substantial shareholder (as defined in the Listing Rules) or an independent non-executive director (or any of their respective close associate), 0.1% of the shares of the Company in issue with an aggregate value not exceeding HK\$5 million. However, subject to separate approval by the shareholders of the Company in general meeting with the relevant participant and his close associates (as defined in the Listing Rules) (or core connected person (as defined in the Listing Rules) if the participant is a connected person (as defined in the Listing Rules)) abstaining from voting and provided that the Company shall issue a circular to its shareholders before such approval is sought, the Company may grant a participant options which would exceed the aforesaid limit.

(5) Grant of options

Each offer of an option (the "Offer") shall be in writing made to an eligible person by letter in such form as the Board may from time to time determine at its discretion (the "Offer Letter"). The Offer Letter shall state, among others, the period during which the option may be exercised (the "Option Period"), which period is to be determined and notified by the Board but shall expire in any event not later than the last day of the 10 year period after the date of grant of the option.

The Board may specify in the Offer Letter any conditions which must be satisfied before the option may be exercised, including without limitation such performance targets and minimum periods for which an option must be held before it can be exercised, as the Board may determine from time to time.

The Board shall specify in the Offer Letter a date by which the grantee must accept the Offer, being a date no later than 14 days after the date on which the option is offered (the "Offer Date") or the date on which the conditions for the Offer are satisfied. Payment of option price of HK\$1.00 shall be made upon acceptance of the Offer.

(4) 每名參與人士可享之最大權利

每名參與人士於任何12個月期間內獲授之購股權(無論已行使或尚未行使)在行使時獲發及將獲發之本公司股份總數不得超過本公司之已發行股份之1%(倘擬向主要股東(定義見上市規則)或獨立非執行董事或彼等各自之任何緊密聯繫人授出購股權,則為本公司已發行股份之0.1%而總值並不超過5百萬港元)。然而,待本公司股東於股東大會上另行批准,而有關參與人士及其緊密聯繫人(定義見上市規則)(或假若參與人士是關連人士(定義見上市規則),核心關連人士(定義見上市規則))放棄投票,及本公司在尋求此批准前向其股東發出通函,則本公司可向參與人士授出超出前述限額之購股權。

(5) 授出購股權

每份購股權要約(「要約」)均須以董事會不時酌量釐定之形式向合資格人士發出書面函件(「要約函件」)作出。要約函件須列明(其中包括)可行使購股權之期間(「購股權期間」),該期間將由董事會釐定及通知,惟無論如何不遲於授出購股權日期後十年期最後一日屆滿。

董事會可於要約函件中列明行使購股權前須達成之任何條件,包括但不限於董事會可能不時釐定之表現目標及購股權於行使前須持有之最短期限。

董事會須於要約函件內列明承授人接納要約之限期,當日須不遲於要約授出購股權日期(「要約日期」)後14日或要約之條件獲達成日期。購股權價格1.00港元須於接納要約時支付。

(6) Subscription Price

The price at which each Share subject to an option may be subscribed for on the exercise of that option (the “**Subscription Price**”) shall be a price solely determined by the Board and notified to an eligible person and shall be at least the highest of: (a) the closing price of the Shares as stated in the Stock Exchange’s daily quotations sheet on the Offer Date, which must be a business day; (b) the average of the closing price of the Shares as stated in the Stock Exchange’s daily quotations sheets for the five business days immediately preceding the Offer Date; and (c) the nominal value of the Share.

No share option was granted or exercised under the 2019 Share Option Scheme during the year ended 31 December 2021. The Company had no share option outstanding as at 31 December 2021.

SHARE INCENTIVE SCHEME

A share incentive scheme (the “**Share Incentive Scheme**”) was approved by the then shareholders at the annual general meeting of the Company held on 2 June 2015 (the “**Adoption Date**”). The purpose of the Share Incentive Scheme is to provide incentive or reward to Directors or employees of the Group for their contributions to, and continuing efforts to promote the interests of, the Group and its business. Pursuant to the Share Incentive Scheme, performance-based shares of the Company may be granted to eligible persons. The Share Incentive Scheme permits the granting of the performance-based shares to the eligible persons that are either new shares of the Company or existing shares of the Company that are purchased pursuant to the terms of the Share Incentive Scheme.

The aggregate number of the performance-based shares which may be allotted and issued and/or purchased upon vesting of the performance-based shares granted under the Share Incentive Scheme is limited to 10% of the total number of shares of the Company in issue as at the Adoption Date. Pursuant to the Share Incentive Scheme, the maximum aggregate number of shares of the Company which may be allotted and issued or purchased upon the vesting of performance-based shares granted under the Share Incentive Scheme and yet to be vested in relation to shares of the Company or options granted under other long-term incentive schemes of the Company (including the 2019 Share Option Scheme) must not, in aggregate, exceed 30% of the total number of shares of the Company in issue from time to time.

(6) 認購價

於行使購股權時認購該購股權所涉及股份之每股價格(「**認購價**」)須為董事會全權釐定並知會合資格人士之價格，該價格最少相等於以下各項之最高者：(a)股份於要約日期(須為營業日)在聯交所每日報價表所報之收市價；(b)股份於緊接要約日期前五個營業日在聯交所每日報價表所報之平均收市價；及(c)股份之面值。

於截至二零二一年十二月三十一日止年度，概無購股權根據二零一九年購股權計劃獲授出或獲行使。本公司於二零二一年十二月三十一日概無尚未行使之購股權。

股份激勵計劃

股份激勵計劃(「**股份激勵計劃**」)於二零一五年六月二日(「**採納日期**」)舉行之本公司股東週年大會上獲當時之股東批准。股份激勵計劃之目的為向董事或本集團僱員提供獎勵或獎賞，以嘉獎彼等對提高本集團及其業務之利益作出之貢獻及持續作出的努力。根據股份激勵計劃，本公司可向合資格人士授出本公司之業績股份。股份激勵計劃允許本公司向合資格人士授出本公司之新股份，或本公司根據股份激勵計劃之條款所購買之現有股份作為業績股份。

於根據股份激勵計劃授出之業績股份歸屬時，可能配發及發行及／或購買之業績股份總數以採納日期本公司已發行股份總數10%為限。根據股份激勵計劃，於根據股份激勵計劃授出之業績股份歸屬時可能配發及發行或購買之股份，連同根據本公司其他長期激勵計劃(包括二零一九年購股權計劃)所授出之股份或購股權之相關未歸屬股份總數，合共最多不得超過本公司不時已發行股份總數之30%。

At the Company's annual general meeting held on 18 June 2021 ("2021 AGM"), a scheme mandate was granted to the Board to exercise the powers of the Company to issue new shares of the Company not exceeding 2% of the issued share capital of the Company as at the date of 2021 AGM. Such mandate has not been used and will lapse at the conclusion of the annual general meeting of the Company in 2022. It is expected that the Company will continue to seek granting of similar scheme mandates from the shareholders at future annual general meetings of the Company during the term of the Share Incentive Scheme so as to enable the Company to allot and issue new shares to satisfy the grant of the performance-based shares under the Share Incentive Scheme.

DISCLOSURE OF INTERESTS

(a) Directors' and chief executive's interests and short positions in shares, underlying shares and debentures of the Company or its associated corporations

As at 31 December 2021, none of the Directors or chief executive of the Company had any interest or short position in the shares, underlying shares or debentures of the Company or its associated corporations (within the meaning of Part XV of the SFO) which were required: (a) pursuant to section 352 of the SFO, to be entered in the register referred to therein; (b) to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO; or (c) to be notified to the Company and the Stock Exchange pursuant to the Model Code as set out in Appendix 10 to the Listing Rules.

於二零二一年六月十八日舉行之本公司股東週年大會(「二零二一年股東週年大會」)上，董事會獲授予計劃授權，藉此可行使本公司之權力發行不超過於二零二一年股東週年大會日期本公司已發行股本2%之本公司新股份。該授權尚未動用，且將於本公司之二零二二年股東週年大會結束時失效。預期本公司將於股份激勵計劃之年內，在日後之本公司股東週年大會上繼續尋求股東授出類似之計劃授權，以便本公司配發及發行新股份，從而得以根據股份激勵計劃授出業績股份。

權益披露

(a) 董事及最高行政人員於本公司或其相聯法團之股份、相關股份及債券之權益及淡倉

於二零二一年十二月三十一日，概無董事或本公司最高行政人員於本公司或其相聯法團(定義見證券及期貨條例第XV部)之股份、相關股份或債券中，擁有任何：(a)須記錄於根據證券及期貨條例第352條所規定存置之登記冊之權益或淡倉；(b)根據證券及期貨條例第XV部第7及8分部須知會本公司及聯交所之權益或淡倉；或(c)根據上市規則附錄10所載的標準守則須知會本公司及聯交所之權益或淡倉。

Report of the Directors

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(b) Interests and short positions of substantial shareholders in the shares and underlying shares of the Company

As at 31 December 2021, so far as is known to the Directors, the following persons (i) had interests or short positions in the shares and/or underlying shares of the Company which were recorded in the register required to be kept by the Company under section 336 of the SFO; or (ii) were, directly or indirectly, interested in 5% or more of the nominal value of any class of share capital carrying the right to vote in all circumstances at general meetings of the Company or any options in respect of such capital.

Long positions and short positions in the shares and underlying shares of the Company:

(b) 主要股東於本公司股份及相關股份之權益及淡倉

於二零二一年十二月三十一日，就董事所知，下列人士(i)於本公司股份及／或相關股份中持有根據證券及期貨條例第336條須登記於本公司所保存登記冊內之權益或淡倉；或(ii)直接或間接擁有附有權利可於任何情況下在本公司股東大會投票之任何類別股本面值5%或以上之權益或該等股本之任何相關購股權。

於本公司股份及相關股份之好倉及淡倉：

Name of shareholder	Notes	Capacity/Nature of interest	Number of Shares interested (Note 1) 擁有權益之 股份數目 (附註1)	Number of Shares which may be converted from PSCS (Note 1) 永久次級可換股證券 可轉換之股份數目 (附註1)	Percentage of the total number of Shares in issue (%) (Note 3) 佔已發行股份 總數之百分比(%) (附註3)
股東名稱	附註	身份／權益性質			
Jinchuan Group Co., Ltd.* 金川集團股份有限公司	(2), (4) & (5)	Interest of controlled corporation 受控法團權益	7,593,009,857 (L)	690,000,000 (L) 690,000,000 (S)	65.69% 5.47%
Jinchuan Group (Hongkong) Resources Holdings Limited 金川集團(香港)資源控股有限公司	(2), (4) & (5)	Interest of controlled corporation 受控法團權益	7,593,009,857 (L)	690,000,000 (L) 690,000,000 (S)	65.69% 5.47%
Jinchuan (BVI) Limited 金川(BVI)有限公司	(2), (4) & (5)	Interest of controlled corporation/ Beneficial owner 受控法團權益／實益擁有人	7,593,009,857 (L)	690,000,000 (L) 690,000,000 (S)	65.69% 5.47%
Jinchuan (BVI) 1 Limited 金川(BVI)1有限公司	(2)	Beneficial owner 實益擁有人	1,888,449,377 (L)	–	14.98%
Jinchuan (BVI) 2 Limited 金川(BVI)2有限公司	(2)	Beneficial owner 實益擁有人	583,518,372 (L)	–	4.63%
Jinchuan (BVI) 3 Limited 金川(BVI)3有限公司	(2)	Beneficial owner 實益擁有人	534,922,108 (L)	–	4.24%
Gansu Province Economy Cooperation Co., Ltd.* 甘肅省經濟合作有限公司		Beneficial owner 實益擁有人	1,090,000,000 (L)	–	8.64%
Gansu Province Xinye Assets Management Co. Ltd.* 甘肅省新業資產經營有限責任公司		Beneficial owner 實益擁有人	1,110,000,000 (L)	–	8.80%

Name of shareholder	Notes	Capacity/Nature of interest	Number of Shares interested (Note 1) 擁有權益之股份數目 (附註1)	Number of Shares which may be converted from PSCS (Note 1) 永久次級可換股證券可轉換之股份數目 (附註1)	Percentage of the total number of Shares in issue (%) (Note 3) 佔已發行股份總數之百分比 (%) (附註3)
股東名稱	附註	身份/權益性質			
Bank of America Corporation	(6)	Interest of controlled corporation 受控法團權益	751,938,481 (L) 751,918,000 (S)	–	5.96% 5.96%
NB Holdings Corporation	(7) to (10)	Interest of controlled corporation 受控法團權益	751,938,481 (L) 751,918,000 (S)	–	5.96% 5.96%
BofAML Jersey Holdings Limited	(7)	Interest of controlled corporation 受控法團權益	747,958,481 (L) 748,673,000 (S)	–	5.93% 5.94%
BofAML EMEA Holdings 2 Limited	(7)	Interest of controlled corporation 受控法團權益	747,958,481 (L) 748,673,000 (S)	–	5.93% 5.94%
ML UK Capital Holdings Limited	(7)	Interest of controlled corporation 受控法團權益	747,958,481 (L) 748,673,000 (S)	–	5.93% 5.94%
Merrill Lynch International	(7)	Beneficial owner 實益擁有人	747,958,481 (L) 748,673,000 (S)	–	5.93% 5.94%
BofA Securities, Inc.	(8)	Beneficial owner 實益擁有人	3,245,000 (L) 3,245,000 (S)	–	0.03% 0.03%
BAC North America Holding Company	(9)	Interest of controlled corporation 受控法團權益	333,000 (L)	–	0.003%
Bank of America, National Association	(9)	Beneficial owner 實益擁有人	333,000 (L)	–	0.003%
BofA Securities Europe SA	(10)	Beneficial owner 實益擁有人	402,000 (L)	–	0.003%

Notes:

- The letter "L" denotes the long position in such Shares and the letter "S" denotes the short position in such Shares.
- Jinchuan Group Co., Ltd* directly owned 100% of the issued share capital of Jinchuan Group (Hongkong) Resources Holdings Limited which in turn owned 100% of the issued share capital of Jinchuan (BVI) Limited which owned 100% of the issued share capital of each of Jinchuan (BVI) 1 Limited, Jinchuan (BVI) 2 Limited and Jinchuan (BVI) 3 Limited. Therefore, Jinchuan Group Co., Ltd*, Jinchuan Group (Hongkong) Resources Holdings Limited and Jinchuan (BVI) Limited were deemed to be interested in the 1,888,449,377 shares, 583,518,372 shares and 534,922,108 shares of the Company held by Jinchuan (BVI) 1 Limited, Jinchuan (BVI) 2 Limited and Jinchuan (BVI) 3 Limited respectively under the SFO.

附註：

- 字母「L」代表於有關股份之好倉，字母「S」代表於有關股份之淡倉。
- 金川集團股份有限公司直接持有金川集團(香港)資源控股有限公司已發行股本之100%，金川集團(香港)資源控股有限公司持有金川(BVI)有限公司已發行股本之100%，金川(BVI)有限公司持有金川(BVI) 1有限公司、金川(BVI) 2有限公司及金川(BVI) 3有限公司各自已發行股本之100%。因此，根據證券及期貨條例，金川集團股份有限公司、金川集團(香港)資源控股有限公司及金川(BVI)有限公司被視為於金川(BVI) 1有限公司、金川(BVI) 2有限公司及金川(BVI) 3有限公司分別所持之1,888,449,377股、583,518,372股及534,922,108股本公司股份中擁有權益。

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3. The calculation is based on the total number of issued shares of the Company (i.e. 12,609,873,051 Shares) as at 31 December 2021.
 4. Jinchuan (BVI) Limited directly held 4,586,120,000 Shares and PSCS in the amount of US\$88,461,539 (equivalent to approximately HK\$690,000,000) which may be converted into 690,000,000 shares of the Company at an initial conversion price of HK\$1.00 per share. Based on the relations set out in note 2 above, Jinchuan Group Co., Ltd* and Jinchuan Group (Hongkong) Resources Holdings Limited were deemed to be interested in the 4,586,120,000 shares of the Company and 690,000,000 underlying shares which may be converted from PSCS of the Company held by Jinchuan (BVI) Limited under the SFO.
 5. According to the information available to the Company, Jinchuan (BVI) Limited had entered into agreements to transfer the remaining principal amount of US\$88,461,539 of the PSCS convertible into 690,000,000 conversion shares at an initial conversion price of HK\$1.00 per conversion share.
 6. NB Holdings Corporation is 100% owned by Bank of America Corporation.
 7. Merrill Lynch International is 100% owned by ML UK Capital Holdings Limited. ML UK Capital Holdings Limited is 80.1% owned by BofAML EMEA Holdings 2 Limited. BofAML EMEA Holdings 2 Limited is 100% owned by BofAML Jersey Holdings Limited. BofAML Jersey Holdings Limited is 100% owned by NB Holdings Corporation.
 8. BofA Securities, Inc. is 100% owned by NB Holdings Corporation.
 9. Bank of America, National Association is 100% owned by BAC North America Holding Company. BAC North America Holding Company is 100% owned by NB Holdings Corporation.
 10. BofA Securities Europe SA is 99.9% owned by NB Holdings Corporation.
3. 佔已發行股份總數之百分比乃根據於二零二一年十二月三十一日本公司已發行股份總數(即12,609,873,051股股份)計算。
 4. 金川(BVI)有限公司直接持有4,586,120,000股股份及金額合共88,461,539美元(相當於約690,000,000港元)之永久次級可換股證券，據此可按初步換股價每股1.00港元轉換為690,000,000股本公司股份。基於上述附註2所述的關係，根據證券及期貨條例，金川集團股份有限公司及金川集團(香港)資源控股有限公司被視作於金川(BVI)有限公司所持之4,586,120,000股本公司股份及690,000,000股永久次級可換股證券可轉換之本公司相關股份中擁有權益。
 5. 根據本公司所得資料，金川(BVI)有限公司曾訂立協議，以轉讓可按初步換股價每股換股股份1.00港元轉換為690,000,000股換股股份之本金餘額88,461,539美元之永久次級可換股證券。
 6. NB Holdings Corporation由Bank of America Corporation擁有100%權益。
 7. Merrill Lynch International由ML UK Capital Holdings Limited擁有100%權益。ML UK Capital Holdings Limited由BofAML EMEA Holdings 2 Limited擁有80.1%權益。BofAML EMEA Holdings 2 Limited由BofAML Jersey Holdings Limited擁有100%權益。BofAML Jersey Holdings Limited由NB Holdings Corporation擁有100%權益。
 8. BofA Securities, Inc. 由NB Holdings Corporation擁有100%權益。
 9. Bank of America, National Association由BAC North America Holding Company擁有100%權益。BAC North America Holding Company由NB Holdings Corporation擁有100%權益。
 10. BofA Securities Europe SA由NB Holdings Corporation擁有99.9%權益。

Save as disclosed above, as at 31 December 2021, so far as is known to the Directors, no other person (i) had interests or short positions in the shares and underlying shares of the Company which were recorded in the register required to be kept by the Company under Section 336 of the SFO, or (ii) were, directly or indirectly, interested in 5% or more of the nominal value of any class of share capital carrying the right to vote in all circumstances at general meetings of the Company or any options in respect of such capital.

* For identification purposes only

除上文披露者外，於二零二一年十二月三十一日，就董事所知，概無其他人士(i)於本公司股份及相關股份中擁有須記入本公司根據證券及期貨條例第336條所規定存置之登記冊之權益或淡倉；或(ii)直接或間接擁有附帶權利可於所有情況下在本公司股東大會上投票之任何類別股本面值5%或以上權益，或有關該等股本之任何購股權。

* 僅供識別

MAJOR CUSTOMERS AND SUPPLIERS

During the year under review, sales to the Group's five largest customers accounted for 86% (2020: 65%) of the total sales for the year and sales to the Group's largest customer accounted for 28% (2020: 17%) of the total sales for the year. Purchases from the Group's five largest suppliers accounted for 67% (2020: 37%) of the total purchases for the year and purchases from the largest supplier accounted for 48% (2020: 13%) of the total purchases for the year.

At no time during the year did a Director, a close associate of a Director, or a shareholder of the Company (which to the knowledge of the Directors own more than 5% of the Company's number of issued shares) had any beneficial interest in any of the Group's five largest customers or suppliers for the year ended 31 December 2021 and 2020.

RETIREMENT BENEFIT SCHEMES

The Group strictly complies with the Mandatory Provident Fund Schemes Ordinance in making mandatory contributions for its staff in Hong Kong, and also makes contributions to staff retirement fund for those staff in the PRC, South Africa, the DRC and Zambia. Details of the Group's retirement benefit schemes for the year ended 31 December 2021 are set out in note 38 to the consolidated financial statements.

PRE-EMPTIVE RIGHTS

There are no provisions for pre-emptive rights under the Company's articles of association, or the laws of the Cayman Islands, where the Company is incorporated, which oblige the Company to offer new shares on a pro-rata basis to existing shareholders.

主要客戶及供應商

於回顧年度，本集團的五大客戶銷售額佔年度銷售總額的86%（二零二零年：65%），而本集團最大客戶銷售額佔年度銷售總額的28%（二零二零年：17%）。本集團的五大供應商採購額佔年度採購總額的67%（二零二零年：37%），而最大供應商採購額佔年度採購總額的48%（二零二零年：13%）。

於年內任何時間，本公司董事、董事之緊密聯繫人或股東（就董事所知擁有本公司已發行股份數目5%以上）於截至二零二一年及二零二零年十二月三十一日止年度概無於本集團之五大客戶或供應商中擁有任何實益權益。

退休福利計劃

本集團嚴格遵照強制性公積金計劃條例，為香港員工作出強制性供款，並為中國、南非、剛果（金）及贊比亞之員工作出員工退休金供款。本集團截至二零二一年十二月三十一日止年度之退休福利計劃詳情載於綜合財務報表附註38。

優先購買權

本公司組織章程細則或本公司註冊成立地點開曼群島之法例並無有關優先購買權之規定，本公司毋須按比例向現有股東提呈新股份。

COMPETING INTERESTS

None of the Directors and their respective associates (as defined in the Listing Rules) had an interest in a business which competes or is likely to compete with the business of the Group throughout the year ended 31 December 2021.

EMOLUMENT POLICY

The emolument policy of the employees of the Group is set out by the Board on the basis of their merit, qualifications and competence.

The emoluments of the Directors are decided by the Board, having regard to the Company's operating results, individual performance and comparable market statistics as well as the recommendations of the Remuneration and Nomination Committee of the Board.

The Company has adopted a share option scheme on 19 June 2019 and a share incentive scheme on 2 June 2015 as an incentive to directors and eligible employees of the Group. Further details of the said share option scheme and the share incentive scheme are set out on pages 69 to 73 of this report.

SUFFICIENCY OF PUBLIC FLOAT

Based on information that is publicly available to the Company and within the knowledge of the Directors, as at the date of this report, the Company has maintained a sufficient public float of not less than 25% of the Company's total number of issued shares as required under the Listing Rules.

競爭性權益

董事及彼等各自之聯繫人(定義見上市規則)於截至二零二一年十二月三十一日止整個年度內概無於對本集團之業務構成或可能構成競爭之業務中擁有權益。

薪酬政策

本集團之僱員薪酬政策乃由董事會按彼等之優點、資歷及能力釐定。

董事之薪酬乃由董事會經考慮本公司經營業績、個別表現、可資比較市場數據以及董事會薪酬及提名委員會的建議而定。

本公司已於二零一九年六月十九日採納購股權計劃及於二零一五年六月二日採納股份激勵計劃，以向本集團董事及合資格僱員提供獎勵。上述之購股權計劃及股份激勵計劃之進一步詳情載於本報告第69至73頁。

足夠公眾持股量

根據本公司可取得之公開資料及據董事所知悉，於本報告日期，本公司維持根據上市規則之規定不少於本公司已發行股份總數25%之足夠公眾持股量。

CONNECTED TRANSACTIONS

During the year under review, the Group had the following connected transactions which were subject to reporting and announcement requirements pursuant to the Listing Rules, but were exempt from the independent shareholders' approval requirement.

(i) Survey Contract

Contract Date

31 December 2018

Parties

Service Receiver: Chibuluma, an indirect non wholly-owned subsidiary of the Company.

Service Provider: Jinchuan R&E, a direct wholly-owned subsidiary of JCG.

Principal Terms

Chibuluma and Jinchuan R&E entered into the survey contract relating to the provision of geochemical and ground-geophysical surveys in the Northwestern Province Exploration Projects by Jinchuan R&E to Chibuluma. Please refer to the announcement published by the Company on 31 December 2018 for details.

Consideration

The basic contract price for geochemical work shall be approximately US\$620,000, whilst the basic contract price for ground-geophysical work shall be approximately US\$120,000. The total contract price shall be subject to adjustments based on actual work to be undertaken. By the end of December 2021, approximately 70% of contracted work was completed by Jinchuan R&E.

關連交易

於回顧年度，本集團已進行下列根據上市規則須遵守申報及公告規定但獲豁免遵守獨立股東批准規定之關連交易。

(i) 勘查合同

合同日期

二零一八年十二月三十一日

訂約方

服務接收方：Chibuluma，本公司之間接非全資附屬公司。

服務提供方：鎳鈷設計院，金川之直接全資附屬公司。

主要條款

Chibuluma與鎳鈷設計院訂立勘查合同，內容有關鎳鈷設計院就西北省勘探項目向Chibuluma提供地球化學和地面地球物理勘查服務。有關詳情請參閱本公司於二零一八年十二月三十一日刊發之公告。

代價

地球化學工作之基本合同價格將約為620,000美元，而地面地球物理工作之基本合同價格將約為120,000美元。合同總價格將根據實際將予進行之工作予以調整。直至二零二一年十二月底，鎳鈷設計院完成合同工作的約70%。

(ii) Design Supervision Contract

Contract Date

31 December 2018

Parties

Service Receiver: Ruashi, an indirect non wholly-owned subsidiary of the Company

Service Provider: Jinchuan R&E, a direct wholly-owned subsidiary of JCG

Principal Terms

Ruashi and Jinchuan R&E entered into the design supervision contract relating to the provision of design supervision services for Musonoi Project by Jinchuan R&E to Ruashi. Please refer to the announcement published by the Company on 31 December 2018 for details.

Consideration

The basic contract price for design supervision services shall be approximately US\$242,409. Approximate 80% of the contract work was completed by Jinchuan R&E by the end of December 2021.

(ii) 設計監理合同

合同日期

二零一八年十二月三十一日

訂約方

服務接收方：Ruashi，本公司之間接非全資附屬公司

服務提供方：鎳鈷設計院，金川之直接全資附屬公司

主要條款

Ruashi與鎳鈷設計院訂立設計監理合同，內容有關鎳鈷設計院就Musonoi項目向Ruashi提供設計監理服務。有關詳情請參閱本公司於二零一八年十二月三十一日刊發之公告。

代價

設計監理服務之基本合同價格將約為242,409美元。直至二零二一年十二月底，鎳鈷設計院完成合同工作的約80%。

CONTINUING CONNECTED TRANSACTIONS

During the year under review, the Group had the following continuing connected transactions which were subject to reporting and announcement requirements pursuant to the Listing Rules, but were exempt from the independent shareholders' approval requirement.

(i) Jin Gang Framework Agreement

Contract Date

20 November 2019

Parties

Services Receiver: the Group

Services Provider: Jin Gang, an indirect non wholly-owned subsidiary of JCG

Term

For a term of three years commencing retrospectively on 1 January 2019 and ending on 31 December 2021 (both days inclusive)

Principal Terms

On 17 July 2018, Jin Gang and Kinsenda entered into a maintenance contract and a mining contract (as amended by an amendment agreement entered on 31 December 2018). The maintenance contract is related to the provision of maintenance work in the process and backfill plants and the bagging and loading work in Kinsenda Mine and the mining contract is related to the provision of underground mine production service in the Kinsenda Mine.

On 20 November 2019, the Company has entered into the Jin Gang Framework Agreement with Jin Gang to expand the services provided by Jin Gang to other mines of the Group, pursuant to which, Jin Gang as contractor shall provide maintenance, bagging and wide variety mining service to the Group.

Please refer to the announcements published by the Company on 17 July 2018, 31 December 2018 and 20 November 2019 for details.

持續關連交易

於回顧年度，本集團已進行下列根據上市規則須遵守申報及公告規定但獲豁免遵守獨立股東批准規定之持續關連交易。

(i) Jin Gang 框架協議

合同日期

二零一九年十一月二十日

訂約方

服務接收方：本集團

服務提供方：Jin Gang，金川之間接非全資附屬公司

年期

年期追溯至二零一九年一月一日起計及截至二零二一年十二月三十一日止(包括首尾兩日)，為期三年

主要條款

於二零一八年七月十七日，Jin Gang 與 Kinsenda 訂立維護合同及採礦合同(由日期為二零一八年十二月三十一日之修訂協議所修訂)。維護合同有關於 Kinsenda 礦場內提供加工廠及回填廠維護工作及裝袋及貨物裝載工作以及採礦合同有關於 Kinsenda 礦場內提供地下採礦生產服務。

於二零一九年十一月二十日，本公司已與 Jin Gang 訂立 Jin Gang 框架協議以擴展 Jin Gang 提供的服務至本集團的其他礦場。據此，Jin Gang 作為承包商將向本集團提供維護、裝袋及多種採礦服務。

有關詳情請參閱本公司於二零一八年七月十七日、二零一八年十二月三十一日及二零一九年十一月二十日刊發之公告。

Consideration

The Group incurred mining and maintenance expenses of US\$14,099,000 for the year ended 31 December 2021, which did not exceed the annual cap for 2021 of US\$17,500,000.

On 30 December 2021, Jin Gang and the Company entered into the New Jin Gang Framework Agreement for the period from 1 January 2022 to 31 December 2024. For details, please refer to the Company's announcement dated 30 December 2021.

(ii) Leasing of Kinsenda's Equipment

Contract Date

17 July 2018

Parties

Lessor: Kinsenda, an indirect non wholly-owned subsidiary of the Company

Lessee: Jin Gang, an indirect non wholly-owned subsidiary of JCG

Principal Terms

Pursuant to a mining contract entered into between Kinsenda and Jin Gang on 17 July 2018, if Jin Gang shall request Kinsenda to make available to Jin Gang certain equipments belonging to Kinsenda for the performance of its work under the contract and if Kinsenda shall agree to such a request the equipment or facilities may be changed at agreed rental rates. The rental cost shall be deducted from mining expenses payment to Jin Gang by Kinsenda. Please refer to the announcements published by the Company on 17 July 2018 and 20 November 2019 for details.

Consideration

The Group received rental income of approximately US\$580,000 for the year ended 31 December 2021, which did not exceed the annual cap for 2021 of US\$2,000,000.

代價

本集團截至二零二一年十二月三十一日止年度產生採礦開支、維護開支14,099,000美元，其並未超過二零二一年之年度上限17,500,000美元。

於二零二一年十二月三十日，Jin Gang與本公司訂立新Jin Gang框架協議，期限為二零二二年一月一日至二零二四年十二月三十一日。有關詳情請參閱本公司日期為二零二一年十二月三十日的公告。

(ii) Kinsenda設備租賃

合同日期

二零一八年七月十七日

訂約方

出租人：Kinsenda，本公司之間接非全資附屬公司

承租人：Jin Gang，金川之間接非全資附屬公司

主要條款

根據Kinsenda與Jin Gang於二零一八年七月十七日訂立之採礦合同，倘Jin Gang將要求Kinsenda向Jin Gang出租屬於其的若干設備，以進行合同項下的工作及倘Kinsenda同意該要求，設備或設施費用可按協定租金費率承擔，租金成本將由Kinsenda向Jin Gang支付的採礦開支付款中扣除。有關詳情請參閱本公司於二零一八年七月十七日及二零一九年十一月二十日刊發之公告。

代價

本集團截至二零二一年十二月三十一日止年度收取租金收入約580,000美元，其並未超過二零二一年之年度上限2,000,000美元。

During the year under review, the Group had the following continuing connected transactions which were subject to reporting, announcement and independent shareholders' approval requirements pursuant to the Listing Rules.

Trading of Mineral and Metal Products Framework Agreement ("2019 CCT Agreement")

Contract and Announcement Date

5 June 2019

Parties

Buyer: JCG

Seller: The Company

Principal Terms

On 5 June 2019 (after trading hours), the Company and JCG entered into the 2019 CCT Agreement which will replace all previous connected transaction agreement for trading of Mineral and Metal Products with JCG Group.

Pursuant to the 2019 CCT Agreement, the Company has agreed to cause the Group to sell to JCG Group, and JCG has agreed to cause JCG Group (for the purpose of 2019 CCT Agreement, excluding the Group) to purchase from the Group, the Mineral and Metal Products that the Group may source from third parties or produce by the mines of the Group during the term of the 2019 CCT Agreement.

The quantity of each type of Mineral and Metal Products to be sold to JCG Group is not fixed under the terms of the 2019 CCT Agreement but is to be determined and agreed between the relevant parties from time to time.

Please refer to the announcement dated 5 June 2019 and circular dated 21 June 2019 published by the Company for more details.

於回顧年度，本集團已進行下列根據上市規則須遵守申報、公告及獨立股東批准規定之持續關連交易。

買賣礦產品及金屬產品框架協議(「二零一九年持續關連交易協議」)

合同及公告日期

二零一九年六月五日

訂約方

買方：金川

賣方：本公司

主要條款

於二零一九年六月五日(於交易時段後)，本公司與金川訂立二零一九年持續關連交易協議，其將取代所有先前與金川集團訂立的買賣礦產品及金屬產品之關連交易協議。

根據二零一九年持續關連交易協議，於二零一九年持續關連交易協議期間，本公司同意促使本集團向金川集團出售，而金川同意促使金川集團(就二零一九年持續關連交易協議而言，不包括本集團)向本集團購買由本集團向第三方採購或由本集團礦場生產的礦產品及金屬產品。

出售予金川集團之每種礦產品及金屬產品的數量並未於二零一九年持續關連交易協議之條款中訂定，而是不時由有關訂約各方釐定及協商。

有關更多詳情請參閱本公司於二零一九年六月五日刊發之公告以及於二零一九年六月二十一日刊發之通函。

Basis of the selling prices of the Mineral and Metal Products

The consideration of the Mineral and Metal Products sold will be determined with reference to the prevailing market price of the Mineral and Metal Products at the time of each specific agreement to be entered into pursuant to the 2019 CCT Agreement, subject to certain adjustments mainly involve the basis coefficient pricing, the moisture content, the percentage of metal content and the impurity element content in the metals. Market prices of copper, cobalt, nickel and other relevant metals refer to (i) the monthly moving average price or the monthly average settlement price of copper quoted on the LME; or (ii) the monthly moving average price of cobalt quoted on the MB; or (iii) the monthly moving average price or the monthly average settlement price of nickel quoted on the LME; or (iv) when the market price of other Mineral and Metal Products could not be adequately reflected through (i), (ii) and (iii) at the place of sale or the receiving market, the price shall be reasonably determined by both parties after making reference to the monthly average selling price of Mineral and Metal Products at the place of sale or the receiving market. Such price will be determined by making reference to the selling price charged by other renowned mining companies at the place of sale or receiving market, and a recognized stock index that is comparable to the LME or the MB, such as SMM Information & Technology Co., Ltd, Shanghai Futures Exchange or Chicago Mercantile Exchange. This mechanism is intended to ensure that the selling prices for the Mineral and Metal Products provided by the Group to JCG Group will be determined on normal commercial terms.

Consideration

The Group sold 2,600 tonnes of copper contained in copper concentrates to JCG Group and recognised revenue of US\$22,118,000 in the year ended 31 December 2021 which did not exceed the annual cap for 2021 of US\$490,000,000.

The transactions contemplated under the agreements between them constituted connected transactions as defined in Listing Rules.

礦產品及金屬產品之售價基準

已售礦產品及金屬產品的代價將參考根據二零一九年持續關連交易協議所訂立之各項礦產品及金屬產品協議之當時市價釐定，惟可進行若干調整，主要涉及基本價格系數釐定、水分含量、金屬含量百分比及金屬雜質元素含量。銅、鈷、鎳及其他相關金屬的市價指(i)倫敦金所報銅的每月移動平均價格或每月平均結算價格；或(ii)金屬導報所報鈷的每月移動平均價格；或(iii)倫敦金所報鎳的每月移動平均價格或每月平均結算價格；或(iv)當其他礦產品及金屬產品的市場價格無法透過(i)、(ii)及(iii)在銷售地或收貨市場予以充分反映時，價格應由雙方經參考礦產品及金屬產品於銷售地或收貨市場的每月平均售價後合理釐定。該價格將參考其他知名礦業公司於銷售地或收貨市場所索要之銷售價格，以及與倫敦金所或金屬導報可資比較的認可股指(如上海有色網信息科技股份有限公司、上海期貨交易所或芝加哥商品交易所)而釐定。此機制旨在確保本集團向金川集團提供之礦產品及金屬產品售價將按一般商業條款釐定。

代價

截至二零二一年十二月三十一日止年度，本集團向金川集團出售含銅量2,600噸的銅精礦並確認收益22,118,000美元，其並未超過二零二一年之年度上限490,000,000美元。

彼等於該等協議項下擬進行之交易構成上市規則界定之關連交易。

All the above continuing connected transactions for the year ended 31 December 2021 have been reviewed by the independent non-executive Directors. The independent non-executive Directors have confirmed that the continuing connected transactions have been entered into:

- (a) in the ordinary and usual course of business of the Group;
- (b) either on normal commercial terms or on terms no less favourable to the Group than terms available to or from independent third parties; and
- (c) in accordance with the respective agreements governing them on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

The Company's auditors were engaged to report on the Group's continuing connected transactions in accordance with the Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants. The auditors have issued an unqualified letter containing their findings and conclusions in respect of the continuing connected transactions for the year ended 31 December 2021 in accordance with Rule 14A.56 of Listing Rules. A copy of the auditors' letter has been provided by the Company to the Stock Exchange.

Save as disclosed above, no contracts, transactions or arrangements of significance to which the Company or any of its subsidiaries was a party and in which a Director or any entity connected with a Director had a material interest, whether directly or indirectly, subsisted at the end of the year or at any time during the year.

The Directors confirmed that the material related party transactions as disclosed in note 39 to the consolidated financial statements fall under the definition of connected transactions or continuing connected transactions. The Directors confirmed that those transactions complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules.

上述截至二零二一年十二月三十一日止年度之持續關連交易均已經獨立非執行董事審閱。獨立非執行董事確認，所訂立之持續關連交易：

- (a) 於本集團之日常及一般業務過程中進行；
- (b) 按正常商業條款進行，或對本集團而言按不遜於給予獨立第三方或從獨立第三方取得之條款進行；及
- (c) 按照規管有關交易之各自之協議進行，其條款屬公平合理，並符合本公司股東之整體利益。

本公司的核數師已獲委聘，按照香港會計師公會頒佈之香港鑒證業務準則第3000號(經修訂)「非審核或審閱過往財務資料的鑒證工作」，並參照實務說明第740號「關於香港上市規則所述持續關連交易的核數師函件」，就本集團之持續關連交易作出報告。核數師已發出無保留意見函件，內含其按照上市規則第14A.56條就截至二零二一年十二月三十一日止年度之持續關連交易所進行鑒證的結果及結論。本公司已將核數師函件副本交予聯交所。

除上文披露者外，本公司或其任何附屬公司並無訂立其為訂約一方，且董事或與董事有關連的任何實體擁有重大權益(不論直接或間接)而於年結日或本年度任何時間存續之重大合約、交易或安排。

董事確認，於綜合財務報表附註39披露之重大關聯人士交易符合關連交易或持續關連交易之定義。董事確認該等交易已符合上市規則第14A章之披露規定。

Report of the Directors 董事會報告

AUDITOR

There has been no change to the Company's auditors for the past three years. During the year, Deloitte Touche Tohmatsu ("Deloitte") were the auditor of the Company. A resolution for the re-appointment of Deloitte as auditor of the Company will be proposed at the forthcoming annual general meeting.

On behalf of the Board

Cai Juan
Chairlady

28 March 2022

核數師

過去三年本公司核數師沒有更換。年內，本公司核數師為德勤•關黃陳方會計師行(「德勤」)。於應屆股東週年大會上將提呈決議案重新委聘德勤為本公司核數師。

代表董事會

蔡娟
主席

二零二二年三月二十八日

The Company is committed to the establishment of good corporate governance practices and procedures. The corporate governance principles of the Company emphasize accountability and transparency to Shareholders. Periodic review will be made to the corporate governance practices to comply with the regulatory requirements.

CORPORATE GOVERNANCE CODE

The Company has complied throughout the year ended 31 December 2021 with the code provisions of the CG Code in force during the year of the Listing Rules. Key corporate governance principles and practices of the Company are summarised below.

DIRECTORS' SECURITIES TRANSACTIONS

The Company has adopted the Model Code as its own code of conduct regarding the Directors' dealings in the Company's securities. Based on specific enquiry made to the Directors, all of the Directors have confirmed that they had complied with the required standard set out in the Model Code for the year ended 31 December 2021.

本公司致力建立良好的企業管治常規及程序。本公司企業管治原則強調給予股東問責及透明度，對企業管治常規作出定期檢討以遵守監管規定。

企業管治守則

本公司已於截至二零二一年十二月三十一日止年度內一直遵守上市規則年內有效的企管守則之守則條文。本公司主要企業管治原則及常規於下文概述。

董事進行證券交易

本公司已就董事買賣本公司證券採納標準守則作為其本身的行為守則。在對董事作出特定查詢後，所有董事均已確認，彼等已於截至二零二一年十二月三十一日止年度一直遵守標準守則所載之規定標準。

BOARD OF DIRECTORS

The main duty of the Board is to act in good faith for the benefit of the Company and the Shareholders as a whole with proper delegation to the management of the Company according to the articles of association of the Company.

The Board, as at the date of this report, comprised eight Directors of whom two were executive Directors, three were non-executive Directors and three were independent non-executive Directors. The Company will continuously evaluate its Board structure to ensure sound corporate governance is in place.

The Company has arranged appropriate directors' and officers' liability insurance in respect of legal action against Directors.

The Directors of the Company as at 31 December 2021 and up to the date of this report were:

Executive directors:

Mr. GAO Tianpeng (*Chief Executive Officer*)
Mr. CHENG Yonghong

Non-executive directors:

Ms. CAI Juan (*Chairlady of the Board*)¹
Mr. ZHANG Youda (*Chairman of the Board*)²
Mr. LIU Jian
Mr. WANG Qiangzhong

¹ appointment with effect from 19 February 2022
² resignation with effect from 19 February 2022

Independent non-executive directors:

Mr. YEN Yuen Ho, Tony
Mr. POON Chiu Kwok
Mr. YU Chi Kit

The biographical details of the Directors are set out under the section headed "Directors and Senior Management" in this Annual Report. None of the members of the Board is related to one another. Following the passing away of Mr. Wu Chi Keung on 12 October 2021, the Board had only two independent non-executive Directors and did not meet the requirement under Rules 3.10(1) and 3.10A of the Listing Rules. With the appointment of Mr. Yu Chi Kit (effective on 6 November 2021), the Board had three independent non-executive directors, which fulfils the requirement under Rules 3.10(1) and 3.10A of the Listing Rules.

董事會

董事會的主要職責是以本公司及股東整體利益真誠行事，並根據本公司組織章程細則正確地授予本公司管理層職能。

於本報告日期，董事會由八名董事組成，包括兩名執行董事、三名非執行董事及三名獨立非執行董事。本公司將持續評估其董事會結構，以確保存有良好的企業管治。

本公司已就針對董事之法律行動安排適當的董事及高級職員責任保險。

於二零二一年十二月三十一日及截至本報告日期為止，本公司之企業如下：

執行董事：

鄧天鵬先生(*行政總裁*)
程永紅先生

非執行董事：

蔡娟女士(*董事會主席*)¹
張有達先生(*董事會主席*)²
劉建先生
王樞忠先生

¹ 委任於二零二二年二月十九日生效
² 辭任於二零二二年二月十九日生效

獨立非執行董事：

嚴元浩先生
潘昭國先生
余志傑先生

董事履歷詳情載於本年報「董事及高級管理層」一節。董事會成員之間概無任何關連。胡志強先生於二零二一年十月十二日辭世後，公司僅餘兩名獨立非執行董事，而此並不符合上市規則第3.10(1)及第3.10A條之規定。余志傑先生獲委任為獨立非執行董事(於二零二一年十一月六日生效)後，公司有三名獨立非執行董事，符合上市規則第3.10(1)及第3.10A條之規定。

MEETINGS ATTENDANCE

A total of 6 Board meetings, 3 Audit Committee meetings, 2 Remuneration and Nomination Committee meetings, 1 Risk Management Committee meeting, 1 Strategy and Investment Committee meeting and 1 annual general meeting were held during the year ended 31 December 2021. In addition, the Chairman held a meeting during the year ended 31 December 2021 with independent non-executive Directors without the presence of executive Directors or non-executive Directors. The following is a summary of the attendance of meetings of each Director in 2021:

會議出席情況

截至二零二一年十二月三十一日止年度，本公司共舉行六次董事會會議、三次審核委員會會議、兩次薪酬及提名委員會會議、一次風險管理委員會會議、一次戰略及投資委員會會議及一次股東週年大會。此外，主席於截至二零二一年十二月三十一日止年度曾與獨立非執行董事舉行一次會議，當時並無執行董事或非執行董事出席。於二零二一年每位董事之出席情況概述如下：

Directors		Board	Audit Committee	Remuneration and Nomination Committee	Risk Management Committee	Strategy and Investment Committee	Independent Directors Meeting with Chairman	Annual General Meeting
董事		董事會	審核委員會	薪酬及提名委員會	風險管理委員會	戰略及投資委員會	獨立董事與主席會議	股東週年大會
GAO Tianpeng	鄒天鵬	6/6	-	2/2	1/1	1/1	-	1/1
CHENG Yonghong	程永紅	6/6	-	-	-	1/1	-	1/1
ZHANG Youda	張有達	6/6	3/3	2/2	1/1	1/1	1/1	1/1
WANG Qiangzhong	王樞忠	5/6	-	-	-	-	-	1/1
LIU Jian	劉建	2/6	-	-	-	1/1	-	1/1
WU Chi Keung	胡志強	4/4	2/2	1/1	1/1	-	-	1/1
YEN Yuen Ho, Tony	嚴元浩	6/6	3/3	2/2	1/1	-	1/1	0/1
POON Chiu Kwok	潘昭國	6/6	3/3	2/2	1/1	-	1/1	1/1
YU Chi Kit	余志傑	1/1	1/1	-	-	-	1/1	-

The Board met regularly during the year and on an ad hoc basis as required by business needs. The Board's primary focus is to determine and review the overall strategic development of the Company and its subsidiaries and to oversee the achievement of the plans in relation thereto. Daily operational decisions are delegated to the executive Directors and the senior management of the Company. The delegated functions and work tasks are periodically reviewed by the Board. The management needs to provide all necessary information to the Board to enable the Board to make a comprehensive consideration in the meeting. Approval has to be obtained from the Board prior to any significant transactions entered into by the above-mentioned officers.

董事會於年內定期及按業務所需不時舉行會議。董事會的主要重點為制訂及檢討本公司及其附屬公司的整體策略發展，以及監督有關計劃之達成。日常營運決策權乃授予執行董事及本公司高級管理層。董事會定期檢討所授予之職能及工作任務。管理層須向董事會提供一切所需資料，讓董事會能於會上作出全盤考慮。上述高級職員在訂立任何重大交易前，必須取得董事會批准。

CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER

During the year ended 31 December 2021, the roles of Chairman of the Board (“**Chairman**”) and Chief Executive Officer (“**CEO**”) of the Company were separated and performed by different individuals. As at 31 December 2021, the Chairman is Mr. Zhang Youda and the CEO is Mr. Gao Tianpeng. The Chairman provides leadership and is responsible for the effective functioning and leadership of the Board. The CEO focuses on the Company’s business development and daily management and operations generally.

INDEPENDENCE OF INDEPENDENT NON-EXECUTIVE DIRECTORS

The Company has received, from each of the independent non-executive Directors, an annual confirmation of his independence pursuant to Rule 3.13 of the Listing Rules.

The independent non-executive Directors are independent of the management and hence the Company considers that they are free of any relationship that could potentially interfere with the exercise of their independent judgment. None of the independent non-executive Directors has any business or financial interests with the Company nor has any relationship with other Directors. The Company considers all of the independent non-executive Directors are independent.

TERMS OF APPOINTMENT OF NON-EXECUTIVE DIRECTORS

As at 31 December 2021, all non-executive Directors are appointed for fixed terms: (1) Mr. Zhang Youda entered into letter of appointment with the Company with a term ending 22 August 2023; (2) Mr. Yen Yuen Ho, Tony, Mr. Poon Chi Kwok and Mr. Liu Jian entered into letters of appointment with the Company with a term or revised term ending on 31 December 2022; (3) Mr. Wang Qiangzhong entered into letter of appointment with the Company with a term ending 19 June 2022; and (4) Mr. Yu Chi Kit entered into letter of appointment with the Company ending on 5 November 2024, or the date on which he shall retire from office in accordance with the articles of association of the Company and the Listing Rules and not having been re-elected or his appointment is terminated before that.

董事會主席及行政總裁

截至二零二一年十二月三十一日止年度，董事會主席（「**主席**」）及本公司行政總裁（「**行政總裁**」）之角色已分離並由不同人士擔任。於二零二一年十二月三十一日，主席為張有達先生，而行政總裁為鄒天鵬先生。主席發揮領導作用並負責董事會之有效運作及領導董事會。行政總裁專注於本公司之業務發展、日常管理及一般營運。

獨立非執行董事之獨立性

本公司已收取每位獨立非執行董事根據上市規則第3.13條之年度獨立性確認書。

獨立非執行董事獨立於管理層，因此，本公司認為彼等不受可潛在干擾彼等行使其獨立判斷能力之任何關係影響。獨立非執行董事概無擁有本公司任何業務或財務權益，亦與其他董事無任何關係。本公司認為全體獨立非執行董事均為獨立人士。

非執行董事之任期

於二零二一年十二月三十一日，全體非執行董事之委任均設有固定任期：(1)張有達先生與本公司訂立的委任函年期至二零二三年八月二十二日為止；(2)嚴元浩先生、潘昭國先生及劉建先生與本公司訂立的委任函，年期或經修訂年期則至二零二二年十二月三十一日為止；(3)王檣忠先生與本公司訂立的委任函年期至二零二二年六月十九日為止；及(4)余志傑先生，與本公司訂立的委任函年期至二零二四年十一月五日為止，或其須按照本公司組織章程細則及上市規則退任且並無獲重選或於該日前被終止委任之日為止。

BOARD COMMITTEES

(a) Audit Committee

The Company has established an Audit Committee with written specific terms of reference in compliance with the CG Code provisions. As at 31 December 2021, the Audit Committee of the Company comprised a non-executive Director, namely Mr. Zhang Youda, and three independent non-executive Directors, namely Mr. Poon Chiu Kwok (being the Chairman of Audit Committee), Mr. Yen Yuen Ho, Tony and Mr. Yu Chi Kit, who together have the relevant accounting and financial management expertise, industrial knowledge, legal and business experience to discharge their duties. The Audit Committee has held 3 meetings during the year ended 31 December 2021. During the year, the Audit Committee reviewed and approved the interim and annual results of the Company, reviewed and recommended the internal control and risk management matters and internal audit function of the Group, considered and recommended the re-appointment and the remuneration of the external auditors and reviewed the continuing connected transactions of the Group and discussed audit issues with the external auditors. Following the passing away of Mr. Wu Chi Keung on 12 October 2021, the audit committee did not meet the requirement of Rule 3.21 of the Listing Rules as the committee was not chaired by an independent non-executive director. With the appointment of Mr. Poon Chiu Kwok as the chairman of the committee (effective on 6 November 2021), the audit committee is chaired by an independent non-executive director, which fulfils the requirement under Rule 3.21 of the Listing Rules.

The principal duties of the Audit Committee are as follows:

- to review the interim and annual financial statements before they are submitted to the Board for approval;
- to make recommendations to the Board on, the appointment, the re-appointment and removal of the external auditors, and approve the remuneration and terms of engagement of the external auditors, and any questions of resignation or dismissal of that auditors;
- to review and monitor the external auditors' independence and objectivity and the effectiveness of the audit process in accordance with applicable standards;
- to review the Company's financial controls, internal controls, and risk management systems;

董事委員會

(a) 審核委員會

本公司已按照企管守則之條文成立審核委員會，並書面訂明特定職權範圍。於二零二一年十二月三十一日，本公司之審核委員會由一名非執行董事張有達先生以及三名獨立非執行董事潘昭國先生(為審核委員會主席)、嚴元浩先生及余志傑先生組成，彼等共同具備相關之會計及財務管理專業知識、行業知識、法律及業務經驗，以履行彼等職責。審核委員會已於截至二零二一年十二月三十一日止年度舉行三次會議。年內，審核委員會已審閱及批核本公司之中期及全年業績、審查本集團內部監控及風險管理事宜及內部審計職能並提供建議、審議重新委任本集團外聘核數師及其酬金並提供建議、審閱本集團之持續關連交易及與外聘核數師商討審計事項。胡志強先生於二零二一年十月十二日辭世後，審核委員會未據上市規則第3.21條由獨立非執行董事出任主席。潘昭國先生獲委任為審核委員會主席(於二零二一年十一月六日生效)後，審核委員會符合上市規則第3.21條規定由獨立非執行董事出任主席。

審核委員會之主要職務如下：

- 在中期及全年財務報表提呈董事會批核前審閱有關報表；
- 就委任、重新委任及撤換外聘核數師向董事會提出建議，批核外聘核數師的酬金及委聘條款，以及處理任何有關該核數師辭任或解聘的問題；
- 按照適用準則，檢討及監察外聘核數師的獨立及客觀性，以及核數程序的效用；
- 檢討本公司的財務控制、內部監控及風險管理系統；

- to review the Company's financial and accounting policies and practices;
 - to report to the Board on the matters set out in the CG Code as required by the Stock Exchange; and
 - to review the terms and conditions of continuing connected transactions of the Company.
- 檢討本公司的財務及會計政策及慣例；
 - 就聯交所要求之企管守則事項向董事會報告；及
 - 審閱本公司持續關連交易的條款及條件。

(b) Remuneration and Nomination Committee

The Company has established a Remuneration and Nomination Committee with written specific terms of reference in compliance with the CG Code provisions. As at 31 December 2021, the Remuneration and Nomination Committee comprised five members, including two non-executive Directors, namely Mr. Zhang Youda and Mr Liu Jian, and three independent non-executive Directors, namely Mr. Yen Yuen Ho, Tony (being the Chairman of Remuneration and Nomination Committee), Mr. Poon Chiu Kwok and Mr. Yu Chi Kit. Following the passing away of Mr. Wu Chi Keung on 12 October 2021, the remuneration and nomination committee did not meet the requirements of Rule 3.25 of the Listing Rules as the committee did not comprise a majority of independent non-executive directors as members and not chaired by an independent non-executive director. With the appointment of Mr. Yu Chi Kit as a member of the committee and the appointment of Mr. Yen Yuen Ho, Tony as the chairman of the committee (both taking effect on 6 November 2021), the remuneration and nomination committee comprises a majority of independent non-executive directors and is chaired by an independent non-executive director, which fulfils the requirement under Rule 3.25 of the Listing Rules.

The principal duties of the Remuneration and Nomination Committee are to perform the remuneration and nomination functions delegated by the Board.

Remuneration functions

In terms of the remuneration functions, the duties of the Remuneration and Nomination Committee are as follows:

- to make recommendations with respect to the remuneration of directors and senior management of the Company for approval by the Board;

(b) 薪酬及提名委員會

本公司已按照企管守則之條文成立薪酬及提名委員會，並書面訂明特定職權範圍。於二零二一年十二月三十一日，薪酬及提名委員會由五名成員組成，包括兩名非執行董事張有達先生及劉建先生，以及三名獨立非執行董事嚴元浩先生（為薪酬及提名委員會主席）、潘昭國先生及余志傑先生。胡志強先生於二零二一年十月十二日辭世後，薪酬及提名委員會未能符合上市規則第3.25條，委員會成員以獨立非執行董事佔大多數，以及由獨立非執行董事出任委員會主席之規定。余志傑先生獲委任為委員會成員及嚴元浩先生獲委任為委員會主席（兩者均於二零二一年十一月六日生效）後，薪酬及提名委員會符合上市規則第3.25條規定委員會成員以獨立非執行董事佔大多數及由獨立非執行董事出任委員會主席。

薪酬及提名委員會之主要職責為執行董事會所授予之薪酬及提名職能。

薪酬職能

就薪酬職能而言，薪酬及提名委員會的職責如下：

- 提出有關本公司董事及高級管理層薪酬之建議，待董事會批核；

- to review the remuneration package and recommend salaries, bonuses, including the incentive awards for directors and senior management of the Company;
- to administer and make determinations with regard to the Company's long term incentive schemes, embracing the share option scheme and share incentive scheme (when appropriate); and
- to administer and make determinations with regard to the Group's Key Performance Indicators system for short term incentive purposes.

The Remuneration and Nomination Committee sets out annually its recommendations on the remuneration packages of directors and senior management. In determining the packages for a director and senior management, the Remuneration and Nomination Committee considers various factors, including market comparability, complexity of duties, and performance.

In order to attract, retain, and motivate executives and key employees serving the Company, the Company has adopted a share option scheme on 19 June 2019 and a share incentive scheme on 2 June 2015. Such incentive schemes enables the eligible persons to obtain an ownership interest in the Company and thus to reward the participants who contribute to the success of the Company's operation.

Nomination functions

In terms of the nomination functions, the duties of the Remuneration and Nomination Committee are as follows:

- to perform evaluation of the Board regarding the structure, size and composition (including the skills, knowledge and experience) of the Board on a regular basis and make recommendations on any proposed changes to the Board to complement the Company's corporate strategy;
- to identify, select and nominate individuals suitably qualified to become Board members and make recommendations to the Board;
- to assess the independence of independent non-executive Directors on its appointment or when their independence is called into question;
- to review the Board diversity policy, as appropriate, and review the measurable objectives that the Board has set for implementing the Board diversity policy, and the progress on achieving the objectives; and

- 檢討薪酬待遇及建議薪金、花紅，包括給予本公司董事及高級管理層之激勵獎勵；
- 管理及就本公司之長期激勵計劃作出決策，包括於適當時候採納購股權計劃及股份激勵計劃；及
- 就本集團為短期激勵目的而採用的關鍵績效指標體系作出管理及決定。

薪酬及提名委員會每年就董事及高級管理層之薪酬待遇作出建議。在決定董事及高級管理層之薪酬待遇時，薪酬及提名委員會考慮不同因素，包括市場之可比較性、職務之複雜性及表現。

為招攬、挽留及激勵在本公司任職之行政人員及主要僱員，本公司於二零一九年六月十九日採納一項購股權計劃及於二零一五年六月二日採納一項股份激勵計劃。有關激勵計劃使合資格人員可獲得本公司之所有權權益，從而對本公司業務成功作出貢獻之參與者提供獎勵。

提名職能

就提名職能而言，薪酬及提名委員會的職責如下：

- 定期評估董事會的架構、人數及構成（包括技能、知識及經驗方面），並就任何為配合本公司的公司策略而擬對董事會作出的變動提出建議；
- 物色具備合適資格可擔任董事會成員的人士，並挑選及提名有關人士出任董事及就此向董事會提供建議；
- 於委任獨立非執行董事時或其獨立性受到質疑時，評核其獨立性；
- 在適當情況下檢討董事會成員多元化政策及檢討董事會為執行董事會成員多元化政策而制定的可計量目標和達標進度；及

- to make recommendations to the Board on the appointment or re-appointment of the Directors and their succession plans.

The Remuneration and Nomination Committee has held 2 meetings in 2021. During the year ended 31 December 2021, the Remuneration and Nomination Committee reviewed and recommended to the Board on the compensation packages, policy and structure of the Directors and the senior management of the Group, reviewed the management structure of the Group and the composition of the Board, considered and recommended to the Board on the re-election of the retiring Directors at the Company's 2021 AGM, considered and recommended to the Board on the change in compositions of the Board and Board Committees during the year, assessed the independence of the independent non-executive Directors newly appointed during the year, considered and recommended to the Board on the remuneration packages for the directors newly appointed/ redesignated during the year.

Pursuant to Code Provision B.1.5 (code number as of the reporting period) of the CG Code, the annual remuneration of the members of the senior management (excluding Directors) by band for the year ended 31 December 2021 is set out below:

Remuneration band
薪酬範圍

For the year ended 31 December	截至十二月三十一日止年度	2021 二零二一年 Number of individuals 人數	2020 二零二零年 Number of individuals 人數
HK\$1,000,000 or below (equivalent to US\$128,205 or below)	1,000,000港元或以下 (相當於128,205美元或以下)	1	2
HK\$1,500,001 to HK\$2,000,000 (equivalent to US\$192,309 to US\$256,410)	1,500,001港元至2,000,000港元 (相當於192,309美元至 256,410美元)	5	4
HK\$2,000,001 to HK\$2,500,000 (equivalent to US\$256,411 to US\$320,513)	2,000,001港元至2,500,000港元 (相當於256,411美元至 320,513美元)	-	1
HK\$2,500,001 to HK\$3,000,000 (equivalent to US\$320,514 to US\$384,615)	2,500,001港元至3,000,000港元 (相當於320,514美元至 384,615美元)	1	-
Total	總數	7	7

Details of the remuneration of each Director for the year ended 31 December 2021 are set out in note 11 to the consolidated financial statements.

- 就董事委任或重新委任，以及彼等的繼任計劃向董事會提出建議。

薪酬及提名委員會於二零二一年舉行了兩次會議。截至二零二一年十二月三十一日止年度，薪酬及提名委員會已審閱本集團董事及高級管理層之薪酬待遇、政策及架構並向董事會提供建議、檢討本集團之管理架構及董事會的構成、審議有關於本公司二零二一年股東週年大會上重選退任董事並向董事會提供建議、審議有關董事會及董事委員會於年內之人員變動並向董事會提供建議、評估年內新委任之獨立非執行董事之獨立性、審議年內新委任／調任董事之薪酬待遇並向董事會提供建議。

根據企管守則第B.1.5條(報告期內的守則編號)守則條文，高級管理層成員(董事除外)於截至二零二一年十二月三十一日止年度之年度薪酬範圍載列如下：

各董事於截至二零二一年十二月三十一日止年度之薪酬詳情載於綜合財務報表附註11。

(c) Other Committees

As at 31 December 2021, apart from Audit Committee and Remuneration and Nomination Committee, the Company has 2 other Board Committees, namely Risk Management Committee and Strategy and Investment Committee.

As at 31 December 2021, the Risk Management Committee of the Company comprised an executive Director, namely Mr. Gao Tianpeng, a non-executive Director, namely Mr. Zhang Youda, and three independent non-executive Directors, namely Mr. Yen Yuen Ho, Tony (being the Chairman of Risk Management Committee), Mr. Poon Chiu Kwok and Mr. Yu Chi Kit.

The function of Risk Management Committee is to oversee the Group's risk management activities and provide recommendations to the Board on risk strategy and control measures to mitigate the overall risk arise from market fluctuation and other external factors.

One committee meeting was held during the year ended 31 December 2021 for the Risk Management Committee. During the year, the report from Chief Risk Officer of the Company was presented to the Risk Management Committee and the Board for deliberation. Besides, Risk Management Committee received requests from the management and reviewed and enhanced the risk management system of the Company, assessed the potential risk of the significant trading contracts and loan agreements, and made relevant recommendations to the Board.

As at 31 December 2021, the Strategy and Investment Committee of the Company comprised two executive Directors, namely Mr. Gao Tianpeng and Mr. Cheng Yonghong, and two non-executive Directors, namely Mr. Zhang Youda (being the Chairman of Strategy and Investment Committee) and Mr. Liu Jian.

The functions of Strategy and Investment Committee is to formulate the long term strategic development of the Group and provide recommendations to the Board on the acquisition and disposal of investments, as well as to oversee the Company's overseas assets and provide advice and recommendations to the Board on managing overseas assets in a sustainable manner and enhancing better return.

(c) 其他委員會

於二零二一年十二月三十一日，除審核委員會以及薪酬及提名委員會外，本公司另外亦有兩個董事會轄下委員會，即風險管理委員會及戰略及投資委員會。

於二零二一年十二月三十一日，本公司之風險管理委員會由一名執行董事鄧天鵬先生，一名非執行董事張有達先生以及三名獨立非執行董事嚴元浩先生(為風險管理委員會主席)、潘昭國先生及余志傑先生組成。

風險管理委員會之職能為監督本集團之風險管理活動及向董事會提供有關風險策略及監控措施之建議，以減低因市場波動及其他外在因素而產生之整體風險。

風險管理委員會於截至二零二一年十二月三十一日止年度舉行了一次委員會會議。年內，本公司的風控總監報告已提呈予風險管理委員會及董事會審議。此外，風險管理委員會收到管理層要求檢討並提升本公司之風險管理系統、評估重大交易合約及貸款協議之潛在風險，並向董事會提供相關推薦建議。

於二零二一年十二月三十一日，本公司之戰略及投資委員會由兩名執行董事鄧天鵬先生及程永紅先生以及兩名非執行董事張有達先生(為戰略及投資委員會主席)及劉建先生組成。

戰略及投資委員會之職能為制定本集團之長遠策略發展及向董事會提供有關收購及出售投資項目之推薦建議，以及監督本公司之海外資產並就可持續性地管理海外資產及提高回報向董事會提供意見及推薦建議。

Corporate Governance Report

企業管治報告

The Strategy and Investment Committee has held 1 meeting during the year ended 31 December 2021. During the year, the Strategy and Investment Committee discussed the potential investment opportunities, the strategic planning of the Group, and made relevant recommendations to the Board.

CORPORATE GOVERNANCE FUNCTIONS

The Board is responsible for performing the corporate governance functions with written specific terms of reference in compliance with the CG Code provisions.

The duties of the Board in respect of the corporate governance functions are summarized as follows:

- to develop and review the Company's policies and practices on corporate governance;
- to review and monitor the training and continuous professional development of directors and senior management;
- to review and monitor the Company's policies and practices on compliance with legal and regulatory requirements;
- to develop, review and monitor the code of conduct and compliance manual applicable to Directors and employees; and
- to review the Company's compliance with the CG Code and disclosure in the Corporate Governance Report in the Company's annual report.

BOARD DIVERSITY POLICY AND NOMINATION POLICY

The Company recognises and embraces the benefits of having a diverse Board to enhance the quality of its performance. As such, the Board has implemented a board diversity policy in accordance with A.5.6 (code number as of the reporting period) of the CG Code and nomination policy of the Board. The purposes of the policies are to set out the approach to achieve diversity on the Board and nomination procedure for the Board.

With a view to achieving a sustainable and balanced development, the Company sees increasing diversity at the Board level as an essential element in supporting the attainment of its strategic objectives and its sustainable development. In designing the Board's composition as well as the selection of candidates for directorship, Board diversity has been considered from a number of aspects, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service.

截至二零二一年十二月三十一日止年度內，戰略及投資委員會舉行了一次會議。年內，戰略及投資委員會已討論潛在投資機會、本集團之戰略規劃並向董事會作出有關推薦建議。

企業管治職能

董事會按照企管守則之條文負責履行企業管治職能，並書面訂明特定職權範圍。

董事會有關企業管治職能之職責概述如下：

- 建立及檢討本公司的企業管治政策及實務；
- 檢討及監督董事及高級管理層之培訓及持續專業發展；
- 檢討及監督本公司在遵守法律及監管規定方面之政策及實務；
- 建立、檢討及監督適用於董事及僱員之行為守則及合規手冊；及
- 檢討本公司遵守企管守則之情況，以及本公司年報企業管治報告內之披露。

董事會多元化政策及提名政策

本公司明白並深信董事會成員多元化對提升公司的表現素質裨益良多。因此，根據企管守則第A.5.6條（報告期內的守則編號）及董事會提名政策，董事會已落實董事會成員多元化政策。該等政策旨在列載董事會為達致成員多元化及董事會提名程序而採取的方針。

為達致可持續的均衡發展，本公司視董事會層面日益多元化為支持其達到戰略目標及維持可持續發展的關鍵元素。本公司在設定董事會成員組合及甄選董事人選時，會從多個方面考慮董事會成員多元化，包括但不限於性別、年齡、文化及教育背景、種族、專業經驗、技能、知識及服務任期。

Board Diversity

Diverse board composition ensures a wide range of business and professional experience on the Board, so that the decision-making process includes different perspectives and supports the achievement of the Company's strategic objectives. All Board appointments are merit-based. The Company has adopted a Board Diversity Policy that takes into account, among other aspects, each candidate's age, cultural and educational background, professional and mining field experience, skills, knowledge and length of service. All candidates are considered against these criteria.

The executive and non-executive Directors have a diverse background. Each of them possesses the depth of relevant experience and expertise to oversee the businesses of the Group. The current mix of the Board members represents a balance of business, academia and the professions, which helps to deliver sustainable value and safeguard shareholders' interests.

The age group diversity of the Board of Directors as at 31 December 2021 are set out below:

Age Group	年齡組別	Number of individuals 人數
41-50	41-50歲	4
51-60	51-60歲	3
Over 70	70歲以上	1
Total	總數	8

董事會多元化

董事會的多元化組成可為董事會帶來廣泛的業務和專業經驗，同時確保決策過程考慮不同觀點，並支持公司實現策略目標。董事會以用人唯才的原則委任董事。本公司採納《董事會多元化政策》，從多個方面考慮董事會的多元性，包括董事人選的年齡、文化及教育背景、專業及採礦領域的經驗、技能、知識及服務年期，並根據這些客觀準則甄選所有董事人選。

執行董事及非執行董事來自不同背景，並具備相關經驗及專業知識的深度以監管本集團的業務。現有董事會的成員來自商界、學術界和專業界別的代表，組合均衡，確保締造可持續增值和保障股東權益。

於二零二一年十二月三十一日，董事會的年齡組別分佈載列如下：

NOMINATION PROCEDURE

All Board appointments will be based on the above-mentioned criteria and meritocracy. Candidates will be considered against objective criteria, having due regard for the benefits of diversity on the Board.

The ultimate decision will be made by Board on merit and contribution that the selected candidates will bring to the Board.

The Director appointed will be subject to re-election by shareholders at the first general meeting after appointment.

During the year, the Board has reviewed its composition under diversified perspectives and considered the Board to be adequately diversified. The Board has also reviewed the Board Diversity Policy and monitored the implementation of this policy.

ACCOUNTABILITY AND AUDIT

The Directors acknowledge their responsibility for preparing the financial statements of the Company for the year ended 31 December 2021. The Directors were not aware of any material uncertainties relating to events or conditions which may cast significant doubt upon the Company's ability to continue as a going concern. Accordingly, the Directors have prepared the financial statements on a going concern basis.

The Audit Committee and the Board have reviewed the consolidated financial statements of the Group for the year ended 31 December 2021.

The responsibilities of the external auditor with respect to the audit are set out in the independent auditor's report in pages 139 to 145 of this Annual Report.

提名程序

董事會所有委任均以上述標準及用人唯才為原則。在考慮人選時以客觀條件充分顧及董事會成員多元化的裨益。

董事會將按人選的長處及可為董事會提供的貢獻而作最終決定。

獲委任董事將須由股東於獲委任後首次股東大會上重選。

於年內，董事會已審閱在多元化層面的組成，並認為董事會多元化達足夠水平。董事會亦審閱《董事會多元化政策》，並監察本政策的執行。

問責性及審核

董事知悉其就編製本公司截至二零二一年十二月三十一日止年度之財務報表所承擔之責任。董事並不知悉任何可能會對本公司持續經營能力造成重大疑慮之事件或情況之重大不確定因素。因此，董事按持續經營基準編製財務報表。

審核委員會及董事會已審閱本集團截至二零二一年十二月三十一日止年度之綜合財務報表。

外聘核數師就審計所承擔之責任載於本年報第139頁至第145頁的獨立核數師報告。

DIVIDEND POLICY

The Group adopted a dividend policy which aimed to allow Shareholders to participate in the Group's profits whilst preserving the Group's liquidity to capture future growth opportunities.

Before declaring dividends, the Board shall mainly consider the following aspects of the Group:

(i) actual and expected financial performance of the Group; (ii) general economic conditions, business cycle of the industries and other internal or external factors that may have an impact on the business or financial performance and position; and (iii) other factors that the Board deems relevant.

This policy will be reviewed and amended by the Board from time to time.

RISK MANAGEMENT AND INTERNAL CONTROLS

Responsibilities of the Board

The Board acknowledges its responsibility to establish, maintain and review the effectiveness of the Group's risk management and internal control systems. While, it is management's role to set the appropriate tone from the top and take charge of the designing, operating and implementing an appropriate system of internal control and risk management to manage risks.

Our Risk Management Framework

The Board has established on-going and responsive risk management and internal control systems and processes, which are designed to manage rather than eliminate risks of failure to achieve strategic objectives, and can only provide reasonable and not absolute assurance against material misstatement or loss. Such processes involve:

- Understanding organisational objectives;
- Identifying risks associated with achieving or not the organisational objectives and assessing the likelihood and potential impact of particular risks; and
- Developing preventive and corrective action plans to address and monitor identified risks.

股息政策

本集團採納旨在讓股東分享本集團溢利同時保留本集團流動資金以把握未來增長機遇之股息政策。

於宣派股息前，董事會將主要考慮本集團以下方面：

(i)本集團實際及預期財務表現；(ii)整體經濟狀況、行業的商業週期，以及對業務或財務業績及狀況可能有影響的其他內在或外在因素；及(iii)董事會認為相關的其他因素。

此政策將由董事會不時檢討及修訂。

風險管理及內部監控

董事會之責任

董事會承擔建立、維持及檢討本集團風險管理及內部監控系統有效健全之責任。管理層之角色則是從上而下確立對公司適宜之業務基調，負責設計、操作及實施合適之內部監控及風險管理系統，以管理各項風險。

我們的風險管理框架

董事會已制定持續反饋風險管理及內部監控系統及程序，旨在管理(而非消除)未能達成策略目標之風險，且只能就不會有重大失實陳述或損失提供合理(而非絕對)之保證。有關程序涉及以下步驟：

- 了解企業目標；
- 識別與達致或不達致企業目標所涉及之風險，並評估特定風險之發生機率及潛在影響；及
- 編製多項預防及修正行動計劃以便處理及監察所識別之風險。

Through the works of the Chief Risk Officer, the Risk Management Committee oversees the day-to-day risks of the major activities across the Group. The business units of the Group, being the risk owners, identify, evaluate, monitor and mitigate their own risks and report to Chief Risk Officer on a monthly basis. The Chief Risk Officer assesses and liaises with the risk owners at each scheduled meeting, the results of their activities during the preceding period pertaining to the adequacy and effectiveness of internal controls, including but not limited to, any indication of failings or material weaknesses in those controls. The Chief Risk Officer is accountable to CEO, where the CEO is accountable to the Board for the Group's performance and the implementation of the Board's strategies and policies, including policies on risk management and internal control.

Internal Control

The Company has outsourced its internal audit function to independent external consultants. The independent external consultants are responsible for conducting internal control reviews on operational, financial and compliance controls of the major operating entities and key business units in Africa and Hong Kong using a risk-based approach. Internal control reviews have been conducted during the year according to the annual internal audit plan approved by the Audit Committee. During the process of internal audit reviews, the independent external consultants identified internal control deficiencies and weaknesses, proposed recommendations for improvements and remedial actions with management and process owners. The management has taken certain remedial actions accordingly. The results of the internal control reviews and the management's remedial actions have been reported to the Audit Committee.

Review of Risk Management and Internal Control Systems

An overall review of the effectiveness of the risk management and internal control systems is conducted annually. Through the Audit Committee, the Board has conducted an annual review of the effectiveness of the risk management and internal control systems of the Group for the year ended 31 December 2021 and considered the risk management and internal control systems effective and adequate. The review covers all material controls, including financial, operational and compliance controls, risk management functions and making any necessary updates to the systems. The scope and quality of ongoing monitoring of risk management and the internal control systems have been assessed.

The Board has also reviewed and confirmed the adequacy of resources, qualifications and experience of staff of the Group's accounting and financial reporting functions, and their training programmes and budget.

透過風控總監執行，風險管理委員會監察本集團各個主要業務層面之日常風險。本集團各業務單位，作為風險責任人，負責識別、評價、監察及減輕自身面對之風險並每月向風控總監匯報。風控總監評估上期風險管理工作表現並就此召開會議與風險責任人檢討內部監控之充分性及成效，包括但不限於檢討是否有任何跡象顯示有關監控正逐漸失效或存在重大缺陷。風控總監向行政總裁負責，而行政總裁就本集團表現及所實施之董事會策略及政策(包括有關風險管理及內部監控之政策)，向董事會負責。

內部監控

本公司已外判其內部審計職能予獨立外部顧問。該獨立外部顧問須負責採用以風險為本的方法對位於非洲及香港之主要營運實體及主要業務單位進行營運、財務及合規方面之內部監控檢討工作。年內，該等獨立外部顧問按照審核委員會批准之年度內部審核計劃，進行內部監控檢討，過程中發現有內部監控缺陷和不足，並向管理層及流程負責人提出改善及補救建議。管理層已就此採取若干補救措施。內部監控之檢討結果及管理層補救措施已向審核委員會匯報。

進行風險管理及內部監控系統之檢討

風險管理及內部監控系統之成效每年均作全面檢討。董事會已通過審核委員會對本集團截至二零二一年十二月三十一日止年度之風險管理及內部監控系統成效進行年度檢討，並認為風險管理及內部監控系統有效及完備。該檢討涵蓋所有重大監控，包括財務、營運及合規監控，亦包含多個風險管理功能，並會對系統作出任何必要更新。我們已評估風險管理及內部監控系統持續監察之範圍及質素。

董事會亦已對資源之充足度、本集團會計及財務申報部門之員工的資歷及經驗，及其培訓計劃及預算進行審閱及確認。

INSIDE INFORMATION

All employees are bound by the Group's Code of Conduct to keep all inside information strictly confidential until the disclosure of such information is appropriately approved and refrain from accepting personal benefits through the power or authority derived from their positions. The Company will continue to review the effectiveness of its internal procedures and internal controls over handling and dissemination of inside information and update its Code of Conduct and/or internal procedures from time to time.

PROFESSIONAL TRAINING AND DEVELOPMENT

Directors keep abreast of responsibilities as a director of the Company and of the conduct, business activities and development of the Company.

Directors participate in appropriate continuous professional development to develop and refresh their knowledge and skills to ensure that their contribution to the Board remains informed and relevant. Internally facilitated briefings for Directors are arranged and reading materials on relevant topics are provided to Directors where appropriate. All Directors are encouraged to attend relevant training courses. During the year, the Company has arranged in-house briefings or provided reading materials to all of the Directors, namely Mr. Gao Tianpeng, Mr. Cheng Yonghong, Mr. Zhang Youda, Mr. Wang Qiangzhong, Mr. Liu Jian, Mr. Yen Yuen Ho, Tony, Mr. Poon Chiu Kwok and Mr. Yu Chi Kit and provided update to the Directors on the latest developments regarding the Listing Rules and other applicable regulatory requirements to ensure compliance and enhance the Directors' awareness of good corporate governance practices for the purpose of Code Provision A.6.5 (code number as of the reporting period) of the CG Code. All Directors have participated in continuous professional development and provided a record of training they received for the financial year ended 31 December 2021 to the Company.

COMPANY SECRETARY

In compliance with Rule 3.29 of the Listing Rules, Mr. Wong Hok Bun Mario (the company secretary of the Company) has undertaken no less than 15 hours of relevant professional training during the year ended 31 December 2021.

內幕消息

所有僱員均受本集團之行為守則約束，在內幕消息獲妥當批准可予披露前，彼等須嚴格保守所有內幕消息，並嚴禁利用職權謀取個人利益。本公司將持續檢討有關處理及發放內幕消息之內部程序及內部監控之成效，並不時更新其行為守則及／或內部程序。

專業培訓及發展

董事不斷留意作為本公司董事的責任，以及本公司的行為、業務活動及發展事宜。

董事參與適用的持續專業發展，務求發展及更新彼等的知識及技能，確保其繼續在知情及切合所需情況下對董事會作出貢獻。本公司為董事安排內部籌辦的簡報，於適用情況下向董事提供相關題材的守則資料，並鼓勵全體董事出席相關培訓課程。於本年度，就企管守則第A.6.5條守則條文(報告期內的守則編號)而言，本公司向全體董事(即鄧天鵬先生、程永紅先生、張有達先生、王橋忠先生、劉建先生、嚴元浩先生、潘昭國先生及余志傑先生)安排內部簡報或提供閱讀材料，以向董事提供有關上市規則及其他適用監管規定的最新發展情況，確保合規及提高董事在良好企業管治常規方面的意識。全體董事已參與持續專業發展，並已向本公司提供彼等於截至二零二一年十二月三十一日止財政年度接受培訓之記錄。

公司秘書

依照上市規則第3.29條，黃學斌先生(本公司之公司秘書)已於截至二零二一年十二月三十一日止年度完成不少於15個小時之相關專業培訓。

SHAREHOLDERS' COMMUNICATION AND RIGHTS

The Company is committed to ensuring the Group's compliance with its disclosure obligations under the Listing Rules and other applicable laws and regulations. The Company would ensure all shareholders and potential investors have equal opportunities to receive and obtain the information published by the Company.

The Company welcomes its shareholders to attend the general meetings to express their opinions and encourages all Directors to attend the general meetings to get into direct communications with shareholders. The external auditors are also required to attend the annual general meeting to assist the Directors in answering any pertinent questions from shareholders. The Company regularly releases information to its shareholders such as annual and interim reports, circulars and notices of general meetings in accordance with the Listing Rules.

Set out below are procedures for shareholders of the Company to convene an extraordinary general meeting, put enquiries to the Board and put proposals at shareholders' meetings. These procedures are generally governed by the articles of association of the Company and applicable laws, rules and regulations, which prevail over the below information in case of any inconsistencies.

(a) Procedures for shareholders of the Company to convene an extraordinary general meeting

1. One or more shareholders of the Company holding, at the date of deposit of requisition, not less than one-tenth of the paid up capital of the Company carrying the right of voting at general meetings of the Company shall at all time have the right, by written requisition, to require an extraordinary general meeting to be called by the Board for the transaction of any business specified in such requisition.
2. The requisition must be deposited at the principal office of the Company in Hong Kong or, in the event the Company ceases to have such a principal office, the registered office.
3. The requisition must specify the objects of the meeting and be signed by the requisitioner(s). The signature(s) of such requisitioner(s) will be verified by the Company's principal share registrars or branch share registrars (where applicable).

股東溝通及權利

本公司致力於確保本集團遵守上市規則及其他適用法例及法規下之披露義務。本公司會確保全部股東及潛在投資者有平等機會收取及取得本公司所刊發之資料。

本公司歡迎鼓勵其股東出席股東大會發表意見，亦鼓勵全體董事出席股東大會與股東直接溝通。外聘核數師亦須出席股東週年大會，協助董事解答股東提出之有關問題。本公司按上市規則之規定，定期向股東發放資訊，如年報及中期報告、通函及股東大會通告。

下文載列本公司股東召開股東特別大會、向董事會查詢及於股東大會上提出建議之程序。該等程序一般受本公司組織章程細則及適用法律、法規及規則監管，如與下文有歧義，概以上述法律、法規及規則為準。

(a) 本公司股東召開股東特別大會的程序

1. 在提交要求當日持有不少於本公司十分之一已繳足股本並有權在本公司股東大會上投票之一名或多名本公司股東，有權隨時以書面方式提出要求，要求董事會召開股東特別大會，處理在要求內所列明之任何事務。
2. 要求必須提交至本公司於香港之主要辦事處，或若本公司停止設立該主要辦事處，則須提交至註冊辦事處。
3. 要求必須列明大會之目的，並由要求者簽署。該要求者之簽署將由本公司之主要股份過戶登記處或股份過戶登記分處(視何者適用)核實。

4. On the condition that the requisition from the requisitioner(s) is proper and in order, the Board will within 21 days from the date of deposit of the requisition proceed to convene an extraordinary general meeting and such meeting for transacting the business specified in the requisition shall be held within 2 months after the deposit of such requisition.
 5. If the Board fails to proceed to convene an extraordinary general meeting within 21 days from the date of deposit of a valid requisition, the requisitioner(s) themselves or any of them may convene an extraordinary general meeting in the same manner as that in which extraordinary general meeting is to be convened by the Board, and all reasonable expenses incurred by the requisitioner(s) as a result of the failure of the Board shall be reimbursed to them by the Company.
4. 如要求者所提出之要求妥善而適當，董事會將於提交要求當日起計21日內著手召開股東特別大會，而該處理要求所列明事項之大會須於提交有關要求後兩個月內舉行。
 5. 若董事會未能於提交有效要求當日起計21日內召開股東特別大會，要求者可自行以同一方式召開股東特別大會，該股東特別大會與董事會所召開之股東特別大會無異，而要求者因董事會未能召開大會所致之一切合理開支將由本公司向彼等付還。

(b) Procedures for shareholders to put enquiries to the Board

Shareholders of the Company who have enquiries for the Board are most welcomed to contact the Company at any time and such enquiries will be forwarded to the Board. The contact details are as follows:

Address: Unit 3101, 31/F, United Centre, 95 Queensway, Hong Kong
Facsimile: (852) 3919 7208
E-mail: comsec@jinchuan-intl.com

(c) Procedures for shareholders to put proposals at general meetings

Shareholders of the Company are advised to follow Article 12.3 of the Articles of Association for including a resolution through a valid requisition of an extraordinary general meeting. Details are set out in paragraph (a) above.

(b) 股東向董事會查詢的程序

本公司股東如擬向董事會查詢，敬請隨時與本公司聯繫，有關查詢將轉交董事會處理。聯繫詳情如下：

地址：香港金鐘道95號統一中心31樓3101室
傳真：(852) 3919 7208
電郵：comsec@jinchuan-intl.com

(c) 股東在股東大會上提出建議的程序

本公司股東可按照組織章程細則第12.3條之規定，經合理要求下在股東特別大會上加入一項決議案。詳情載於上文(a)段。

(d) Annual General Meeting

2021 AGM was held on 18 June 2021 and the matters resolved are summarised below:

As ordinary resolution:

- Approval of the audited financial statements and reports of the Directors and auditors for the year ended 31 December 2020;
- Approval of an ordinary final dividend of HK0.1 cent per share for the year ended 31 December 2020;
- Re-election of Mr. Zhang Youda, Mr. Wang Qiangzhong and Mr. Yen Yuen Ho, Tony as Directors;
- Re-appointment of Deloitte Touche Tohmatsu as auditors of the Company, and authorisation of the Board to fix their remuneration;
- Fixing the remuneration of the Directors;
- Granting of a general mandate to the Board to issue shares;
- Granting of a general mandate to the Board to exercise the powers of the Company to purchase its own shares;
- Extending the share issue mandate granted to the Board; and
- Granting power to the Board to issue shares under the share incentive scheme.

The details and poll voting results of the 2021 AGM were published on the websites of the Company and the Stock Exchange on 18 June 2021.

(d) 股東週年大會

於二零二一年六月十八日召開的二零二一年股東週年大會，議決的事項概述如下：

作為普通決議案：

- 批准截至二零二零年十二月三十一日止年度的經審核財務報表以及董事會報告與核數師報告；
- 批准截至二零二零年十二月三十一日止年度的普通末期股息每股0.1港仙；
- 重選張有達先生、王樞忠先生及嚴元浩先生為董事；
- 續聘德勤•關黃陳方會計師行為本公司核數師，並授權董事會釐定其酬金；
- 釐定董事薪酬；
- 授予董事會發行股份之一般授權；
- 授予董事會行使本公司權力以購回公司股份之一般授權；
- 擴大授予董事會發行股份之授權；及
- 授予董事會根據股份激勵計劃發行股份之權利。

有關二零二一年股東週年大會會議的詳情及投票結果已於二零二一年六月十八日刊載於本公司及聯交所的網站內。

The 2022 Financial Calendar of the Company is set out as follows:

•	Announcement of 2021 final results	28 March 2022
•	Dispatch of 2021 Annual Report and accompanying circular to shareholders	29 April 2022
•	Last day to register transfer to qualify to attend and vote at annual general meeting 2022	18 May 2022
•	Book closure for annual general meeting 2022 (both dates inclusive)	19 May 2022 – 25 May 2022
•	Date of annual general meeting 2022	25 May 2022
•	Last day to register transfer to qualify for 2021 final dividend	2 June 2022
•	Book closure for 2021 final dividend (both dates inclusive)	6 June 2022 – 10 June 2022
•	Payment of 2021 final dividend	On or before 29 June 2022

During the year under review, the Company has not made any changes to its Articles of Association. An up-to-date version of the Articles of Association is available on the websites of the Company and the Stock Exchange. Shareholders may refer to the Articles of Association for further details of the rights of shareholders.

以下為本公司二零二二年度財政紀要：

•	二零二一年全年業績公佈	二零二二年三月二十八日
•	向股東派發二零二一年年報及隨附的通函	二零二二年四月二十九日
•	符合資格出席二零二二年股東週年大會及於會上投票的最後登記過戶日期	二零二二年五月十八日
•	就二零二二年股東週年大會暫停辦理股份過戶登記（首尾兩天包括在內）	二零二二年五月十九日至二零二二年五月二十五日
•	二零二二年股東週年大會舉行日期	二零二二年五月二十五日
•	符合資格享有二零二一年末期股息的最後登記過戶日期	二零二二年六月二日
•	就二零二一年末期股息暫停辦理股份過戶登記（首尾兩天包括在內）	二零二二年六月六日至二零二二年六月十日
•	派發二零二一年末期股息	二零二二年六月二十九日或之前

於回顧年度內，本公司並無對其組織章程細則作出任何更改。組織章程細則之最新版本可於本公司及聯交所網站查閱。股東可就有關股東權利之進一步詳情參閱組織章程細則。

INVESTOR RELATIONS

Updated information of the Company is available to investors via the Company's website www.jinchuan-intl.com. All material information such as circulars, annual and interim reports and procedures for nomination of directors for election can be accessed via the Company's website.

Communication with Shareholders and Investors

Investor relations have always been regarded as highly important by the Company, the Board, and our management.

The Company continues to help our shareholders understand the Company in a timely and comprehensive manner through various communication channels. Meanwhile, we highly value the views and feedback of shareholders and investors. We earnestly consider the advice and comments of shareholders and investors on the Company's development strategy, operation and other aspects and provide feedback to the Board, the management and relevant departments of the Company through briefings, special reports and other means, in order to achieve the alignment between the Company's business development and shareholder value and to protect the interests of the shareholders, thereby achieving effective and smooth two-way communication.

Communication Activities with Shareholders and Investors

Main channels of communication with shareholders and investors and the communication activities in 2021:

- Regular report: Annual report, interim report, quarterly operational update and ESG report of the Company are released from time to time.
- General meeting: the 2021 AGM was held in Hong Kong on 18 June 2021
- Results announcement conference: The 2020 annual results announcement conference call was held on 31 March 2021; the 2021 interim results announcement conference call was held on 24 September 2021.
- Results roadshow: The Company organized annual results roadshow in March and April 2021 and interim results roadshow in September 2021.
- Research activities: We arranged interviews between the management and the investors and analysts from time to time to listen to their opinions and suggestions and respond to their concerns.

投資者關係

投資者可通過本公司網站www.jinchuan-intl.com得悉本公司最新資訊。通函、年報、中期報告及提名董事參選程序等全部重大資料，均可從本公司網站獲取。

與股東、投資者溝通

本公司、董事會及高級管理層一貫高度重視投資者關係。

公司持續通過各種溝通渠道，幫助股東及時且全面地了解公司。同時，我們也高度重視股東和投資者的意見和反饋，認真把股東和投資者對公司發展戰略和生產經營等方面的意見或建議，通過簡報、專題報告等多種形式，反饋給公司董事會、管理層和相關部門，促進公司經營發展與股東價值的統一，注重保護股東權益，實現有效和順暢的雙向溝通。

與股東、投資者的溝通情況

與股東和投資者溝通的主要途徑及二零二一年溝通情況：

- 定期報告：不時發佈本公司年度報告、中期報告、季度最新營運情況和環境、社會及管治報告。
- 股東大會：於二零二一年六月十八日在香港舉行的二零二一年股東週年大會
- 業績發佈會：於二零二一年三月三十一日舉行的二零二零年年度業績發佈會；二零二一年九月二十四日舉行的二零二一年中期業績發佈電話會。
- 業績路演：二零二一年三月及四月開展年度業績路演及二零二一年九月開展中期業績路演。
- 調研活動：不定期安排管理層與投資者、分析師會面，聽取他們的意見和建議、回應關注的問題。

- Analyst teleconference: The Company organizes analyst teleconference to facilitate detailed communication with the capital market after publishing annual and interim reports or in case of internal and external material matters.
- Online communication: The Company participated in several online conferences in 2021.
- Daily communication: Timely response to the concerns of shareholders and investors on the investor relation management platform, investor hotline, and investor relationship mailbox.
- Company website (www.jinchuan-intl.com): The Company publishes information and materials relevant to investors in the Investor Relations column
- 分析師電話會議：在公司發佈中報、年報或出現內外部重大事項時組織面對分析師的電話會議，與資本市場進行詳細溝通。
- 網上交流：本公司二零二一年參加若干線上會議。
- 日常溝通：針對股東和投資者在互動平台、投資者熱線、投資者查詢郵箱的關注問題進行及時回覆。
- 本公司網站(www.jinchuan-intl.com)：通過投資者關係專欄，公佈與投資者有關的信息及資料。

AUDITOR'S REMUNERATION

The Group's external auditor is Deloitte Touche Tohmatsu, Certified Public Accountants. The auditor's remuneration for the year ended 31 December 2021 is US\$566,000 out of which US\$490,000 was related to audit services for the consolidated financial statements (including US\$241,000 for Deloitte overseas member firms) and US\$76,000 was related to non-audit services regarding the tax consultancy services and other professional services.

核數師酬金

本集團之外聘核數師為執業會計師德勤•關黃陳方會計師行。截至二零二一年十二月三十一日止年度，核數師薪酬為566,000美元，其中490,000美元與綜合財務報表之核數服務有關(當中包括德勤海外成員公司的241,000美元)，另外76,000美元則為與稅務諮詢服務及其他專業服務有關的非核數服務。

JCI ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT 2021

The Board oversees the sustainability initiatives, practices and progress as part of the business strategy and risk management process through the support of Audit Committee, Strategy and Investment Committee and Risk Management Committee. The Board takes responsibility in ESG management, including ESG strategies, initiatives and target formulation, policy and procedures approval etc. Our governance approach incorporates in the daily operations, where different internal functional departments are responsible for their line of responsibility. The functional departments regularly provide a report containing KPIs to the management and/or the Board for evaluation of effectiveness of the business operations.

THE COMPANY'S APPROACH TO ESG RISKS, IMPACTS AND OPPORTUNITIES

We consider ourselves are duty-bound to assess and manage all foreseeable risk factors as effectively as possible, as we believe that an effective management of ESG risks, impacts and opportunities can deliver more sustainable and better financial performance in the long term.

We recognise the need to consider ESG risks in our investment and the operation process of our subsidiaries and their impact on financial performance and the communities in which both we and our subsidiaries operate.

Our vision and strategy on ESG is set out broadly in our ESG Policy.

Reporting Principles – Materiality Assessment

In deciding what ESG data or information is included in this report, we have taken into account the materiality of the relevant data or information, that is, its importance and relevance to the Company's business and operations.

The Materiality Matrix below shows the result of our materiality assessment process, with reference to the ESG issues set out in the "comply and explain provisions" of Environmental, Social and Governance Reporting Guide (Appendix 27) of the Listing Rules:

金川國際二零二一年環境、社會及管治報告

董事會在通過審核委員會、戰略及投資委員會和風險管理委員會等專門委員會監督可持續發展舉措、實踐和進度，並將其視為業務戰略和風險管理的其中一環。董事會負責環境、社會及管治的管理，包括環境、社會及管治的戰略、舉措、目標制定、政策和程序審批等。我們將管治方針實踐於日常運營，而不同的內部職能機構則專注其職責。各職能機構定期向管理層和／或董事會提供KPI匯報情況，以評估業務經營的效用。

本公司應對環境、社會及管治的風險、影響和機遇的方法

我們認為本公司有責任並盡可能有效地去評估和管理所有可預見的風險因素，因我們相信有效管理環境、社會及管治的風險、影響和機遇，長遠來看能維持更具可持續性且更好的財務表現。

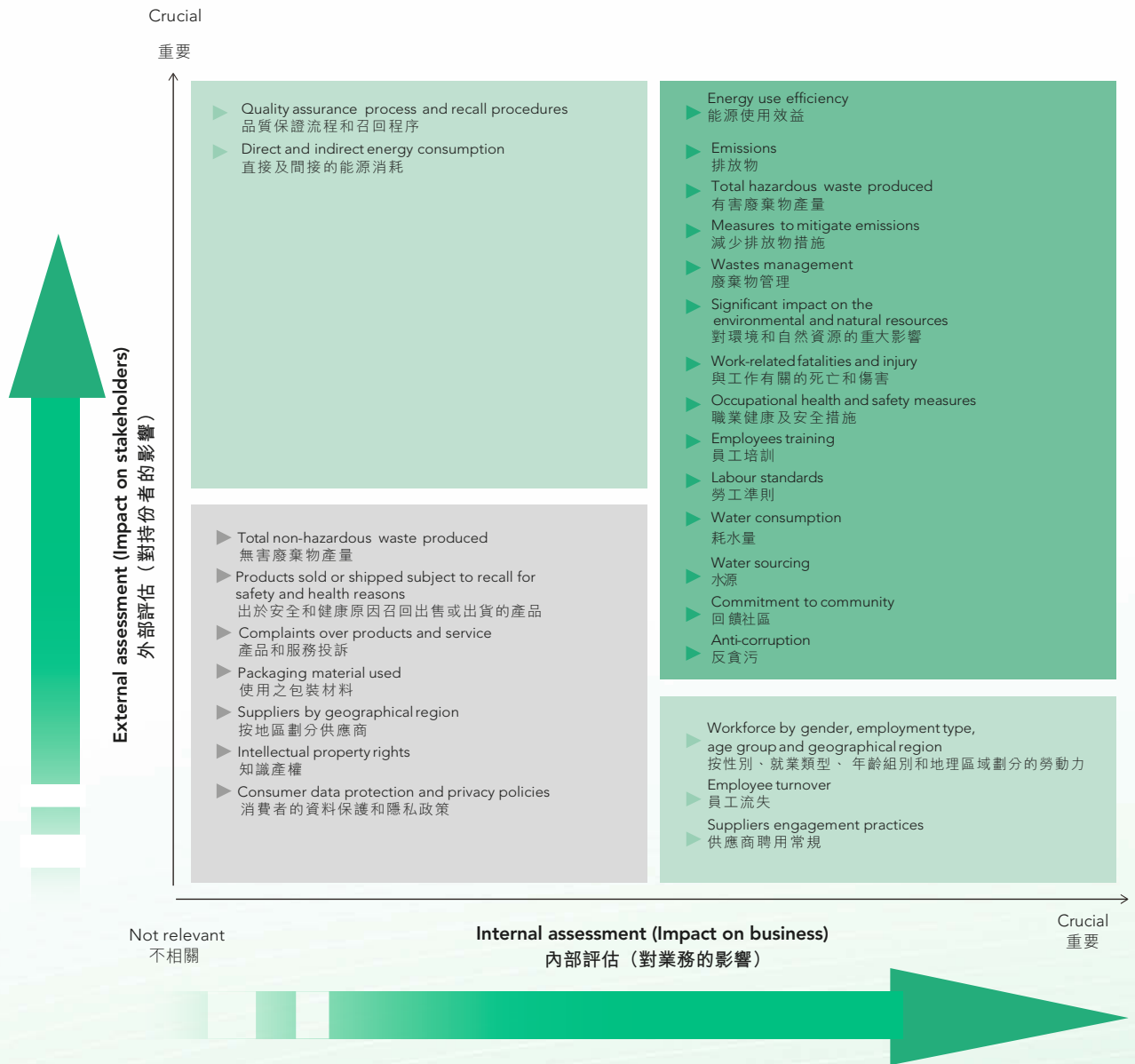
我們意識到有必要考慮我們在投資上以及附屬公司在經營過程中的環境、社會及管治風險，以及它們在財務表現及我們和附屬公司經營所在的社區上的影響。

我們對於環境、社會及管治的願景和策略在我們的環境、社會及管治政策中已列明。

匯報原則—重要性評估

當決定何種環境、社會及管治數據或資料可納入本報告時，我們考慮相關數據或資料的重要性，即它對本公司業務及經營是否重要和相關。

以下的重要性矩陣，參照了上市規則(附錄27)環境、社會及管治報告指引中「不遵守就解釋」條文的環境、社會及管治事項，顯示了我們重要性評估過程的結果：



Reporting Principles – Quantitative data

The JCI sustainability report for the mining operations was first compiled in 2015 and form part of the JCI annual report. This report included natural resource use and consumption (e.g. water use, power consumption), as well as waste management, emissions, reagent use and the carbon footprint. Information on Corporate Social Responsibility and the spend on social projects has also been included, as well as Safety and Health data. These measurements are taken at mine level to enable site specific use of the data to assess ESG performance at operational level.

匯報原則—量化資料

金川國際採礦業務可持續發展報告於二零一五年首次編製，並作為金川國際年度報告的一部分。該報告包括自然資源使用及消耗(例如耗水量、電力消耗)，以及廢物管理、排放物、藥劑使用及碳足跡等內容。亦載有有關企業社會責任及社會項目支出的信息，以及安全及健康資料。該等測量於礦山層面進行，以便能夠在特定礦址使用資料來評估運營層面的環境、社會及管治表現。

Reporting Principles – Balance

This report has been compiled by an external consultant who has obtained information from the mining operations for compilation into the report.

Reporting Principles – Consistency

Consistency has been applied in the JCI sustainability reports to enable comparison of measurements over time. This is important in the context of the mining operations, as the mines produce different final products, which influences measurement and comparability within and between operations. Ruashi Mine produces copper cathode and cobalt, while Kinsenda Mine and Chibuluma South Mine produce copper concentrate. Measurements of, for example, water consumption per tonne of final product are not comparable between operations as Ruashi Mine produces finished copper, while the concentrate produced by the other mines requires further processing to final product. The measurements at each individual operation have, however, remained consistent since 2015, ensuring comparability over time.

The only exception to this is the move in mine life cycle phase from project development to production. During the project development phase resource consumption (e.g. water and electricity) is measured as total consumption as there is no final product. After the commissioning of the operations resource consumption is measured per tonne of final product. At present, the Musonoi Project is still under development and full consumption figures are reported. Once commissioned, the consumption figures will be reported as resource use per tonne of concentrate, as is the case for Kinsenda Mine.

ESG performance for Business Review

SHEC policies and performance

JCI has Environmental, Community and Zero Harm policies in place at the corporate as well as operational levels. Safety, Health, Environment and Community ("SHEC") management is undertaken at operational level using an electronic management system (IsoMetrix), which includes incident and risk management.

Ruashi Mine is certified to the international standard ISO14001:2015 for Environmental Management Systems.

No serious environmental incidents or serious community incidents were reported in 2021 at JCI Group mines. Two fatalities were recorded, both of which occurred at Kinsenda Mine. A total of four lost time injuries ("LTI") were reported in 2021, of which one LTI occurred at Ruashi Mine, two at Chibuluma South Mine and one at Musonoi Project.

匯報原則 – 平衡

本報告由一名外聘顧問編製，該顧問於採礦業務中獲取信息以編入報告。

匯報原則 – 一致性

金川國際可持續發展報告中應用了一致性，以便比較隨時間變化的測量值。這在礦山業務的背景下尤為重要，因為礦山生產不同的最終產品，其會影響業務內部及業務之間的測量及可比性。Ruashi礦場生產電解銅和鈷，而Kinsenda礦場及Chibuluma南礦場生產銅精礦。例如，每噸最終產品的耗水量測量值在各項業務之間無法比較，因為Ruashi礦場生產成品銅，而其他礦場生產的精礦需要進一步加工成最終產品。然而，自二零一五年以來，每項單獨業務的測量值始終保持一致，從而確保了在不同時期的可比性。

唯一例外是礦場生命週期階段從項目開發到投產的轉變。在項目開發階段，資源消耗（例如水和電）以總耗用量來衡量，因為並無最終產品。投入運營後，按每噸最終產品測量資源耗用量。目前，Musonoi項目仍在開發中，並已匯報全部耗用量數據。一旦投入使用，耗用量數據將按每噸精礦的資源耗用量呈報，Kinsenda礦場亦是如此。

業務回顧的環境、社會及管治表現

SHEC政策及表現

金川國際在公司及運營層面制定了環境、社區及零傷害政策。安全、健康、環境及社區("SHEC")管理是在運營層面使用電子管理系統(IsoMetrix)進行，其中包括事故及風險管理。

Ruashi礦場已獲國際標準ISO14001:2015環境管理體系認證。

二零二一年，金川國際集團礦場並無嚴重環境事故或嚴重社區事故被報道。經記錄兩宗死亡事件，均發生於Kinsenda礦場。二零二一年共呈報四宗損失工時工傷事故("損失工時工傷事故")，其中一宗損失工時工傷事故發生於Ruashi礦場，兩宗發生於Chibuluma南礦場，一宗發生於Musonoi項目。

Legal compliance and fines

The main legislation in the DRC pertaining to the mining industry is the Mining Code (2002, amended by Law No. 18/001 dated 9 March 2018) and the Mining Regulations, which include environmental and social considerations.

The revised Mining Code introduced a requirement whereby all holders of mining rights are required to make a contribution of a minimum of 0.3% of turnover to development projects in mine-affected communities. Mining licence holders are also required to contribute to projects which promote local industrial and socio-economic development.

Other relevant DRC environmental legislation includes the Environmental Protection Act Law No. 11/009 of 2011 and the Forest Code Law No. 011/2002 of 2002.

Ruashi Mine, Musonoi Project and Kinsenda Mine operate in compliance with the DRC Mining Law and Regulations as required. Revised environmental impact studies, environmental annual reports, both rainy and dry seasons follow up and control reports as well as audits reports are submitted on time to the relevant authorities.

Kinsenda and Musonoi have not receive any notices or fines for legal non-conformance compliance during 2021. For the reporting period, Ruashi has 2 outstanding matters: The first concerned an allegation for causing pollution to a farm downstream, whereas the second involved an allegation in having a subcontractor working illegally on the mine site and for failure to declare the activity in the relevant report submitted to the governing ministry. The first matter mentioned has been concluded administratively with outcome in favour of Ruashi. For the second matter mentioned, Ruashi has initiated legal proceedings to challenge the allegation. The legal proceedings remained in progress.

The main legislation governing environmental performance in Zambia is the Environmental Management Act, 12 of 2011 administered by the Zambian Environmental Management Agency ("ZEMA"). Chibuluma South Mine did not have any legal non-compliances related to matters of safety and the environment, and did not receive any fines during the reporting period.

Key stakeholder relationships

All of the mines operate in proximity to local communities, and also maintain key relationships with their employees, suppliers and relevant authorities.

法律合規及罰款

剛果(金)與採礦業有關的主要法例是《礦業法》(二零零二年，經二零一八年三月九日第18/001號法例修訂)及《礦業條例》，其中包括環境及社會考量因素。

經修訂的《礦業法》引入了一項規定，即所有採礦權持有人須為受礦山影響社區的開發項目貢獻至少0.3%的營業額。採礦許可證持有人亦須為促進當地工業及社會經濟發展的項目做出貢獻。

剛果(金)其他相關環境立法包括二零一一年第11/009號《環境保護法》及二零零二年第011/2002號《森林法》。

Ruashi礦場、Musonoi項目及Kinsenda礦場的經營符合剛果(金)《礦業法》及《礦業條例》之規定。經修訂環境影響研究、環保年報、雨季旱季跟蹤控制報告以及審計報告乃定時向有關當局呈遞。

二零二一年內，Kinsenda及Musonoi並無因違反法律而接獲任何通知或被處以罰款。於報告期間，Ruashi有2項未決事宜：第一項涉及被指控對下游農場造成污染，而第二項則涉及被指控於礦址安排分包商非法作業，並且未有於向主管部門呈遞的相關報告中聲明該活動。上述第一項事宜已獲得行政結案，判決結果對Ruashi有利。就上述第二項事宜而言，Ruashi已啟動法律訴訟對指控提出質疑。相關法律訴訟仍在審理中。

贊比亞管轄環保表現的主要法例為《環境管理法》(二零一一年第12號法)，由贊比亞環境管理局(「ZEMA」)施行。於報告期內，Chibuluma南礦場概無任何涉及安全及環境事宜的違法情形，亦無受到任何罰款。

主要利益相關方關係

所有該等礦場均在當地社區附近運營，並與其僱員、供應商及有關當局維持重要關係。

Ruashi Mine has a social office for liaison with the local community and Non-Governmental Organisations, while the mine maintains relationships with key local authorities, state institutions, financial institutions, SNEL (DRC power utility), Regie Des Eaux (DRC water utility), local clinics as well as the local media.

A key partner at Chibuluma South Mine is the finance lessee. Other stakeholders include the Kalulushi community and local authorities, as well as government offices such as the Mines Safety Department and ZEMA.

Kinsenda Mine is in close proximity to Kinsenda village, and key stakeholders include the community as well as local leaders and authorities.

Musonoi Project, which is currently under development, is located in Kolwezi, which is a mining centre in the Lualaba Province of the DRC. Key stakeholder relationships include surrounding operations (the mine is located between ENRC's Roan Tailings Project and Kamoto Copper Company), the local community in Kolwezi, as well as various local, provincial and national authorities. Musonoi Project has a social and community department, and quarterly meetings are held with community representatives to address issues which may arise.

COMPLY OR EXPLAIN PROVISIONS

A – ENVIRONMENT

ASPECT A1 – EMISSIONS

General disclosure

The DRC legislation governing emissions is the Mining Code, and relevant licences for emissions and discharges are issued per mining operation. In Zambia, licences are issued in terms of the Environmental Management Act, where emissions, waste management and pesticide and toxic substance licences have been issued to Chibuluma South Mine.

Musonoi Project is under construction and operations have not yet commenced.

Ruashi礦場設有負責聯絡當地社區及非政府組織的社會事務辦公室，同時該礦場保持與主要地方當局、國家機構、金融機構、SNEL（剛果(金)電力公司）、Regie Des Eaux（剛果(金)水務公司）、當地診所及當地媒體保持關係往來。

位於Chibuluma南礦場的主要合作夥伴為融資承租人。其他利益相關方包括Kalulushi社區及地方當局，以及包括礦山安全局及ZEMA等政府機關。

Kinsenda礦場毗鄰Kinsenda村莊，主要利益相關方包括社區、村代表及地方當局。

目前正在開發的Musonoi項目位於科盧韋齊，後者為剛果(金)盧阿拉巴省的採礦中心。主要利益相關方關係涉及周圍業務(該礦場地處歐亞自然資源集團Roan尾礦項目與Kamoto Copper Company之間)、科盧韋齊地方社區以及各地方、省級及國家機關。Musonoi項目設有社會及社區部門，每季度均會舉行社區代表會議以處理可能出現的問題。

不遵守就解釋條文

A – 環境

層面A1 – 排放物

一般披露

剛果(金)規管排放物的法律為《礦業法典》，而每項採礦業務均會頒發排放和排出的相關許可證。於贊比亞境內，該等許可證乃根據《環境管理法》頒發，其中Chibuluma南礦場已獲頒發排放、廢棄物管理、殺蟲劑及有毒物質許可證。

Musonoi項目處於在建階段，尚未投入運營。

KPI A1.1 The types of emissions and respective emissions data.

KPI A1.1 排放物種類及相關排放數據。

KPI A1.2 Carbon footprint

KPI A1.2 碳足跡

The total carbon footprint is shown, as well as Scope 1 (direct emissions, mainly comprising diesel use for the mining fleet and on-site generator power) and Scope 2 (purchased electricity) emissions.

下表列示碳足跡總量以及範圍1(直接排放, 主要為採礦車隊及現場發電所用的柴油)及範圍2(外購電力)的排放量。

It must be noted that most of the power generated in the DRC and Zambia is hydro-electric power.

值得注意的是, 剛果(金)及贊比亞的電力大部分為水力發電。

Scope 1 and Scope 2 emissions (t CO ₂ -e) 2019 – 2021	範圍1及範圍2排放量(每噸二氧化碳當量)二零一九年至二零二一年	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	1,816	4,496	10,775
Chibuluma	Chibuluma	3,795	2,127	N/A不適用
Kinsenda	Kinsenda	5,811	7,505	9,745
Musonoi	Musonoi	–	2,651	2,107
Corporate Offices at Hong Kong, Shanghai and Johannesburg (“Corporate Offices”)	公司辦事處(香港、上海及約翰內斯堡)(「公司辦事處」)	175	109	121
The Group	本集團	11,597	16,888	22,748

Scope 1 emissions (t CO ₂ -e) 2019 – 2021	範圍1排放量(每噸二氧化碳當量)二零一九年至二零二一年	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	1,276	3,903	10,214
Chibuluma	Chibuluma	3,741	2,095	N/A不適用
Kinsenda	Kinsenda	5,546	7,216	9,418
Musonoi	Musonoi	–	2,643	2,091
The Group	本集團	10,563	15,857	21,723

Scope 2 emissions (t CO ₂ -e) 2019 – 2021	範圍2排放量(每噸二氧化碳當量)二零一九年至二零二一年	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	540	593	562
Chibuluma	Chibuluma	55	32	N/A不適用
Kinsenda	Kinsenda	265	289	327
Musonoi	Musonoi	–	8	16
Corporate Offices	公司辦事處	175	109	121
The Group	本集團	1,035	1,031	1,026

Ruashi Mine's acid plant emits SO₂ gas, emissions in tonnes per annum are shown below.

Ruashi礦場製酸廠排出二氧化硫氣體每年以噸計列示如下。

Ruashi Acid Plant Emissions	Ruashi製酸廠排放	2019 二零一九年	2020 二零二零年	2021 二零二一年
SO ₂ gas (tonnes)	二氧化硫氣體(噸)	142	126	144

Kinsenda Mine operates a maize farm on the mine, which planted approximately 100 hectare of maize in 2021.

As detailed in the “Significant Events” section under “Management Discussion and Analysis” of this Annual Report, Chibuluma South Mine (including Chifupu Deposit) has been leased out to an independent third party under a finance lease agreement since 1 April 2021.

KPI A1.3 Hazardous waste

The main types of hazardous waste generated by the mining operations include waste oil and batteries as well as old reagents and spent catalyst at Ruashi Mine. Medical waste is generated by the hospital at Kinsenda and the clinic at Ruashi Mine. Chibuluma has a mine clinic, but since the downscaling of the mine it is used only for emergencies, with medical cases using the Kalulushi General Hospital. No clinic waste was generated at Chibuluma during 2021. A small quantity of medical waste is produced by the clinic at Ruashi Mine, which is burned in an on-site incinerator.

Musonoi Project is still under development, and does not generate significant amounts of hazardous waste.

Waste oil generation at all sites is shown in the table below.

Waste oil generation (litres)	產生的廢油量(升)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	104,840	43,520	21,180
Chibuluma	Chibuluma	38,850	15,570	N/A不適用
Kinsenda	Kinsenda	17,800	18,540	20,220
Musonoi	Musonoi	—	—	—

Ruashi Mine has implemented an oil recycling programme for waste oil, whereby it is used as a supplementary fuel in power generation facilities in Likasi for lime production. Other hazardous waste generated at Ruashi Mine includes sulphur ash and vanadium pentoxide catalyst from the acid plant. The hazardous waste is currently stored on site as the DRC does not have a licenced hazardous waste disposal facility, and Ruashi Mine intends to export the waste catalyst to South Africa for disposal at a licenced site in future.

Used oil and used batteries generated at Chibuluma South Mine are sold to companies licenced by ZEMA. This activity is managed onsite by the finance lessee and only licenced dealers are engaged in the collection of used oil.

Used oil at Kinsenda Mine is collected onsite and sent to Likasi for recycling.

Kinsenda礦場於礦場經營玉米農場，於二零二一年種植約100公頃的玉米。

如本年報「管理層討論及分析」中「重大事件」一節所詳述，自二零二一年四月一日起，Chibuluma南礦場(包括Chifupu礦床)以融資租賃協議出租予一名獨立第三方。

KPI A1.3有害廢物

採礦業務產生的有害廢物主要包括廢油及廢棄電池，以及於Ruashi礦場產生的舊藥劑及廢棄催化劑。醫療廢物產生自Kinsenda的醫院以及Ruashi礦場的診所。Chibuluma設有礦場內診所，但由於礦場規模縮小，其僅用於緊急情況，醫療病例均會送往Kalulushi綜合醫院(Kalulushi General Hospital)就診。於二零二一年，Chibuluma概無產生診所廢物。Ruashi礦場的診所則產生少量醫療廢物，於現場焚化爐作焚燒處理。

Musonoi項目仍在開發中，沒有產生大量有害廢物。

下表列示各礦址產生的廢油量。

Ruashi礦場已就廢油推行廢油回收計劃，將廢油用作Likasi發電設施的補充燃料，用於生產石灰。於Ruashi礦場產生的其他有害廢物包括製酸廠產生的硫渣及五氧化二釩催化劑。有害廢物目前就地貯存，乃由於剛果(金)境內並無經營有害廢物處置的持牌設施，Ruashi礦場擬於未來將廢催化劑出口到南非，以便在持牌地點處置。

於Chibuluma南礦場產生的廢油及廢棄電池會售予由ZEMA發牌的持牌公司。該項業務由融資承租人現場管理，惟持牌經銷商方可從事廢油收集工作。

Kinsenda礦場的廢油乃現場收集，並運往Likasi作回收利用。

The amount of hazardous waste generated by Ruashi is shown in the table below.

下表列示於Ruashi產生的有害廢物量：

Ruashi hazardous waste generation	於Ruashi產生的有害廢物量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Sulphur ash (tonnes)	硫渣(噸)	52	67	53
Catalyst (tonnes)	催化劑(噸)	2.4	5.6	0.0

Chibuluma, Kinsenda and Musonoi do not use acid in their processes, nor do they run acid plants and therefore do not use sulphur.

Chibuluma、Kinsenda及Musonoi於冶煉中並無使用酸，亦無經營製酸廠，因此不會使用硫磺。

The mines also produce waste in the form of waste rock dumps and tailings dams. Facilities are designed and operated such that geotechnical risks and environmental impacts are identified, addressed and managed through the life cycle of the mine.

礦場還以廢石堆及尾礦壩的形式生產廢物。設施的設計特點及作業方式乃便於識別、處理及管理礦場整個生命週期中的岩土風險及環境影響。

KPI A1.4 Non-hazardous waste

KPI A1.4非有害廢物

Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).

產生的非有害廢物總量(以噸計)及(如適用)密度(如以每產量單位、每項設施計算)。

Ruashi and Chibuluma dispose of non-hazardous waste generated by the mining operation only, while Kinsenda also assists with the disposal of non-hazardous domestic waste from nearby Kinsenda village. Ruashi has a domestic landfill onsite, which includes recycling.

Ruashi及Chibuluma僅處置自採礦業務產生的非有害廢物，而Kinsenda則同時協助處置鄰近Kinsenda村莊的非有害生活廢物。Ruashi自身擁有廢物堆填區，包括回收。

Scrap generated at Chibuluma South Mine is weighed and sold to licenced scrap dealers and an amount of 10.41 tonnes of scrap was sold in 2021. The waste is stored at a designated salvage yard before sale. Scrap generated at Kinsenda Mine is sold to a scrap dealer in Musoshi. 12 tonnes of non-hazardous waste was generated at Kinsenda, which is being stored in a temporary landfill site prior to removal to the main Kinsenda landfill.

Chibuluma南礦場產生的廢料稱重後售予持牌廢料經銷商，二零二一年售出的廢料數量為10.41噸。廢物售出前存放於指定廢棄場。Kinsenda礦場產生的廢料均銷往Musoshi的一家廢料經銷商。Kinsenda產生了12噸非有害廢物，在運往Kinsenda主垃圾填埋場之前，該等廢物被貯存在一個臨時垃圾填埋場。

Non-hazardous waste disposal (tonnes)	處置無害廢物(噸)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	50.04	37.50	43.47
Chibuluma	Chibuluma	60.64	15.88	N/A不適用
Kinsenda	Kinsenda	62.80	61.05	65.55
Musonoi	Musonoi	-	-	12.00

Non-hazardous waste recycling (tonnes)	無害廢物回收(噸)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	855	717	681.73
Chibuluma	Chibuluma	74.52	41.32	N/A不適用
Kinsenda	Kinsenda	67.6	307.1	532.65
Musonoi	Musonoi	-	-	-

As detailed in the “Significant Events” section under “Management Discussion and Analysis” of this Annual Report, Chibuluma South Mine (including Chifupu Deposit) has been leased out to an independent third party under a finance lease agreement since 1 April 2021.

如本年報「管理層討論及分析」中「重大事件」一節所詳述，自二零二一年四月一日起，Chibuluma南礦場(包括Chifupu礦床)以融資租賃協議出租予一名獨立第三方。

KPI A1.5 Emissions targets

The SO₂ emission target at the main stack of the Ruashi acid plant is < 250 ppm. The minimum target for leakages at start up and shutdown is zero. An annual shutdown of the plant is undertaken to replace critical equipment and undertake internal cleaning.

KPI A1.5排放目標

Ruashi製酸廠主煙囪的二氧化硫排放目標為< 250 ppm。啓停時最低洩漏目標為零。每年度均會關停廠房以更換關鍵設備及進行內部清潔。

KPI A1.6 Waste reduction targets

Waste is handled as described in the paragraph above. A key waste management concern in the DRC is the lack of a licenced hazardous waste site, which results in the storage of hazardous waste on site pending safe disposal. The mine actively seek opportunities to recycle waste where possible,

KPI A1.6減廢目標

廢物按上段所述進行處理。剛果(金)的一個關鍵廢物管理問題為缺乏持牌有害廢物堆放處，導致有害廢物現場存放，等待安全處置。礦場盡可能積極尋覓廢物回收利用的良機。

ASPECT A2 – USE OF RESOURCES

層面A2 – 資源使用

KPI A2.1 Energy consumption

The power supplied by the utilities in Zambia and the DRC is largely hydro-electric power. Ruashi’s power consumption is shown as kWh per tonne of finished copper. Chibuluma and Kinsenda produce copper concentrate, so the power consumption is reflected as kWh per tonne of copper concentrate produced. The Musonoi Project is still under development, and total power consumption is shown. The energy use for each operation, as well as the corporate offices, is shown in the tables below.

KPI A2.1能源消耗

於贊比亞及剛果(金)的供電設施以水力發電為主。Ruashi的電力消耗以千瓦時／噸成品銅表示。Chibuluma及Kinsenda生產銅精礦，故電力消耗反映為千瓦時／噸產出銅精礦。Musonoi項目仍在開發中，所示為其總電力消耗。有關各項業務及公司辦事處的能源使用情況如下表所示。

Ruashi’s energy use	Ruashi能源使用	2019 二零一九年	2020 二零二零年	2021 二零二一年
Power consumption (kWh/t finished copper)	電力消耗(千瓦時／噸成品銅)	4,560	4,389	4,588

Chibuluma's energy use	Chibuluma能源使用	2019 二零一九年	2020 二零二零年	2021 二零二一年
Power consumption (kWh/t concentrate)	電力消耗(千瓦時/噸銅精礦)	938	1,089*	N/A不適用

Chibuluma South Mine was put into care and maintenance in 2020. Mining activities restarted in 2021 under the operation of finance lessee.

Chibuluma南礦場於二零二零年進行關停維護。二零二一年由融資承租人重啟採礦活動。

* January to June 2020

*二零二零年一月至六月

Kinsenda's energy use	Kinsenda能源使用	2019 二零一九年	2020 二零二零年	2021 二零二一年
Power consumption (kWh/t concentrate)	電力消耗(千瓦時/噸銅精礦)	400	399	416

The total power consumption at Musonoi is shown below.

如下所示為Musonoi的電力消耗總量。

Musonoi's energy use	Musonoi能源使用	2019 二零一九年	2020 二零二零年	2021 二零二一年
Total power consumption (kWh)	電力消耗總量(千瓦時)	-	2,097,953	5,240,495

The Corporate Offices have carried out many initiatives to reduce energy consumption, such as, encouraging our employees to switch off unnecessary lights and electronic equipment while not in use. The power consumption is shown as kWh. The power consumption in the Johannesburg corporate office has decreased due to reduced numbers of employees in the office.

公司辦事處已採取許多措施來減少能源消耗，例如鼓勵員工在不使用時關掉不必要的燈及電子設備。電力消耗以千瓦時列示。公司駐約翰內斯堡辦事處的電力消耗有所減少，乃由於該辦事處僱員數量減少。

Corporate Offices' energy use	公司辦事處能源使用	2019 二零一九年	2020 二零二零年	2021 二零二一年
Power consumption (kWh)	電力消耗(千瓦時)	192,829	114,697	133,241

KPI A2.2 Water consumption

KPI A2.2耗水量

Water at Ruashi is recycled from the return water dams as well as from the stormwater dam for use in the plant. The Ruashi pit is dewatered with the use of boreholes, and water from these boreholes is supplied to REGIDESO S.A., the local water utility, which then supplies water to the local community. pH is monitored on the site on a daily basis.

於Ruashi的水經回流壩及雨水壩循環，轉而供選礦廠使用。Ruashi礦井通過使用鑽井進行脫水，而自該等鑽井流出的水乃供應給當地供水公司REGIDESO S.A.，其後將水轉供給當地社區使用。礦場每日監測水的酸鹼度。

Ruashi's water consumption	Ruashi耗水量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Copper produced (tonnes)	已生產銅(噸)	33,824	33,897	33,063
Water use (m ³ /day)	耗水量(立方米/日)	10,230	13,815	12,021
Water use (m ³ /tonne Cu)	耗水量(立方米/噸銅)	110.39	148.00	132.70

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Chibuluma produces copper concentrate, which is transported to a smelter in Zambia, so water consumption is measured per tonne of copper concentrate produced. The mine uses return water and water from underground dewatering in the plant, with make-up water pumped from surface and underground water sources when required. The mine monitors water in accordance with the requirements of its environmental management plan. It must be noted that more than 90% of the water used in the Chibuluma plant is recycled from the tailings dam.

Chibuluma生產銅精礦，並將銅精礦運往贊比亞一間冶煉廠，因此，耗水量以每噸已生產銅精礦計量。礦場使用選礦廠排出的回注水及地下水，並於有需要時自地表及地下水源抽水補給。礦場根據其環境管理計劃之規定監測水質。務須注意，Chibuluma選礦廠所耗超過90%的水乃循環自尾礦壩。

Chibuluma's water consumption	Chibuluma耗水量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Copper concentrate produced (t)	已生產銅精礦(噸)	8,174	1,744	N/A 不適用
Water used (m ³ /day)	耗水量(立方米/日)	650	410	N/A 不適用
Water used (m ³ /t Cu produced)	耗水量(立方米/生產一噸銅)	29.02	86.01	N/A 不適用

As detailed in the "Significant Events" section under "Management Discussion and Analysis" of this Annual Report, Chibuluma South Mine (including Chifupu Deposit) has been leased out to an independent third party under a finance lease agreement since 1 April 2021.

如本年報「管理層討論及分析」中「重大事件」一節所詳述，自二零二一年四月一日起，Chibuluma南礦場(包括Chifupu礦床)以融資租賃協議出租予一名獨立第三方。

The main source of water for the Kinsenda plant is underground dewatering, where approximately 65,600m³ of water was pumped out of the mine daily in 2021.

Kinsenda工廠的主要水源是地下脫水，二零二一年每日約有65,600立方米的水從礦井抽出。

Kinsenda's water use is shown in the table below.

下表列示Kinsenda的耗水量。

Kinsenda's water consumption	Kinsenda耗水量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Copper concentrate produced (t)	已生產銅精礦(噸)	31,059	30,557	28,197
Water used (m ³ /day)	耗水量(立方米/日)	420	413	417
Water used (m ³ /t Cu produced)	耗水量(立方米/生產一噸銅)	4.17	4.10	4.14

Water at the Musonoi Project is sourced from boreholes and dewatering from underground development. The infrastructure is not yet in place to measure water consumption.

Musonoi項目水源來自鑽孔及地下開發排水。測量耗水量的基礎設施尚未到位。

As the offices in Hong Kong and Johannesburg are located in leased office premises where both water supply and discharge and data of water consumption are solely controlled by the property owner/management office of the building, hence data of water consumption are not able to be obtained and calculated. However, Corporate Offices encourage their employees to reduce their water consumption and monitor the amount of water used so as to implement relevant control measures.

由於香港及約翰內斯堡的辦事處位於租賃辦公場所，供水及排水以及水消耗數據均由樓宇業主/管理辦公室單獨控制，因此無法獲得及計算水消耗數據。然而，公司辦事處鼓勵員工減少水消耗並監測用水量，以便實施相關的控制措施。

KPI A2.3 Energy efficiency targets

In order to sustain the process plant power demand at Ruashi in the event of power outages from the local utility, two power plants were installed at the mine in 2012 and 2013. These consisted of 13 Cummins generators and 7 Caterpillar generators with a total production capacity of 21MW. Kinsenda has also installed 2 Cummins generators with a total production capacity of 5MW.

The running philosophy of the power plants is to use generators only when there is a shortage of supply from the grid network.

KPI A2.4 Water sourcing and efficiency targets

Water is recycled at all of the mines, with recycled water from the tailings dams and underground dewatering used for plant processes. Make-up water from local water sources is only used if there is a shortfall of recycled water.

At Ruashi, water from the mine dewatering system is used as a source of raw water to the process plant and to the Ruashi community. Surface water from storm and return water ponds is pumped back to the plant. Boreholes drilled on site produce higher quality water, which is less affected by seasonal changes, and has a significantly reduced risk of being contaminated by third party factors.

Kinsenda Mine is a wet mine, and as such dewatering water not used for the plant is discharged into the Kinsenda river. Copper levels and pH are closely monitored. The mine obtains its drinking water from a local spring, and the water is used by the mine as well as Kinsenda village. The water is chlorinated before the off-take points for the mine and local community.

KPI A2.5 Packaging materials

Cobalt hydroxide is transported from Ruashi Mine in 1m³ bags. The number of bags used annually is shown in the table below.

KPI A2.3能源效益目標

為在當地公用事業單位斷電時仍然支撐Ruashi冶煉廠電力需求，該礦場於二零一二年及二零一三年安裝兩座發電站。該等發電站包含13台康明斯發電機及7台卡特彼勒發電機，總發電容量達21兆瓦。Kinsenda亦已安裝2台康明斯發電機，總發電容量達5兆瓦。

發電站的運行理念是僅在電網供電短缺時使用發電機。

KPI A2.4取水目標及效率目標

所有礦場的水均為循環使用，來自尾礦壩及地下排水的循環水用於工廠冶煉。惟循環水短缺時，方使用當地水源的補給水。

在Ruashi，礦場排水系統的產水用作制煉廠及Ruashi社區的原水來源。來自暴雨及回流水池的地表水將抽回工廠。現場所鑽井產水質量較高，其受季節性變化的影響更小，且受第三方因素污染的風險明顯降低。

Kinsenda礦場為濕礦，因此脫水並非用於工廠，而是排入Kinsenda河，並密切監測銅含量及酸鹼度。礦場飲用水來自當地一處泉水，由礦場和Kinsenda村莊共享。泉水在輸往礦場和當地社區的取水點之前已作氯化處理。

KPI A2.5包裝材料

氫氧化鈷以一立方米大小的袋子從Ruashi礦場運送。每年使用的袋子數量如下表所示。

Ruashi Cobalt Hydroxide Bags Used	Ruashi氫氧化鈷所使用的袋子	2019 二零一九年	2020 二零二零年	2021 二零二一年
Number of 1m ³ bags used	已使用一立方米的袋子數量	47,104	27,872	31,600

Kinsenda reverted to the practice of transporting copper concentrate using 1m³ bags in July 2021, from loading the material directly onto trucks in prior years. The number of bags used from July to December is shown in the table below.

Kinsenda於二零二一年七月恢復使用一立方米袋子運輸銅精礦的慣常做法，而前幾年為直接將物料裝載到卡車上。下表所示為七月至十二月所使用的袋子數量。

Kinsenda concentrate Bags Used	Kinsenda銅精礦所使用的袋子	2019 二零一九年	2020 二零二零年	2021 二零二一年
Number of 1m ³ bags used	已使用一立方米的袋子數量	49,064	-	32,839

Chibuluma's concentrate and Ruashi's final copper product is loaded directly onto trucks, and no packaging material is used. The Musonoi plant was under construction during 2021, and therefore no product was transported from site.

Chibuluma的銅精礦及Ruashi的成品銅乃直接裝載到卡車上，並無使用包裝材料。於二零二一年，Musonoi工廠處於在建階段，因此並無產品從現場運出。

ASPECT A3 – THE ENVIRONMENT AND NATURAL RESOURCES

層面A3 – 環境及自然資源

General disclosure

一般披露

The Group's Environmental Policy remains unchanged, and is as follows:

本集團環境政策維持不變，具體如下：

JCI is committed to the responsible stewardship of natural resources and the ecological environment. Environmental management is recognised as a high corporate priority, and is a component of "Zero Harm", one of the Group's principle values.

金川國際致力於就天然資源及生態環境的可持續性進行負責任的管理。環境管理被認為是企業管理的重中之重，並為本集團核心價值之一「零傷害」的其中一環。

JCI is committed to:

金川國際致力於：

- Continually improving the assessment and improvement of environmental performance and the prevention of pollution through the implementation of processes, practices and techniques to avoid, reduce or control the creation, emission or discharge of any type of pollutant or waste and to reduce adverse environmental impacts;
- Conducting environmental impact assessments on all relevant new programmes and projects;
- The integration of environmental management into management practices throughout the company;
- Minimising the use of consumptive resources and promoting the reduction and recycling of waste products where possible;
- Rehabilitating disturbed land and protecting environmental biodiversity;
- Exercising prudence with critical ecological resources, in particular where impacts are unknown or uncertain;
- 持續優化評估及提高環境績效，並透過執行各種流程、常規及技術防止污染產生，以避免、減少或控制任何種類污染物或廢棄物的產生或排放及降低對環境產生的不利影響；
- 對所有相關新計劃及項目進行環境影響評估；
- 將環境管理融入本公司整體的管理實踐；
- 盡量減少使用消耗性資源，推動減廢及盡量循環再造；
- 復修遭破壞的土地及保護環境生物多樣性；
- 謹慎對待重要生態資源，尤其該等具有未知或不確定影響的資源；

- Managing environmental risk in the workplace and surrounding areas;
 - Complying with applicable legal requirements and with other requirements to which the organisation subscribes and which relate to its environmental aspects;
 - Training and educating employees in environmental responsibilities; and
 - Being transparent and constructive in interactions with stakeholders.
- 管理工作場所及周圍地區的環境風險；
 - 遵守適用的法律規定以及組織所接納且與其環境因素有關的其他規定；
 - 培訓及教育僱員有關環境責任；及
 - 與利益相關者進行透明及具建設性的互動。

Employees and contractors working at JCI operations play a fundamental role in achieving environmental objectives through:

金川國際營運業務的僱員及承包商透過以下方式於達成環境目標方面發揮基礎性作用：

- Taking ownership of, and participating in, environmental management programmes and initiatives; and
 - Setting objective and targets for sound environmental management within the framework of an ISO14001 standard environmental management system.
- 主導及參與環境管理計劃及措施；及
 - 於ISO14001標準環境管理體系框架內確立良好的環境管理目標及指標。

Ruashi is certified to the international standard ISO14001:2015 for environmental management systems. All of the mines undertake the relevant environmental impact assessments and management plans prior to commencement of operations, and during operations as required by legislation (every five years in the DRC, or when material changes are made to the mining or plant process. The Musonoi has completed the relevant environmental impact assessments, management plans and specialist studies for commencement of mine development.

Ruashi獲國際標準ISO14001：2015環境管理體系認證。所有礦場於營運開始前及在營期間內均須按法例規定進行相關環境影響評估及管理規劃(剛果(金)境內為每五年一次，或在採礦或工廠流程發生重大變動時)。Musonoi就開始礦場開發已完成相關環境影響評估、管理規劃及專家研究。

KPI A3.1 Significant impacts of activities on the environment and natural resources

KPI A3.1業務活動對環境及天然資源的重大影響

The following impacts on the environment and natural resources have been identified at the mine sites:

各礦址已識別下列對環境及天然資源的影響：

Water

水

Regular monitoring of ground and surface water levels and quality are carried out at all of the mines, with boreholes placed at various locations onsite (particularly near to the tailings storage facilities and waste rock dumps). At Ruashi, monitoring is done down-gradient of the mine to check for potential pollution, as well as up-gradient to assess the quality of groundwater not affected by the mine. Volumes and quality of water discharged into the environment (in accordance with relevant permits) is monitored.

所有礦場定期監測地面及地表水的水位及水質，並於礦場各處(尤其是在尾礦貯存設施和廢石堆附近)鑽孔。於Ruashi，於礦井的下坡處進行監測，以檢查潛在的污染，並於上坡處進行監測，以評估未受礦井影響的地下水的品質。我們對排入環境中的水量及水質(根據相關許可)進行監測。

Kinsenda is a wet mine, where excess water from underground dewatering is discharged into the Kinsenda river. The water is monitored for copper levels and pH, and pH control is undertaken if necessary. The pH in the discharge water varied between 6.48 and 7.8 in 2021.

Air quality

The main impact on air quality at the mining operations is dust from mining operations and travel on dirt roads by heavy vehicles, as well as exhaust emissions. Dust monitoring is undertaken in accordance with permit requirements.

Air quality in the vicinity of the mining operations is also influenced by surrounding land uses, particularly at Ruashi, Chibuluma and Musonoi, which are in close proximity to other mining operations, industry and population centres. In addition, subsistence farming and artisanal industries such as brick-making and charcoaling, and waste burning also contribute to the cumulative impacts at all sites. Ruashi Mine is in close proximity to Luano airport (Lubumbashi) and as such undertakes monitoring for SO₂, CO and H₂S at the airport.

Dust entrainment by vehicles on unpaved roads occurs at Kinsenda, where speed control has been implemented. While this is primarily for safety reasons, reduced speed reduces dust generation.

Biodiversity

Progressive rehabilitation is undertaken on Chibuluma's tailings dams. Kinsenda has a programme to re-establish vegetation, and 200 trees were planted in 2021. Musonoi has implemented a programme to monitor and protect vegetation during the construction phase to prevent unnecessary ecological disturbances.

Pollution prevention

The mining operations have potential for hydrocarbon and chemical pollution. All operations have policies and procedures in place regarding the transport, storage and used of hazardous substances, and remediation procedures should they be required.

ASPECT A4 – CLIMATE CHANGE

General Disclosure

On one hand, the Group assesses from time to time the potential challenges to our mining and business operations associated with extreme climate hazards such as heavy precipitation, drought, and heat. On the other hand, with copper and cobalt continue to be vital for electric vehicles, global decarbonisation and the worldwide push against climate change, the Group will focus on our part to supply such metals to the world in a responsible way.

Kinsenda為一處潮濕礦場，該處地下排水的多餘水量排入Kinsenda河中。水中含銅量水平及酸鹼度均受監測，必要時進行酸鹼度控制。於二零二一年，排放水的酸鹼度介乎6.48至7.8之間。

空氣質素

採礦作業對空氣質素的主要影響為採礦作業產生的粉塵及重型車輛在土路上行駛產生的揚塵以及廢氣排放。粉塵監測按許可規定進行。

採礦作業附近的空氣質素亦受到鄰近土地用途的影響，尤其是靠近其他採礦作業、工業及人口中心的Ruashi、Chibuluma及Musonoi。此外，自給農業及手工業(如製磚及燒炭)以及廢物焚燒亦對所有礦址造成累積影響。Ruashi礦場鄰近Luano機場(Lubumbashi)，因此於該機場對二氧化硫、一氧化碳及硫化氫進行監測。

於Kinsenda未鋪路面的道路上，汽車夾帶粉塵的情況時有發生，該處已實施限速措施。此項舉措乃出於安全考慮，但減速行駛同時可減少粉塵產生。

生物多樣性

Chibuluma的尾礦壩正在逐步復修。Kinsenda設有一個重建植被的項目，並於二零二一年種植200棵樹。Musonoi於興建階段已實施一項監測及保護植被的計劃，以避免不必要的生態失調。

污染防治

採礦作業有可能造成碳氫化合物及化學污染。所有作業均擁有關於有害物質的運輸、儲存及使用的政策及程序，以及補救程序(如需要)。

層面A4 – 氣候變化

一般披露

一方面，本集團不時評估極端氣候災害(如強降雨、乾旱和高溫)可能對我們採礦和業務運營帶來的潛在挑戰。另一方面，隨著銅和鈷對電動汽車、全球碳中和以及全球應對氣候變化持續地有著重要作用，本集團將專注於以負責任的方式向世界供應這些金屬。

KPI A4.1 Significant climate-related issues

The Group assesses from time to time the potential challenges to our mining and business operations associated with extreme climate hazards such as heavy precipitation, drought, and heat.

B – SOCIAL

ASPECT B1 – EMPLOYMENT AND LABOUR PRACTICES

General disclosure

The Group operates within the labour laws of the country of operation. In Zambia and the DRC, the mines are required to comply with the Labour Code, Ministerial Decrees and the Collective Agreements, which include working hours, rest periods, equal opportunity, anti-discrimination, work conditions, vocational qualifications and output. Apart from complying to the law and regulation of different countries, the Group operates under internal policies on different aspects but not limited to recruitment, remuneration, leave and conditions of employment.

KPI B1.1 Workforce information

Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region is shown for each mining operation below.

Total workforce 2021 by gender

Operation	營運	Male 男性	Female 女性	Total 總計
Corporate Offices	公司辦事處	16	12	28
Ruashi	Ruashi	950	55	1,005
Chibuluma	Chibuluma	11	2	13
Kinsenda	Kinsenda	409	40	449
Musonoi	Musonoi	71	9	80
Total	總數	1,457	118	1,575

Total workforce 2021 by employment type

Operation	營運	Full time 全職	Contractor 承建商	Part time 兼職	Total 總計
Corporate Offices	公司辦事處	28	1	–	29
Ruashi	Ruashi	1,005	1,336	–	2,341
Chibuluma	Chibuluma	13	–	–	13
Kinsenda	Kinsenda	400	1,068	49	1,517
Musonoi	Musonoi	80	336	–	416
Total	總數	1,526	2,741	49	4,316

KPI A4.1 重大氣候相關事宜

本集團不時評估極端氣候災害(如強降雨、乾旱和高溫)可能對我們採礦和業務運營帶來的潛在挑戰。

B – 社會

層面B1 – 僱傭及勞工常規

一般披露

本集團根據其營運所在國家的勞動法運作。贊比亞及剛果(金)兩地的礦場必須遵守勞工守則、部長法令及集體協議，當中涉及工作時間、休息時段、平等機會、反歧視、工作條件、職業資格及生產力。除遵守不同國家的法律及法規外，本集團根據其於不同方面(包括但不限於)招聘、薪酬、假期及僱傭條件方面的內部政策運作。

KPI B1.1 勞工資料

以下所示為按性別、僱傭類型(例如全職或兼職)、年齡組別及地區劃分的各項採礦業務勞工總數。

二零二一年按性別劃分的勞工總數

二零二一年按僱傭類型劃分的勞工總數

Sustainability Report

可持續發展報告

Total workforce 2021 by age group

二零二一年按年齡組別劃分的勞工總數

Operation	營運	Under 25 25歲以下	25 - 35 25歲至 35歲	36 - 40 36歲至 40歲	41 - 45 41歲至 45歲	46-50 46歲至 50歲	51-54 51歲至 54歲	55 and above 55歲及 以上	Total 總計
Corporate Offices	公司辦事處	-	9	3	9	5	1	1	28
Ruashi	Ruashi	2	97	222	258	198	100	128	1,005
Chibuluma	Chibuluma	-	2	2	7	1	1	-	13
Kinsenda	Kinsenda	5	72	52	34	39	56	191	449
Musonoi	Musonoi	8	23	14	12	8	10	5	80
Total	總數	15	203	293	320	251	168	325	1,575

KPI B1.2 Employee turnover

KPI B1.2 僱員流失

Employee turnover rate by gender, age group and geographical region is shown below for each operation.

以下所示為按性別、年齡組別及地區劃分的各項採礦業務僱員流失比率。

Total employee turnover 2021 by gender

二零二一年按性別劃分的總僱員流失率

Operation	營運	Male 男性	Female 女性	Total 總計
Corporate Offices	公司辦事處	16%	45%	32%
Ruashi	Ruashi	2%	0%	2%
Chibuluma	Chibuluma	52%	60%	54%
Kinsenda	Kinsenda	8%	2%	7%
Musonoi	Musonoi	4%	0%	4%

Total employee turnover 2021 by age group

二零二一年按年齡組別劃分的總僱員流失率

Operation	營運	Under 25 25歲以下	25 - 35 25歲至 35歲	36 - 40 36歲至 40歲	41 - 45 41歲至 45歲	46-50 46歲至 50歲	51-54 51歲至 54歲	55 and above 55歲及 以上	Total 總計
Corporate Offices	公司辦事處	0%	18%	0%	25%	29%	83%	50%	32%
Ruashi	Ruashi	0%	2%	1%	2%	0%	2%	5%	2%
Chibuluma	Chibuluma	0%	33%	75%	13%	75%	67%	100%	54%
Kinsenda	Kinsenda	0%	8%	9%	8%	5%	5%	8%	7%
Musonoi	Musonoi	0%	8%	0%	8%	0%	0%	0%	4%

ASPECT B2 – HEALTH AND SAFETY

General Disclosure

The Group has a Zero Harm policy, which is applicable to all mining operations. The operations also have their own safety policies, and manage safety with the use of the electronic SHEC management system IsoMetrix. Mines also operate in accordance with the safety legislation in their countries of operation, which is the Mining Code and Regulations in the DRC and the Occupational Health and Safety Act of 2010 in Zambia. All of the Group mines have permanent safety management personnel onsite, and the relevant Safety appointments in terms of legislation have been made. Health and Safety meetings are held monthly, and formal training and induction is conducted onsite. The Group has compiled a set of Safe Production Rules, which are used onsite.

Musonoi Project is implementing their safety management system during mine development, and has appointed a Safety Manager, Safety Officers and representatives.

KPI B2.1 Fatalities

Two fatalities were recorded at Kinsenda Mine in 2021. The fatalities and fatality frequency rates for all operations in the last three years are shown in the tables below.

Number of fatalities	死亡事故數目	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	1	-	-
Chibuluma	Chibuluma	-	-	-
Kinsenda	Kinsenda	1	-	2
Musonoi	Musonoi	-	-	-

Fatality Frequency Rate per million man-hours worked	每百萬工時的死亡頻率	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	0.30	-	-
Chibuluma	Chibuluma	-	-	-
Kinsenda	Kinsenda	0.35	-	0.83
Musonoi	Musonoi	-	-	-

層面B2 – 健康與安全

一般披露

本集團設有零傷害政策，其適用於所有採礦業務。各項業務亦設有自身的安全政策，並使用電子SHEC管理系統IsoMetrix進行安全管理。各礦場亦根據其營運所在國家的安全法(即剛果(金)的《礦業法典》與《礦業條例》及贊比亞於二零一零年頒佈的《職業健康及安全法》)進行營運。本集團全體礦場均有常駐現場的安全管理人員，並就法令方面安排相關安全約見。每月舉行健康及安全會議，並於現場進行正式培訓及就職儀式。本集團已編製一套用於現場的安全生產規章制度。

於礦場開發期間，Musonoi項目正落實安全管理制度，並已委任一名安全管理人員、若干安全主任及代表。

KPI B2.1死亡事故

二零二一年Kinsenda礦場錄得兩宗死亡事故。下表所示為最近三年內所有業務的死亡事故及死亡頻率。

KPI B2.2 Lost days due to work injury

Number of lost days due to work injury	因工傷損失工作日數量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	11	62	1
Chibuluma	Chibuluma	7	-	5
Kinsenda	Kinsenda	108	299	-
Musonoi	Musonoi	-	29	2

Ruashi recorded one LTI, with one lost day, while Chibuluma recorded two LTIs with a loss of five working days. Musonoi recorded one LTI which incurred two lost days.

KPI B2.3 Occupational health and safety measures

At Ruashi, a formal occupational hygiene programme has been implemented whereby hygiene parameters such as noise, dust, thermal stress, gas, organic vapours and radiation are monitored within the plant. Employees working in areas where high levels of occupational risks have been identified are medically assessed twice a year in accordance with DRC regulations. A baseline risk assessment has been undertaken onsite, and hazards are identified and eliminated where possible.

Hazard identification and incident reporting at all operations is undertaken in the electronic SHEC system, IsoMetrix. Safety information is communicated onsite through pre-shift safety talks, weekly toolbox talks, monthly safety meetings, notice boards, training and daily site inspections by safety officers and safety representatives. Planned Task Observations are ongoing on mine sites. The safety standards and systems are applicable to all employees and contractors.

Safety

Ruashi Mine achieved 1,193,179 fatality free shifts up to the end of 2021 since the last fatality occurred in June 2019.

Health

COVID-19 protocols were implemented at all of the mine sites. These included:

- Social distancing
- Flash thermometer evaluation at the mine entrance
- Hand washing
- Disinfection of public areas

KPI B2.2因工傷損失工作日

Number of lost days due to work injury	因工傷損失工作日數量	2019 二零一九年	2020 二零二零年	2021 二零二一年
Ruashi	Ruashi	11	62	1
Chibuluma	Chibuluma	7	-	5
Kinsenda	Kinsenda	108	299	-
Musonoi	Musonoi	-	29	2

Ruashi錄得一起損失工時工傷事故，即一日損失工作日，而Chibuluma錄得兩起損失工時工傷事故，即五日損失工作日。Musonoi錄得一起損失工時工傷事故，造成兩日損失工作日。

KPI B2.3職業健康與安全措施

Ruashi已實施一項正式的職業衛生計劃，據此，噪音、粉塵、熱應力、氣體、有機蒸氣及輻射等衛生參數於廠房內監測。根據剛果(金)法規，於被確定為職業風險較高的地區工作的僱員每年須進行兩次醫療評估。現場已進行基線風險評估，並於可能的情況下識別及消除危害。

所有作業的危險識別及事故報告均於電子SHEC系統IsoMetrix中進行。安全信息透過輪班前安全會談、每週工具箱會議、每月安全會議、佈告欄、培訓及由安全主任及安全代表進行的日常實地視察等方式現場通報。計劃工作觀察於礦場繼續進行。安全準則及制度適用於全體僱員及承建商。

安全

自上次死亡事故於二零一九年六月發生以來直至二零二一年底，Ruashi礦場實現1,193,179個無死亡個案班次。

健康

所有礦區現場均實行新冠肺炎協議。其中包括：

- 社交隔離
- 礦區入口閃點溫度計測溫
- 洗手
- 公共區域消毒

At Ruashi, travellers returning from leave were required to isolate for a week, and could only return to site after a negative polymerase chain reaction (PCR) test. Six cases of COVID-19 were detected at the mine. Five cases of COVID-19 were detected at Chibuluma, where all recovered and were able to resume work. 36 cases of COVID-19 were detected at Kinsenda, of which two were serious. Three cases of COVID-19 were recorded at Musonoi. All employees have subsequently recovered.

Malaria

All of the mining operations fall within areas where malaria is a significant health risk. Prevention measures include indoor residual spraying in Zambia as well as malaria prevention programs at the sites. These programs involve the donation of mosquito nets, removal of stagnant water and improvement of drainage, and support to existing government and non-governmental organisation programs and education of the workforce and community.

At Ruashi, the incidence of malaria among the workforce increased by 40%. Indoor residual spraying was undertaken at Kinsenda, and 368 cases were reported.

Malaria prevention mechanisms were implemented at Musonoi including weekly spraying of the offices, use of mosquito nets at night in the camp and the use of insect repellent. No cases of malaria were reported.

HIV/AIDS

The Company actively promotes HIV/AIDS prevention programs aimed at employees, their families and the communities in which we operate. Voluntary counselling and testing (VCT) for HIV is encouraged amongst employees and support systems are in place for employees who test positive for HIV.

At Ruashi, no new HIV/AIDS cases were detected during 2021, and no deaths due to HIV/AIDS were reported.

No HIV/AIDS programmes were conducted by Chibuluma during 2022, but this is expected to resume in 2022.

697 tests were done in the Kinsenda VCT programme, of which 15 were found to be positive, and the cases are being actively managed.

在Ruashi，假後返工的旅客須隔離一週，惟聚合酶連鎖反應(PCR)測試呈陰性後方能回到現場。該礦場檢測出6例新冠肺炎病例。Chibuluma檢測出5例新冠肺炎病例，所有病例均已康復及復工。Kinsenda檢測出36例新冠肺炎，其中2例為重癥。Musonoi錄得3例新冠肺炎病例。所有僱員隨後均已康復。

瘧疾

所有採礦業務所處區域均受瘧疾影響，構成重大健康隱患。預防措施包括於贊比亞進行的室內殘留噴灑，以及於各礦址實行的瘧疾預防方案。該等計劃涉及捐獻蚊帳、掃除積水及改善排水系統，以及支持政府和非政府組織現行計劃及對勞工和社區進行的教育。

於Ruashi，勞工瘧疾發病率增加了40%。Kinsenda進行了室內殘留噴灑，但報告了368例病例。

於Musonoi實行的瘧疾預防機制包括每週辦公室噴灑、在營區晚間使用蚊帳及使用驅蟲劑，且並無報告瘧疾病例。

愛滋病病毒／愛滋病

本公司為僱員、僱員家屬及我們營運所在社區積極推動愛滋病病毒／愛滋病預防計劃，鼓勵僱員進行愛滋病病毒自願諮詢檢測(VCT)，並已制定支援制度幫助該等在愛滋病病毒測試中呈陽性的僱員。

於Ruashi，二零二一年內並未檢測出愛滋病病毒／愛滋病新增病例，且無報道任何愛滋病病毒／愛滋病致死病例。

二零二二年內Chibuluma未執行愛滋病病毒／愛滋病方案，但其預計將於二零二二年恢復。

Kinsenda VCT方案進行了697次檢測，其中15次呈陽性，目前正積極處理該等病例。

ASPECT B3 – DEVELOPMENT AND TRAINING

General Disclosure

Ruashi Mine has a Training Department which identifies training needs and undertakes the required training for Ruashi, and presently Musonoi (while in the construction phase). Musonoi undertakes Safety training and induction on site. Training at Kinsenda falls under the Human Capital department, and training needs are identified with the assistance of the National Professional Institute.

No training was undertaken at Chibuluma in 2021.

KPI B3.1 Training

The percentage of employees trained by gender and employee category (e.g. senior management, middle management) per operation is shown in the tables below.

Training by gender and employee category at Ruashi, Kinsenda and Musonoi in 2021

層面B3 – 發展及培訓

一般披露

Ruashi礦場下設培訓部門，其可為Ruashi以及目前的Musonoi（處於建設階段）識別培訓需求及承擔所須培訓。Musonoi承擔現場的安全培訓及就職。Kinsenda的培訓為人力資源部門下轄，且培訓需求經National Professional Institute協助確定。

二零二一年，於Chibuluma並未進行培訓活動。

KPI B3.1培訓

按性別及僱員類別（如高級管理層及中級管理層）劃分的各項業務受培訓僱員百分比如下表所示。

二零二一年Ruashi, Kinsenda及Musonoi之培訓人員（按性別及僱員類別劃分）

Grading Group	分級組別	Category 類別	Headcount 人數			Number of staff trained 已培訓員工數目			% of staff trained 佔已培訓員工百分比		
			Female 女性	Male 男性	Total 總計	Female 女性	Male 男性	Total 總計	Female 女性	Male 男性	Total 總計
General Labour	普通勞工	II	2	42	44	1	2	3	50%	5%	7%
Semi-qualified workers	半合資質工人	IIIA	5	305	310	3	245	248	60%	80%	80%
		IIIB	7	132	139	7	124	131	100%	94%	94%
		IIIC	6	35	41	5	28	33	83%	80%	80%
Qualified Workers	合資質工人	IVA	5	226	231	2	173	175	40%	77%	76%
		IVB	4	96	100	3	63	66	75%	66%	66%
Highly Qualified Workers Supervisors	高資質工人 監理	V	10	112	122	9	87	96	90%	78%	79%
		VIA	10	62	72	8	50	58	80%	81%	81%
		VIB	4	37	41	4	36	40	100%	97%	98%
		VIC	9	89	98	3	65	68	33%	73%	69%
Assistant Managers	助理經理	VID	11	34	45	11	29	40	100%	85%	89%
		VIIA	14	55	69	10	52	62	71%	95%	90%
		VIIIB	3	29	32	0	19	19	0%	66%	59%
		VIIIC	4	35	39	2	21	23	50%	60%	59%
Managers	經理	VIIID	2	23	25	1	16	17	50%	70%	68%
		VIIIA	6	76	82	6	49	55	100%	64%	67%
		VIIIB	2	42	44	2	24	26	100%	57%	59%
Total	總計		104	1430	1534	77	1083	1160	74%	76%	76%

Training by gender and employee category at Corporate Office in 2021

二零二一年公司辦事處之培訓人員(按性別及僱員類別劃分)

Grading Group	分級組別	Headcount 人數			Number of staff trained 已培訓員工數目			% of staff trained 佔已培訓員工百分比		
		Female 女性	Male 男性	Total 總計	Female 女性	Male 男性	Total 總計	Female 女性	Male 男性	Total 總計
General Level	一般員工	11	8	19	11	6	17	100%	75%	85%
Senior Level	高級管理人員	1	8	9	1	4	5	100%	50%	56%
TOTAL	總計	12	16	28	12	10	22	100%	63%	73%

KPI B3.2 Training hours

KPI B3.2培訓時數

The average training hours completed per employee by gender and employee category are shown per mine below.

如下所示為各礦場按性別及僱員類別劃分的平均每僱員已完成培訓時數。

Training hours by gender and employee category at Ruashi, Kinsenda and Musonoi in 2021

二零二一年Ruashi, Kinsenda及Musonoi之培訓時數(按性別及僱員類別劃分)

Grading Group	分級組別	Category 類別	Average training hours 平均培訓時數		Total 總計
			Female 女性	Male 男性	
General Labour Semi-qualified workers	普通勞工 半合資質工人	II	1	2	2
		IIIA	7	4	4
		IIIB	7	7	7
Qualified workers	合資質工人	IIIC	7	6	6
		IVA	2	3	3
		IVB	14	5	5
Highly Qualified worker Supervisors	高資質工人 監理	V	7	2	3
		VIA	21	6	8
		VIB	16	6	7
		VIC	18	3	4
		VID	7	6	6
Assistant Manager	助理經理	VIIA	9	8	8
		VIIIB	–	6	6
		VIIIC	31	9	11
		VIIID	10	12	12
Managers	經理	VIIIA	4	11	10
		VIIIB	5	14	13
Average Training Hours	平均培訓時數		10	5	6

Training hours by gender and employee category at Corporate Office in 2021

二零二一年公司辦事處之培訓時數(按性別及僱員類別劃分)

Grading Group	分級組別	Average trainings hours 平均培訓時數		Total 總計
		Female 女性	Male 男性	
General Level	一般員工	3	3	3
Senior Level	高級管理人員	15	15	15
Average trainings hours	平均培訓時數	4	9	7

ASPECT B4 – LABOUR STANDARDS

層面B4 – 勞工準則

KPI B4.1 Prevention of child and forced labour

KPI B4.1防止童工或強制勞工

The DRC ratified the International Labour Organisation Conventions No. 138 on the Minimum Age of Employment and No. 182 on the Worst Forms of Child Labour in 2001. While DRC law makes specific provision for the employment of children younger than 16, it is company policy that the mines do not employ anyone younger than 18 years of age. All employees are required to present identification when joining the company.

剛果(金)於二零零一年批准了國際勞工組織《准予就業最低年齡公約》(第138號公約)及《最惡劣形式童工勞動公約》(第182號公約)。雖然剛果(金)法律對僱傭未滿16歲的兒童作出了具體規定，但公司政策規定礦場不得僱傭未滿18歲的任何人員。所有僱員於加入本公司時須出示身份證明。

In Zambia, the applicable legislation with regard to child labour is the Employment Code Act no 3 of 2019, as well as the ILO labour standards. The minimum age for employment in Zambia is 15 years, but the mines do not employ anyone younger than 18 years. Social audits and engagement with Human Resource personnel at finance lessee and contractor companies are undertaken to ensure that contractors comply with this policy. Chibuluma has a 3 step on-boarding process that eliminates the employment of underage persons. On engagement of a new employee, the employee is required to undergo medicals at a government hospital, secondly, the new employee undergoes medicals at the medical bureau under Mines Safety Department. also a government body. These processes eliminate the possibility of underage employment as the Company does not employ outside government regulation. The labour office, a government wing is mandated to do regular inspections of company premises. This also applies to contractors.

於贊比亞，有關童工的適用法律為二零一九年第3號法律《僱用法典法》以及國際勞工組織勞工標準。儘管贊比亞准予就業最低年齡為15歲，但礦場並不僱傭未滿18歲的任何人員。對融資承租人及承建商公司的人力資源人員進行社會審計及接觸，確保承建商遵守該政策。Chibuluma設有一個3步驟入職程序，以消除僱傭未成年人的現象。於聘用新僱員時，該僱員須於一家政府醫院接受體檢。其次，新僱員須於礦山安全局下屬的醫療局(亦為政府機關)接受體檢。該等程序消除了低齡就業的可能性，因為本公司並不僱傭政府規定之外的任何人員。勞工處(政府機關)被授權對公司場所進行定期檢查。此項亦適用於承建商。

Mine workers' unions are present on all of the mining operations to protect the mine workers' rights, and to prevent exploitation. Musonoi is currently in the process of setting up a union structure for the mine.

在所有採礦作業中均設有礦工工會，以保障礦工權利及防止剝削。Musonoi目前正在為礦場建立一個工會體系。

KPI B4.2 Elimination of child and forced labour when discovered

KPI B4.2當發現童工及強制勞工時，立即取締

No cases of child labour have occurred at the Metorex mining operations.

於Metorex採礦業務中，並未發生僱傭童工的情況。

ASPECT B5 SUPPLY CHAIN MANAGEMENT

層面B5 – 供應鏈管理

General disclosure

一般披露

The Group's contracts specify that all contractors are required to comply with the Group's SHEC policies.

本集團的合約規定，所有承建商均須遵守本集團的SHEC政策。

KPI B5.1 Number of suppliers by geographical region

KPI B5.1按地理區域劃分的供應商數量

Suppliers for the operating mines are located in the following regions:

營運礦場的供應商位於以下地區：

Sustainability Report

可持續發展報告

Ruashi

Ruashi

Ruashi's suppliers by geographical region	按地理區域劃分的Ruashi供應商	2019 二零一九年	2020 二零二零年	2021 二零二一年
The DRC	剛果(金)	449	272	173
South Africa	南非	218	74	49
Zambia	贊比亞	14	22	11
Switzerland	瑞士	2	-	1
United Kingdom	英國	4	2	1
United Arab Emirates	阿拉伯聯合酋長國	3	2	2
Australia	澳大利亞	4	2	1
Mauritius	毛里求斯	6	3	2
Canada	加拿大	2	1	-
China	中國	10	11	8
Germany	德國	2	2	2
India	印度	2	1	-
Portugal	葡萄牙	1	-	-
Singapore	新加坡	1	-	-

Chibuluma

Chibuluma

Chibuluma's suppliers by geographical region	按地理區域劃分的Chibuluma供應商	2019 二零一九年	2020 二零二零年	2021 二零二一年
Zambia	贊比亞	276	276	N/A不適用
South Africa	南非	31	-	N/A不適用
United Kingdom	英國	1	-	N/A不適用
China	中國	3	-	N/A不適用

As detailed in the "Significant Events" section under "Management Discussion and Analysis" of this Annual Report, Chibuluma South Mine (including Chifupu Deposit) has been leased out to an independent third party under a finance lease agreement since 1 April 2021.

如本年報「管理層討論及分析」中「重大事件」一節所詳述，自二零二一年四月一日起，Chibuluma南礦場(包括Chifupu礦床)以融資租賃協議出租予一名獨立第三方。

Kinsenda

Kinsenda

Kinsenda's suppliers by geographical region	按地理區域劃分的Kinsenda供應商	2019 二零一九年	2020 二零二零年	2021 二零二一年
The DRC	剛果(金)	210	225	244
South Africa	南非	132	140	148
Zambia	贊比亞	70	78	83
China	中國	7	9	15
United Kingdom	英國	4	4	4
Netherlands	荷蘭	1	3	3
Mauritius	毛里求斯	2	2	2
Belgium	比利時	1	1	1
Sweden	瑞典	1	1	1
Australia	澳大利亞	1	1	1
Switzerland	瑞士	-	1	1
Germany	德國	-	1	1

Musonoi

Musonoi

Musonoi's suppliers by geographical region 按地理區域劃分的Musonoi供應商		2019 二零一九年	2020 二零二零年	2021 二零二一年
China	中國	-	-	24
DRC	剛果(金)	-	-	6
Zambia	贊比亞	-	-	1

KPI B5.2 Engagement of suppliers

All suppliers or contractors must complete a vendor registration form before conducting any business with the Group companies. This application to be approved by all signatories. Tenders and enquiries for goods and services are sent out to multiple suppliers.

Before approving the new vendor, the Group requires that contracting of services, the purchase, hire or lease of equipment and materials and activities with partners are carried out so as to minimize any negative impacts on sustainability and, where possible, to enhance community development opportunities. It is further required by the Group that suppliers are subject to risk-based evaluation prior to contractual arrangements being established. The new potential vendor for chemicals must undergo a trial process before becoming a long-term partner. The process consists of laboratory testing of the product, plant trials, and assessment of transportation and packaging. All new suppliers are required to adhere to the the Group Zero Harm Policy.

At Musonoi the mine checks the legal suppliers through the qualification certificates issued by the government, checks the sales performance of products, the enterprise business experience and the supplier's history.

KPI B5.3 Identification of environmental and social risks along the supply chain

Onsite, the supply chain departments undertakes risk assessments and adheres to the site policies on the prevention of pollution, pollution remediation, and waste management to ensure that all materials bought are stored safely and in an environmentally responsible manner.

Ruashi has implemented an End-of-Life Information procedure for all product sold. This process requires that all necessary information related to the product (product specifications), the mode of transport, the storage and the eventual usage of the product is provided to the end user. That information will help the client to handle the product in the correct manner.

KPI B5.2委聘供應商

所有供應商或承建商在與本集團公司開展任何業務之前均須填寫供應商登記表。該申請須經所有簽字人核准。貨物及服務的標書和詢盤會寄送予多個供應商。

於批准新的供應商之前，本集團要求與合作夥伴就服務、購買、租用或租賃設備及材料以及業務訂約，從而盡量減少對可持續性的負面影響，並(如可能)增加社區發展的機會。本集團進一步要求，於建立合約安排之前，供應商須接受基於風險的評估。於成為長期合作夥伴之前，新的潛在化學品供應商必須通過一項試用程序。該程序包括產品的實驗室測試、工廠試驗及運輸和包裝的評估。所有新的供應商均須遵守本集團零傷害政策。

於Musonoi，礦場通過政府頒發的資質證書檢查供應商合法性，檢查產品的銷售業績、企業的業務經歷及供應商歷史。

KPI B5.3識別供應鏈上的環境及社會風險

供應鏈部門於現場進行風險評估，並遵守關於防止污染、污染整治及廢棄物管理的政策，確保所有購買的材料均以安全及對環境負責的方式貯存。

Ruashi已對所有售出的產品實施報廢資訊程序。該程序要求向終端用戶提供與產品(產品規格)、運輸方式、儲存及產品最終用途有關的必要資訊。該等資訊將有助於客戶正確處理產品。

KPI B5.4 Promotion of environmentally preferable services

The Group actively looks for products and consumables that lessen its impact on the environment. A recent example is that the diesel on the mine has been changed from 500ppm to 50ppm, which reduces emissions and improves air quality.

ASPECT B6 – PRODUCT RESPONSIBILITY

General disclosure

For our Copper cathode produced, cathode is placed in bundles of 2 to 2.5 tonnes each (approximately 60 cathode sheets). Samples are taken on each bundle by a third party inspection body using random number generation. The samples are taken diagonally on each sheet selected. All increments are mixed to get one sample for one specific lot allocated to client. Visual inspection is done to provide any evidence of surface contamination and or physical issues.

Samples are analysed with an emission spectrometer to determine impurities and the results will classify the grade of each copper lot. It can be A-grade, standard grade or off grade using the LME grading system.

KPI B6.1 Product recalls for health and safety reasons

No products have been recalled for product safety reasons.

KPI B6.2 Product and service complaints

No complaints received and reported for the reporting period.

KPI B6.3 Protection of intellectual property rights

To safeguard customers' data and the confidential information of the Group, the Group requests the employees and consultants to undertake confidentiality obligations during their continuation or after termination of employment and engagement.

The Group also takes steps to upgrade the security features of computer system regularly and change their password on a regular basis so as to prevent customers' personal information from being stolen or misused. In order to continuously protect the privacy of customers, ongoing measures such as risk identification and monitoring are also implemented and strengthened.

KPI B5.4 推進環境友好型服務

本集團積極探索減少對環境產生影響的產品及消耗品。近期案例為，礦場的柴油已由500ppm更換為50ppm，從而減少排放並改善空氣質量。

層面B6 – 產品責任

一般披露

以我們生產的電解銅而言，電解銅以每捆2至2.5噸（約60塊陰極板）的形式放置。第三方檢測機構使用隨機數生成法對每捆電解銅進行抽樣。於所選陰極板上沿對角線取樣。混合所有的子樣，以獲得配給客戶的一個特定批次的樣品。進行目視檢查以提供表面污染及或實物問題的任何證據。

使用發射光譜儀對樣品進行分析以確定雜質，其結果將對每個銅批次的品位進行分類。根據倫金所品位分級系統樣品可歸為A級、標準級或不合規格。

KPI B6.1 出於健康及安全原因召回產品

概無產品出於產品安全原因被召回。

KPI B6.2 產品及服務投訴

報告期內無接獲投訴報告。

KPI B6.3 知識產權保護

為保護客戶的數據及本集團的機密資料，本集團要求僱員及顧問在本集團繼續僱傭及委聘期間或終止僱傭及委聘後承擔保密責任。

本集團亦採取措施定期升級電腦系統的安全功能及定期更換密碼，以防止客戶的個人資料被盜或被濫用。為了不斷保護客戶的隱私，亦實施及增強了風險識別及監察等持續性措施。

KPI B6.4 Quality assurance and recalls

Our rights and obligations concerning product assurance and recalls are set out mainly in contractual terms binding on us and the local (or, as the case may be, international) trade practices that we are subject to.

KPI B6.5 Consumer data protection and privacy

Due to our business nature, the Group does not receive a significant amount of consumer data. We observe applicable laws when handling personal data, for example, Personal Data (Privacy) Ordinance in Hong Kong.

ASPECT B7 – ANTI-CORRUPTION

General disclosure

An anti-fraud, misconduct and whistleblowing policy was adopted to the Group.

In order to minimise the possibility of fraud, the Board is determined to establish an effective control environment where the importance of the efficiency in operation and the effectiveness in fraud prevention can be well-balanced.

The Board requires all employees of the Group to adhere the code of conduct of the Company and conducts periodic and systematic fraud risk assessments so as to assure the effectiveness of current preventive measures. At the same time, the Board reviews and modifies the procedures and policies from time to time by constant communication with all level of employees to remain the controls in full force while giving sufficient flexibility to the operation of the Group.

Ruashi and Kinsenda has implemented the Code of Ethics and Human Rights Policy addressing money-laundering and whistleblowers.

Anti-corruption is addressed in the Chibuluma Code of Conduct, which is compliant with the provisions of the Anti-corruption Commission of Zambia.

KPI B7.1 Concluded legal cases regarding corrupt practices

No cases have been reported.

KPI B6.4品質保證及召回措施

我們在品質保證及召回措施方面的權利和義務主要載於對我們具有約束力的合同條款及當地的(或，視情況而定，國際的)貿易慣例。

KPI B6.5消費者資料保障及私隱政策

由於我們的業務性質，本集團並未收到大量的消費者數據。我們在處理個人資料時有遵守適用法律，例如香港的《個人資料(私隱)條例》。

層面B7 – 反貪污

一般披露

本集團已採納反欺詐、不當行為及舉報政策。

為了盡量減少欺詐的可能性，董事會決定建立一個有效的監控環境，使運營效率的重要性與預防欺詐的有效性可取得良好平衡。

董事會要求本集團所有僱員遵守本公司的行為準則，並定期進行系統的欺詐風險評估，以確保現行預防措施的成效。同時，董事會不時檢討及修改程序及政策，與各級僱員持續溝通，以在為本集團營運提供充分靈活性的同時，維持全面有效監控。

Ruashi及Kinsenda已實施《道德守則》及《人權政策》應對洗黑錢及舉報人。

《Chibuluma行為守則》訂有反貪污處理辦法，符合贊比亞反貪污委員會規定。

KPI B7.1已審結的貪污訴訟案件

無案件報告。

KPI B7.2 Corruption preventive measures and whistle-blowing procedures

The Group has developed an Anti-Fraud, Misconduct and Whistleblowing Policy, a Code of Ethics and Human Rights Policy for implementation at corporate and site level.

Employees are not permitted to give or accept, directly or indirectly, favours, gifts or business courtesies that might compromise or be seen to compromise employee professionalism or impartiality or which may, in any way impair the ability to act or be seen to act with integrity and in the best interest of the Group. This requirement extends to immediate family members.

Unethical practices are encourage to be reported to line management or the human capital department onsite.

Our corporate website set outs also how our employees of the Group and related third parties (e.g. customers, suppliers, etc., who deal with the Group) to raise concerns, in confidence, about fraud, misconduct, malpractice or irregularities in any matters related to our Group, under our whistle blowing policy.

KPI B7.3 Anti-corruption training

Trainings in connection with the aforesaid anti-corruption policies at our different corporate levels have been held from time to time.

ASPECT B8 – COMMUNITY INVESTMENT

General disclosure

The Group has a community policy in place as follows:

Community Policy

The Group strives to minimise potential negative social impacts while promoting opportunities and benefits for host communities. The Group engages in a range of sustainable development and community relations activities and encourages staff to join various volunteer works. Community management and development is recognised as a high corporate priority, and is a component of Zero Harm, one of the company's values.

KPI B7.2 貪污防範措施及舉報程序

本集團制定的《反欺詐、不當行為及舉報政策》、《道德守則》及《人權政策》於企業及礦址層面實施。

僱員不得直接或間接給予或接受可能損害或被視為損害僱員素養或公正性的恩惠、禮品或商業禮遇，或可能以任何方式損害誠信行事或被視為誠信行事的能力，並符合本集團的最佳利益。這一要求也適用於直系家屬。

鼓勵向項目管理層或人力資本部門現場報告不道德行為。

我們的公司網站亦有說明讓僱員及相關第三方(例如：客戶、供應商等與本集團有往來之人士)，在保密情況下，如何透過我們的舉報政策，對任何與本集團事務有關的欺詐、不當行為、其他舞弊及違規情況表達關注。

KPI B7.3 反貪污培訓

我們不時提供就上述在不同企業層面的反腐敗政策相關的培訓。

層面B8 – 社區投資

一般披露

本公司制定的社區政策如下：

社區政策

本集團在致力為所處社區大力促進機遇及謀求福祉的同時，會盡量減少可能對社區造成之負面影響。本集團參與不同種類的可持續發展及社區關係活動，鼓勵員工參與各類志願者工作。社區管理及發展被認為是企業管理的重中之重，零傷害管理是本公司企業價值之一。

The Group is committed to:

- Continually improving community development and community investment programmes through monitoring, measuring and managing our social and economic impacts;
- Developing programmes that ensure the sustainable welfare of communities;
- Upholding and promoting the human rights of our employees and contractors, our suppliers, and the communities in which we operate;
- Recognising and respecting indigenous people's culture, heritage and traditional rights and supporting the identification, recording, management and protection of indigenous cultural heritage;
- Building and maintaining stakeholder relationships with people who are directly affected or interested in our operations; and
- Managing the risk of public health threats amongst employees, contractors and local communities.

In the DRC, the Mining Code specifies that spend on community projects is equivalent to a minimum of 0.3% of turnover. In addition, the Mining Code also guides the matter of compensation to landowners where land is required for mining purposes.

KPI B8.1 Focus areas of community contributions

The focus areas of community contributions are determined by the individual mining operations dependent on local community and local authority focus areas. At Ruashi Mine, community projects focus on health, education, provision of water to the local community, community feeding schemes and agriculture. The objective of community development at Chibuluma South Mine is the contribution to projects which have positive long-term effects. Main focus areas include education, health, skills development and sport. At Kinsenda Mine, the focus areas include education, environmental concerns, labour needs, health, sport and community infrastructure. The community focus at Musonoi Project is on education, as well as community compensation for the construction of a powerline to the mine.

本集團致力於：

- 透過監察、測量及管理我們造成的社會及經濟影響，持續改善社區發展及社區投資計劃；
- 制定可確保社區永續福祉的計劃；
- 維護及提升我們僱員、承建商、供應商及經營所在社區的人權水平；
- 承認及尊重原居民的文化、遺產及傳統權利及支持鑑定、記載、管理及保護原居民的文化遺產；
- 與直接受我們業務影響或於我們業務中擁有權益的人民建立及維持利益相關者關係；及
- 管理僱員、承建商及地方社區之公眾健康威脅風險。

在剛果(金)，《礦業法典》規定，社區項目的支出至少相當於營業額的0.3%。此外，《礦業法典》還指導土地用於採礦目的時的土地所有者賠償問題。

KPI B8.1 社區供款的關注領域

社區供款的重點領域視乎當地社區及當地政府關注領域而按個別採礦業務決定。於Ruashi礦場，社區項目專注於健康、教育、向當地社區供水、社區糧食供給計劃及農業。Chibuluma南礦場社區發展的目標是對有長期積極影響的項目作出供款。主要關注領域包括教育、衛生、技能發展及體育。於Kinsenda礦場，關注領域包括教育、環境問題、勞動力需求、健康、體育及社區基礎設施。Musonoi項目社區專注於教育，以及對在礦井建設電力線的社區賠償。

Sustainability Report

可持續發展報告

KPI B8.2 Resources contributed to community investment

KPI B8.2社區投資投入資源

The tables below specify financial investment during 2021 in community projects at each mining operation.

下表列明二零二一年每項採礦業務社區項目的財政投資。

Ruashi Mine

Ruashi礦場

Ruashi Community Investment (US\$)	Ruashi的社區投資(美元)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Health	健康	95,000	287,467	65,000
Community water provision	社區供水	80,000	18,045	150,000
Education	教育	225,000	-	85,000
Community feeding schemes (orphans and widows)	社區糧食供給計劃(孤兒及寡婦)	-	6,300	10,000
Agriculture projects	農業項目	350,000	198,399	350,000
Ward offices – Ruashi township	病房 – Ruashi社區	80,000	292,340	85,000
TOTAL	總計	830,000	802,551	745,000

Chibuluma South Mine

Chibuluma南礦場

Community Investment (US\$)	社區投資(美元)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Education	教育	6,928	5,351	1,194
Health	健康	4,080	470	1,519
Corporate social responsibility	企業社會責任	7,561	48,589	192
Sport and recreation	體育與休閒	21,929	6,443	-
Community road repair and maintenance	社區道路維修及保養	2,928	393	-
TOTAL	總計	43,426	61,246	2,905

Kinsenda Mine

Kinsenda礦場

Community Investment (US\$)	社區投資(美元)	2019 二零一九年	2020 二零二零年	2021 二零二一年
Agriculture	農業	1,132	25,093	119,857
Community electricity	社區電力	293,789	277,746	353,705
Community feeding schemes (orphans and widows)	社區糧食供給計劃(孤兒及寡婦)	3,370	69,521	23,502
Education	教育	6,559	18,403	18,274
Sport and recreation	體育與休閒	17,805	3,803	8,050
Community sanitation	社區衛生	475	29,142	48,383
Community relations	社區關係	1,281	78,427	67,598
TOTAL	總計	324,411	502,135	639,369

For Musonoi, payment of US\$926,844 has been made to the community which has been affected by the installation of new powerline. The investment in community will be increased once the mine becomes operational.

在Musonoi，926,844美元的款項已付給因安裝新電力線而受到影響的社區。一旦礦場投入運營，對社區的投資將增加。

Deloitte.

德勤

TO THE SHAREHOLDERS OF JINCHUAN GROUP
INTERNATIONAL RESOURCES CO. LTD

(incorporated in the Cayman Islands with limited liability)

致金川集團國際資源有限公司股東

(於開曼群島註冊成立之有限公司)

OPINION

We have audited the consolidated financial statements of Jinchuan Group International Resources Co. Ltd (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 146 to 261, which comprise the consolidated statement of financial position as at 31 December 2021, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2021, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRSs") issued by the International Accounting Standards Board ("IASB") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSA") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants (the "Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

意見

本核數師(以下簡稱「本行」)已審計列載於第146至261頁的金川集團國際資源有限公司(以下簡稱「貴公司」)及其附屬公司(以下統稱「貴集團」)的綜合財務報表，此財務報表包括於二零二一年十二月三十一日的綜合財務狀況表與截至該日止年度的綜合損益及其他全面收益表、綜合權益變動表和綜合現金流量表，以及綜合財務報表附註，包括重大會計政策概要。

本行認為，該等綜合財務報表已根據國際會計準則委員會(「國際會計準則委員會」)頒佈之《國際財務報告準則》(「國際財務報告準則」)真實而中肯地反映了貴集團於二零二一年十二月三十一日的綜合財務狀況及截至該日止年度的綜合財務表現及綜合現金流量，並已遵照《香港公司條例》的披露要求妥為擬備。

意見基礎

本行已根據香港會計師公會(「香港會計師公會」)頒佈的《香港審計準則》(「香港審計準則」)進行審計。本行在該等準則下承擔的責任已在本報告「核數師就審計綜合財務報表承擔的責任」部分中作進一步闡述。根據香港會計師公會頒佈的《專業會計師道德守則》(以下簡稱「守則」)，本行獨立於貴集團，並已履行守則中的其他專業道德責任。本行相信，本行所獲得的審計憑證能充足及適當地為本行的審計意見提供基礎。

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KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter 關鍵審計事項

Impairment assessment of property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations ("Non-current Assets")

採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產（「非流動資產」）的減值評估

We identified impairment assessment of Non-current Assets as a key audit matter due to the significance of the balances to the consolidated financial statements as a whole, combined with the significant management judgment and estimation associated with determining the recoverable amounts in the impairment assessment. 由於非流動資產結餘為整體綜合財務報表的重大項目，加上釐定減值評估的可收回金額涉及管理層的重大判斷及估計，故本行認為非流動資產的減值評估為關鍵審計事項。

As disclosed in note 4 to the consolidated financial statements, the carrying amount of property, plant and equipment, minerals rights and exploration and evaluation assets for mining operations as at 31 December 2021 amounted to US\$730,028,000, US\$582,711,000 and US\$121,320,000 respectively. 如綜合財務報表附註4所述，採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產於二零二一年十二月三十一日的賬面值分別為730,028,000美元、582,711,000美元及121,320,000美元。

During the year ended 31 December 2021, there is an indicator of impairment reversal for the Non-current Assets due to increase in copper price. The management of the Group performed impairment assessment, details of which are set out in note 18 to the consolidated financial statements. The management also engaged independent external competent persons to prepare a resources and reserves report as at 31 December 2021. The recoverable amounts of the relevant cash-generating units are determined using value in use calculations based on the cash flow projection prepared from financial forecasts approved by the directors of the Company in which key assumptions on reserves, long-term copper prices and discount rates can significantly affect the discounted cash flows.

截至二零二一年十二月三十一日止年度，由於銅的價格上漲，非流動資產出現減值撥回跡象。貴集團管理層執行減值評估，詳情載於綜合財務報表附註18。於二零二一年十二月三十一日，管理層亦委聘獨立外界合資格人士編製資源量及儲量報告。相關現金產生單位的可收回金額乃基於本公司董事批准之財務預測所編製的現金流量估算（當中涉及對儲量、銅的長期價格及貼現率作出關鍵假設，其可對貼現現金流量構成重大影響）按使用價值計算釐定。

關鍵審計事項

關鍵審計事項是根據本行的專業判斷，認為對本期綜合財務報表的審計最為重要的事項。這些事項是在本行審計整體綜合財務報表及出具意見時進行處理的。本行不會對這些事項提供單獨的意見。

How our audit addressed the key audit matter 本行如何處理關鍵審計事項

Our procedures in relation to impairment assessment of the Non-current Assets included:
本行針對非流動資產的減值評估執行的程序包括：

- Understanding the Group's impairment assessment process, including the impairment assessment model adopted, and assumptions used.
瞭解貴集團的減值評估過程，包括採納的減值評估模型及所用假設。
- Evaluating the qualification of the independent external competent persons;
評估獨立外界合資格人士之資格；
- Working with our internal experts to carry out, among others, the following procedures:
與本行內部的行業專家協作執行（其中包括）下列程序：
 - evaluating the appropriateness of the model used to calculate the recoverable amounts;
對用以計算可收回金額的模型的恰當性作出評價；
 - reviewing the reasonableness of the economic and technical assumptions in the resource and reserve report prepared by the external competent persons;
審閱由外界合資格人士所編製的資源量及儲量報告中經濟及技術假設的合理性；
 - assessing the reasonableness of the discount rates by benchmarking against independent data;
以獨立所得數據為基準評估貼現率的合理性；

Key audit matter

關鍵審計事項

Impairment assessment of property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations ("Non-current Assets") (Continued)

採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產（「非流動資產」）的減值評估（續）

Based on the impairment assessment, as described in note 18 to the consolidated financial statements, the management of the Group reversed impairment losses of US\$96,000,000 on mineral rights during the year ended 31 December 2021.

根據綜合財務報表附註18所述的減值評估，於截至二零二一年十二月三十一日止年度，貴集團管理層就礦產權的減值虧損撥回為96,000,000美元。

How our audit addressed the key audit matter

本行如何處理關鍵審計事項

Impairment assessment of property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations ("Non-current Assets") (Continued)

採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產（「非流動資產」）的減值評估（續）

- comparing if the management's estimate of future production level is consistent with the resources and reserves report prepared by the independent external competent persons; and
對管理層就未來生產水平的估計與由獨立外界合資格人士編製的資源量及儲量報告的一致性作出比較；及
- assessing the appropriateness of estimate of long-term metal prices by reference to historical information and other relevant market data.
參考過往信息及市場數據來評估金屬價格長期走勢估計的恰當性。
- Evaluating the historical accuracy of the management's cash flow forecasts by comparing the historical cash flow forecasts with the actual performance.
透過將歷史現金流量預測與實際表現進行比較，對管理層過往的現金流量預測準確度作出評價。

Independent Auditor's Report

獨立核數師報告

OTHER INFORMATION

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRSs issued by the IASB and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

其他資訊

貴公司董事需對其他資訊負責。其他資訊包括刊載於年報內的資訊，但不包括綜合財務報表及本行的核數師報告。

本行對綜合財務報表的意見並不涵蓋其他資訊，本行亦不對該等其他資訊發表任何形式的鑒證結論。

結合本行對綜合財務報表的審計，本行的責任是閱讀其他資訊，在此過程中，考慮其他資訊是否與綜合財務報表或本行在審計過程中所瞭解的情況存在重大抵觸或者似乎存在重大錯誤陳述的情況。基於本行已執行的工作，如果本行認為其他資訊存在重大錯誤陳述，本行需要報告該事實。在這方面，本行沒有任何報告。

董事及治理層就綜合財務報表須承擔的責任

貴公司董事須負責根據國際會計準則委員會頒佈的國際財務報告準則及《香港公司條例》的披露要求擬備真實而中肯的綜合財務報表，並對其認為為使綜合財務報表的擬備不存在由於欺詐或錯誤而導致的重大錯誤陳述所需的內部控制負責。

在擬備綜合財務報表時，董事負責評估貴集團持續經營的能力，並在適用情況下披露與持續經營有關的事項，以及使用持續經營為會計基礎，除非董事有意將貴集團清盤或停止經營，或別無其他實際的替代方案時停止使用。

治理層須負責監督貴集團的財務報告過程。

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSA's will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSA's, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

核數師就審計綜合財務報表承擔的責任

本行的目標，是對綜合財務報表整體是否存在由於欺詐或錯誤而導致的重大錯誤陳述取得合理保證，並按照本行商定的業務約定條款僅向全體股東出具包括本行意見的核數師報告。除此以外，本行的報告不可用作其他用途。本行並不就本行報告之內容對任何其他人士承擔任何責任或接受任何義務。合理保證是高水準的保證，但不能保證按照香港審計準則進行的審計，在某一重大錯誤陳述存在時總能發現。錯誤陳述可以由欺詐或錯誤引起，如果合理預期它們單獨或匯總起來可能影響綜合財務報表使用者依賴財務報表所作出的經濟決定，則有關的錯誤陳述可被視作重大。

在根據香港審計準則進行審計的過程中，本行運用專業判斷及保持專業懷疑態度。本行亦：

- 識別和評估由於欺詐或錯誤而導致綜合財務報表存在重大錯誤陳述的風險，設計及執行審計程序以應對這些風險，以及獲取充足和適當的審計憑證，作為本行意見的基礎。由於欺詐可能涉及串謀、偽造、蓄意遺漏、虛假陳述，或凌駕於內部控制之上，因此未能發現因欺詐而導致的重大錯誤陳述的風險高於未能發現因錯誤而導致的重大錯誤陳述的風險。
- 瞭解與審計相關的內部控制，以設計適當的審計程序，但目的並非對貴集團內部控制的有效性發表意見。
- 評價董事所採用會計政策的恰當性及作出會計估計和相關披露的合理性。

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

核數師就審計綜合財務報表承擔的責任(續)

- 對董事採用持續經營會計基礎的恰當性作出結論。根據所獲取的審計憑證，確定是否存在與事項或情況有關的重大不確定性，從而可能導致對 貴集團的持續經營能力產生重大疑慮。如果本行認為存在重大不確定性，則有必要在核數師報告中提請使用者注意綜合財務報表中的相關披露。假若有關的披露不足，則修訂本行的意見。本行的結論是基於核數師報告日止所取得的審計憑證。然而，未來事項或情況可能導致 貴集團不能持續經營。
- 評價綜合財務報表的整體列報方式、結構和內容，包括披露，以及綜合財務報表是否中肯反映相關交易和事項。
- 就 貴集團內實體或業務活動的財務資訊獲取充足、適當的審計憑證，以對綜合財務報表發表意見。本行負責集團審計的方向、監督和執行。本行為審計意見承擔全部責任。

除其他事項外，本行與治理層溝通了計劃的審計範圍、時間安排、重大審計發現等，包括本行在審計中識別出內部控制的任何重大缺陷。

本行還向治理層提交聲明，說明本行已符合有關獨立性的相關專業道德要求，並與他們溝通有可能合理地被認為會影響本行獨立性的所有關係和其他事項，以及在適用的情況下，採取消除威脅的行動或應用的保障措施。

**AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF
THE CONSOLIDATED FINANCIAL STATEMENTS
(Continued)**

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Lam Shu Lung.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
28 March 2022

核數師就審計綜合財務報表承擔的責任(續)

從與治理層溝通的事項中，本行確定哪些事項對本期綜合財務報表的審計最為重要，因而構成關鍵審計事項。本行在核數師報告中描述這些事項，除非法律法規不允許公開披露這些事項，或在極端罕見的情況下，如果合理預期在本行報告中溝通某事項造成的負面後果超過產生的公眾利益，本行決定不應在報告中溝通該事項。

出具本獨立核數師報告的審計項目合夥人是林樹龍。

德勤•關黃陳方會計師行
執業會計師
香港
二零二二年三月二十八日

Consolidated Statement of Profit or Loss and Other Comprehensive Income

綜合損益及其他全面收益表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

		Notes 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Continuing operations	持續經營業務			
Revenue	收益	5	831,899	531,502
Cost of sales	銷售成本		(531,101)	(408,621)
Royalty payment	礦權使用費		(49,133)	(36,324)
Gross profit	毛利		251,665	86,557
Other income, other gains and losses	其他收入、其他收益及虧損	7	63,246	21,831
Selling and distribution costs	銷售及分銷成本		(22,815)	(23,125)
Administrative expenses	行政開支		(4,549)	(8,118)
Finance income	財務收入	8	728	1,182
Finance costs	財務成本	9	(9,539)	(14,053)
Profit before tax	除稅前溢利	10	278,736	64,274
Income tax expense	所得稅開支	12	(116,729)	(22,353)
Profit for the year from continuing operations	來自持續經營業務的年內溢利		162,007	41,921
Discontinued operations	終止經營業務			
Profit for the year from discontinued operations	來自終止經營業務的年內溢利	13	438	573
Profit for the year	年內溢利		162,445	42,494
Other comprehensive (expense) income	其他全面(開支)收入			
Items that may be reclassified subsequently to profit or loss:	其後可能重新分類至損益之項目：			
Exchange differences arising on translation of foreign operations	換算海外業務產生之匯兌差額		-	2,253
Release of cumulative translation reserves upon liquidation of foreign operation	清算海外業務後釋放之累計換算儲備		(438)	-
Fair value gain on hedging instruments designated as cash flow hedges	指定為現金流量對沖的對沖工具公平值收益	29	278	-
Other comprehensive (expense) income for the year	本年度其他全面(開支)收入		(160)	2,253
Total comprehensive income for the year	本年度全面收入總額		162,285	44,747
Profit (loss) for the year attributable to:	下列人士應佔年內溢利(虧損):			
Owners of the Company	本公司擁有人			
- from continuing operations	- 來自持續經營業務		120,089	30,030
- from discontinued operations	- 來自終止經營業務		438	(87)
			120,527	29,943

Consolidated Statement of Profit or Loss and Other Comprehensive Income

綜合損益及其他全面收益表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

	Note 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Non-controlling interests	非控股權益		
– from continuing operations	– 來自持續經營業務	41,918	11,891
– from discontinued operations	– 來自終止經營業務	–	660
		41,918	12,551
		162,445	42,494
Total comprehensive income attributable to:	以下人士應佔全面收入總額：		
Owners of the Company	本公司擁有人		
– from continuing operations	– 來自持續經營業務	120,367	30,030
– from discontinued operations	– 來自終止經營業務	–	1,440
		120,367	31,470
Earnings per share	每股盈利	14	
From continuing and discontinued operations	來自持續及終止經營業務		
Basic (US cent)	基本(美分)	0.96	0.24
Diluted (US cent)	攤薄(美分)	0.91	0.23
From continuing operations	來自持續經營業務		
Basic (US cent)	基本(美分)	0.95	0.24
Diluted (US cent)	攤薄(美分)	0.90	0.23

Consolidated Statement of Financial Position

綜合財務狀況表

At 31 December 2021
於二零二一年十二月三十一日

		Notes 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Non-current assets	非流動資產			
Property, plant and equipment	物業、廠房及設備	16	730,028	705,304
Right-of-use assets	使用權資產	17	2,400	1,325
Mineral rights	礦產權	18	582,711	501,145
Exploration and evaluation assets	勘探及評估資產	19	121,320	119,652
Derivative financial instruments	衍生金融工具	29	258	–
Other non-current assets	其他非流動資產	21	72,506	13,104
			1,509,223	1,340,530
Current assets	流動資產			
Inventories	存貨	22	233,499	191,417
Trade and other receivables	貿易及其他應收款項	23	74,346	128,066
Financial assets at fair value through profit or loss ("FVTPL")	按公平值計入損益之金融資產（「按公平值計入損益」）	24	2,978	–
Amount due from a related company	應收一間關聯公司款項	27	–	16
Derivative financial instruments	衍生金融工具	29	20	–
Finance lease receivables	融資租賃應收款項	20	2,825	–
Bank deposits with original maturity over three months	原到期日超出三個月之銀行存款	25	17,000	34,476
Bank balances and cash	銀行結餘及現金	25	198,780	73,839
			529,448	427,814
Current liabilities	流動負債			
Trade and other payables	貿易及其他應付款項	26	112,159	95,449
Amount due to an intermediate holding company	應付中間控股公司款項	27	102,539	131,257
Amount due to a fellow subsidiary	應付同系附屬公司款項	27	5,234	5,111
Amount due to a non-controlling shareholder of a subsidiary	應付附屬公司非控股股東款項	27	533	441
Bank borrowings	銀行借款	28	115,657	30,736
Lease liabilities	租賃負債	30	778	952
Short-term provisions	短期撥備	31	6,767	7,173
Tax payable	應付稅項		32,621	7,633
			376,288	278,752
Net current assets	流動資產淨值		153,160	149,062
Total assets less current liabilities	總資產減流動負債		1,662,383	1,489,592

Consolidated Statement of Financial Position 綜合財務狀況表

At 31 December 2021
於二零二一年十二月三十一日

		Notes 附註	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Non-current liabilities	非流動負債			
Deferred tax liabilities	遞延稅項負債	32	325,698	263,076
Bank borrowings	銀行借款	28	134,000	179,000
Lease liabilities	租賃負債	30	1,571	366
Long-term provisions	長期撥備	31	24,155	30,221
			485,424	472,663
Net assets	資產淨值		1,176,959	1,016,929
Capital and reserves	股本及儲備			
Share capital	股本	33	16,166	16,166
Perpetual subordinated convertible securities	永久次級可換股證券	35	88,462	88,462
Reserves	儲備		908,588	789,838
Equity attributable to owners of the Company	本公司擁有人應佔權益		1,013,216	894,466
Non-controlling interests	非控股權益		163,743	122,463
Total equity	權益總額		1,176,959	1,016,929

The consolidated financial statements on pages 146 to 261 were approved and authorised for issue by the board of directors on 28 March 2022 and are signed on its behalf by:

載於第146至261頁的綜合財務報表已經董事會於二零二二年三月二十八日批准及授權刊發，並由以下人士代為簽署：

CAI Juan
蔡娟
DIRECTOR
董事

GAO Tianpeng
郜天鵬
DIRECTOR
董事

Consolidated Statement of Changes in Equity

綜合權益變動表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

Attributable to owners of the Company
本公司擁有人應佔

		Share capital	Perpetual subordinated convertible securities	Share premium	Translation reserve	Statutory reserve	Hedging reserve	Other reserves	(Accumulated losses) retained profits	Total	Non-controlling interests	Total equity
		股本	永久次級可換股證券	股份溢價	換算儲備	法定儲備	對沖儲備	其他儲備	(累計虧損) 保留溢利	總計	非控股權益	總權益
		US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
		千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元	千美元
								(Note) (附註)				
At 1 January 2020	於二零二零年一月一日	16,166	88,462	1,332,071	(24,933)	278	-	(400,721)	(146,710)	864,613	125,576	990,189
Profit for the year	年內溢利	-	-	-	-	-	-	-	29,943	29,943	12,551	42,494
Other comprehensive income for the year	年內其他全面收入	-	-	-	1,527	-	-	-	-	1,527	726	2,253
Total comprehensive income for the year	年內全面收入總額	-	-	-	1,527	-	-	-	29,943	31,470	13,277	44,747
Dividends recognised as distribution (note 15)	確認為分派的股息 (附註15)	-	-	(1,617)	-	-	-	-	-	(1,617)	-	(1,617)
Transfer to statutory reserve	轉撥至法定儲備	-	-	-	-	37	-	-	(37)	-	-	-
Return of capital to non-controlling shareholder of a subsidiary (note 13)	向一間附屬公司之非控股股東返還資本 (附註13)	-	-	-	-	(315)	-	-	315	-	(16,390)	(16,390)
At 31 December 2020	於二零二零年十二月三十一日	16,166	88,462	1,330,454	(23,406)	-	-	(400,721)	(116,489)	894,466	122,463	1,016,929
Profit for the year	年內溢利	-	-	-	-	-	-	-	120,527	120,527	41,918	162,445
Release of cumulative translation reserves upon liquidation of foreign operation	清算海外業務後釋放之累計換算儲備	-	-	-	(438)	-	-	-	-	(438)	-	(438)
Fair value gain on hedging instruments designated as cash flow hedges (note 29)	指定為現金流量對沖的對沖工具公平值收益 (附註29)	-	-	-	-	-	278	-	-	278	-	278
Other comprehensive (expense) income for the year	年內其他全面(開支)收益	-	-	-	(438)	-	278	-	-	(160)	-	(160)
Total comprehensive (expense) income for the year	年內全面(開支)收入總額	-	-	-	(438)	-	278	-	120,527	120,367	41,918	162,285
Dividends recognised as distribution (note 15)	確認為分派之股息 (附註15)	-	-	(1,617)	-	-	-	-	-	(1,617)	-	(1,617)
Dividends paid to non-controlling shareholder	已付非控股股東股息	-	-	-	-	-	-	-	-	-	(638)	(638)
At 31 December 2021	於二零二一年十二月三十一日	16,166	88,462	1,328,837	(23,844)	-	278	(400,721)	4,038	1,013,216	163,743	1,176,959

Consolidated Statement of Changes in Equity 綜合權益變動表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

Note: Other reserves comprised (i) the excess of the nominal value of the shares of the subsidiaries acquired pursuant to a group reorganisation (“**Combination**”) in 2013 over the nominal value of the Company’s shares issued in exchange therefor and (ii) the issue of 1,595,880,000 shares of the Company with a fair value of US\$206,646,000 and the issue of perpetual subordinated convertible securities (“**Convertible Securities**”) of the Company with a fair value of US\$1,089,084,000 on 14 November 2013 in exchange for the entire equity interests in Jin Rui Mining Investment Limited (“**Jin Rui**”) and the settlement of all shareholder’s loans outstanding by Jin Rui to Jintai Mining Investment Limited amounting to the principal amount of South African Rand (“**ZAR**”) 9,193,369,000 (equivalent to US\$895,000,000) at 14 November 2013.

附註：其他儲備包括(i)於二零一三年根據集團重組所收購附屬公司股份(「**合併事項**」)之面值，超過本公司作為收購代價所發行股份之面值的差額及(ii)於二零一三年十一月十四日發行1,595,880,000股公平值為206,646,000美元的本公司股份以及發行公平值為1,089,084,000美元的本公司永久次級可換股證券(「**可換股證券**」)，以收購Jin Rui Mining Investment Limited(「**Jin Rui**」)之全部股本權益，以及結清Jin Rui於二零一三年十一月十四日結欠金泰礦業投資有限公司的所有未償還股東貸款本金額9,193,369,000南非蘭特(「**南非蘭特**」)(相當於895,000,000美元)。

Consolidated Statement of Cash Flows

綜合現金流量表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Operating activities	經營活動		
Profit before tax	除稅前溢利	278,736	64,987
Adjustments for:	經調整：		
Finance income	財務收入	(728)	(1,287)
Finance costs	財務成本	9,539	14,060
Reversal of rehabilitation and environmental expenditure	復修及環保開支的撥回	(6,123)	(5)
Gain on disposal of property, plant and equipment	出售物業、廠房及設備之收益	(1,477)	-
Depreciation of property, plant and equipment	物業、廠房及設備折舊	67,935	73,360
Depreciation of right-of-use assets	使用權資產折舊	911	1,063
Amortisation of mineral rights	礦產權攤銷	14,434	15,244
Reversal of impairment loss recognised in respect of mineral rights	就礦產權確認之減值虧損撥回	(96,000)	(27,000)
Written off of property, plant and equipment	撇銷物業、廠房及設備	10,369	-
Fair value loss on financial assets at FVTPL	透過損益按公平值計量的金融資產之公平值虧損	16	-
Impairment loss on value-added tax ("VAT") recoverable	可收回增值稅(「增值稅」)之減值虧損	25,900	-
Impairment loss on inventories	存貨減值虧損	5,695	5,395
Operating cash flows before movements in working capital	營運資金變動前之經營現金流量	309,207	145,817
(Increase) decrease in inventories	存貨(增加)減少	(47,777)	5,176
Decrease in trade and other receivables	貿易及其他應收款項減少	1,523	49,491
Increase in VAT recoverable	可收回增值稅增加	(30,022)	(20,555)
Increase in trade and other payables	貿易及其他應付款項增加	1,145	16,304
Decrease in rehabilitation trust fund	復修信託基金減少	6	1
Decrease in provisions excluding rehabilitation and environmental provision	撥備(不包括復修及環保撥備)減少	(349)	(2,657)
Decrease in finance lease receivables	融資租賃應收款項減少	1,695	-
Cash generated from operations	經營業務所得現金	235,428	193,577
Income tax paid	已付所得稅	(29,119)	(20,380)
Net cash from operating activities	經營活動所得現金淨額	206,309	173,197

Consolidated Statement of Cash Flows

綜合現金流量表

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Investing activities	投資活動		
Advance to a Democratic Republic of Congo ("DRC") state-owned power company	向剛果民主共和國(「剛果(金)」) 國有電力公司之墊款	(1,374)	-
Advance to a related company	向一間關聯公司墊款	-	(191)
Repayment from a related company	自關聯公司之還款	16	175
Interest received	已收利息	538	1,287
Purchase of financial assets at FVTPL	購買透過損益按公平值計量的 金融資產	(2,994)	-
Decrease (increase) in bank deposits with original maturity over three months	原到期日超出三個月之銀行存款 減少(增加)	17,476	(34,476)
Expenditure on exploration and evaluation assets	勘探及評估資產開支	(1,668)	(2,804)
Purchase of property, plant and equipment	購買物業、廠房及設備	(88,811)	(51,982)
Net cash used in investing activities	投資活動所用現金淨額	(76,817)	(87,991)
Financing activities	融資活動		
Dividends paid	已付股息	(1,617)	(1,617)
New bank borrowings raised	新增銀行借款	100,000	37,313
(Repayment to) advance from an intermediate holding company	(償還)來自一間中間控股公司之墊款	(28,718)	2,973
Advance from (repayment to) a non-controlling shareholder of a subsidiary	來自(償還)附屬公司非控股 股東墊款	92	(16,431)
Dividends paid to non-controlling shareholder	已付非控股股東股息	(638)	-
Advance from (repayment to) a fellow subsidiary	來自(償還)同系附屬公司之墊款	123	(23)
Repayments of bank borrowings	償還銀行借款	(60,079)	(64,942)
Repayments of lease liabilities	償還租賃負債	(955)	(1,104)
Net settlement of derivative financial instruments	衍生金融工具結算淨額	(111)	-
Interest paid	已付利息	(10,933)	(14,060)
Net cash used in financing activities	融資活動所用現金淨額	(2,836)	(57,891)
Net increase in cash and cash equivalents	現金及現金等值項目增加淨額	126,656	27,315
Effect of foreign exchange rate changes	外匯匯率變動的影響	(1,715)	2,253
Cash and cash equivalents at the beginning of the year	年初現金及現金等值項目	73,839	44,271
Cash and cash equivalents at the end of the year	年終現金及現金等值項目	198,780	73,839
Analysis of cash and cash equivalents, represented by	現金及現金等值項目分析，代表		
Bank balances and cash	銀行結餘及現金	198,780	73,839

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

1. GENERAL

Jinchuan Group International Resources Co. Ltd. (the “**Company**”) is a public limited company incorporated in the Cayman Islands and its shares are listed on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”). Its ultimate holding company is 金川集團股份有限公司 (Jinchuan Group Co., Ltd) (“**JCG**”), a state-owned enterprise established in the PRC. The addresses of registered office and principal place of business of Company are disclosed in the “Corporate Information” section in the annual report.

The Company is an investment holding company. The principal activities of the Company and its subsidiaries (collectively referred to as the “**Group**”) are mining operations and the trading of mineral and metal products.

The consolidated financial statements are presented in United States dollars (“**US\$**”), which is also the functional currency of the Company.

2. APPLICATION OF AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS (“**IFRSs**”)

Amendments to IFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following amendments to IFRSs issued by the International Accounting Standards Board (“**IASB**”) for the first time, which are mandatorily effective for the annual period beginning on or after 1 January 2021 for the preparation of the consolidated financial statements:

Amendments to IFRS 16	Covid-19-Related Rent Concession
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark Reform – Phase 2

In addition, the Group applied the agenda decision of the IFRS Interpretations Committee of the IASB issued in June 2021 which clarified the costs an entity should include as “estimated costs necessary to make the sale” when determining the net realisable value of inventories.

1. 一般資料

金川集團國際資源有限公司(「**本公司**」)於開曼群島註冊成立為公眾有限公司，其股份於香港聯合交易所有限公司(「**聯交所**」)上市。其最終控股公司為金川集團股份有限公司(「**金川**」)(於中國成立的國有企業)。本公司的註冊辦事處及主要營業地點的地址於年報的「公司資料」一節披露。

本公司為投資控股公司。本公司及其附屬公司(統稱「**本集團**」)之主要業務為採礦業務與礦產品及金屬產品貿易。

綜合財務報表以美元(「**美元**」)呈列，美元亦為本公司功能貨幣。

2. 應用國際財務報告準則(「**國際財務報告準則**」)之修訂

於本年度強制生效之國際財務報告準則之修訂

於本年度，本集團已首次應用國際會計準則委員會(「**國際會計準則委員會**」)頒佈的下列對國際財務報告準則的修訂(該等修訂就編製綜合財務報表而言於二零二一年一月一日或之後開始的年度期間強制生效)：

國際財務報告準則第16號之修訂	新冠肺炎相關的租金優惠
國際財務報告準則第9號、國際會計準則第39號、國際財務報告準則第7號、國際財務報告準則第4號及國際財務報告準則第16號之修訂	利率基準改革 – 第二階段

此外，本集團應用了國際會計準則理事會於二零二一年六月頒佈的國際財務報告準則詮釋委員會議程決定，該決定明確實體在釐定存貨的可變現淨值時應計入「進行銷售所需的估計成本」之成本。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

2. APPLICATION OF AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS (“IFRSs”) (Continued)

Amendments to IFRSs that are mandatorily effective for the current year (Continued)

Except as described below, the application of the amendments to IFRSs in the current year has had no material impact on the Group’s financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

Impacts on application of Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform – Phase 2

The Group has applied the amendments for the first time in the current year. The amendments relate to changes in the basis for determining the contractual cash flows of financial assets, financial liabilities and lease liabilities as a result of interest rate benchmark reform, specific hedge accounting requirements and the related disclosure requirements applying IFRS 7 “Financial Instruments: Disclosures” (“IFRS 7”).

As at 1 January 2021, the Group has borrowings with carrying amount of US\$346,104,000 of which interest rates are indexed to London Interbank Offered Rate (“LIBOR”), that will be subject to interest rate benchmark reform.

The amendments have had no impact on the consolidated financial statements as none of the relevant contracts (including the hedging instruments) has been transitioned to the relevant replacement rates during the year. The Group will apply the practical expedient in relation to the changes in contractual cash flows resulting from the interest rate benchmark reform for bank borrowings measured at amortised cost. Additional disclosures regarding the effect of the interest rate benchmark reform on the Group’s consolidated financial statements and risk management strategy are set out in note 36.

2. 應用國際財務報告準則(「國際財務報告準則」)之修訂(續)

於本年度強制生效之國際財務報告準則之修訂(續)

除下文所述者外，當前年度應用國際財務報告準則之修訂對本集團當前及過往年度財務狀況及業績及／或該等綜合財務報表所載披露並無重大影響。

應用國際財務報告準則第9號、國際會計準則第39號、國際財務報告準則第7號、國際財務報告準則第4號及國際財務報告準則第16號之修訂利率基準改革－第二階段之影響

本集團已於本年度首次應用相關修訂。由於利率基準改革、特定對沖會計規定及應用國際財務報告準則第7號「金融工具：披露」(「國際財務報告準則第7號」)之相關披露規定，該等修訂涉及釐定金融資產、金融負債及租賃負債之合約現金流量之基準之變動。

於二零二一年一月一日，本集團擁有借款賬面值為346,104,000美元，其利率與倫敦銀行同業拆息(「倫敦銀行同業拆息」)掛鈎，而倫敦銀行同業拆息將會受利率基準改革之影響。

由於概無相關合約(包括對沖工具)已於年內過渡到相關替代利率，該等修訂對綜合財務報表並無影響。本集團對按攤銷成本計量之銀行借款因利率基準改革產生的合約現金流量之變動將採用可行權宜方法。有關利率基準改革對本集團綜合財務報表及風險管理策略的影響之額外披露載列於附註36。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

2. APPLICATION OF AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS (“IFRSs”) (Continued)

New and amendments to IFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to IFRSs that have been issued but are not yet effective:

IFRS 17	Insurance Contracts and the related Amendments ³
Amendments to IFRS 3	Reference to the Conceptual Framework ²
Amendments to IFRS 10 and IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture ⁴
Amendment to IFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021 ¹
Amendments to IAS 1	Classification of Liabilities as Current or Non-current ³
Amendments to IAS 1 and IFRS Practice Statement 2	Disclosure of Accounting Policies ³
Amendments to IAS 8	Definition of Accounting Estimates ³
Amendments to IAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction ³
Amendments to IAS 16	Property, Plant and Equipment – Proceeds before Intended Use ²
Amendments to IAS 37	Onerous Contracts – Cost of Fulfilling a Contract ²
Amendments to IFRS Standards	Annual Improvements to IFRS Standards 2018-2020 ²

2. 應用國際財務報告準則(「國際財務報告準則」)之修訂(續)

已頒佈但尚未生效之新訂國際財務報告準則及其修訂

本集團並無提早應用下列已頒佈但尚未生效的新訂國際財務報告準則及其修訂：

國際財務報告準則第17號	保險合約及相關修訂 ³
國際財務報告準則第3號之修訂	對概念框架之提述 ²
國際財務報告準則第10號及國際會計準則第28號之修訂	投資者及其聯營公司或合資企業間之資產出售或注入 ⁴
國際財務報告準則第16號之修訂	二零二一年六月三十日後新冠肺炎相關的租金優惠 ¹
國際會計準則第1號之修訂	負債分類為即期或非即期 ³
國際會計準則第1號及國際財務報告準則實務報告第2號之修訂	會計政策披露 ³
國際會計準則第8號之修訂	會計估計之定義 ³
國際會計準則第12號之修訂	與單一交易產生之資產及負債相關之遞延稅項 ³
國際會計準則第16號之修訂	物業、廠房及設備—擬定用途前之所得款項 ²
國際會計準則第37號之修訂	虧損性合約—履行合約之成本 ²
國際財務報告準則之修訂	二零一八年至二零二零年國際財務報告準則的年度改進 ²

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

2. APPLICATION OF AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS ("IFRSs") (Continued)

New and amendments to IFRSs in issue but not yet effective (Continued)

- | | |
|---|--|
| 1 | Effective for annual periods beginning on or after 1 April 2021 |
| 2 | Effective for annual periods beginning on or after 1 January 2022 |
| 3 | Effective for annual periods beginning on or after 1 January 2023 |
| 4 | Effective for annual periods beginning on or after a date to be determined |

Except for the amendments to IFRSs mentioned below, the directors of the Company anticipate that the application of the new and amendments to IFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

Amendments to IAS 1 "Classification of Liabilities as Current or Non-current"

The amendments provide clarification and additional guidance on the assessment of right to defer settlement for at least twelve months from reporting date for classification of liabilities as current or non-current, which:

- specify that the classification of liabilities as current or non-current should be based on rights that are in existence at the end of the reporting period. Specifically, the amendments clarify that:
 - (i) the classification should not be affected by management intentions or expectations to settle the liability within 12 months; and
 - (ii) if the right is conditional on the compliance with covenants, the right exists if the conditions are met at the end of the reporting period, even if the lender does not test compliance until a later date; and

2. 應用國際財務報告準則(「國際財務報告準則」)之修訂(續)

已頒佈但尚未生效之新訂國際財務報告準則及其修訂(續)

- | | |
|---|------------------------|
| 1 | 於二零二一年四月一日或之後開始之年度期間生效 |
| 2 | 於二零二二年一月一日或之後開始之年度期間生效 |
| 3 | 於二零二三年一月一日或之後開始之年度期間生效 |
| 4 | 於待釐定日期或之後開始之年度期間生效 |

除下文提及的國際財務報告準則之修訂外，本公司董事預期應用新訂國際財務報告準則及其修訂於可見將來將不會對綜合財務報表產生重大影響。

國際會計準則第1號「負債分類為流動或非流動」之修訂

該等修訂為報告日期後最少十二個月的遞延結算權利的評估提供澄清及額外指引，以將負債分類為流動或非流動，其中：

- 規定負債的流動或非流動分類應以報告期末存在的權利為基礎。具體而言，該等修訂澄清：
 - (i) 該分類不應受管理層在12個月內結算負債之意圖或預期所影響；及
 - (ii) 倘若該權利以遵守契約為條件的，則如果在報告期末符合彼等條件，則該權利仍然存在，即使貸款人在稍後日期才測試其合規性；及

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

2. APPLICATION OF AMENDMENTS TO INTERNATIONAL FINANCIAL REPORTING STANDARDS (“IFRSs”) (Continued)

New and amendments to IFRSs in issue but not yet effective (Continued)

Amendments to IAS 1 “Classification of Liabilities as Current or Non-current” (Continued)

- clarify that if a liability has terms that could, at the option of the counterparty, result in its settlement by the transfer of the entity’s own equity instruments, these terms do not affect its classification as current or non-current only if the entity recognises the option separately as an equity instrument applying IAS 32 “Financial Instruments: Presentation”.

As at 31 December 2021, the Group’s right to defer settlement for borrowings of US\$134,000,000 are subject to compliance with certain financial ratios within 12 months from the reporting date. Such borrowings were classified as non-current as the Group met such ratios at 31 December 2021. The impacts on application, if any, will be disclosed in the Group’s future consolidated financial statements.

Except for as disclosed above, the application of the amendments will not result in reclassification of the Group’s other liabilities as at 31 December 2021.

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements have been prepared in accordance with IFRSs issued by the IASB. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (“**Listing Rules**”) and by the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair value at the end of each reporting period, as explained in the accounting policies set out below.

2. 應用國際財務報告準則(「國際財務報告準則」)之修訂(續)

已頒佈但尚未生效之新訂國際財務報告準則及其修訂(續)

國際會計準則第1號「負債分類為流動或非流動」之修訂(續)

- 澄清倘若負債附有條款，可由對手方選擇透過轉讓實體本身之權益工具進行結算，則僅在實體應用國際會計準則第32號「金融工具：呈列」將選擇權單獨確認為權益工具時，該等條款方不會對其分類為流動或非流動造成影響。

於二零二一年十二月三十一日，本集團延後償還134,000,000美元借款的權利須在報告日起計12個月內遵守若干財務比率。由於本集團於二零二一年十二月三十一日達至該等比率，因此該等借款被分類為非流動。應用修訂的影響(如有)將在本集團其後的綜合財務報表中披露。

除上文所披露者外，該等修訂的應用不會造成本集團於二零二一年十二月三十一日的其他負債重新分類。

3. 綜合財務報表編製基準及重大會計政策

綜合財務報表已根據國際會計準則委員會頒佈之國際財務報告準則編製。另外，綜合財務報表包括香港聯合交易所有限公司證券上市規則(「**上市規則**」)及香港公司條例規定之適用披露。

誠如下文所載之會計政策所闡述，除於各報告期末按公平值計量的若干金融工具外，綜合財務報表乃按歷史成本基準編製。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for leasing transactions that are accounted for in accordance with IFRS 16 "Leases", and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 "Inventories" or value in use in IAS 36 "Impairment of Assets" ("IAS 36").

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The significant accounting policies are set out below.

3. 綜合財務報表編製基準及重大會計政策 (續)

歷史成本一般基於交換貨品及服務之代價的公平值計算。

公平值乃市場參與者於計量日在有序交易中出售資產所收取或轉讓負債所付出的價格，而不論該價格為可直接觀察獲得或可使用其他估值技術估計。於估計資產或負債的公平值時，本集團會考慮該等市場參與者於計量日對資產或負債定價時所考慮的資產或負債的特徵。於該等綜合財務報表中作計量及／或披露用途的公平值乃按此基準釐定，惟根據國際財務報告準則第16號「租賃」入賬的租賃交易，以及與公平值存在若干相似之處但並非公平值（如國際會計準則第2號「存貨」的可變現淨值或國際會計準則第36號「資產減值」（「國際會計準則第36號」）的使用價值）的計量除外。

此外，就財務申報而言，公平值計量按公平值計量的輸入數據的可觀察程度及該等輸入數據對公平值計量整體的重要性劃分為第一、二或三級，詳情如下：

- 第一級輸入數據為實體於計量日可獲得的相同資產或負債於活躍市場的報價（未調整）；
- 第二級輸入數據為（不包括計入第一級的報價）資產或負債可直接或間接觀察的輸入數據；及
- 第三級輸入數據為資產或負債無法觀察的輸入數據。

重大會計政策載列如下。

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截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

3. 綜合財務報表編製基準及重大會計政策 (續)

綜合基準

綜合財務報表包括本公司以及本公司及其附屬公司所控制實體的財務報表。當本公司符合以下各項時，即取得控制權：

- 有權控制被投資方；
- 承擔或有權獲得來自參與被投資方營運之可變回報；及
- 有能力行使其權力影響其回報金額。

倘事實及情況表明上文所列三個控制權元素中的一個或多個有變，則本集團重新評估其是否對被投資方擁有控制權。

附屬公司於本集團取得其控制權時綜合入賬，並於本集團喪失對其的控制權時終止綜合入賬。具體而言，自本集團取得控制權當日起，年內所收購或出售附屬公司之收支均計入綜合損益及其他全面收益表，直至本集團不再控制該附屬公司當日止。

損益及各其他全面收入項目歸屬至本公司擁有人及非控股權益。附屬公司的全面收入總額歸屬至本公司擁有人及非控股權益，即使此舉會導致非控股權益出現虧絀結餘。

倘有需要，將對附屬公司的財務報表作出調整，以令其會計政策與本集團的會計政策貫徹一致。

與本集團成員公司之間的交易相關的所有集團內公司間資產與負債、股本、收入、開支及現金流量於綜合賬目時全數對銷。

於附屬公司之非控股權益與本集團之有關權益分開呈列，其相當於現時擁有權權益，賦予其持有人可按比例分佔有關附屬公司清盤時之資產淨值。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

Variable consideration

For contracts that contain variable consideration (weight and grade of metals), the Group estimates the amount of consideration to which it will be entitled using the expected value method, which better predicts the amount of consideration to which the Group will be entitled.

The estimated amount of variable consideration is included in the transaction price only to the extent that it is highly probable that such an inclusion will not result in a significant revenue reversal in the future when the uncertainty associated with the variable consideration is subsequently resolved.

3. 綜合財務報表編製基準及重大會計政策 (續)

客戶合約收益

本集團於完成履約責任時(即當特定之履約責任下之相關貨品或服務「控制權」轉移至客戶時)(或就此)確認收益。

履約責任指一項明確的貨品或服務(或一組貨品或服務)或一系列大致相同而屬明確的貨品或服務。

倘符合以下任何一項條件，控制權及收益將分別在一段時間內參照完成相關履約責任的進度而轉移及確認：

- 客戶隨著本集團履約同時獲得及利用自本集團履約所帶來之利益；
- 本集團之履約帶來新增資產或使資產有所升值，而客戶將隨著本集團履約獲得該資產之控制權；或
- 本集團之履約並無新增對本集團有其他用途之資產，而本集團就迄今已完成履約之部分有強制執行收款之權利。

否則，收益將於客戶獲得該明確的貨品或服務之控制權時確認。

可變代價

就訂有涉及金屬重量及品位之可變代價之合約而言，本集團以預期估值方法更佳預測本集團將有權享有之代價金額估計有關代價金額。

可變代價之估計金額乃包含於交易價格內，惟僅當可變代價之相關不確定性在其後變得確定，致使有關估計金額很大可能不會導致於將來出現重大收益撥回，其方可包含於交易價格內。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue from contracts with customers (Continued)

Variable consideration (Continued)

At the end of each reporting period, the Group updates the estimated transaction price (including updating its assessment of whether an estimate of variable consideration is constrained) to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

For certain sales of minerals, revenue is recognised initially at a selling price that is determined on a provisional basis. The final selling price is subject to the weight and grades of minerals in the Group's minerals products and movements in minerals prices up to the date of final pricing, normally 0 to 90 days after initial booking. The adjustment in respect of the final weight and grades based on the third party examination is included within the "revenue" line item. The adjustment to the final mineral prices that is part of the fair value through profit or loss measurement of the trade receivables (see the accounting policy in respect of financial assets at FVTPL), is also included within the "revenue" line item.

Principal versus agent

When another party is involved in providing goods or services to a customer, the Group determines whether the nature of its promise is a performance obligation to provide the specified goods or services itself (i.e. the Group is a principal) or to arrange for those goods or services to be provided by the other party (i.e. the Group is an agent).

The Group is a principal if it controls the specified good or service before that good or service is transferred to a customer. The Group is an agent if its performance obligation is to arrange for the provision of the specified good or service by another party. In this case, the Group does not control the specified good or service provided by another party before that good or service is transferred to the customer.

3. 綜合財務報表編製基準及重大會計政策 (續)

客戶合約收益(續)

可變代價(續)

於各報告期末，本集團更新其估計交易價格（包括更新其有關可變代價估計金額是否已設限之評估），以忠實反映於報告期末之情況及於報告期內之情況變動。

就若干礦物銷售而言，收益初步按以臨時定價基準釐定之售價確認。最終銷售價格乃取決於本集團礦物產品之礦產重量及品位，以及截至最終定價日期止（一般為初步入賬後之0至90日）之礦產價格波動情況而定。經第三方查驗後對最終重量及品位所作出之調整計入「收益」分項內。對最終礦產價格所作出之調整屬於貿易應收款項中按公平值計入損益之一部分（見有關按公平值計入損益之金融資產之會計政策）亦計入「收益」分項內。

主事與代理人

當另一方涉及向客戶提供貨品或服務時，本集團釐定其承諾性質為其自行提供指定貨品或服務（即本集團為主事）或安排由其他方提供該等貨品或服務（即本集團為代理人）之履約責任。

倘本集團於指定貨品或服務轉讓予客戶前控制該貨品或服務，則本集團為主事。倘本集團之履約責任為安排另一方提供指定貨品或服務，則本集團為代理。在此情況下，本集團於另一方所提供指定貨品或服務轉讓予客戶前並無控制該貨品或服務。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application, the Group assesses whether a contract is or contains a lease based on the definition under IFRS 16 at inception, modification date or acquisition date, as appropriate. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

Right-of-use assets

The cost of right-of-use assets includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received; and
- any initial direct costs incurred by the Group.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. Right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

3. 綜合財務報表編製基準及重大會計政策 (續)

租賃

租賃的定義

倘合約為換取代價而給予在一段時間內控制可識別資產使用的權利，則該合約為租賃或包含租賃。

就於首次應用日期或之後訂立或修訂而產生的合約而言，本集團於開始、修訂日期或收購日期(倘適用)根據國際財務報告準則第16號的定義評估合約是否為租賃或包含租賃。除非合約的條款及條件於其後改變，否則將不會重新評估相關合約。

本集團作為承租人

分配代價至合約組成部分

就包含租賃組成部分及一項或多項額外租賃或非租賃組成部分之合約而言，本集團根據租賃組成部分的相對單獨價格及非租賃組成部分的總單獨價格將合約代價分配至各個租賃組成部分。

使用權資產

使用權資產的成本包括：

- 租賃負債的初始計量金額；
- 在開始日期或之前支付的任何租賃付款，減已獲得的任何租賃優惠；及
- 本集團產生的任何初始直接成本。

使用權資產按成本減任何累計折舊及減值虧損計量，並就任何重新計量的租賃負債作出調整。使用權資產按直線法基於其估計使用年期和租期計提折舊。

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綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessee (Continued)

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise the option; and
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising an option to terminate the lease.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

3. 綜合財務報表編製基準及重大會計政策 (續)

租賃(續)

本集團作為承租人(續)

租賃負債

於租賃開始日期，本集團按該日未支付的租賃金額現值確認及計量租賃負債。於計算租賃金額現值時，倘租賃中所隱含的利率不易釐定，則本集團使用租賃開始日期之遞增借款利率。

租賃金額包括：

- 固定金額(包括實質固定付款)減任何應收租賃優惠；
- 基於指數或利率的可變租賃金額，初步按於開始日期的指數或利率計量；
- 剩餘價值擔保下本集團的預期應付金額；
- 購買權的行使價(倘本集團合理確定行使購買權)；及
- 為終止租賃而支付的罰款(倘租賃條款反映本集團行使終止租賃的權利)。

於開始日期後，租賃負債乃透過應計利息及租賃付款予以調整。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessee (Continued)

Lease liabilities (Continued)

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review, in which case the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

Lease modifications

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification. The Group accounts for the remeasurement of lease liabilities by making corresponding adjustments to the relevant right-of-use asset.

3. 綜合財務報表編製基準及重大會計政策 (續)

租賃(續)

本集團作為承租人(續)

租賃負債(續)

出現以下情況時，本集團將重新計量租賃負債（及對相關使用權資產作出相應調整）：

- 租期已發生改變或行使購買權的評估出現變動，在這種情況下，相關租賃負債乃透過使用重新評估日期的經修訂貼現率貼現經修訂租賃金額而予以重新計量。
- 租賃金額因市場租金檢討後導致市場租金率發生變化，在這種情況下，相關租賃負債乃透過使用初始貼現率貼現經修訂租賃金額而予以重新計量。

租賃修訂

倘存在以下情況，則本集團將租賃修訂入賬為個別租賃：

- 該項修訂透過增加使用一項或多項相關資產的權利擴大租賃範圍；及
- 增加租賃代價，金額相當於範圍擴大對應的單獨價格，並就反映特定合約的情況對單獨價格進行的任何適當調整。

對於並非作為個別租賃入賬的租賃修訂而言，本集團於修訂生效日期根據經修訂租賃的租賃條款透過使用經修訂貼現率貼現經修訂租賃金額而重新計量租賃負債。本集團通過對相關使用權資產進行相應調整，以對重新計量租賃負債進行會計處理。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Leases (Continued)

The Group as a lessor

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Amounts due from lessees under finance leases are recognised as receivables at commencement date at amounts equal to net investments in the leases, measured using the interest rate implicit in the respective leases. Initial direct costs (other than those incurred by manufacturer or dealer lessors) are included in the initial measurement of the net investments in the leases. Interest income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term. Variable lease payments that do not depend on an index or a rate are recognised as income when they arise.

3. 綜合財務報表編製基準及重大會計政策 (續)

租賃 (續)

本集團作為出租人

本集團為出租人的租賃分類為融資或經營租賃。倘租賃條款將與相關資產所有權有關的絕大部分風險及回報轉移予承租人，合約則被分類為融資租賃。所有其他租賃均分類為經營租賃。

融資租賃下應收承租人的款項於開始日期確認為應收款項，其金額相等於租賃的投資淨額，並使用各租賃隱含的利率計量。初始直接成本（製造商或經銷商出租人產生的直接成本除外）計入租賃投資淨額的首次計量中。利息收入分配至會計期間，以反映本集團有關租賃的未償還投資淨額的固定定期回報率。

經營租賃之租金收入乃按相關租賃年期以直線法於損益內確認。協商和安排經營租賃時產生的初始直接成本將計入租賃資產的賬面值，且該等成本按直線法在租賃期內確認為開支。並非基於指數或比率之可變租賃付款將於產生時確認為收益。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the functional currency of that entity (foreign currencies) are recognised at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into the presentation currency of the Group (i.e. US\$) using exchange rates prevailing at the end of each reporting period. Income and expenses items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case, the exchange rates at the dates of transactions are used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in equity under the heading of the "translation reserve" (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation (that is, a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation), all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

In addition, in relation to a partial disposal of a subsidiary that does not result in the Group losing control over the subsidiary, the proportionate share of accumulated exchange differences are re-attributed to non-controlling interests and are not recognised in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

外幣

於編製各個別集團實體之財務報表時，以該實體功能貨幣以外之貨幣(外幣)所進行之交易，按交易當日適用之匯率確認。於報告期末，以外幣計值之貨幣項目乃按於該日適用之匯率重新換算。按歷史成本計量以外幣計值之非貨幣項目無須重新換算。

因貨幣項目結算及因重新換算貨幣項目而產生之匯兌差額，乃於產生期間在損益內確認。

就呈列綜合財務報表而言，本集團對外業務之資產及負債按各報告期末適用之匯率換算為本集團之呈列貨幣(即美元)。收入及開支項目按期內平均匯率換算；惟倘該期間內匯率大幅波動，則採用交易當日適用之匯率換算。所產生之匯兌差額(如有)於其他全面收入確認，並於「換算儲備」項下權益中累計(非控股權益應佔(倘適用))。

出售境外業務時(即出售本集團於境外業務之全部權益，或出售涉及失去對包含境外業務的附屬公司之控制權)，於權益中累計並與該業務相關之歸屬於本公司擁有人之所有匯兌差額重新分類至損益。

此外，有關部分出售附屬公司並未導致本集團失去附屬公司的控制權，則按比例分佔的累計匯兌差額重新分配予非控股權益且不會於損益內確認。

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綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale.

Any specific borrowing that remain outstanding after the related asset is ready for its intended use or sale is included in the general borrowing pool for calculation of capitalisation rate on general borrowings. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Retirement benefits costs

Payments to defined contribution retirement benefit schemes are recognised as an expense when employees have rendered service entitling them to the contributions.

Short-term employee benefits

Short-term employee benefits are recognised at the undiscounted amount of the benefits expected to be paid as and when employees rendered the services. All short-term employee benefits are recognised as an expense unless another IFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees (such as wages and salaries, annual leave and sick leave) after deducting any amount already paid.

3. 綜合財務報表編製基準及重大會計政策 (續)

借貸成本

因收購、興建或生產需要長時間籌備方可供其擬定用途或銷售之合資格資產所直接產生之借貸成本，加至該等資產之成本，直至該等資產大致上可供其擬定用途或銷售為止。

任何於相關資產可作擬定用途或出售之後仍未償還的任何特別借款於計算一般借款的資本化率時計入一般借款組合。在特別借款撥作合資格資產開支前之暫時投資所賺取的投資收入，自合資格資本化之借貸成本扣除。

所有其他借貸成本於產生期間於損益確認。

退休福利成本

向界定供款退休福利計劃繳付之款項於僱員提供令其有權享有供款之服務時確認為開支。

短期僱員福利

短期僱員福利按僱員提供服務時預期支付的福利的未貼現金額確認。所有短期僱員福利均被確認為開支，除非另有國際財務報告準則要求或允許在資產成本中納入福利。

經扣除任何已付金額後，僱員應得的福利(例如工資及薪金、年假及病假)確認為負債。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit before tax because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using the tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary difference to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investments in subsidiaries, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

3. 綜合財務報表編製基準及重大會計政策 (續)

稅項

所得稅開支指即期應繳稅項及遞延稅項之總和。

即期應繳稅項根據年內應課稅溢利計算。應課稅溢利有別於除稅前溢利，因其不包括其他年度之應課稅或可扣稅收入或開支項目，亦不包括毋須課稅或不可扣稅項目。本集團之即期稅項負債採用於報告期末已實施或大致已實施之稅率計算。

遞延稅項乃就綜合財務報表內資產及負債之賬面值與用以計算應課稅溢利之相關稅基準之暫時差額而確認。遞延稅項負債一般就所有應課稅暫時差額確認。遞延稅項資產則在有可能獲得可動用可扣減暫時差額之應課稅溢利時確認。倘暫時差額乃因初步確認一宗交易(業務合併除外)中的資產及負債產生，且不影响應課稅溢利及會計溢利，則相關遞延稅項資產及負債不予確認。

遞延稅項負債乃就於附屬公司之投資相關之應課稅暫時差額而確認，惟倘本集團能控制暫時差額之撥回及暫時差額不大可能於可見將來撥回則除外。因該等投資之可扣減暫時差額而產生之遞延稅項資產，僅於有可能獲得可供動用暫時差額之利益的足夠應課稅溢利且其預計可於可見將來撥回時確認。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Taxation (Continued)

The carrying amount of deferred tax assets is reviewed at the end of the reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rate (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies IAS 12 "Income Taxes" requirements to right-of-use assets and lease liabilities separately. Temporary differences on initial recognition of the relevant right-of-use assets and lease liabilities are not recognised due to application of the initial recognition exemption. Temporary differences arising from subsequent revision to the carrying amounts of right-of-use assets and lease liabilities, resulting from remeasurement of lease liabilities and lease modifications, that are not subject to initial recognition exemption are recognised on the date of remeasurement or modification.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied to the same taxable entity by the same taxation authority.

Current and deferred tax is recognised in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

稅項(續)

遞延稅項資產之賬面值於報告期末檢討，並扣減至當不再可能有足夠應課稅溢利可供收回所有或部分資產為止。

遞延稅項資產及負債按預期於清償負債或變現資產之期間適用之稅率計量，該稅率乃根據於報告期末已實施或大致已實施之稅率(及稅法)釐定。

遞延稅項負債及資產之計量反映本集團於報告期末預期收回或結清其資產及負債賬面值之方式可能會帶來之稅務後果。

就計量本集團確認使用權資產及相關租賃負債的租賃交易的遞延稅項而言，本集團首先釐定稅項扣減是否歸因於使用權資產或租賃負債。

就稅項扣減歸因於租賃負債之租賃交易而言，本集團將國際會計準則第12號「所得稅」規定分別應用於使用權資產及租賃負債。有關使用權資產及租賃負債之暫時差額及租賃負債，由於應用初步確認豁免，故此不會於初步確認時確認。因重新計量租賃負債及租賃修訂而導致的使用權資產及租賃負債賬面值隨後修訂而未獲初步確認豁免的暫時差額於重新計量或修訂日期確認。

遞延稅項資產及負債乃當有法定可執行權利將即期稅項資產與即期稅項負債抵銷且其與同一稅務機關向同一應課稅實體徵收之所得稅有關時予以抵銷。

即期及遞延稅項於損益確認。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property, plant and equipment

Property, plant and equipment are tangible assets that are held for use in the production or supply of goods or services, or for administrative purposes (other than freehold land and construction in progress) are stated in the consolidated statement of financial position at cost less subsequent accumulated depreciation and subsequent accumulated impairment losses, if any.

Freehold land is stated at cost less subsequent accumulated impairment losses and is not depreciated.

Construction in progress, which represents assets under construction, is stated at cost less impairment loss, if any. When the assets are completed and ready for intended use, the carrying amount of the assets will be reclassified to the appropriate categories of property, plant and equipment. Depreciation of these assets, on the same basis as the appropriate categories of property, plant and equipment, commences when the assets are ready for their intended use.

Mining assets, including buildings and infrastructure, shafts and mine development costs, are depreciated to their residual values based on estimated proved and probable ore reserves using the unit of production ("UOP") method. The estimated mineral reserves, useful lives and residual values are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

3. 綜合財務報表編製基準及重大會計政策 (續)

物業、廠房及設備

物業、廠房及設備為持作用於生產或提供貨物或服務或作行政用途的有形資產(不包括永久業權土地及在建工程)按成本減其後的累計折舊及其後的累計減值虧損(如有)於綜合財務狀況表列賬。

永久業權土地按成本減其後的累計減值虧損列示，且不予折舊。

在建工程指興建中之資產，按成本減減值虧損(如有)列賬。當有關資產完成及可投入作擬定用途時，該等資產之賬面值將重新分類至適當的物業、廠房及設備類別。該等資產計提折舊的基準與適當類別之物業、廠房及設備相同，即在資產可投入作擬定用途時開始計提折舊。

採礦資產(包括樓宇及基礎設施、豎井及礦場開發成本)按估計的證實及概約礦石儲量使用產量單位("UOP")法對其剩餘價值計提折舊。估計礦產儲量、可使用年期及剩餘價值乃於各報告期末進行檢討，估計發生變動之影響則按未來適用法入帳。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property, plant and equipment (Continued)

Depreciation for other property, plant and equipment (other than freehold land, mining assets and construction in progress) are depreciated using the straight-line method over their estimated useful lives to their residual value, which vary between 4 to 10 years.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

Stripping costs

Stripping costs incurred in the development phase of a surface mine are capitalised as mine development costs. Depreciation of the stripping costs, on the same basis as the related mines, commences when the mines commence production. To the extent that stripping costs incurred in the production phase of a surface mine provide improved access to ore, such costs are recognised as a non-current asset when the following criteria are met:

- it is probable that the future economic benefit (improved access to the ore body) associated with the stripping activity will flow to the Group;
- the Group can identify the component of the ore body for which access has been improved; and
- the costs relating to the stripping activity associated with that mine can be measured reliably.

Stripping costs are capitalised as mine development costs and are subsequently depreciated based on estimated proved and probable ore reserves using the UOP method once the mine comes into commercial production. The costs of normal ongoing operational stripping activities are accounted for as inventories.

3. 綜合財務報表編製基準及重大會計政策 (續)

物業、廠房及設備(續)

其他物業、廠房及設備(不包括永久業權土地、採礦資產及在建工程)按其估計可使用年期(介乎4年至10年)以直線法計提折舊至剩餘價值。

物業、廠房及設備項目於出售時或當預期繼續使用該資產不會產生未來經濟利益時取消確認。物業、廠房及設備項目出售或報廢產生之任何損益，按出售所得款項與資產賬面值之間的差額釐定並於損益確認。

剝採成本

露天礦場開發階段所產生之剝採成本乃資本化為礦場開發成本。剝採成本由礦場開始生產時開始計提折舊，基準與相關礦場相同。倘露天礦場生產階段所產生之剝採成本可改善礦石開採，則該等成本將於符合以下條件時確認為非流動資產：

- 與剝採活動有關之未來經濟利益(即經改善之礦體開採)可能會流入本集團；
- 本集團能夠識別開採經改善之礦體之成分；及
- 與該礦場有關之剝採活動相關成本能夠可靠地計量。

剝採成本乃資本化為礦場開發成本。一經礦場投入商業生產，該等成本其後將使用UOP法按估計的證實及概約礦石儲量計提折舊。正常持續的經營性剝採活動之成本則入賬列為存貨。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Mineral rights

Mineral rights represent the rights to conduct mining activities.

Mineral rights are stated at cost less accumulated amortisation and any impairment losses. Mineral rights include the cost of acquiring mining licences. Mineral rights are amortised based on estimated proved and probable ore reserves using the UOP method.

Mineral rights are derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains and losses arising from derecognition of mineral rights, measured as the difference between the net disposal proceeds and the carrying amount of the asset, are recognised in profit or loss when the asset is derecognised.

Impairment losses on property, plant and equipment (including stripping costs), right-of-use assets and intangible assets other than exploration and evaluation assets

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss, or impairment loss recognised in prior periods may no longer exist or may have decreased. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss or reversal of impairment losses, if any.

The recoverable amount of property, plant and equipment, right-of-use assets, and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

3. 綜合財務報表編製基準及重大會計政策 (續)

礦產權

礦產權指從事採礦活動之權利。

礦產權按成本減累計攤銷及任何減值虧損列賬。礦產權包括取得採礦許可證之成本。礦產權按估計的證實及概約礦石儲量使用UOP法計提攤銷。

礦產權於出售或預期不會從其使用或出售產生未來經濟利益時取消確認。於取消確認礦產權時所產生之收益及虧損以出售所得款項淨額與該資產賬面值間之差額計算，並將於取消確認資產時於損益確認。

物業、廠房及設備(包括剝採成本)、使用權資產及無形資產(勘探及評估資產除外)之減值虧損

於報告期末，本集團對其物業、廠房及設備、使用權資產及無形資產之賬面值作出檢討，以釐定是否有任何跡象顯示該等資產已出現減值虧損，或於過往期間已確認的減值虧損或會不復存在或已減少。如有任何該等跡象，則會估計資產的可收回金額，以釐定減值虧損或減值虧損撥回(如有)的程度。

物業、廠房及設備、使用權資產及無形資產之可收回金額乃個別估計。當不大可能估計個別資產之可收回金額時，本集團估計相關資產所屬現金產生單位之可收回金額。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Impairment losses on property, plant and equipment (including stripping costs), right-of-use assets and intangible assets other than exploration and evaluation assets (Continued)

In testing a cash-generating unit for impairment, corporate assets are allocated to the relevant cash generating units when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be established. The recoverable amount is determined for the cash-generating unit or group of cash-generating units to which the corporate asset belongs, and is compared with the carrying amount of the relevant cash-generating unit or group of cash-generating units.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset (or a cash-generating unit) for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or a cash-generating unit) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a cash-generating unit, the Group compares the carrying amount of a group of cash-generating units, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of cash-generating units, with the recoverable amount of the group of cash-generating units. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of cash-generating units. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro-rata to the other assets of the unit or the group of cash-generating units. An impairment loss is recognised immediately in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

物業、廠房及設備(包括剝採成本)、使用權資產及無形資產(勘探及評估資產除外)之減值虧損(續)

就現金產生單位進行減值測試時，當可建立分配之合理及一致基準時，公司資產分配至相關現金產生單位，或另行分配至可建立合理及一致分配基準之最小現金產生單位組合。對公司資產所屬現金產生單位或現金產生單位組合，釐定其可收回金額，並與相關現金產生單位或現金產生單位組合之賬面值進行比較。

可收回金額乃公平值減出售成本與使用價值兩者中之較高者。評估使用價值時，採用稅前貼現率將估計未來現金流量貼現至其現值，該貼現率反映當前市場對貨幣時間值及資產(或現金產生單位)特定風險(未來現金流量之估計未就該等風險作出調整)之評估。

倘某項資產(或現金產生單位)之可收回金額估計將低於其賬面值，則該資產(或現金產生單位)之賬面值將調減至其可收回金額。就未能按合理一致的基準分配至現金產生單位的公司資產或部分公司資產，本集團會比較一個組別的現金產生單位賬面值(包括已分配至該組現金產生單位的公司資產或部分公司資產的賬面值)與該組現金產生單位的可收回金額。於分配減值虧損時，首先分配減值虧損以調減任何商譽的賬面值(如適用)，其後根據單位或一組現金產生單位內各資產之賬面值按比例分配至其他資產。資產之賬面值不會下調至低於其公平值減去出售成本(若可計量)、其使用價值(若可釐定)與零之間的最高者。本應分配至該資產之減值虧損金額按比例分配至該單位或一組現金產生單位之其他資產。減值虧損即時於損益確認。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Impairment losses on property, plant and equipment (including stripping costs), right-of-use assets and intangible assets other than exploration and evaluation assets (Continued)

Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating unit or the group of cash-generating units) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a cash-generating unit or the group of cash-generating units) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

Exploration and evaluation assets

Exploration and evaluation assets are recognised at cost on initial recognition. Subsequent to initial recognition, exploration and evaluation assets are stated at cost less any accumulated impairment losses. Costs of exploration are capitalised pending a determination of whether sufficient quantities of potential mineral reserves have been discovered.

Exploration and evaluation assets include the cost of exploration rights and the expenditures incurred in the search for mineral resources as well as the determination of the technical feasibility and commercial viability of extracting those resources. Once the technical feasibility and commercial viability of the extraction of mineral resources in an area of interest are demonstrated, any previously recognised exploration and evaluation assets attributable to that area of interest are first tested for impairment and then reclassified to either mineral rights or property, plant and equipment under the heading of construction in progress.

3. 綜合財務報表編製基準及重大會計政策 (續)

物業、廠房及設備(包括剝採成本)、使用權資產及無形資產(勘探及評估資產除外)之減值虧損(續)

倘減值虧損其後撥回，則將該資產(或現金產生單位或一組現金產生單位)之賬面值增至其可收回金額的經修訂估計值，惟增加後的賬面值不得超過該資產(或現金產生單位或一組現金產生單位)過往年度並無確認減值虧損情況下所應釐定之賬面值。減值虧損撥回金額即時於損益確認。

勘探及評估資產

勘探及評估資產於初步確認時按成本確認。初步確認後，勘探及評估資產按成本減任何累計減值虧損列賬。勘探成本是否資本化取決於是否發現足夠數量的潛在礦產儲量。

勘探及評估資產包括探礦權之成本以及於探索礦產資源及釐定開採該等資源之技術可行性及商業可行性時所產生之開支。當可證實於某個權益地區開採礦產資源之技術可行性及商業可行性時，先前確認歸屬於該權益地區的任何勘探及評估資產首先進行減值測試，之後重新分類至礦產權或在建工程下的物業、廠房及設備。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Impairment of exploration and evaluation assets

The carrying amount of exploration and evaluation assets is reviewed whenever there is an indication that they may be impaired, or impairment loss recognised in prior periods may no longer exist or may have decreased. Impairment test is performed in accordance with IAS 36 whenever one of the following events or changes in circumstances indicate that the carrying amount may not be recoverable (the list is not exhaustive):

- the period for which the Group has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned;
- exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the Group has decided to discontinue such activities in the specific area; or
- sufficient data exist to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development or by sale.

An impairment loss is recognised in profit or loss whenever the carrying amount of an asset exceeds its recoverable amount. Where an impairment loss subsequently reverses, the carrying amount of exploration and evaluation assets is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for exploration and evaluation assets in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

勘探及評估資產之減值

勘探及評估資產之賬面值於有跡象顯示其可能出現減值，或於過往期間已確認的減值虧損或會不復存在或已減少時進行檢討。倘出現下列其中一項事件或事況變化，顯示賬面值或無法收回(所列項目並非詳盡無遺)，則根據國際會計準則第36號進行減值測試：

- 本集團於特定地區之勘探權年期已於期內或將於不久將來屆滿，且預期不會續期；
- 於特定地區進一步勘探及評估礦產資源所產生之大量開支並非在預算或計劃之內；
- 於特定地區勘探及評估礦產資源並無導致發現在商業上可行的礦產資源數量，而本集團已決定終止於該特定地區進行該等活動；或
- 存在充分數據顯示，儘管於特定地區之開發可能會繼續進行，但勘探及評估資產之賬面值不大可能從成功開發或銷售中全數收回。

倘一項資產之賬面值超出其可收回金額，則於損益確認減值虧損。倘減值虧損其後撥回，則勘探及評估資產之賬面值將增至其可收回金額的經修訂估計值，惟增加後的賬面值不得超過勘探及評估資產過往年度並無確認減值虧損情況下所應釐定之賬面值。減值虧損撥回金額即時於損益確認。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Inventories

Consumable stores are valued at the lower of cost, determined on a weighted average basis, and estimated net realisable value. Net realisable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale. Costs necessary to make the sale include incremental costs directly attributable to the sale and non-incremental costs which the Group must incur to make the sale. Obsolete and slow-moving consumable stores are identified and are written down to their net realisable values. Product inventories are valued at the lower of cost, determined on a weighted average basis, and net realisable value.

Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (when the effect of the time value of money is material).

Provision for rehabilitation and environmental expenditure

Long-term environmental obligations are provided for based on the Group's environmental plans, in compliance with current environmental and regulatory requirements.

3. 綜合財務報表編製基準及重大會計政策 (續)

存貨

易耗品按成本(以加權平均基準釐定)與估計可變現淨值間之較低者定值。可變現淨值指存貨估計售價減完成的所有估計成本及作出銷售的必需成本。作出銷售所需的成本包括直接歸屬於銷售的增量成本及本集團為作出銷售而必需產生的非增量成本。過時及滯銷易耗品須作識別並撇減至其可變現價值。產品存貨按成本(以加權平均基準釐定)與可變現淨值間之較低者定值。

撥備

倘本集團因過往事件而承擔現時之法律或推定責任，及本集團很可能須履行責任，且有關責任金額能夠可靠地估計，則確認撥備。

確認為撥備之金額為於報告期末對履行現時責任所需代價之最佳估計，並經考慮責任相關之風險及不確定性。倘撥備採用履行現時責任之估計現金流量計量，而貨幣時間值之影響重大，則其賬面值為該等現金流量之現值。

復修及環保開支撥備

長期環保責任乃遵照現行環保及監管規定根據本集團之環保計劃計提撥備。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Provision for rehabilitation and environmental expenditure (Continued)

Full provision is made based on the net present value of the estimated cost of restoring the environmental disturbance that has occurred up to the end of the reporting period. The estimated cost is capitalised in property, plant and equipment as decommissioning assets and amortised based on estimated proved and probable ore reserves using the UOP method. The estimated cost of rehabilitation is reviewed annually and adjusted as appropriate for changes in legislation or technology and unwinding for the time value of money. Changes in estimated costs are added or deducted from the cost of the relevant assets in the period such changes occurred.

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instruments. All regular way purchases or sales of financial assets are recognised and derecognised on a trade date basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with IFRS 15 Revenue from Contracts with Customers ("IFRS 15"). Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

復修及環保開支撥備(續)

截至報告期末已發生的環境干擾修復活動，乃按其估計成本淨現值作全數撥備。估計成本於物業、廠房及設備進行資本化為善後資產，並按估計的證實及概約礦石儲量使用UOP法計提攤銷。估計復修成本每年檢討，並就法例或科技之改變以及貨幣時間值之展開作適當調整。估計成本之變動乃加入或扣自出現變動期內相關資產之成本。

金融工具

當集團實體成為工具合約條款之訂約方時，確認金融資產及金融負債。所有日常買賣之金融資產均於交易日確認及取消確認。日常買賣指須於市場規例或慣例所規定之期間內交付資產之金融資產買賣活動。

金融資產及金融負債初步按公平值計量，惟根據國際財務報告準則第15號客戶合約收益(「國際財務報告準則第15號」)初步計量之客戶合約產生之貿易應收款項除外。於初步確認時，購買或發行金融資產及金融負債(不包括按公平值計入損益之金融資產及金融負債)直接應佔之交易成本適當地計入金融資產或金融負債之公平值或從中扣除。購買按公平值計入損益之金融資產或金融負債直接應佔之交易成本即時於損益確認。

Notes to the Consolidated Financial Statements 綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at fair value through other comprehensive income ("FVTOCI"):

- the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial asset; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

實際利率法為一種計算金融資產或金融負債攤銷成本及於有關期間內分配利息收入及利息開支之方法。實際利率為一項於金融資產或金融負債之預計年期內或(如適用)較短期間內將估計未來現金收入及付款(包括構成實際利率一部分之所有已付或已收費用及點差、交易成本及其他溢價或折讓)準確貼現至初步確認時之賬面淨值之利率。

金融資產

金融資產之分類及其後計量

符合下列條件之金融資產其後按攤銷成本計量：

- 金融資產以目的為收取合約現金流量之商業模式持有；及
- 合約條款導致於特定日期產生之現金流量僅為支付本金及未償還本金利息。

符合以下條件之金融資產其後按公平值計入其他全面收入(「按公平值計入其他全面收入」)計量：

- 金融資產乃按透過收取合約現金流量及銷售金融資產達致目標之業務模式持有；及
- 合約條款導致於特定日期產生之現金流量僅為支付本金及未償還本金利息。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Classification and subsequent measurement of financial assets (Continued)

All other financial assets are subsequently measured at FVTPL.

(i) *Amortised cost and interest income*

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit-impaired financial asset improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of each reporting period following the determination that the asset is no longer credit-impaired.

(ii) *Financial assets at FVTPL*

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI or designated as FVTOCI are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss. The net gain or loss recognised in profit or loss excludes any interest earned on the financial asset and is included in the "other gains and losses" line item.

Trade receivables under provisional pricing arrangements that are exposed to future movement in London Metal Exchange ("LME") and Metal Bulletin ("MB") commodity prices have the contractual cash flow characteristics that are not solely payment of principal and interest on the principal amount outstanding and are therefore measured at FVTPL. The change in fair value is included in the "revenue" line item.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之分類及其後計量(續)

所有其他金融資產其後按公平值計入損益計量。

(i) *攤銷成本及利息收入*

就其後按攤銷成本計量之金融資產而言，利息收入採用實際利率法確認。利息收入透過對金融資產之總賬面值運用實際利率計算，惟其後出現信貸減值之金融資產除外(見下文)。就其後出現信貸減值之金融資產而言，利息收入乃透過對自下個報告期間起金融資產之攤銷成本運用實際利率確認。如已信貸減值之金融資產之信貸風險改善，致令金融資產不再有信貸減值，則自於釐定資產不再信貸減值後各報告期間開始起，利息收入乃透過對金融資產之總賬面值運用實際利率法確認。

(ii) *按公平值計入損益之金融資產*

並不符合按攤銷成本或按公平值計入其他全面收入計量之金融資產，或指定為按公平值計入其他全面收入之金融資產，均按公平值計入損益計量。

按公平值計入損益之金融資產於各報告期末按公平值計量，任何公平值收益或虧損均於損益內確認。於損益內確認之收益或虧損金額不包括於金融資產賺取之任何利息，並計入「其他收益及虧損」分項內。

臨時定價安排下承受倫敦金屬交易所(「倫敦金所」)及金屬導報(「金屬導報」)商品價格未來變動的貿易應收款項具有合約現金流量特徵，而不僅僅是支付本金及未償還本金利息，因此按公平值計入損益計量。公平值變動計入「收益」分項內。

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets

The Group performs impairment assessment under expected credit loss (“ECL”) model on financial assets (including trade and other receivables, amount due from a related company, bank deposits with original maturity over three months and bank balances) which are subject to impairment assessment under IFRS 9 “Financial Instruments” (“IFRS 9”). The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL (“12m ECL”) represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessment are done based on the Group’s historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables at amortised cost. The ECL on these assets are assessed individually. For all other instruments, the Group measures the loss allowance equal to 12m ECL, unless there has been a significant increase in credit risk since initial recognition, in which case the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之減值

本集團根據預期信貸虧損(「**預期信貸虧損**」)模式對須根據國際財務報告準則第9號「金融工具」(「**國際財務報告準則第9號**」)進行減值評估之金融資產(包括貿易及其他應收款項、應收一間關聯公司款項、原到期日超出三個月之銀行存款及銀行結餘)進行減值評估。預期信貸虧損金額於各報告日期更新，以反映自初步確認以來之信貸風險變動。

存續期預期信貸虧損指於相關工具之預期存續期內所有可能發生之違約事件所導致之預期信貸虧損。相反，12個月預期信貸虧損(「**12個月預期信貸虧損**」)指於報告日期後12個月內可能發生之違約事件所預期導致之部分存續期預期信貸虧損。預期信貸虧損根據本集團過往信貸虧損經驗進行評估，並按債務人特有之因素、整體經濟狀況及於報告日期之當前狀況與預測未來狀況兩者之評估而作出調整。

本集團一直就按攤銷成本計量之貿易應收款項確認存續期預期信貸虧損。該等資產的預期信貸虧損會進行個別評估。就所有其他工具而言，本集團計量之虧損撥備為相等於12個月預期信貸虧損，除非信貸風險自初步確認以來經歷大幅增加，則本集團會確認存續期預期信貸虧損。評估應否確認存續期預期信貸虧損乃基於自初步確認以來發生違約之可能性或風險是否大幅增加。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(i) *Significant increase in credit risk*

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, for example, a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor;
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之減值(續)

(i) *信貸風險大幅增加*

於評估信貸風險是否自初步確認以來大幅增加時，本集團比較金融工具於報告日期發生違約之風險與該金融工具於初步確認日期發生違約之風險。在進行有關評估時，本集團會考慮合理有據之定量及定性資料，包括在毋須付出過大成本或精力便可獲得之過往經驗及前瞻性資料。

具體而言，評估信貸風險是否大幅增加時會考慮下列資料：

- 金融工具之外部(如有)或內部信貸評級之實際或預期重大倒退；
- 信貸風險根據外界市場指標之重大惡化，例如信貸息差大幅增加、債務人之信貸違約掉期價格；
- 預期導致債務人在履行其債務責任之能力大幅下降的業務、財務或經濟狀況之現有或預測不利變動；
- 債務人經營業績之實際或預期重大倒退；
- 導致債務人在履行其債務責任之能力大幅下降的債務人之監管、經濟或技術環境之實際或預期重大不利變動。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(i) *Significant increase in credit risk (Continued)*

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

(ii) *Definition of default*

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Irrespective of the above, the Group considers that default has occurred when a financial asset is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之減值(續)

(i) *信貸風險大幅增加(續)*

不論上述評估結果如何，本集團假定當合約付款逾期超過30天，則信貸風險乃自初步確認以來大幅增加，除非本集團擁有合理有據之資料反對此一假定，則作別論。

本集團定期監察所用標準之成效以確認信貸風險是否有大幅增加並作出適當修訂以確保標準能夠在金額逾期前識別信貸風險大幅增加。

(ii) *違約之定義*

就內部信貸風險管理而言，當內部編製或自外部來源獲得之資料預示債務人不大可能向其債權人(包括本集團)悉數還款時(並無計及本集團持有之任何抵押品)，本集團認為發生違約事件。

不論上文所述，當金融資產逾期超過90日，本集團考慮發生違約，除非本集團擁有可證示更寬鬆的違約標準更為合適的合理可靠資料。

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綜合財務報表附註

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3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(iii) *Credit-impaired financial assets*

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

- (a) significant financial difficulty of the issuer or the borrower;
- (b) a breach of contract, such as a default or past due event;
- (c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- (d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or
- (e) the disappearance of an active market for that financial asset because of financial difficulties.

(iv) *Write-off policy*

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables at amortised cost, when the amounts are over two years past due, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之減值(續)

(iii) *信貸減值之金融資產*

當發生對金融資產的估計未來現金流量產生不利影響的一件或多件事件之時，該金融資產即出現信貸減值。金融資產信貸減值的證據包括以下事件的可觀察數據：

- (a) 發行人或借款人陷入嚴重財困；
- (b) 違反合約，例如違約或逾期事件；
- (c) 借款人的貸款人出於與借款人財困相關的經濟或合約原因，而向借款人授予貸款人原本不會考慮的優惠；
- (d) 借款人可能破產或進行其他財務重組；或
- (e) 該項金融資產的活躍市場因財困而消失。

(iv) *撇銷政策*

當有資料顯示交易對手陷入嚴重財困，且並無實際收回的可能之時(例如交易對手已清算或進入破產程序)或金額逾期超過兩年(就按攤銷成本計量的貿易應收款項而言)(以較早者為準)，本集團會撇銷金融資產。已撇銷的金融資產仍可根據本集團的收回程序實施強制執行，在適當情況下考慮法律意見。撇銷構成取消確認事件。任何其後收回於損益中確認。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(v) *Measurement and recognition of ECL*

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data and forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit-impaired, in which case interest income is calculated based on amortised cost of the financial asset.

The Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade receivables at amortised cost where the corresponding adjustment is recognised through a loss allowance account.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產之減值(續)

(v) *預期信貸虧損之計量及確認*

預期信貸虧損之計量值為表達違約概率、違約所造成虧損(即倘發生違約之虧損程度)與違約所造成風險之函數。違約概率及違約所造成虧損之評估乃根據過往數據及前瞻性資料作出。預期信貸虧損的估計反映以發生相關違約風險的金額作為加權數值而確定的無偏概率加權金額。

一般而言，預期信貸虧損為根據合約應付本集團之所有合約現金流量與本集團預期收取之現金流量之間的差額，按初步確認時確定之實際利率貼現。

利息收入根據金融資產之總賬面值計算，除非金融資產出現信貸減值，於此情況下，利息收入根據金融資產之攤銷成本計量。

本集團透過調整有關金融工具之賬面值而於損益確認所有金融工具之減值收益或虧損，惟按攤銷成本計量之貿易應收款項透過虧損撥備賬確認相應調整則除外。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial assets (Continued)

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by a group entity, are recognised at the proceeds received, net of direct issue costs.

Perpetual instruments, which include no contractual obligation for the Group to deliver cash or other financial assets or the Group has the sole discretion to defer payment of distribution and redemption of principal amount indefinitely, are classified as equity instruments.

Perpetual subordinated convertible securities

Perpetual subordinated convertible securities are convertible into a fixed number of ordinary shares of the Company and include no contractual obligation for the Group to deliver cash or another financial asset to the holders or to exchange financial assets or financial liabilities with the holders under conditions that are potentially unfavourable to the Group. These securities are classified as equity instruments and are initially recognised at their fair value of issuance proceeds and are not subsequently remeasured.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融資產(續)

金融資產的取消確認

僅在金融資產所產生現金流量的合約權利到期，或者將金融資產及該資產所有權上幾乎所有的風險和報酬轉讓給另一個實體的情況下，本集團才取消確認一項金融資產。

一旦取消確認的金融資產，資產的賬面值與收到及應收的代價之間的差額會在損益中確認。

金融負債及股本

分類為債務或股本

債務及股本工具根據合約安排之內容以及金融負債及股本工具之定義分類為金融負債或股本。

股本工具

股本工具指證明擁有某實體資產於扣減其所有負債後之剩餘權益之任何合約。集團實體所發行之股本工具按已收所得款項扣除直接發行成本確認。

永久性工具(包括本集團無支付現金或其他金融資產的合約責任或本集團可全權酌情無限期推遲派付及贖回本金額)均為歸類為權益工具。

永久次級可換股證券

永久次級可換股證券可轉換為固定數目的本公司普通股，不包含若發生有可能不利於本集團之情況，則由本集團向持有人交付現金或其他金融資產，或與持有人交換金融資產或金融負債的合約責任。該等證券分類為股本工具，初步按其於發行所得款項的公平值確認，其後不予重新計量。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial liabilities and equity (Continued)

Financial liabilities

All financial liabilities are subsequently measured at amortised cost using the effective interest method or at FVTPL.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is either held for trading or it is designated as at FVTPL.

A financial liability is held for trading if:

- it has been incurred principally for the purpose of repurchasing in the near term; or
- on initial recognition it is a part of portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

A financial liability other than a financial liability held for trading may be designated as at FVTPL upon initial recognition if:

- such designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise; or
- the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed and its performance is evaluated on a fair value basis, in accordance with the Group's documented risk management or investment strategy, and information about the grouping is provided internally on that basis; or
- it forms part of a contract containing one or more embedded derivatives, and IFRS 9 permits the entire combined contract to be designated as at FVTPL.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

金融負債及股本(續)

金融負債

所有金融負債其後均按攤銷成本使用實際利率法或按公平值計入損益計量。

按公平值計入損益之金融負債

持作買賣或指定為按公平值計入損益之金融負債分類為按公平值計入損益。

符合下列條件之金融負債為持作買賣：

- 產生之主要目的為於短期內重新購買；或
- 於初步確認時為本集團共同管理的已識別金融工具組合之一部分，且近期已形成實際的短期獲利模式；或
- 為一項未有指定及非有效對沖工具的衍生工具。

金融負債(持有作買賣之金融負債除外)倘滿足下列條件，可於初步確認時指定為按公平值計入損益：

- 有關指定消除或大幅減少可能會出現的計量或確認方面之不一致性；或
- 根據本集團制定之風險管理或投資策略，該項金融負債構成一組金融資產組別或金融負債組別或兩者組成之組別之一部分，其按公平值基準管理且其表現以公平值為基準進行評估，而有關組別之資料亦按此基準向內部提供；或
- 其構成包含一項或多項嵌入式衍生工具之合約之一部分，且國際財務報告準則第9號允許將全部合併合約指定為按公平值計入損益。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Financial liabilities and equity (Continued)

Financial liabilities at FVTPL (Continued)

For financial liabilities that are designated as at FVTPL, the amount of change in the fair value of the financial liability that is attributable to changes in the credit risk of that liability is recognised in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss.

Trade payables under provisional pricing arrangements contain an embedded derivative in relation to the LME future commodity prices (see the accounting policy in respect of embedded derivatives below). The Group has designated the trade payables containing the embedded derivatives to be measured at FVTPL. The change in fair value other than the change that is attributable to changes in credit risk is included in the "cost of sales" line item.

Financial liabilities at amortised cost

Financial liabilities (including trade and other payables, amounts due to an intermediate holding company, a fellow subsidiary and a non-controlling shareholder of a subsidiary and bank borrowings) are subsequently measured at amortised cost using the effective interest method.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具 (續)

金融負債及股本 (續)

按公平值計入損益之金融負債 (續)

就指定為按公平值計入損益之金融負債而言，因有關負債之信貸風險變動而造成之金融負債公平值變動乃於其他全面收入確認，除非於其他全面收入確認有關負債之信貸風險變動影響會造成或擴大於損益之會計錯配，則作別論。

有臨時定價安排之貿易應付款項包含一項針對倫敦金所未來商品價格而訂立之嵌入式衍生工具（見下文有關嵌入式衍生工具之會計政策）。本集團已將包含嵌入式衍生工具之貿易應付款項指定為按公平值計入損益計量。除了源於信貸風險轉變的轉變外，公平值之變動計入「銷售成本」分項。

按攤銷成本計量之金融負債

金融負債（包括貿易及其他應付款項、應付一間中間控股公司、一間同系附屬公司及一間附屬公司之非控股股東款項及銀行借款）其後採用實際利率法按攤銷成本計量。

取消確認金融負債

本集團僅於其責任已獲解除、註銷或屆滿時方會取消確認金融負債。取消確認的金融負債的賬面值與已付及應付代價的差額於損益內確認。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Derivative financial instruments

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss.

Embedded derivatives

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of IFRS 9 are not separated. The entire hybrid contract is classified and subsequently measured in its entirety as either amortised cost or fair value as appropriate.

Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of IFRS 9 are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

Hedge accounting

The Group designates certain derivatives as hedging instruments for cash flow hedges.

At the inception of the hedging relationship the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

For the purpose of determining whether a forecast transaction (or a component thereof) is highly probable, the Group assumes that the interest rate benchmark on which the hedged cash flows (contractually or non-contractually specified) are based is not altered as a result of interest rate benchmark reform.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

衍生金融工具

衍生工具初步於衍生合約訂立之日期按公平值計量，及其後重新計量至其於報告期末之公平值。所導致的收益或虧損於損益內確認。

嵌入式衍生工具

嵌入混合合約的衍生工具(包括於國際財務報告準則第9號界定範圍內的主金融資產)，不會視為單獨的衍生工具。整個混合合約按攤銷成本或按公平值(如適用)分類再進行計量。

並不屬國際財務報告準則第9號範圍內金融資產的非衍生主體合約中內含的衍生工具於符合衍生工具定義時視作獨立的衍生工具，其風險及特徵與主體合約的風險及特徵並不密切相關，而該等主體合約並非按公平值計入損益計量。

對沖會計處理

本集團指定若干衍生工具為現金流對沖的對沖工具。

在建立對沖關係時，本集團記錄對沖工具與被對沖項目之間的關係，以及其風險管理目標和進行各種對沖交易的策略。此外，本集團在對沖開始時及其後，持續記錄對沖工具在抵銷被對沖項目因被對沖風險所導致的公平值或現金流變化方面是否有高效用。

為釐定預期交易(或其一部分)是否極有可能，本集團假設對沖現金流量所依據的利率基準(合約或非合約指定)不會因利率基準改革而改變。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Hedge accounting (Continued)

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

對沖會計處理(續)

對沖關係及有效性評估

評估對沖有效性時，本集團會考慮對沖工具是否有效地抵銷被對沖風險應佔被對沖項目之公允值或現金流變動，即當對沖關係滿足下列所有對沖有效性要求時：

- 被對沖項目與對沖工具間存在經濟關係；
- 信貸風險影響不會主導該經濟關係所產生價值變動；及
- 對沖關係的對沖比率與本集團實際對沖的被對沖項目數量及實體實際用於對沖該被對沖項目數量的對沖工具數量產生的對沖比率相同。

倘對沖關係不再符合與對沖比率相關的對沖有效性規定，惟該指定對沖關係的風險管理目標維持不變，本集團會調整對沖關係的對沖比率（即重新平衡該對沖），以使其再次符合有關合資格標準。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

3. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial instruments (Continued)

Hedge accounting (Continued)

Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading of hedging reserves, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss, and is included in the "other gains and losses" line item.

When a hedged item in a cash flow hedge is amended to reflect the changes that are required by the interest rate benchmark reform, the amount accumulated in the cash flow hedge reserve is deemed to be based on the alternative benchmark rate on which the hedged future cash flows are determined.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognised hedged item. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

3. 綜合財務報表編製基準及重大會計政策 (續)

金融工具(續)

對沖會計處理(續)

現金流對沖

被指定為符合資格作為現金流對沖的衍生工具和其他合資格對沖工具的公平值變動的有效部分，在其他全面收益中確認，並在對沖儲備項下累積，但僅限對沖開始時被對沖項目的公平值的累計變動。而與無效部分相關的收益或虧損則會計入「其他收益及虧損」項目中即時在損益中確認。

當現金流對沖中的對沖項目被修改以反映利率基準改革要求的變化時，現金流對沖儲備中的累計金額被視為基於未來對沖現金流的替代基準利率而釐定。

較早前在其他全面收益中確認並在權益中累計的金額會於被對沖項目影響損益的期間，重新分類至與確認的被對沖項目相同損益項目。此外，倘本集團預期現金流對沖儲備中累計的部分或全部虧損日後將無法收回，則該金額會即時重新分類至損益。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

4. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application the Group's accounting policies, which are described in note 3, the directors of the Company are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Mineral reserves

Technical estimates of the Group's mineral reserves are inherently imprecise and represent only estimated amounts because of the subjective judgments involved in developing such information. There are authoritative guidelines regarding the engineering criteria that have to be met before estimated mineral reserves can be designated as "proved" and "probable". Proved and probable mineral reserves estimates are updated on a regular basis and take into account recent economic production and technical information about each mine. In addition, as production levels and technical standards change from year to year, the estimate of proved and probable mineral reserves also changes. Despite the inherent imprecision in these technical estimates, these estimates are used as the basis for calculation of depreciation of property, plant and equipment and amortisation of mineral rights and for assessment of impairment losses as appropriate.

4. 估計不確定因素之主要來源

於本集團之會計政策(詳見附註3)應用時,本公司董事須對未能透過其他來源確定之資產及負債賬面值作出判斷、估計及假設。該等估計及相關假設乃基於過往經驗及其他被視為相關之因素。實際結果可能有別於該等估計。

有關估計及相關假設將持續進行審閱。倘修訂僅影響修訂估計的期間,則於該期間確認會計估計的修訂,或倘修訂同時影響現時及未來期間,則於修訂期間及未來期間確認會計估計的修訂。

涉及未來之主要假設以及於報告期末作出估計而存在不明朗因素之其他主要來源,(均可能導致下個財政年度資產及負債之賬面值須作出大幅調整之重大風險)載列如下。

礦產儲量

鑒於編製礦產儲量資料涉及主觀判斷,本集團礦產儲量之技術估計本身並不精確,僅為估計數額。在估計礦產儲量可指定為「證實」及「概略」儲量前,須達致有關工程標準之權威性指引。證實及概略礦產儲量估計乃定期更新,並計入各個礦場最近之經濟生產量及技術資料。此外,由於生產水平及技術標準逐年變更,故證實及概略礦產儲量之估計亦會出現變動。此等技術估計雖然本身並不精確,但估計可用作計算物業、廠房及設備之折舊以及礦產權之攤銷,以及適當評估減值虧損之基準。

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

4. KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Impairment assessment of property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations

Determining whether property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations are impaired or reversed for impairment losses requires an estimation of the value in use of the cash-generating units to which these assets have been allocated. The value in use calculation requires the Group to estimate the future cash flows expected to arise from the cash-generating units (i.e. estimation of the total proved and probable reserves of the ore mines and future metal price) and a suitable discount rate in order to calculate the present value. The management also engaged independent external competent persons to prepare resources and reserves report as at 31 December 2021. Where the actual future cash flows are different from expected, an additional impairment loss or reversal of impairment loss may arise. In view of the continued increase in copper price during the year, the recoverable amount of the cash-generating unit ("CGU") of the Ruashi Mine ("Ruashi CGU") is higher than its carrying value as at 31 December 2021. As at 31 December 2021, the carrying amount of property, plant and equipment, mineral rights and exploration and evaluation assets for mining operations is US\$729,970,000 (2020: US\$705,146,000), US\$582,711,000 (2020: US\$501,145,000) and US\$121,320,000 (2020: US\$119,652,000), respectively. Accordingly, reversal of impairment of mineral rights amounting to US\$96,000,000 (2020: US\$27,000,000) is recognised in profit or loss for the year ended 31 December 2021. Details of impairment assessment are disclosed in note 18.

4. 估計不確定因素之主要來源(續)

採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產之減值評估

釐定採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產是否減值或減值虧損是否撥回需要估計該等資產所獲分配現金產生單位的使用價值。使用價值計算需要本集團估計現金產生單位預期產生的未來現金流量(即礦山的證實儲量及概略儲量估計總量以及未來金屬價格)以及計算現值的適當貼現率。管理層亦聘請獨立外部合資格人士編製截至二零二一年十二月三十一日的資源量及儲量報告。倘實際未來現金流量有別於預期，則可能產生額外減值虧損或減值虧損撥回。考慮到年內銅價格持續上漲，於二零二一年十二月三十一日，Ruashi 礦場現金產生單位(「現金產生單位」)(「Ruashi 現金產生單位」)的可收回金額高於其賬面值。於二零二一年十二月三十一日，採礦業務的物業、廠房及設備、礦產權以及勘探及評估資產的賬面值分別為729,970,000美元(二零二零年：705,146,000美元)、582,711,000美元(二零二零年：501,145,000美元)及121,320,000美元(二零二零年：119,652,000美元)。因此，礦產權的減值撥回96,000,000美元(二零二零年：27,000,000美元)於截至二零二一年十二月三十一日止年度的損益中確認。減值評估的詳情披露於附註18。

Notes to the Consolidated Financial Statements

綜合財務報表附註

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截至二零二一年十二月三十一日止年度

4. KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Depreciation of property, plant and equipment and amortisation of mineral rights for mining operations

Mining assets included within property, plant and equipment and mineral rights are depreciated and amortised respectively using the UOP method. The calculation of the UOP rates of depreciation and amortisation, and therefore the annual depreciation and amortisation charge to operations, can fluctuate from initial estimates. This could generally result when there are significant changes in any of the factors or assumptions used in estimating mineral reserves, notably changes in the assumptions relating to geology of the reserves and assumptions used in determining the economic feasibility of the reserves. Estimates of proved and probable reserves are prepared by experts in extraction, geology and reserve determination. Assessments of the UOP rates against the estimated reserve base and operating and development plan are performed regularly taking into account the recent economic production and technical information about each mine from the Group's experts. Any changes in estimates will increase or decrease the depreciation in the period in which the changes occur. The depreciation and amortisation of the mining assets are US\$67,831,000 (2020: US\$73,177,000) and US\$14,434,000 (2020: US\$15,244,000), respectively for the year ended 31 December 2021. The carrying amounts of property, plant and equipment and mineral rights are set out in notes 16 and 18, respectively.

Recognition of revenue and inventories

Mineral and metal products are purchased and sold under provisional pricing arrangements where final weight and grades of copper and cobalt in the Group's copper and cobalt products are agreed based on third-party examination and final prices are set on the date of final pricing. Revenues and inventories are recognised when control of the mineral and metal products are passed to customers and from suppliers using history of grades of copper and cobalt in copper and cobalt products based on internal examination statistics, estimated weight and estimated average price up to the date of final pricing. The amount of revenue from continuing and discontinued operations for the year ended 31 December 2021 is US\$831,899,000 (2020: US\$664,562,000). The carrying amount of inventories as at 31 December 2021 is US\$233,499,000 (2020: US\$191,417,000).

4. 估計不確定因素之主要來源(續)

採礦業務的物業、廠房及設備之折舊以及礦產權之攤銷

分別計入物業、廠房及設備以及礦產權之採礦資產乃分別採用UOP法計提折舊及攤銷。折舊及攤銷的UOP比率乃至經營所產生的年度折舊及攤銷支出之計算結果可能較初步估計有所變動。變動一般源自用以估計礦產儲量之任何因素或假設出現重大變動，尤其是與儲量之地質狀況有關之假設及用以釐定儲量經濟可行性時所用的假設出現變動。證實及概略儲量之估計乃由開採、地質及儲量計算專家編製。經計及來自本集團專家有關各礦場最近經濟生產及技術資料後，UOP比率須按估計儲量基礎及經營開發計劃定期作出評估。任何估計之變動將會增加或減少變動發生期間之折舊。截至二零二一年十二月三十一日止年度，採礦資產之折舊及攤銷金額分別為67,831,000美元(二零二零年：73,177,000美元)及14,434,000美元(二零二零年：15,244,000美元)。物業、廠房及設備以及礦產權之賬面值分別載於附註16及18。

收益及存貨之確認

礦產及金屬產品根據臨時定價安排買賣，而臨時定價安排中本集團銅鈷產品所含之銅鈷最終重量及品位乃基於第三方之檢驗協定，最終價格於最終訂價日訂定。收益及存貨於礦產及金屬產品之控制權轉移至客戶及由供應商轉出時，採用銅及鈷產品之銅及鈷品位的過往記錄(基於內部檢驗結果的統計數據釐定)，估計重量及截至最終訂價日止之估計平均價格確認。截至二零二一年十二月三十一日止年度，來自持續經營業務及終止經營業務之收益為831,899,000美元(二零二零年：664,562,000美元)。於二零二一年十二月三十一日，存貨之賬面值為233,499,000美元(二零二零年：191,417,000美元)。

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4. KEY SOURCES OF ESTIMATION UNCERTAINTY (Continued)

Income taxes and VAT recoverable

The DRC parliament adopted a new mining code which introduced wide-ranging reforms including the introduction of a new Super Profits Tax regime. The uncertainties of the application and interpretation of the Super Profits Tax (see note 12) remain, and significant judgment is required in determining the tax position and the estimates and assumptions in relation to the provision for taxes and the recovery of tax assets, which could have a significant impact on the Group. Where the final outcome of pending tax matters is different from the amounts that were initially recognised, such differences will impact the balances in the accounting period in which such determination is made. In addition, as a result of continued challenge by relevant tax authorities in settling long outstanding VAT claims, an impairment loss of US\$25,900,000 (2020: nil) was recognised on VAT receivable for the year ended 31 December 2021. The management has been working closely to negotiate with these tax authorities.

5. REVENUE

Revenue represents revenue arising from sales of commodities. An analysis of the Group's revenue from continuing operations for the year is as follows:

4. 估計不確定因素之主要來源(續)

所得稅及可收回增值稅

剛果(金)議會已採納一項引入廣泛改革的新採礦法規，包括引入新的超額利潤稅制度。超額利潤稅(見附註12)的應用和詮釋仍然存在不確定性，在釐定稅收狀況以及與稅項撥備和稅收資產回收有關的估計和假設時需要做出重大判斷，這可能對本集團造成重大影響。如果未決稅務事項的最終結果與最初確認的金額有所出入，該等差異將影響作出該釐定的會計期間的結餘。此外，由於相關稅務機關對解決長期未決增值稅申索不斷提出質疑，因此於截至二零二一年十二月三十一日止年度確認應收增值稅減值虧損25,900,000美元(二零二零年：無)。管理層一直密切合作，以與該等稅務機關進行磋商。

5. 收益

收益指銷售商品所產生之收益。本集團年內來自持續經營業務之收益分析如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Sales of copper	銷售銅	637,288	382,825
Sales of cobalt	銷售鈷	159,790	131,958
Revenue from sales of commodities	銷售商品收益	797,078	514,783
Provisional pricing adjustment	臨時定價調整	34,821	16,719
Revenue – reported measure	收益－呈報計量	831,899	531,502

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For the year ended 31 December 2021
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5. REVENUE (Continued)

For certain sales of minerals, revenue is recognised initially at a selling price that is determined on a provisional basis. The final selling price is subject to the weight and grades of minerals in the Group's minerals products and movements in mineral prices up to the date of final pricing, normally 0 to 90 days after the initial booking. The adjustment in respect of the final mineral price is shown as provisional pricing adjustment.

Revenue from the sale of commodities is recognised at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods.

All revenue is recognised at a point in time.

6. SEGMENT INFORMATION

IFRS 8 "Operating Segments" requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the chief operating decision maker ("CODM") in order to allocate resources to the segment and assess its performance.

The CODM has been identified as the executive directors of the Company. They review the Group's internal reporting for the purpose of resource allocation and assessment of segment performance.

No operating segments have been aggregated in arriving at the reportable segments of the Group.

The Group's operating and reportable segments are as follows:

- Mining operations
- Trading of mineral and metal products

During the year ended 31 December 2020, the Group discontinued the trading of mineral and metal products operations in the PRC and those results are presented as discontinued operations. The segment information below does not include any amounts for the discontinued operations, which are described in more details in note 13.

5. 收益(續)

就若干礦產銷售而言，收益初步按以臨時定價基準釐定之售價確認。最終銷售價格乃取決於本集團礦產品之礦物重量及品位，以及截至最終定價日期止(一般為初步入賬後之0至90日)之礦物價格波動情況而定。就最終礦物價格之調整以臨時定價調整列示。

商品銷售的收益乃當資產的控制權轉移至客戶時(一般為商品交付時)確認。

所有收益於某個時間點確認。

6. 分部資料

國際財務報告準則第8號「經營分部」規定，經營分部須按本集團組成部分之內部報告確定，有關內部報告經由主要營運決策者(「**主要營運決策者**」)定期審閱，以分配分部資源及評估分部表現。

主要營運決策者經確定為本公司執行董事。彼等審閱本集團之內部報告以進行資源分配及評估分部表現。

於確定本集團的可報告分部時並無合併經營分部。

本集團之經營及可報告分部如下：

- 採礦業務
- 礦產品及金屬產品貿易

於截至二零二零年十二月三十一日止年度，本集團終止於中國的礦產品及金屬產品貿易業務，而該等經營業績呈列為終止經營業務。以下分部資料不包括任何終止經營業務的金額，有關更多詳情載於附註13。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Segment revenue and results

The following is an analysis of the Group's revenue and results by operating and reportable segments.

For the year ended 31 December 2021

Continuing operations

		Mining operations 採礦業務 US\$'000 千美元	Trading of mineral and metal products 礦產品及金屬產品貿易 US\$'000 千美元	Total 總計 US\$'000 千美元
Segment revenue	分部收益			
Revenue	收益	593,932	198,085	792,017
Inter-segment sales	分部間銷售	5,061	–	5,061
Provisional pricing adjustment	臨時定價調整	21,645	13,176	34,821
		620,638	211,261	831,899
Segment results	分部業績	281,612	359	281,971
Unallocated corporate income	未分配公司收入			537
Unallocated corporate expenses	未分配公司開支			(3,772)
Profit before tax from continuing operations	來自持續經營業務的除稅前溢利			278,736

6. 分部資料(續)

分部收益及業績

以下為本集團按經營及可報告分部劃分之收益及業績分析。

截至二零二一年十二月三十一日止年度

持續經營業務

		Mining operations 採礦業務 US\$'000 千美元	Trading of mineral and metal products 礦產品及金屬產品貿易 US\$'000 千美元	Total 總計 US\$'000 千美元
Segment revenue	分部收益			
Revenue	收益	593,932	198,085	792,017
Inter-segment sales	分部間銷售	5,061	–	5,061
Provisional pricing adjustment	臨時定價調整	21,645	13,176	34,821
		620,638	211,261	831,899
Segment results	分部業績	281,612	359	281,971
Unallocated corporate income	未分配公司收入			537
Unallocated corporate expenses	未分配公司開支			(3,772)
Profit before tax from continuing operations	來自持續經營業務的除稅前溢利			278,736

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Segment revenue and results (Continued)

For the year ended 31 December 2020

Continuing operations

		Mining operations 採礦業務 US\$'000 千美元	Trading of mineral and metal products 礦產品及金屬產品貿易 US\$'000 千美元	Total 總計 US\$'000 千美元
Segment revenue	分部收益			
Revenue	收益	482,783	32,000	514,783
Provisional pricing adjustment	臨時定價調整	14,886	1,833	16,719
		497,669	33,833	531,502
Segment results	分部業績			
Unallocated corporate income	未分配公司收入			852
Unallocated corporate expenses	未分配公司開支			(3,761)
Profit before tax from continuing operations	來自持續經營業務的除稅前溢利			64,274

Inter-segment sales are charged at prevailing market price.

Note: The accounting policies of operating segments are the same as the Group's accounting policies described in note 3. Segment revenues and segment results comprise revenue from external customers and profit before tax of each segment (excluding non-operating related finance income, other income, other gains and losses at corporate level and other central administration costs and finance costs), respectively.

6. 分部資料(續)

分部收益及業績(續)

截至二零二零年十二月三十一日止年度

持續經營業務

		Mining operations 採礦業務 US\$'000 千美元	Trading of mineral and metal products 礦產品及金屬產品貿易 US\$'000 千美元	Total 總計 US\$'000 千美元
Segment revenue	分部收益			
Revenue	收益	482,783	32,000	514,783
Provisional pricing adjustment	臨時定價調整	14,886	1,833	16,719
		497,669	33,833	531,502
Segment results	分部業績			
Unallocated corporate income	未分配公司收入			852
Unallocated corporate expenses	未分配公司開支			(3,761)
Profit before tax from continuing operations	來自持續經營業務的除稅前溢利			64,274

分部間銷售按交易時市價記賬。

附註：經營分部之會計政策與本集團附註3所載之會計政策相同。分部收益及分部業績分別包括來自外界客戶之收益及各分部之除稅前溢利(不包括公司層面的非經營相關之財務收入、公司層面的其他收入、其他收益及虧損及其他中央行政成本及財務成本)。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Segment assets and liabilities

The following is an analysis of the Group's assets and liabilities by operating and reportable segments:

Segment assets

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Mining operations	採礦業務	1,949,046	1,677,461
Trading of mineral and metal products	礦產品及金屬產品 貿易	32,810	44,731
Total segment assets	分部資產總值	1,981,856	1,722,192
Unallocated corporate assets	未分配公司資產	56,815	46,152
Consolidated assets	綜合資產	2,038,671	1,768,344

Segment liabilities

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Mining operations	採礦業務	491,472	474,756
Trading of mineral and metal products	礦產品及金屬產品 貿易	7,993	17
Total segment liabilities	分部負債總值	499,465	474,773
Unallocated corporate liabilities	未分配公司負債	362,247	276,642
Consolidated liabilities	綜合負債	861,712	751,415

Note: Segment assets and segment liabilities comprise total assets (excluding unallocated corporate assets that include right-of-use assets, prepayments, other receivables, property, plant and equipment and bank balances and cash at corporate level) and total liabilities (excluding tax payable, deferred tax liabilities and other unallocated corporate liabilities that include other payables, amount due to intermediate holding company and lease liabilities at corporate level) of each segment, respectively.

6. 分部資料(續)

分部資產及負債

以下為本集團按經營及可報告分部劃分之資產及負債分析：

分部資產

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Mining operations	採礦業務	1,949,046	1,677,461
Trading of mineral and metal products	礦產品及金屬產品 貿易	32,810	44,731
Total segment assets	分部資產總值	1,981,856	1,722,192
Unallocated corporate assets	未分配公司資產	56,815	46,152
Consolidated assets	綜合資產	2,038,671	1,768,344

分部負債

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Mining operations	採礦業務	491,472	474,756
Trading of mineral and metal products	礦產品及金屬產品 貿易	7,993	17
Total segment liabilities	分部負債總值	499,465	474,773
Unallocated corporate liabilities	未分配公司負債	362,247	276,642
Consolidated liabilities	綜合負債	861,712	751,415

附註：分部資產及分部負債分別包括各分部之資產總值（不包括未分配公司資產（包括公司層面的使用權資產、預付款項、其他應收款項、物業、廠房及設備以及銀行結餘及現金））及負債總額（不包括應繳稅項、遞延稅項負債及其他未分配公司負債（包括公司層面的其他應付款項、應付中間控股公司款項及租賃負債））。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Other segment information

For the year ended 31 December 2021

Continuing operations

6. 分部資料(續)

其他分部資料

截至二零二一年十二月三十一日止年度

持續經營業務

		Mining operations 採礦業務 US\$'000 千美元	Trading of mineral and metal products 礦產品及金屬 產品貿易 US\$'000 千美元	Unallocated 未分配 US\$'000 千美元	Total 總計 US\$'000 千美元
Amounts included in the measure of segment results and segment assets:	計量分部業績及分部資產時計入的金額：				
Addition to non-current assets (Note)	非流動資產添置(附註)	111,682	-	3	111,685
Finance income	財務收入	(313)	(272)	(143)	(728)
Finance costs	財務成本	9,425	-	114	9,539
Reversal of impairment loss recognised in respect of mineral rights	就礦產權確認之減值虧損撥回	(96,000)	-	-	(96,000)
Depreciation of property, plant and equipment	物業、廠房及設備折舊	67,831	-	104	67,935
Depreciation of right-of-use assets	使用權資產折舊	107	-	804	911
Amortisation of mineral rights	礦產權攤銷	14,434	-	-	14,434
Impairment of inventories	存貨減值	5,695	-	-	5,695

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Other segment information (Continued)

For the year ended 31 December 2020

Continuing operations

	Mining operations	Trading of mineral and metal products	Unallocated	Total
	採礦業務	礦產品及金屬產品貿易	未分配	總計
	US\$'000	US\$'000	US\$'000	US\$'000
	千美元	千美元	千美元	千美元
Amounts included in the measure of segment results and segment assets:	計量分部業績及分部資產時計入的金額：			
Addition to non-current assets (Note)	非流動資產添置(附註)	63,295	10	63,305
Finance income	財務收入	(302)	(307)	(1,182)
Finance costs	財務成本	13,925	128	14,053
Reversal of impairment loss recognised in respect of mineral rights	就礦產權確認之減值虧損撥回	(27,000)	–	(27,000)
Depreciation of property, plant and equipment	物業、廠房及設備折舊	73,177	183	73,360
Depreciation of right-of-use assets	使用權資產折舊	97	828	925
Amortisation of mineral rights	礦產權攤銷	15,244	–	15,244
Impairment of inventories	存貨減值	5,395	–	5,395

Note: Non-current assets excluded royalty prepayment to non-controlling shareholders of subsidiaries, VAT recoverable, derivative financial instruments and rehabilitation trust fund.

附註：非流動資產不包括向附屬公司非控股股東預付的礦權使用費、可收回增值稅、衍生金融工具及復修信託基金。

6. 分部資料(續)

其他分部資料(續)

截至二零二零年十二月三十一日止年度

持續經營業務

	Mining operations	Trading of mineral and metal products	Unallocated	Total
	採礦業務	礦產品及金屬產品貿易	未分配	總計
	US\$'000	US\$'000	US\$'000	US\$'000
	千美元	千美元	千美元	千美元

Amounts included in the measure of segment results and segment assets:

Addition to non-current assets (Note)	非流動資產添置(附註)	63,295	10	63,305
Finance income	財務收入	(302)	(307)	(1,182)
Finance costs	財務成本	13,925	128	14,053
Reversal of impairment loss recognised in respect of mineral rights	就礦產權確認之減值虧損撥回	(27,000)	–	(27,000)
Depreciation of property, plant and equipment	物業、廠房及設備折舊	73,177	183	73,360
Depreciation of right-of-use assets	使用權資產折舊	97	828	925
Amortisation of mineral rights	礦產權攤銷	15,244	–	15,244
Impairment of inventories	存貨減值	5,395	–	5,395

Note: Non-current assets excluded royalty prepayment to non-controlling shareholders of subsidiaries, VAT recoverable, derivative financial instruments and rehabilitation trust fund.

附註：非流動資產不包括向附屬公司非控股股東預付的礦權使用費、可收回增值稅、衍生金融工具及復修信託基金。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Geographical information

Information about the Group's revenue from external customers (excluding provisional pricing adjustment) for continuing operations is presented based on geographical location of the customers. Information about the Group's non-current assets (excluding derivative financial instruments) are based on geographical location of the assets.

6. 分部資料(續)

地區資料

有關本集團持續經營業務外界客戶收益(不包括臨時定價調整)之資料乃基於客戶所在地區呈列。有關本集團非流動資產(不包括衍生金融工具)之資料乃基於資產所在地區呈列。

		Revenue from external customers		Non-current assets	
		外界客戶之收益		非流動資產	
		2021	2020	2021	2020
		二零二一年	二零二零年	二零二一年	二零二零年
		US\$'000	US\$'000	US\$'000	US\$'000
		千美元	千美元	千美元	千美元
Hong Kong	香港	430,498	195,387	2,275	1,195
South Africa	南非	-	-	753	898
The DRC	剛果(金)	-	7,095	1,505,430	1,332,541
Zambia	贊比亞	-	19,136	507	5,896
The PRC	中國	136,093	114,504	-	-
Switzerland	瑞士	136,013	103,965	-	-
South Korea	南韓	11,867	8,003	-	-
Singapore	新加坡	82,607	66,693	-	-
		797,078	514,783	1,508,965	1,340,530

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

6. SEGMENT INFORMATION (Continued)

Information about major customers

The following is an analysis of revenue from customers of the corresponding year contributing over 10% of the revenue (excluding provisional pricing adjustment) from continuing operations of the Group:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Customer A (Note a)	客戶A(附註a)	219,483	166,349
Customer B (Note a)	客戶B(附註a)	136,013	103,965
Customer C (Note b)	客戶C(附註b)	132,861	-
Customer D (Note a)	客戶D(附註a)	114,054	108,326
Customer E (Note a)	客戶E(附註a)	82,607	66,693

Notes:

- (a) Revenue from above customers is arising from mining operations.
- (b) Revenue from above customer is arising from trading of mineral and metal products.

附註：

- (a) 以上客戶之收益乃源自採礦業務。
- (b) 上述客戶的收益來自礦產品及金屬產品貿易。

7. OTHER INCOME, OTHER GAINS AND LOSSES

7. 其他收入、其他收益及虧損

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Continuing operations	持續經營業務		
Reversal of impairment loss recognised in respect of mineral rights (note 18)	就礦產權確認之減值虧損撥回(附註18)	96,000	27,000
Written off of property, plant and equipment	撇銷物業、廠房及設備	(10,369)	-
Impairment loss on VAT recoverable	可收回增值稅之減值虧損	(25,900)	-
Exchange losses, net	匯兌虧損，淨額	(1,075)	(5,705)
Royalty income	礦權使用費收入	2,442	-
Gain on disposal of property, plant and equipment	出售物業、廠房及設備之收益	1,477	-
Others	其他	671	536
		63,246	21,831

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

8. FINANCE INCOME

8. 財務收入

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Continuing operations	持續經營業務		
Interest income	利息收入	728	1,182

9. FINANCE COSTS

9. 財務成本

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Continuing operations	持續經營業務		
Interest on	以下各項之利息		
Convertible Securities	可換股證券	88	88
Bank borrowings	銀行借款	8,030	9,989
Loan from an intermediate holding company	來自中間控股公司之貸款	2,748	3,757
Loan from a fellow subsidiary	來自同系附屬公司之貸款	123	163
Lease liabilities	租賃負債	55	56
		11,044	14,053
Less: Amount capitalised in cost of qualifying assets	減：已於合資格資產成本中資本化之金額	(1,505)	-
		9,539	14,053

Notes to the Consolidated Financial Statements 綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

10. PROFIT BEFORE TAX

10. 除稅前溢利

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Profit before tax from continuing operations has been arrived at after charging:	來自持續經營業務的除稅前溢利已扣除下列項目：		
Staff costs	員工成本		
Directors' emoluments (note 11)	董事酬金 (附註11)	559	617
Other staff costs	其他員工成本		
– Salaries and other benefits	– 薪金及其他福利	47,858	49,166
– Retirement benefits schemes contributions	– 退休福利計劃供款	3,902	1,089
		52,319	50,872
Auditors' remuneration	核數師酬金	490	473
Depreciation of property, plant and equipment	物業、廠房及設備折舊	67,935	73,360
Depreciation of right-of-use assets	使用權資產之折舊	911	925
Amortisation of mineral rights	礦產權攤銷	14,434	15,244
Impairment loss on inventories (included in cost of sales)	存貨減值虧損 (計入銷售成本)	5,695	5,395

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

(a) Directors' and chief executive's emoluments

For the year ended 31 December 2021

		Fees	Salaries and allowances	Retirement benefits schemes contributions	Total
		袍金 US\$'000 千美元	薪金及津貼 US\$'000 千美元	退休福利計劃供款 US\$'000 千美元	總計 US\$'000 千美元
Executive directors	執行董事				
Gao Tianpeng (Note a)	鄒天鵬(附註a)	-	149	2	151
Cheng Yonghong (Note b)	程永紅(附註b)	-	269	-	269
Non-executive directors	非執行董事				
Wang Qiangzhong (Note d)	王禕忠(附註d)	-	-	-	-
Liu Jian	劉建	-	-	-	-
Zhang Youda (Note e)	張有達(附註e)	-	-	-	-
Independent non-executive directors	獨立非執行董事				
Wu Chi Keung (Note f)	胡志強(附註f)	28	12	-	40
Yen Yuen Ho, Tony	嚴元浩	34	12	-	46
Poon Chiu Kwok	潘昭國	34	13	-	47
Yu Chi Kit (Note g)	余志傑(附註g)	5	1	-	6
		101	456	2	559

11. 董事、最高行政人員及僱員酬金

(a) 董事及最高行政人員酬金

截至二零二一年十二月三十一日止年度

	Fees	Salaries and allowances	Retirement benefits schemes contributions	Total
	袍金 US\$'000 千美元	薪金及津貼 US\$'000 千美元	退休福利計劃供款 US\$'000 千美元	總計 US\$'000 千美元
Executive directors				
Gao Tianpeng (Note a)	-	149	2	151
Cheng Yonghong (Note b)	-	269	-	269
Non-executive directors				
Wang Qiangzhong (Note d)	-	-	-	-
Liu Jian	-	-	-	-
Zhang Youda (Note e)	-	-	-	-
Independent non-executive directors				
Wu Chi Keung (Note f)	28	12	-	40
Yen Yuen Ho, Tony	34	12	-	46
Poon Chiu Kwok	34	13	-	47
Yu Chi Kit (Note g)	5	1	-	6
	101	456	2	559

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For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

(a) Directors' and chief executive's emoluments (Continued)

For the year ended 31 December 2020

		Fees	Salaries and allowances	Retirement benefits schemes contributions	Total
		袍金 US\$'000 千美元	薪金及津貼 US\$'000 千美元	退休福利 計劃供款 US\$'000 千美元	總計 US\$'000 千美元
Executive directors	執行董事				
Gao Tianpeng (Note a)	鄧天鵬(附註a)	–	113	2	115
Cheng Yonghong (Note b)	程永紅(附註b)	–	188	62	250
Qiao Fugui (Note c)	喬富貴(附註c)	–	143	1	144
Non-executive directors	非執行董事				
Wang Qiangzhong (Note d)	王樞忠(附註d)	–	–	–	–
Liu Jian	劉建	–	–	–	–
Zhang Youda (Note e)	張有達(附註e)	–	–	–	–
Independent non-executive directors	獨立非執行董事				
Wu Chi Keung (Note f)	胡志強(附註f)	34	2	–	36
Yen Yuen Ho, Tony	嚴元浩	34	2	–	36
Poon Chiu Kwok	潘昭國	34	2	–	36
		102	450	65	617

The executive directors' and chief executive's emoluments shown above were for their services in connection with the management of the affairs of the Company and the Group. The non-executive directors' and independent non-executive directors' emoluments shown above were for their services as directors of the Company.

上述執行董事及最高行政人員的酬金與彼等就本公司及本集團管理事務提供服務有關。上述非執行董事及獨立非執行董事的酬金為彼等擔任本公司董事之酬金。

11. 董事、最高行政人員及僱員酬金(續)

(a) 董事及最高行政人員酬金(續)

截至二零二零年十二月三十一日止年度

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截至二零二一年十二月三十一日止年度

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

(a) Directors' and chief executive's emoluments (Continued)

Notes:

- (a) This director also acts as the Chief Executive Officer of the Company.
- (b) This director was appointed as an Executive Director on 21 April 2020.
- (c) This director resigned as an Executive Director on 21 April 2020.
- (d) This director was not entitled to any director fee for the years ended 31 December 2021 and 2020.
- (e) His emoluments were borne by the ultimate holding company. The director has resigned with effective on 19 February 2022.
- (f) This director deceased on 12 October 2021.
- (g) This director was appointed as an Independent Non-executive Director on 6 November 2021.

There was no arrangement under which a director or the chief executive waived or agreed to waive any remuneration which accrued during the past financial year.

11. 董事、最高行政人員及僱員酬金(續)

(a) 董事及最高行政人員酬金(續)

附註：

- (a) 該董事亦擔任本公司之行政總裁。
- (b) 該董事於二零二零年四月二十一日獲委任為執行董事。
- (c) 該董事於二零二零年四月二十一日辭任執行董事。
- (d) 該董事於截至二零二一年及二零二零年十二月三十一日止年度並無任何董事袍金。
- (e) 彼之薪酬由最終控股公司承擔。該董事於二零二二年二月十九日辭任。
- (f) 該董事於二零二一年十月十二日身故。
- (g) 該董事於二零二一年十一月六日獲委任為獨立非執行董事。

並無訂立可讓董事或最高行政人員放棄或同意放棄其於上一財政年度應計之任何酬金之安排。

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11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

(b) Employees' emoluments

Continuing and discontinued operations

The five highest paid employees in the Group during the year included none of the directors (2020: none of the directors), details of whose emoluments are set out in (a) above. Details of the remuneration for the year of the remaining five (2020: five) highest paid employees who are neither a director nor chief executive of the Company are as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Salaries and allowances	薪金及津貼	1,289	1,385
Retirement benefits schemes contributions	退休福利計劃供款	580	5
Performance related incentive payments	與績效掛鈎之獎金	406	343
		2,275	1,733

The performance related incentive payment is determined with reference to the financial performance of the Group and the performance of the individuals.

11. 董事、最高行政人員及僱員酬金(續)

(b) 僱員酬金

持續及終止經營業務

本年度本集團五名最高薪僱員不包括董事(二零二零年:概無董事),其酬金詳情載於上文(a)段。並非本公司董事或最高行政人員的餘下五名(二零二零年:五名)最高薪僱員之本年度薪酬詳情如下:

與績效掛鈎之獎金乃參照本集團財務表現及個人表現釐定。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

11. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (Continued)

(b) Employees' emoluments (Continued)

Continuing and discontinued operations (Continued)

The number of the highest paid employees who are not the directors of the Company whose remuneration fell within the following bands is as follows:

		2021 二零二一年 No. of employees 僱員人數	2020 二零二零年 No. of employees 僱員人數
Hong Kong dollars ("HK\$") 2,000,001 to HK\$2,500,000 (equivalent to US\$256,411 to US\$320,513)	2,000,001港元(「港元」)至 2,500,000港元(相當於 256,411美元至320,513美元)	-	1
HK\$2,500,001 to HK\$3,000,000 (equivalent to US\$320,514 to US\$384,615)	2,500,001港元至3,000,000港元 (相當於320,514美元至 384,615美元)	-	4
HK\$3,000,001 to HK\$3,500,000 (equivalent to US\$384,616 to US\$448,718)	3,000,001港元至3,500,000港元 (相當於384,616美元至 448,718美元)	2	-
HK\$3,500,001 to HK\$4,000,000 (equivalent to US\$448,719 to US\$512,821)	3,500,001港元至4,000,000港元 (相當於448,719美元至512,821 美元)	3	-
		5	5

No emoluments were paid by the Group to the directors of the Company or the five highest paid individuals as an inducement to join or upon joining the Group.

11. 董事、最高行政人員及僱員酬金(續)

(b) 僱員酬金(續)

持續及終止經營業務(續)

並非為本公司董事且其酬金介乎以下範圍的最高薪僱員人數如下：

本集團概無向本公司董事或五名最高薪人士支付任何酬金，作為加入本集團或加入本集團後之獎勵。

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For the year ended 31 December 2021
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12. INCOME TAX EXPENSE

12. 所得稅開支

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Continuing operations	持續經營業務		
Current taxation	即期稅項		
Hong Kong Profits Tax	香港利得稅	–	–
Corporate income tax in the DRC	剛果(金)企業所得稅	53,781	27,948
Corporate income tax in Zambia	贊比亞企業所得稅	326	134
		54,107	28,082
Deferred taxation (note 32)	遞延稅項(附註32)	62,622	(5,729)
		116,729	22,353

No provision for Hong Kong Profits Tax has been made as the Group does not have assessable profits arising in Hong Kong for both years.

Corporate income tax in Mauritius, South Africa, Zambia and the DRC are calculated at 15%, 28%, 35% and 30% (2020: 15%, 28%, 30% and 30%) on the estimated assessable profits for the year, respectively. Assessable profits in the DRC may also be subject to Super Profits Tax, when and if applicable.

由於該兩個年度本集團並無於香港產生應課稅溢利，故未計提香港利得稅撥備。

毛里求斯、南非、贊比亞及剛果(金)之企業所得稅分別根據年內估計應課稅溢利按15%、28%、35%及30% (二零二零年：15%、28%、30%及30%)之稅率計算。剛果(金)的應課稅溢利亦可能需繳納超額利潤稅(如當適用時)。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
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12. INCOME TAX EXPENSE (Continued)

Income tax expense for the year is reconciled to profit before tax from continuing operations per the consolidated statement of profit or loss and other comprehensive income as follows:

12. 所得稅開支(續)

本年度的所得稅開支可與綜合損益及其他全面收益表項下的來自持續經營業務的除稅前溢利對賬如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Profit before tax	除稅前溢利	278,736	64,274
Tax at Hong Kong Profits Tax at 16.5% (2020: 16.5%)	按16.5%(二零二零年：16.5%)計算香港利得稅稅項	294	(81)
Tax at income tax rate in the DRC for operation at 30% (2020: 30%)	按剛果(金)所得稅率30%(二零二零年：30%)計算營運稅項	98,478	23,539
Tax at income tax rate in Mauritius for operation at 15% (2020: 15%)	按毛里求斯所得稅率15%(二零二零年：15%)計算營運稅項	(3)	(2)
Tax at income tax rate in South Africa for operation at 28% (2020: 28%)	按南非所得稅率28%(二零二零年：28%)計算營運稅項	(15,202)	(3,058)
Tax at income tax rate in Zambia for operation at 35% (2020: 30%)	按贊比亞所得稅率35%(二零二零年：30%)計算營運稅項	110	(830)
		83,677	19,568
Tax effect of expenses not deductible for tax purposes	不可扣稅開支之稅務影響	254	2,195
Tax effect of income not taxable for tax purpose	毋須課稅收入之稅務影響	(228)	(352)
Tax effect of utilisation of tax losses previously not recognised	動用過往未確認稅項虧損之稅務影響	(24)	(16)
Tax effect of tax losses not recognised	未確認稅項虧損之稅務影響	309	958
Taxable temporary difference on net investment loan	淨投資貸款之應課稅暫時差額	29,114	-
Super Profits Tax in the DRC	剛果(金)超額利潤稅	3,627	-
Income tax expenses for the year	年內所得稅開支	116,729	22,353

During the current year, the management expects that certain net investment loan would be repaid in the foreseeable future and therefore the related exchange differences from these net investment loan, which is taxable when realised, are recognised as deferred tax expense during the year.

於本年度，管理層預計若干淨投資貸款將於可見未來償還，因此來自該等淨投資貸款的相關當變現時為應課稅之匯兌虧損已確認為年內遞延稅項開支。

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13. DISCONTINUED OPERATIONS

On 24 March 2020, the Group passed a written resolution to voluntarily liquidate a subsidiary, Shanghai Jinchuan Junhe Economic Development Co., Ltd.* (“**Shanghai Jinchuan Junhe**”), which carried out all of the Group’s trading of mineral and metal products in the PRC. The liquidation was effected in order to generate cash flows for the expansion of the Group’s other businesses. The liquidation of Shanghai Jinchuan Junhe was completed in June 2021 and gain on liquidation (from release of cumulative translation reserve) of US\$438,000 was recognised during the year, which is the profit the year ended 31 December 2021 from discontinued operations.

The results of the trading of mineral and metal products in the PRC for the year ended 31 December 2020, were as follows:

13. 終止經營業務

於二零二零年三月二十四日，本集團通過一項有關自願清算一家附屬公司上海金川均和經濟發展有限公司(「上海金川均和」)的書面決議案，本集團於中國所有的礦產品及金屬產品貿易由金川均和進行。進行清算乃為擴張本集團其他業務產生現金流量。上海金川均和之清算已於二零二一年六月完成，而清算之收益(來自釋放累計換算儲備)438,000美元已於年內確認，其為截至二零二一年十二月三十一日止年度終止經營業務產生的溢利。

截至二零二零年十二月三十一日止年度於中國進行的礦產品及金屬產品貿易業績載列如下：

		2020 二零二零年 US\$'000 千美元
Revenue	收益	133,060
Cost of sales	銷售成本	(132,313)
Gross profit	毛利	747
Other income, other gain and losses	其他收入、其他收益及虧損	238
Selling and distribution costs	銷售及分銷成本	(12)
Administrative expenses	行政開支	(358)
Finance income	財務收入	105
Finance costs	財務成本	(7)
Profit before tax	除稅前溢利	713
Income tax expense	所得稅開支	(140)
Profit for the year	年內溢利	573

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

13. DISCONTINUED OPERATIONS (Continued)

Profit for the year ended 31 December 2020 from discontinued trading of mineral and metal products operation in the PRC includes the following items:

		2020 二零二零年 US\$'000 千美元
Other staff costs	其他員工成本	
– Salaries and other benefits	– 薪金及其他福利	50
– Retirement benefits schemes contributions	– 退休福利計劃供款	5
		55
Depreciation of right-of-use assets	使用權資產之折舊	138

During the year ended 31 December 2020, Shanghai Jinchuan Junhe contributed approximately US\$36,140,000 to the Group's net operating cash flows and paid approximately US\$16,431,000 in respect of financing activities.

* for identification purpose only.

13. 終止經營業務(續)

來自終止於中國的礦產品及金屬產品貿易業務的截至二零二零年十二月三十一日止年度溢利包括以下項目：

		2020 二零二零年 US\$'000 千美元
Other staff costs	其他員工成本	
– Salaries and other benefits	– 薪金及其他福利	50
– Retirement benefits schemes contributions	– 退休福利計劃供款	5
		55
Depreciation of right-of-use assets	使用權資產之折舊	138

截至二零二零年十二月三十一日止年度，上海金川均和為本集團經營現金流量淨額貢獻約36,140,000美元，就融資活動支付約16,431,000美元。

* 僅供識別

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14. EARNINGS PER SHARE

From continuing operations

The calculation of the basic and diluted earnings per share for continuing operations attributable to owners of the Company is based on the following data:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Earnings	盈利		
Earnings for the purpose of basic earnings per share	用作計算每股基本盈利之盈利	120,089	30,030
Add: Interest expense on Convertible Securities	加：可換股證券之利息開支	88	88
Earnings for the purpose of diluted earnings per share	用作計算每股攤薄盈利之盈利	120,177	30,118

		2021 二零二一年	2020 二零二零年
Number of shares	股份數目		
Weighted average number of ordinary shares for the purpose of basic earnings per share	用作計算每股基本盈利之普通股加權平均數	12,609,873,051	12,609,873,051
Effect of dilutive potential ordinary shares: Convertible Securities	攤薄性潛在普通股之影響： 可換股證券	690,000,000	690,000,000
Weighted average number of ordinary shares for the purpose of diluted earnings per share	用作計算每股攤薄盈利之普通股加權平均數	13,299,873,051	13,299,873,051

14. 每股盈利

來自持續經營業務

本公司擁有人應佔持續經營業務每股基本及攤薄盈利乃根據下列數據計算：

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14. EARNINGS PER SHARE (Continued)

From continuing and discontinued operations

The calculation of the basic and diluted earnings per share attributable to the owners of the Company is based on the following data:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Earnings	盈利		
Earnings for the purpose of basic earnings per share	用作計算每股基本盈利之盈利	120,527	29,943
Add: Interest expense on Convertible Securities	加：可換股證券之利息開支	88	88
Earnings for the purpose of diluted earnings per share	用作計算每股攤薄盈利之盈利	120,615	30,031

The denominators used are the same as those set out above for continuing operations.

14. 每股盈利(續)

來自持續及終止經營業務

本公司擁有人應佔每股基本及攤薄盈利乃根據下列數據計算：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Earnings	盈利		
Earnings for the purpose of basic earnings per share	用作計算每股基本盈利之盈利	120,527	29,943
Add: Interest expense on Convertible Securities	加：可換股證券之利息開支	88	88
Earnings for the purpose of diluted earnings per share	用作計算每股攤薄盈利之盈利	120,615	30,031

所用基數與上文持續經營業務所載者相同。

From discontinued operations

The earnings (loss) per share for discontinued operations is as follows:

		2021 二零二一年 US cent 美分	2020 二零二零年 US cent 美分
Basic	基本	0.01	(0.00)
Diluted	攤薄	0.01	(0.00)

來自終止經營業務

終止經營業務每股盈利(虧損)如下：

The calculation of the earnings (loss) per share for discontinued operations is based on:

終止經營業務每股盈利(虧損)乃根據下列數據計算：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Earnings (loss)	盈利(虧損)		
Earnings (loss) for the purpose of basic and diluted earnings (loss) per share	用作計算每股基本及攤薄盈利(虧損)之盈利(虧損)	438	(87)

The denominators used are the same as those set out above for continuing operations.

所用基數與上文持續經營業務所載者相同。

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15. DIVIDENDS

15. 股息

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Dividends for ordinary shareholders of the Company recognised as distributions during the year 2020 Final – HK0.1 cent per share (2020: 2019 Final – HK0.1 cent per share)	年內確認為分派之本公司普通股股東的股息 二零二零年末期股息 – 每股股份0.1港仙(二零二零年：二零一九年末期股息 – 每股股份0.1港仙)	1,617	1,617

Subsequent to the end of the reporting period, a final dividend in respect of the year ended 31 December 2021 of HK0.2 cent per ordinary share, in an aggregate amount of approximately HK\$25,220,000 (2020: HK\$12,610,000), equivalent to approximately US\$3,233,000 (2020: US\$1,617,000), has been proposed by the directors of the Company and is subject to approval by the shareholders in the forthcoming annual general meeting.

於報告期末後，本公司董事建議派付截至二零二一年十二月三十一日止年度的末期股息每股普通股0.2港仙，總額約25,220,000港元(二零二零年：12,610,000港元)，相當於約3,233,000美元(二零二零年：1,617,000美元)，惟須待股東於應屆股東週年大會上批准。

16. PROPERTY, PLANT AND EQUIPMENT

16. 物業、廠房及設備

		Freehold land 永久業權土地 US\$'000 千美元	Buildings and infrastructure 樓宇及基建 US\$'000 千美元	Plant, machinery and shafts 廠房、機器及 豎井 US\$'000 千美元	Mine development costs 礦場開發成本 US\$'000 千美元	Construction in progress 在建工程 US\$'000 千美元	Others 其他 US\$'000 千美元 (Note a) (附註a)	Total 總計 US\$'000 千美元
At 1 January 2020, net of accumulated depreciation and impairment	於二零二零年一月一日，扣除累計折舊及減值	6,711	50,451	292,181	189,221	27,538	122,748	688,850
Depreciation	折舊	-	(5,843)	(30,260)	(17,800)	-	(19,457)	(73,360)
Additions	添置	-	4,950	-	-	46,580	8,971	60,501
Transfer	轉撥	-	992	28,902	-	(29,894)	-	-
Transfer from exploration and evaluation assets	轉撥自勘探及評估資產	-	-	-	-	29,313	-	29,313
At 31 December 2020, net of accumulated depreciation and impairment	於二零二零年十二月三十一日，扣除累計折舊及減值	6,711	50,550	290,823	171,421	73,537	112,262	705,304
At 31 December 2020 Cost	於二零二零年十二月三十一日 成本	6,711	82,906	804,872	202,423	73,537	216,045	1,386,494
Accumulated depreciation and impairment	累計折舊及減值	-	(32,356)	(514,049)	(31,002)	-	(103,783)	(681,190)
Carrying amount	賬面值	6,711	50,550	290,823	171,421	73,537	112,262	705,304

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16. PROPERTY, PLANT AND EQUIPMENT (Continued)

16. 物業、廠房及設備(續)

		Freehold land	Buildings and infrastructure	Plant, machinery and shafts	Mine development costs	Construction in progress	Others	Total
		永久業權土地	樓宇及基建	廠房、機器及豎井	礦場開發成本	在建工程	其他	總計
		US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
		千美元	千美元	千美元	千美元	千美元	千美元	千美元
At 1 January 2021, net of accumulated depreciation and impairment	於二零二一年一月一日，扣除累計折舊及減值	6,711	50,550	290,823	171,421	73,537	112,262	705,304
Depreciation	折舊	-	(5,641)	(34,845)	(12,387)	-	(15,062)	(67,935)
Additions	添置	-	1,832	2,811	-	98,021	5,367	108,031
Written off (Note b)	撇銷(附註b)	-	-	(10,369)	-	-	-	(10,369)
Disposals	出售	-	-	(4,883)	-	-	(120)	(5,003)
Transfers	轉撥	-	236	48,161	-	(48,766)	369	-
At 31 December 2021, net of accumulated depreciation and impairment	於二零二一年十二月三十一日，扣除累計折舊及減值	6,711	46,977	291,698	159,034	122,792	102,816	730,028
At 31 December 2021 Cost	於二零二一年十二月三十一日成本	6,711	84,974	653,321	202,423	122,792	221,781	1,292,002
Accumulated depreciation and impairment	累計折舊及減值	-	(37,997)	(361,623)	(43,389)	-	(118,965)	(561,974)
Carrying amount	賬面值	6,711	46,977	291,698	159,034	122,792	102,816	730,028

Notes:

- (a) Included in others are pollutant treatment plant and related equipment and facilities and decommissioning assets, motor vehicles, furniture and fixtures, office equipment and other equipment.
- (b) Part of the Group's property, plant and equipment, were replaced by new facilities and therefore the Group has written off the obsolete fixed assets amounted to US\$10,369,000 during the year ended 31 December 2021.

The Group's freehold land is situated in the DRC and Zambia.

For the details of the impairment testing, please refer to note 18.

附註：

- (a) 其他包括污染物處理廠及相關設備及設施及善後資產、汽車、傢俬及裝置、辦公室設備及其他設備。
- (b) 本集團部分物業、廠房及設備已被新設施取代，因此本集團已於截至二零二一年十二月三十一日止年度內撇銷廢舊固定資產10,369,000美元。

本集團的永久業權土地位於剛果(金)及贊比亞。

有關減值測試的詳情，請參閱附註18。

Notes to the Consolidated Financial Statements

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17. RIGHT-OF-USE ASSETS

17. 使用權資產

		Leased properties 租賃物業	
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
As at 31 December Carrying amount	於十二月三十一日 賬面值	2,400	1,325
For the year ended 31 December Depreciation	截至十二月三十一日止年度 折舊	911	1,063
Total cash outflow for leases	租賃現金流出總額	1,010	1,167
Additions to right-of-use assets	添置至使用權資產	1,986	–
Early termination of right-of-use assets	提前終止使用權資產	–	316

For the year ended 31 December 2021, the Group leases various offices for its operations. Lease contracts are entered into for fixed term of 3 to 5 years (2020: 3 to 5 years). Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

截至二零二一年十二月三十一日止年度，本集團為其營運租賃各類辦公室。租約按3年至5年（二零二零年：3年至5年）的固定租期訂立。租賃條款按個別基準協商且包含多種不同條款及條件。於釐定租期及評估不可撤銷期限的時長時，本集團應用合約的定義並釐定合約可強制執行的期限。

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18. MINERAL RIGHTS

18. 礦產權

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
At 1 January, net of accumulated amortisation and impairment	於一月一日，扣除累計攤銷及減值	501,145	489,389
Amortisation provided during the year	年內計提攤銷	(14,434)	(15,244)
Reversal of impairment loss recognised in profit or loss (note 7)	於損益內確認減值虧損撥回(附註7)	96,000	27,000
At 31 December, net of accumulated amortisation and impairment	於十二月三十一日，扣除累計攤銷及減值	582,711	501,145
At 31 December Cost	於十二月三十一日成本	1,007,643	1,007,643
Accumulated amortisation and impairment	累計攤銷及減值	(424,932)	(506,498)
Carrying amount	賬面值	582,711	501,145

Mineral rights represent the rights to conduct mining activities in the Group's two operating mines, one mine leased out under finance lease agreement, one developing project and one exploration project in Zambia and the DRC. The mineral rights for the two operating mines are granted for the remaining terms from 15 to 21 years.

For the purposes of impairment assessment, the Group's property, plant and equipment, mineral rights and exploration and evaluation assets are grouped at the lowest level for which cash inflows generated are largely independent cash inflows from other assets or groups of assets.

礦產權指本集團於贊比亞及剛果(金)的兩個營運礦場、一個以融資租賃協議下出租之礦場、一個開發中項目及一個探礦項目從事採礦活動之權利。該兩個營運礦場獲授礦產權餘下年期為15至21年。

就減值評估而言，本集團的物業、廠房及設備、礦產權以及勘探及評估資產按其大部分為獨立現金流入，而其現金流入獨立於其他資產或資產組合則歸類為最小單位。

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18. MINERAL RIGHTS (Continued)

Following the increase in copper price, the Group identified this to be indicator for reversal of impairment previously provided. The Group has recognised reversal of impairment on mineral rights amounting to US\$96,000,000 (2020: US\$27,000,000) for Ruashi CGU as its recoverable amount is higher than the carrying amount. The recoverable amount of the Ruashi CGU approximately US\$545,678,000 (2020: US\$409,715,000) as at 31 December 2021 was determined based on a value in use calculation. The discounted cash flow method was calculated based on a pre-tax discount rate of 27.3% (2020: 25.6%) and cash flow projection prepared from financial forecasts approved by the directors of the Company covering the expected mine life period until the end of mine life estimated based on proved and probable reserves. The aggregate copper reserves assumed in the projection is approximately 227,000 tonnes (2020: 243,000 tonnes) with an estimated mine life of approximately 7 years (2020: 8 years). The discount rate used reflects current market assessments of the time value of money and the risks specific to the CGU for which the estimates of future cash flows have not been adjusted. Other key assumptions for the calculation related to the estimation of cash inflows/outflows and long-term copper price of US\$7,100 (2020: US\$6,400) per tonne. There are no impairment or reversal of impairment recognised for other CGUs.

19. EXPLORATION AND EVALUATION ASSETS

		US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	146,161
Additions	添置	2,804
Transferred to property, plant and equipment	轉撥至物業、廠房及設備	(29,313)
At 31 December 2020	於二零二零年十二月三十一日	119,652
Additions	添置	1,668
At 31 December 2021	於二零二一年十二月三十一日	121,320

Exploration and evaluation assets represent the cost incurred for evaluating the technical feasibility and commercial viability of extracting mineral resources in the Group's exploration mines. When the area of interest are first tested for impairment and then reclassified to either mineral right or property, plant and equipment under heading of construction in progress. The management considers that the determination of commercial viability is still in progress at the end of the reporting period.

18. 礦產權(續)

隨著銅價格上升，本集團識別出此為撥回先前計提減值的指標。本集團就Ruashi現金產生單位確認礦產權減值撥回96,000,000美元(二零二零年：27,000,000美元)，乃由於其可收回金額高於賬面值。於二零二一年十二月三十一日，Ruashi現金產生單位的可收回金額約545,678,000美元(二零二零年：409,715,000美元)乃按使用價值計算釐定。貼現現金流量法乃基於除稅前貼現率27.3%(二零二零年：25.6%)計算，而現金流量估算乃按本公司董事於根據證實及概略儲量估計的礦山使用年期結束前批准的財務預測(涵蓋礦山的預期使用年期)編製。預測中假定的總銅儲量約為227,000噸(二零二零年：243,000噸)，預計礦山使用年期約為7年(二零二零年：8年)。所使用的貼現率反映了當前市場對貨幣時間價值及現金產生單位的特定風險的評估，乃由於尚未對未來現金流量的估計進行調整。計算的其他關鍵假設與現金流入/流出的估計及對長期銅價每噸7,100美元(二零二零年：6,400美元)有關。概無就其他現金產生單位確認減值或減值撥回。

19. 勘探及評估資產

勘探及評估資產指為評估在本集團勘探礦場內開採礦產資源之技術及商業可行性而產生之成本。當權益地區首先進行減值測試，之後重新分類至礦產權或在建工程下的物業、廠房及設備。管理層認為，於報告期末，仍在釐定其商業可行性。

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20. FINANCE LEASE RECEIVABLES

The Group has entered into a lease agreement with an independent third party (as lessee) for a 5-year term lease in respect of certain mining assets. The management considers it is a finance lease arrangement considering the lease term forms a major part of the economic life of the related mine. The total lease payment payable under the lease agreement is US\$6,200,000, payable in instalments over a two year period starting from the date of signing of the lease agreement. Interest rates implicit in the finance lease at 7.9%. In addition, the Group is entitled to a monthly royalty payment calculated based on the volume of copper ore extracted and sold from the mine which is not included in the measurement of the net investment in the lease. During the year ended 31 December 2021, the Group has recognised royalty income of US\$2,442,000 as other income (note 7).

20. 融資租賃應收款項

本集團已與一名獨立第三方(作為承租人)就若干採礦資產訂立一份為期5年的租賃協議。考慮到租賃期構成相關礦場經濟壽命的主要部分，管理層認為其屬融資租賃安排。租賃協議項下應付的租賃付款總額為6,200,000美元，應於簽署租賃協議之日起計兩年內分期支付。融資租賃的隱含利率為7.9%。此外，本集團亦將有權每月收取礦權使用費付款，有關費用乃根據自礦場開採及出售的銅礦量計算得出，不納入租賃投資淨額的計量。截至二零二一年十二月三十一日止年度，本集團已將2,442,000美元的礦權使用費收入確認為其他收入(附註7)。

		Minimum lease payments 最低租賃款項 US\$'000 千美元	Present value of minimum lease payments 最低租賃款項現值 US\$'000 千美元
Finance lease receivables comprise:	融資租賃應收款項包括：		
Within one year	一年內	2,911	2,825
Less: unearned finance income	減：未賺取融資收入	(86)	N/A 不適用
Present value of minimum lease payment receivables – current	應收最低租賃款項 – 流動	2,825	2,825

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21. OTHER NON-CURRENT ASSETS

21. 其他非流動資產

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Royalty prepayment to non-controlling shareholders of subsidiaries (Note a)	向附屬公司非控股股東預付礦權使用費(附註a)	11,602	13,013
Rehabilitation trust fund (Note b)	復修信託基金(附註b)	85	91
VAT recoverable, net of impairment	可收回增值稅，扣除減值	60,819	-
		72,506	13,104

Notes:

- (a) It represents an advance to the non-controlling shareholders of subsidiaries operating in the DRC. The directors anticipate that it will be recovered through royalties to be charged in the future.
- (b) Payments are made to rehabilitation trusts or investment accounts held by banking institutions with the intention of fully funding those liabilities as required by the governments for the mines that have been closed.

附註：

- (a) 指墊付予在剛果(金)開展業務之附屬公司的非控股股東之款項，董事預計日後將以收取礦權使用費之形式收回。
- (b) 向銀行機構持有之復修信託或投資賬戶支付款項，旨在按政府之規定全數撥付已關閉礦場之負債。

22. INVENTORIES

22. 存貨

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Consumable stores	易耗品	33,140	45,945
Work in progress	在製品	136,866	128,139
Final products	製成品	63,493	17,333
		233,499	191,417

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23. TRADE AND OTHER RECEIVABLES

23. 貿易及其他應收款項

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Financial assets at FVTPL	按公平值計入損益之金融資產		
Trade receivables under provisional pricing arrangements	臨時定價安排下之貿易應收款項	49,268	55,245
Financial assets at amortised cost	按攤銷成本計量之金融資產		
Other receivables	其他應收款項	7,962	8,354
Loan to a DRC state-owned power company	向剛果(金)國有電力公司提供貸款	1,374	–
		9,336	8,354
Non-financial assets	非金融資產		
Other receivables	其他應收款項	2,524	2,773
Prepayments	預付款項	13,218	6,712
VAT recoverable	可收回增值稅	–	54,982
		15,742	64,467
		74,346	128,066

The Group provided customers with a credit period ranging from 5 days to 30 days (2020: 5 days to 30 days). Before accepting new customers, the Group performs a credit assessment to assess the potential customers' credit limit and credit quality.

本集團向客戶提供介乎5日至30日(二零二零年：5日至30日)之信貸期。接納新客戶前，本集團開展信貸評估，以評估潛在客戶之信貸限額及信貸質素。

As at 31 December 2021, the amounts of trade receivables under provisional pricing arrangements had been adjusted for US\$7,695,000 (2020: US\$5,768,000), being the difference between the average LME commodity prices for the duration up to the date of final pricing and the quoted price on the date of recognition of revenue.

於二零二一年十二月三十一日，臨時定價安排下之貿易應收款項經調整7,695,000美元(二零二零年：5,768,000美元)，即截至最終訂價日為止之倫敦所商品平均價格與確認收益當日之報價間之差額。

As at 1 January 2020, the trade receivables under provisional pricing adjustments amounted to US\$73,763,000.

於二零二零年一月一日，臨時定價調整下之貿易應收款項為73,763,000美元。

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23. TRADE AND OTHER RECEIVABLES (Continued)

The Group seeks to maintain strict control over its outstanding receivables to minimise credit risk. Overdue balances are reviewed regularly by senior management.

The following is an ageing analysis of trade receivables presented based on invoice date at the end of the reporting period.

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within 3 months	三個月內	47,655	40,790
4 to 6 months	四至六個月	–	6,668
7 to 12 months	七至十二個月	–	4,112
Over 1 year	一年以上	1,613	3,675
		49,268	55,245

As at 31 December 2021, none of the trade receivables under provisional pricing arrangement (2020: US\$1,683,000) which was past due and was included in financial assets at FVTPL.

Details of impairment assessment on trade and other receivables are set out in note 36.

24. FINANCIAL ASSETS AT FVTPL

Financial assets at FVTPL represents the listed bonds which carry coupon at 3.1% to 3.15% per annum. Details of fair value measurements are set out in note 36.

25. BANK BALANCES AND CASH/BANK DEPOSITS WITH ORIGINAL MATURITY OVER THREE MONTHS

Bank balances comprising cash and short-term deposits with an original maturity of three months or less carried interest at prevailing market deposit rate. As at 31 December 2021, the effective interest rate of bank balances ranged from 0.001% to 3.00% (2020: 0.001% to 2.95%) per annum.

Bank deposits with original maturity over three months carry interest at market rate at 0.55% (2020: range from 0.85% to 0.96%) per annum.

23. 貿易及其他應收款項(續)

本集團力求對未結清應收款項維持嚴密監控，以將信貸風險降至最低。逾期結餘由高級管理層定期檢討。

以下為於報告期末根據發票日期呈列之貿易應收款項之賬齡分析。

於二零二一年十二月三十一日，概無臨時定價安排下之貿易應收款項已逾期並已計入按公平值計入損益之金融資產內(二零二零年：1,683,000美元)。

貿易及其他應收款項之減值評估詳情載於附註36。

24. 按公平值計入損益之金融資產

按公平值計入損益之金融資產指年化票面利率為3.1厘至3.15厘之上市債券。公平值計量之詳情載於附註36。

25. 銀行結餘及現金／原到期日超出三個月之銀行存款

銀行結餘包括現金及原到期日為三個月或以內並按現行市場存款利率計息之短期存款。於二零二一年十二月三十一日，銀行結餘之實際年利率介乎0.001厘至3.00厘(二零二零年：0.001厘至2.95厘)。

原到期日超出三個月之銀行存款按0.55厘(二零二零年：介乎0.85厘至0.96厘)之年市場利率計息。

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26. TRADE AND OTHER PAYABLES

26. 貿易及其他應付款項

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Financial liabilities at FVTPL	按公平值計入損益之金融負債		
Trade payables under provisional pricing arrangements	臨時定價安排下之貿易應付款項	39,577	28,864
Financial liabilities at amortised cost	按攤銷成本計量之金融負債		
Mining expenses payables	應付採礦支出	9,580	9,312
Construction cost payable	應付建造成本	17,715	8,519
Other payables	其他應付款項	3,108	637
		30,403	18,468
Non-financial liabilities	非金融負債		
Accrued royalty payment and other tax payable	應計礦權使用費及其他應付稅項	16,732	32,369
Provision for import duties and export clearing charges	進口稅及出口清關費之撥備	10,091	6,390
Others (Note)	其他(附註)	15,356	9,358
		42,179	48,117
		112,159	95,449

Note: Included accrual for freight charges, provision for unpaid related surcharge in the DRC and other general operation related payables.

附註：包括應計運費、未付剛果(金)相關附加費之撥備及其他一般營運相關應付款項。

The purchase contracts of commodity contain a clause of provisional pricing arrangements, where the quoted price on the date of recognition of purchase will be adjusted for the difference between the average LME future commodity prices for the duration up to the date of final pricing. As at 31 December 2021, the amounts of trade payables under provisional pricing arrangements had been adjusted for US\$7,764,000 (2020: US\$330,000), being the difference between the average LME commodity prices for the duration up to the date of final pricing and the quoted price on the date of recognition of inventories.

商品購買合約包含臨時定價安排條款，其中於確認購買日期的報價根據倫敦金所於截至最終定價日期止期限的期貨平均商品價格之間的差異予以調整。於二零二一年十二月三十一日，臨時定價安排下之貿易應付款項經調整7,764,000美元(二零二零年：330,000美元)，即截至最終訂價日為止之倫敦金所商品平均價格與確認庫存當日之報價間之差額。

The credit period on purchases of goods ranges from 0 to 90 days.

購買貨品之信貸期介乎0至90日不等。

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26. TRADE AND OTHER PAYABLES (Continued)

The following is an ageing analysis of trade payables based on the invoice date at the end of the reporting period.

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within 3 months	三個月內	38,127	26,843
4 to 6 months	四至六個月	340	287
7 to 12 months	七至十二個月	4	628
Over 1 year	一年以上	1,106	1,106
		39,577	28,864

27. AMOUNTS DUE FROM/TO A RELATED COMPANY, AN INTERMEDIATE HOLDING COMPANY, A FELLOW SUBSIDIARY AND A NON-CONTROLLING SHAREHOLDER OF A SUBSIDIARY

Amount due from a related company represented a company in which JCG holds more than 40% of its equity interest.

As at 31 December 2021, included in the amount due to an intermediate holding company is a loan amounting to US\$85,000,000 (2020: US\$115,000,000). The loan carries interest at floating interest rate of LIBOR plus 2.25% (2020: LIBOR plus 2.25%) per annum. The amount is unsecured and repayable on demand.

As at 31 December 2021, included in the amount due to a fellow subsidiary is a loan amounting to US\$5,000,000 (2020: US\$5,000,000). The loan carries interest at floating interest rate of LIBOR plus 2.25% (2020: LIBOR plus 2.25%) per annum. The amount is unsecured and repayable on demand.

The remaining amounts are unsecured, interest free and repayable on demand.

All the balances are non-trade in nature.

26. 貿易及其他應付款項(續)

以下為於報告期末根據發票日期呈列之貿易應付款項賬齡分析。

27. 應收／應付一間關聯公司、中間控股公司、同系附屬公司及附屬公司非控股股東之款項

應收一間關聯公司款項指應收金川持有40%以上股權公司的款項。

於二零二一年十二月三十一日，應付中間控股公司之款項中有一筆貸款85,000,000美元(二零二零年：115,000,000美元)。該貸款按倫敦銀行同業拆息加2.25厘(二零二零年：倫敦銀行同業拆息加2.25厘)之浮動年利率計息。該款項無抵押及須按要求償還。

於二零二一年十二月三十一日，應付同系附屬公司之款項中有一筆貸款5,000,000美元(二零二零年：5,000,000美元)。該貸款按倫敦銀行同業拆息加2.25厘(二零二零年：倫敦銀行同業拆息加2.25厘)之浮動年利率計息。該款項無抵押及須按要求償還。

剩餘款項為無抵押、免息並須按要求償還。

所有結餘均屬非貿易性質。

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28. BANK BORROWINGS

28. 銀行借款

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Unsecured term loans	無抵押定期貸款	249,657	209,736
Guaranteed	有擔保	166,363	96,332
Non-guaranteed	無擔保	83,294	113,404
		249,657	209,736

The Group's bank borrowings are repayable as follows:

本集團銀行借款之還款期如下：

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Within a period not exceeding one year	不超過一年	115,657	30,736
Within a period of more than one year but not exceeding two years	一年以上但不超過兩年	27,000	145,000
Within a period of more than two years but not exceeding five years	兩年以上但不超過五年	77,000	34,000
Within a period of more than five years	超過五年	30,000	-
		249,657	209,736
Less: Amount due within one year shown under current liabilities	減：列為流動負債之一年內到期款項	(115,657)	(30,736)
Amount due after one year shown as non-current liabilities	列為非流動負債之一年後到期款項	134,000	179,000

The Group is required to comply with certain financial covenants throughout the continuance of the relevant borrowings and/or as long as the borrowings are outstanding. The Group has complied with these covenants throughout the reporting period.

本集團須於相關借款的整個持續期間及／或借款尚未償還期間遵守若干財務契諾。本集團已於整個報告期間遵守該等契諾。

As at 31 December 2021, the Group's bank borrowings of US\$166,363,000 (2020: US\$96,332,000) are guaranteed by the ultimate holding company. As at 31 December 2021, the bank borrowings carried floating rate interest ranging from 6-month LIBOR plus 2.1% to 3.5% (2020: 6-month LIBOR plus 2.1% to 3.5%) per annum. The effective interest rate on the Group's borrowings ranged from 2.35% to 3.76% (2020: 2.36% to 3.76%) per annum.

於二零二一年十二月三十一日，本集團166,363,000美元(二零二零年：96,332,000美元)之銀行借款乃由最終控股公司提供擔保。於二零二一年十二月三十一日，銀行借款均為浮息，按六個月倫敦銀行同業拆息加2.1厘至3.5厘(二零二零年：六個月倫敦銀行同業拆息加2.1厘至3.5厘)之年利率計息。本集團借款之實際年利率介乎2.35厘至3.76厘(二零二零年：2.36厘至3.76厘)。

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29. DERIVATIVE FINANCIAL INSTRUMENTS

29. 衍生金融工具

		2021 二零二一年 US\$'000 千美元
Interest rate swap contracts under cash flow hedges	以現金流量對沖之利率掉期合約	
Current	流動	20
Non-current	非流動	258
		278

As at 31 December 2021, the Group had a number of interest rate swap contracts with the commercial banks to minimise its exposure to cash flow changes of its floating-rate United States dollars bank borrowings with principal amount of US\$149,000,000 from banks by swapping floating interest rates of 6-month LIBOR to fixed interest rates of 0.415% to 0.425%. The terms of these contracts were negotiated to match with those of the hedged bank borrowings with the same notional amounts to principal amounts of bank borrowings, currency and interest rate index. The directors of the Company consider that the interest rate swap contracts are highly effective hedging instruments and have designated them as cash flow hedging instruments for hedge accounting purpose.

The hedges were highly effective in hedging cash flow exposure to interest rate movements. Fair value change on hedging instruments in cash flow hedge of gain of US\$278,000 for the year ended 31 December 2021 have been recognised in other comprehensive income and accumulated in hedging reserve. The directors of the Company expected the accumulated sum is to be released to profit or loss at various dates in the coming maturity periods after the reporting period.

於二零二一年十二月三十一日，本集團與多間商業銀行訂立多項利率掉期合約，通過將六個月倫敦銀行同業拆息之浮動利率轉換為0.415厘至0.425厘的固定利率，將銀行之本金額為149,000,000美元之美元浮息銀行借款之現金流量變動風險降至最低。該等合約之條款經磋商後與對沖銀行借款之條款一致（即名義金額與銀行借款之本金額、幣別及利率指標均相同）。本公司董事認為利率掉期合約屬高效對沖工具，並根據對沖會計法指定該等工具為現金流量對沖工具。

就對沖利率波動之現金流量風險而言，對沖為高度有效。截至二零二一年十二月三十一日止年度，以現金流量對沖之對沖工具之公平值變動收益278,000美元已於其他全面收入內確認並累積於對沖儲備內。本公司董事預期累計總和將於報告期後未來到日期間之不同日期於損益內入賬。

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30. LEASE LIABILITIES

30. 租賃負債

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Lease liabilities are payable:	應付租賃負債：		
Within a period not exceeding one year	不超過一年	778	952
Within a period of more than one year but not exceeding two years	一年以上但不超過 兩年	716	366
Within a period of more than two years but not exceeding five years	兩年以上但不超過 五年	855	-
		2,349	1,318
Less: Amount due for settlement within 12 months shown under current liabilities	減：列為流動負債之 12個月內到期 結算款項	(778)	(952)
Amount due for settlement after 12 months shown under non-current liabilities	列為非流動負債之 12個月後到期 結算款項	1,571	366

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31. PROVISIONS

31. 撥備

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Long-term provisions	長期撥備		
Rehabilitation and environmental provision (Note a)	復修及環保撥備 (附註a)	24,155	30,221
Short-term provisions	短期撥備		
Termination benefits	離職福利	3,543	3,661
Rehabilitation and environmental provision (Note a)	復修及環保撥備 (附註a)	417	474
Leave pay and bonuses	休假薪酬及花紅	1,712	1,943
Provision for legal claim (Note b)	法律索償撥備 (附註b)	1,095	1,095
		6,767	7,173
Total provisions	撥備總額	30,922	37,394
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
At 1 January	於一月一日	37,394	40,056
Utilised during the year	年內動用	(9,644)	(5,198)
Provided during the year	年內撥備	3,172	2,536
At 31 December	於十二月三十一日	30,922	37,394

Notes:

(a) The Group is exposed to environmental liabilities relating to its mining operations. Estimates of the cost of environmental and other remedial work such as reclamation costs, close-down and restoration and pollution control are made on an annual basis, based on the estimated lives of the mines.

Rehabilitation and environmental provisions classified as short-term represents the amount estimated to be settled within one year at the end of the reporting period.

(b) The Group has dealt with the remaining lawsuits and arbitrations that arise in the ordinary course of business.

The legal cases are reviewed on a regular basis and as at 31 December 2021 and 2020, provisions for legal cases were provided where feasible estimate can be made of the potential financial impact on the Group.

附註：

(a) 本集團承擔與其採礦業務有關之環保負債。環保及其他補救工程(如復墾、閉井及復修以及污染防治)之成本乃根據礦場之估計開採期每年作出估計。

分類為短期之復修及環保撥備指於報告期末估計將於一年內結清之款項。

(b) 本集團已處理餘下的於日常業務過程中發生的現有訴訟及仲裁。

該等法律案件乃定期審議，並於二零二一年及二零二零年十二月三十一日在可行情況下估計其對本集團之潛在財務影響而作出法律案件撥備。

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32. DEFERRED TAXATION

For the purpose of presentation in the consolidated statement of financial position, deferred tax liabilities and assets have been offset. The followings are the major deferred taxation recognised and movements thereon during the current and prior years:

		Property, plant and equipment, mineral rights and exploration and evaluation assets 物業、廠房 及設備、 礦產權以及 勘探及 評估資產 US\$'000 千美元	Other provisions 其他撥備 US\$'000 千美元	Foreign exchange difference arising from intra-group activities 集團內公司間 活動之 匯兌差額 US\$'000 千美元	Tax losses 稅項虧損 US\$'000 千美元	Others 其他 US\$'000 千美元 (Note) (附註)	Total 總計 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	270,127	(5,079)	13,945	(8,246)	(1,942)	268,805
Charge (credit) to profit or loss (note 12)	於損益扣除(計入損益) (附註12)	4,488	(80)	(3,490)	(6,967)	320	(5,729)
At 31 December 2020	於二零二零年十二月三十一日	274,615	(5,159)	10,455	(15,213)	(1,622)	263,076
Charge (credit) to profit or loss (note 12)	於損益扣除(計入損益) (附註12)	32,710	(2,636)	29,118	3,430	-	62,622
At 31 December 2021	於二零二一年十二月三十一日	307,325	(7,795)	39,573	(11,783)	(1,622)	325,698

Note: Others include tax deduction on qualified capital expenditures and others.

As at 31 December 2021, the Group has unused tax losses of US\$42,602,000 (2020: US\$74,904,000). A deferred tax asset has been recognised in respect of US\$39,482,000 (2020: US\$50,710,000) of such losses. No deferred tax asset has been recognised in respect of the remaining US\$3,120,000 (2020: US\$24,194,000) due to the unpredictability of future profit streams. The tax losses may be carried forward indefinitely, except for the tax losses of subsidiaries in Zambia are available to be carried forward up to a maximum of ten years from the year in which they are incurred subject to regulations in Zambia. As at 31 December 2020, the unrecognized tax losses from subsidiaries in Zambia, amounted to US\$21,743,000, was forfeited during the year ended 31 December 2021.

32. 遞延稅項

就呈列綜合財務狀況表而言，遞延稅項負債及資產已作對銷。以下為於本年度及過往年度內確認之主要遞延稅項及其變動：

		Property, plant and equipment, mineral rights and exploration and evaluation assets 物業、廠房 及設備、 礦產權以及 勘探及 評估資產 US\$'000 千美元	Other provisions 其他撥備 US\$'000 千美元	Foreign exchange difference arising from intra-group activities 集團內公司間 活動之 匯兌差額 US\$'000 千美元	Tax losses 稅項虧損 US\$'000 千美元	Others 其他 US\$'000 千美元 (Note) (附註)	Total 總計 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	270,127	(5,079)	13,945	(8,246)	(1,942)	268,805
Charge (credit) to profit or loss (note 12)	於損益扣除(計入損益) (附註12)	4,488	(80)	(3,490)	(6,967)	320	(5,729)
At 31 December 2020	於二零二零年十二月三十一日	274,615	(5,159)	10,455	(15,213)	(1,622)	263,076
Charge (credit) to profit or loss (note 12)	於損益扣除(計入損益) (附註12)	32,710	(2,636)	29,118	3,430	-	62,622
At 31 December 2021	於二零二一年十二月三十一日	307,325	(7,795)	39,573	(11,783)	(1,622)	325,698

附註：其他包括合資格資本開支及其他項目之減稅。

於二零二一年十二月三十一日，本集團有未動用稅項虧損42,602,000美元(二零二零年：74,904,000美元)。已就相關虧損39,482,000美元(二零二零年：50,710,000美元)確認遞延稅項資產。因未來溢利流不可預測，並無就餘下3,120,000美元(二零二零年：24,194,000美元)確認遞延稅項資產。除位於贊比亞的附屬公司在贊比亞有關規定的規限下，稅項虧損自其產生年度起可結轉最多十年外，稅項虧損可無限期結轉。於二零二零年十二月三十一日，贊比亞附屬公司未確認的稅項虧損為21,743,000美元，於二零二一年十二月三十一日止年度予以沒收。

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33. SHARE CAPITAL

33. 股本

		Number of shares 股份數目	Amount 金額 HK\$'000 千港元
Ordinary shares of HK\$0.01 each	每股面值0.01港元之普通股		
Authorised:	法定：		
At 1 January 2020, 31 December 2020 and 31 December 2021	於二零二零年一月一日、 二零二零年十二月三十一日及 二零二一年十二月三十一日	20,000,000,000	200,000
Issued and fully paid:	已發行及繳足：		
At 1 January 2020, 31 December 2020 and 31 December 2021	於二零二零年一月一日、 二零二零年十二月三十一日及 二零二一年十二月三十一日	12,609,873,051	126,099

Shown in the consolidated financial statements as:

於綜合財務報表中列為：

		Amount 金額 US\$'000 千美元
At 1 January 2020, 31 December 2020 and 31 December 2021	於二零二零年一月一日、 二零二零年十二月三十一日及 二零二一年十二月三十一日	16,166

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34. SHARE OPTION SCHEME

A share option scheme of the Company (the “**2019 Share Option Scheme**”) was approved and adopted by the shareholders of the Company at the extraordinary general meeting held on 19 June 2019. The purpose of the 2019 Share Option Scheme is to provide incentives and reward to eligible participants for their contribution to, and continuing efforts to promote the interests of, the Group and for such other purposes as the board of directors may approve from time to time. Eligible participants of the 2019 Share Option Scheme include any director (whether executive or non-executive, including any independent non-executive director) or employee (whether full time or part time) of the Group. The 2019 Share Option Scheme, unless otherwise terminated or amended, will remain in force for a period of 10 years from 19 June 2019. Further details of the 2019 Share Option Scheme are set out in the Company’s circular dated 30 May 2019.

The maximum number of shares which may be issued upon exercise of all options to be granted under the 2019 Share Option Scheme, any other new share option scheme and existing scheme of the Company shall not, in aggregate, exceed 10% of the ordinary shares in issue as at the adoption of the 2019 Share Option Scheme or any other new share option scheme of the Company. The Company may seek approval of its shareholders in a general meeting to refresh the 10% limit under the 2019 Share Option Scheme. The total number of shares issued and to be issued upon exercise of the share options granted under the 2019 Share Option Scheme and any other share option scheme of the Group (including both exercised and outstanding options) to each participant in any 12-month period up to the date of grant shall not exceed 1% of the ordinary shares in issue at the date of grant. Any further grant of share options in excess of this limit is subject to shareholders’ approval in a general meeting of the Company.

34. 購股權計劃

本公司股東在二零一九年六月十九日舉行之股東特別大會上已批准及採納本公司購股權計劃（「**二零一九年購股權計劃**」）。二零一九年購股權計劃旨在就合資格參與者對提升本集團利益所作之貢獻及持續努力以及對董事會不時批准之其他目的向合資格參與者提供激勵及獎勵。二零一九年購股權計劃之合資格參與者包括本集團之任何董事（不論是執行董事或非執行董事，包括任何獨立非執行董事）或僱員（不論全職或兼職）。除非以其他方式予以終止或修訂，否則二零一九年購股權計劃將由二零一九年六月十九日起計十年內維持生效。二零一九年購股權計劃之進一步詳情載於本公司日期為二零一九年五月三十日之通函。

根據二零一九年購股權計劃、本公司任何其他新購股權計劃及現有計劃將予授出之所有購股權獲行使時可予發行之最高股份數目，合共不得超過採納二零一九年購股權計劃或本公司任何其他新購股權計劃時已發行普通股之10%。本公司可於股東大會上尋求其股東批准更新二零一九年購股權計劃之10%上限。於截至授出日期止任何十二個月期間，根據二零一九年購股權計劃及本集團任何其他購股權計劃向各參與者授出之購股權（包括已行使及尚未行使之購股權）獲行使而已發行及將予發行之股份總數，不得超過本公司於授出日期已發行普通股之1%。進一步授出任何超出此上限之購股權均須由股東在本公司股東大會上批准，方為有效。

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34. SHARE OPTION SCHEME (Continued)

Any share option granted under the 2019 Share Option Scheme to a substantial shareholder (as defined in the Listing Rules) or an independent non-executive director (or any of their respective associates) of the Company, in excess of 0.1% of the ordinary shares of the Company in issue at the date of grant and with an aggregate value (based on the closing price of the Company's shares as quoted on the Stock Exchange at the date of each grant) in excess of HK\$5 million, within any 12-month period up to and including the date of such grant, are subject to recommendation from the independent non-executive directors of the Company (excluding any independent non-executive director who is also the grantee of the options) and shareholders' approval in a general meeting of the Company.

A share option may be accepted by a participant within 14 days from the date of the offer for grant of the option. The exercise period of the share options granted is determinable by the directors in accordance with the terms of the 2019 Share Option Scheme, and commences from the date of acceptance of the offer of grant of the share options and ends on a date which is not later than 10 years from the date of grant of the share options. At the date of offer of the option, the directors of the Company may specify any conditions which must be satisfied before any option may be exercised.

The exercise price of the share options is determinable by the directors of the Company, but must not be less than the highest of (i) the closing price of the Company's shares as stated in the Stock Exchange's daily quotation sheet on the date of the offer for grant, which must be a business day; (ii) the average closing price of the Company's shares as stated in the Stock Exchange's daily quotation sheets for the five business days immediately preceding the date of the offer of the grant; and (iii) the nominal value of the ordinary share.

Share options do not confer rights on the holders to dividends or to vote at shareholders' meetings.

No options were granted or exercised under the 2019 Share Option Scheme during the years ended 31 December 2021 and 2020. The Company had no share option outstanding as at 31 December 2021 and 31 December 2020.

34. 購股權計劃(續)

倘於截至授出日期(包括該日)止任何十二個月期間，根據二零一九年購股權計劃向本公司主要股東(定義見上市規則)或獨立非執行董事(或彼等各自的任何聯繫人)授出之購股權超出本公司於授出日期已發行普通股之0.1%，及其總值(按各授出日期聯交所報本公司股份之收市價計算)超出5百萬港元，則須獲本公司獨立非執行董事(同時身為購股權承授人之任何獨立非執行董事除外)之推薦建議及股東於本公司股東大會上批准，方可作實。

參與者可於提呈授出購股權要約日期起計十四日內接納購股權。所授出購股權之行使期由董事根據二零一九年購股權計劃之條款釐定，及由接納授出購股權要約日期起至授出購股權日期起計不超過十年之日止。於授出購股權要約當日，本公司董事可能指定於行使任何購股權前必須達成的任何條件。

購股權行使價由本公司董事釐定，但不得低於下列三者之最高者：(i)本公司股份於提呈授出日期(須為營業日)在聯交所每日報價表內所示之收市價；(ii)本公司股份於緊接提呈授出日期前五個營業日在聯交所每日報價表內所示之平均收市價；及(iii)普通股面值。

購股權並無賦予持有人收取股息或在股東大會上投票之權利。

於截至二零二一年及二零二零年十二月三十一日止年度，概無購股權根據二零一九年購股權計劃獲授出或行使。於二零二一年十二月三十一日及二零二零年十二月三十一日，本公司亦無購股權尚未獲行使。

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35. PERPETUAL SUBORDINATED CONVERTIBLE SECURITIES

On 14 November 2013, the Company issued the Convertible Securities with an aggregate principal amount of US\$1,085,400,000, being part of consideration for the Combination. The fair value of the Convertible Securities, which was determined based on a valuation carried out by Asset Appraisal Limited, an independent valuer not connected with the Group, on the date of completion of the Combination amounted to US\$1,089,084,000.

The Convertible Securities are convertible into a maximum of 8,466,120,000 ordinary shares of the Company at an initial conversion price of HK\$1 per share, subject to anti-dilutive adjustments. On or at any time after three years after the date of issue of the Convertible Securities, the Company may, at its sole discretion, elect to convert the Convertible Securities in whole or in part into ordinary shares of the Company. At any time when a holder of the Convertible Securities is not a connected person of the Company, a principal amount of the Convertible Securities which upon conversion will result in the holder holding in aggregate under 10% of the issued share capital of the Company shall be automatically converted into ordinary shares of the Company.

The Convertible Securities shall not bear any distribution for the first three years from the issue date but shall bear distribution at 0.1% of the principal amount per annum thereafter payable annually in arrears on 31 December each year and can be deferred indefinitely at the discretion of the Company. The Convertible Securities have no fixed maturity and are redeemable at the Company's option at their principal amounts together with any accrued, unpaid or deferred distributions. While any distributions are unpaid or deferred, the Company may not, inter alia, declare or pay any dividends or distribution on any ordinary shares of the Company or redeem or buy-back any ordinary shares of the Company, for so long as any distributions which are due and payable have not yet been paid in full.

During 2018, various investors including Jinchuan (BVI) Limited ("Jinchuan BVI"), an indirect wholly-owned subsidiary of JCG, which in turn is the controlling shareholder of the Company, exercised the conversion of the Convertible Securities in an aggregate principal amount of US\$996,938,000 into ordinary shares at the conversion price of HK\$1 per share ("Conversion").

35. 永久次級可換股證券

於二零一三年十一月十四日，本公司發行本金總額為1,085,400,000美元之可換股證券，作為合併之部分代價。可換股證券之公平值(按完成合併當日與本集團並無關連之獨立估值師中誠達資產評估顧問有限公司進行之估值釐定)為1,089,084,000美元。

可換股證券可按初始轉換價每股1港元轉換為最多8,466,120,000股本公司普通股(須作出反攤薄調整)。於可換股證券之發行日期後三年屆滿或其後任何時間，本公司可全權酌情選擇將可換股證券全部或部分轉換為本公司普通股。於任何時間，倘可換股證券持有人並非本公司關連人士，而轉換後可換股證券之本金額將導致該持有人合共持有本公司已發行股本10%以下，則該本金額將自動轉換為本公司普通股。

可換股證券自發行日期起首三年內不附帶任何分派，惟其後每年按本金額之0.1%計算分派，並於每年十二月三十一日按年累計支付，而本公司可酌情選擇延期分派。可換股證券並無固定期限，本公司可選擇按其本金額另加應計、未付或延遲之分派贖回可換股證券。倘任何分派尚未或延期支付，則只要任何到期應付之分派尚未獲全數支付，本公司將不可(其中包括)就本公司之任何普通股宣派或派付任何股息或分派，亦不可贖回或購回本公司任何普通股。

於二零一八年，多名投資者(包括本公司之控股股東金川集團之間接全資附屬公司金川(BVI)有限公司(「金川BVI」))按換股價每股股份1港元將本金總額為996,938,000美元之可換股證券轉換為普通股(「該轉換」)。

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35. PERPETUAL SUBORDINATED CONVERTIBLE SECURITIES (Continued)

As a result of the Conversion and pursuant to the terms of the Convertible Securities, on 6 June 2018, the Company allotted and issued a total of 7,776,120,000 ordinary shares to the investors including Jinchuan BVI, representing approximately 61.66% of the number of issued shares as enlarged by the aforesaid allotment and issue of ordinary shares. These ordinary shares ranked rank pari passu with all the existing shares at the date of allotment and among themselves in all respects. The aggregate outstanding principal amount of the Convertible Securities has been reduced to US\$88,462,000 immediately after the Conversion. The issued share capital of the Company has been increased to 12,609,873,051 shares upon abovementioned allotment and issue of the ordinary shares.

Movement of Convertible Securities:

35. 永久次級可換股證券(續)

由於進行該轉換，根據可換股證券之條款，本公司於二零一八年六月六日向包括金川BVI在內之投資者配發及發行合共7,776,120,000股普通股，佔經配發及發行上述普通股所擴大之已發行股份數目約61.66%。該等普通股在所有方面與於配發日期之所有現有股份及彼此之間享有同等地位。緊隨該轉換後，可換股證券之尚未償還本金總額已減少至88,462,000美元。經配發及發行上述普通股後，本公司之已發行股本已增加至12,609,873,051股股份。

可換股證券之變動：

		Number of Convertible Securities 可換股證券數目	Convertible Securities US\$'000 千美元
As at 1 January 2020, 31 December 2020 and 31 December 2021	於二零二零年一月一日、 二零二零年十二月三十一日及 二零二一年十二月三十一日	690,000,000	88,462

36. FINANCIAL INSTRUMENTS

Capital risk management

The Group manages its capital to maintain a balance between continuity of cash flows from operating activities and the flexibility through the use of borrowings. The Group also monitors the current and expected liquidity requirements and its compliance with lending covenants regularly to ensure that sufficient working capital and adequate committed lines of funding are maintained to meet its liquidity requirements. The Group's overall strategy remains unchanged from prior years.

The capital structure of the Group consists of net debts, which include the borrowings disclosed in note 28 and amounts due to an intermediate holding company, a fellow subsidiary and a non-controlling shareholder of a subsidiary disclosed in note 27, net of bank balances and cash; and equity attributable to owners of the Company and non-controlling interests, comprising issued share capital and reserves.

36. 金融工具

資本風險管理

本集團的資本管理目標乃透過使用借款在經營業務所得現金流量之持續性與靈活性之間保持平衡。本集團亦定期監察目前及預期待期之流動資金需要及其遵守借貸契諾的情況，確保維持充裕的營運資金及足夠的承諾信貸額度，以應付其流動資金所需。本集團之整體策略與過往年度維持不變。

本集團資本結構包括債務淨額(包括附註28披露之借款及附註27披露應付中間控股公司、同系附屬公司及附屬公司非控股股東款項，扣除銀行結餘及現金)；及本公司擁有人應佔權益及非控股權益(包括已發行股本及儲備)。

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36. FINANCIAL INSTRUMENTS (Continued)

Capital risk management (Continued)

The management reviews the capital structure on a regular basis. As part of this review, the management considers the costs of capital and the risks associated with each class of capital, and will balance its overall capital structure through the issue of new debt or the redemption of existing debt.

Categories of financial instruments

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
<i>Financial assets</i>	<i>金融資產</i>		
Amortised cost	攤銷成本	225,116	116,685
FVTPL	按公平值計入損益	52,246	55,245
Derivative financial instruments	衍生金融工具	278	-
<i>Financial liabilities</i>	<i>金融負債</i>		
Amortised cost	攤銷成本	388,366	365,117
FVTPL	按公平值計入損益	39,577	28,864

Financial risk management objectives and policies

The Group's major financial instruments include trade and other receivables, financial assets at FVTPL, amount due from a related company, bank deposits with original maturity over three months, bank balances and cash, trade and other payables, amounts due to an intermediate holding company/a fellow subsidiary/a non-controlling shareholder of a subsidiary, bank borrowings and derivative financial instruments. Details of the financial instruments are disclosed in respective notes. The risks associated with these financial instruments include market risk (currency risk, interest rate risk and commodity price risk), credit risk and liquidity risk. The policies on how to mitigate these risks are set out below. The management manages and monitors these exposures to ensure appropriate measures are implemented on a timely and effective manner.

36. 金融工具(續)

資本風險管理(續)

管理層定期檢討資本結構。作為此項檢討之一環，管理層考慮資本成本及各類資本的相關風險，並透過發行新債或贖回現有債務調整本集團之整體資本結構。

金融工具類別

財務風險管理目標及政策

本集團之主要金融工具包括貿易及其他應收款項、按公平值計入損益之金融資產、應收一間關聯公司款項、原到期日超出三個月之銀行存款、銀行結餘及現金、貿易及其他應付款項、應付中間控股公司/同系附屬公司/附屬公司非控股股東款項、銀行借款及衍生金融工具。金融工具之詳情於相關附註披露。此等金融工具之相關風險包括市場風險(貨幣風險、利率風險及商品價格風險)、信貸風險及流動資金風險。降低此等風險之政策載於下文。管理層負責管理及監察此等風險，以確保及時有效地執行適當的措施。

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk

Currency risk

The carrying amounts of the Group's monetary assets denominated in foreign currencies, i.e. currencies other than the functional currency of the respective group entities, which mainly represent trade and other receivables and bank balances and cash at the end of the reporting period are as follows:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
ZAR	南非蘭特	2,201	1,731
HK\$	港元	528	714
Zambian Kwacha ("ZMW")	贊比亞克瓦查	18	251
Congo Franc ("CDF")	剛果法郎	60,918	55,052

The Group manages its foreign currency risk by closely monitoring the movements of foreign currency exchange rates. The Group currently has not entered into any foreign currency forward contracts to hedge against foreign currency risk.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險

貨幣風險

於報告期末，本集團以外幣(即各集團實體功能貨幣以外之貨幣)計值之貨幣資產(主要為貿易及其他應收款項以及銀行結餘及現金)之賬面值如下：

本集團透過密切監察外幣匯率變動情況管理其外幣風險。本集團現時並無訂立任何遠期外匯合約以對沖外幣風險。

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk (Continued)

Currency risk (Continued)

Sensitivity analysis

The Group is mainly exposed to fluctuation against foreign currency of ZAR, ZMW and CDF relative to US\$. Under the linked exchange rate system, the financial impact on foreign exchange difference between HK\$ and US\$ is expected to be immaterial and therefore no sensitivity analysis has been prepared. The following table details the Group's sensitivity to a 5% increase in functional currency against the relevant foreign currencies. 5% represents management's assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the end of the reporting period for a 5% change in foreign currency rates. A positive number below indicates an increase in profit for the year where foreign currency of each group entity strengthens 5% against the relevant functional currency.

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
ZAR	南非蘭特	79	62
ZMW	贊比亞克瓦查	1	9
CDF	剛果法郎	2,132	1,927

For a 5% weakening of foreign currency of each group entity against the relevant functional currency, there would be an equal and opposite impact on the profit.

In the opinion of directors of the Company, the sensitivity analysis is unrepresentative of inherent foreign exchange risk as the year end exposure does not reflect the exposure during the year.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險(續)

貨幣風險(續)

敏感度分析

本集團主要承受南非蘭特、贊比亞克瓦查及剛果法郎兌美元之匯率波動風險。基於聯匯制度，港元與美元匯差之財務影響預期並不重大，故並無編製敏感度分析。下表詳述本集團對於功能貨幣兌有關外幣升值5%之敏感度。5%為管理層對匯率合理可能變動所作之評估。敏感度分析僅包括以外幣計值之未兌換貨幣項目，並於報告期末就5%之匯率變動作出換算調整。以下之正數說明倘各集團實體之外幣貨幣兌有關功能貨幣升值5%，年內溢利將增加。

倘各集團實體之外幣兌有關功能貨幣貶值5%，則會對年內溢利帶來等額但相反之影響。

本公司董事認為，敏感度分析不足以代表固有之外匯風險，原因是年末之風險敞口並不反映年內所承擔之風險敞口。

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate risk

The Group is exposed to cash flow interest rate risk in relation to borrowings with reference to LIBOR.

The Group's cash flow interest rate risk relates primarily to variable rate borrowings and amount due to an intermediate holding company and a fellow subsidiary. The use of financial derivatives is governed by the Group's policies approved by the board of directors, which provide written principles on interest rate risk and the use of financial derivatives. The Group uses interest rate swap contracts to hedge interest rate risk for certain bank borrowings carrying interest rate at floating rate in order to achieve the appropriate mix in accordance with the Group's risk management policy. Hedging activities are evaluated regularly to align with interest rate views and defined risk appetite; ensuring the most cost-effective hedging strategies are applied.

The Group's cash flow interest rate risk is mainly concentrated on the fluctuation of LIBOR arising from the Group's US\$ denominated borrowings. Interest rate swap contracts are designated as effective hedging instruments and hedge accounting is used (see note 29 for details). Under interest rate swap contracts, the Group agrees to exchange the difference between fixed and floating rate interest amounts calculated on agreed notional principal amounts. Such contracts enable the Group to mitigate the risk of changing interest rates and the cash flows exposures. As the critical terms of the interest rate swap contracts and their corresponding hedged items are the same, the Group performs a qualitative assessment of effectiveness and it is expected that the value of the interest rate swap contracts and the value of the corresponding hedged items will systematically change in opposite direction in response to movements in the underlying interest rates. The main source of hedge ineffectiveness in these hedge relationships is the effect of the counterparty and the Group's own credit risk on the fair value of the interest rate swap contracts, which is not reflected in the fair value of the hedged item attributable to the change in interest rates. No other sources of ineffectiveness emerged from these hedging relationships.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險(續)

利率風險

本集團承受借款(參照倫敦銀行同業拆息計息)之現金流量利率風險。

本集團的現金流利率風險主要有關浮動利率的借款和應付一家中間控股公司及一家同系附屬公司之款項。衍生金融工具的使用受本集團董事會所批准之政策所規管，該等政策提供有關利率風險及衍生金融工具之使用之書面準則。為了按照本集團的風險管理政策達致適當風險組合，本集團就浮動利率計息的若干銀行借款運用利率掉期合約以對沖利率風險。本集團定期評估對沖活動以符合利率的展望及既定風險偏好，確保採用最為成本有效的對沖策略。

本集團的現金流利率風險主要集中於本集團以美元計價之借款產生之有關倫敦銀行同業拆息之波動。利率掉期合約乃指定為有效之對沖工具，並已使用對沖會計法(詳情見附註29)。根據利率掉期合約，本集團同意交換固定與浮動利率(按協定名義本金額計算)的差額。該等合約可令本公司減少利率變動風險及現金流量風險。由於利率掉期合約的主要條款與其相應的對沖項目相同，因此本集團對有效性進行定性評估，並預期利率掉期合約價值及相應對沖項目的價值將因相關利率變動而系統性地反向變動。該等對沖關係中對沖無效的主要來源為交易對方及本集團自身之信貸風險對利率掉期合約公平值之影響，而該影響並未反映於受利率變動影響之對沖項目公平值。該等對沖關係概無浮現其他無效對沖來源。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate risk (Continued)

All interest rate swap contracts exchanging floating rate interest amounts for fixed rate interest amounts are designated as cash flow hedges to reduce the Group's cash flow exposure resulting from variable interest rates on bank borrowings. The interest rate swap and the interest payments on the loan occur simultaneously and the amount accumulated in equity is reclassified to profit or loss over the period that the floating rate interest payments on debt affect profit or loss.

The Group's bank balances have exposure to cash flow interest rate risk due to the fluctuation of the prevailing market interest rate on bank balances. The directors of the Company consider that the Group's exposure of the short-term bank deposits to interest rate risk is not significant as interest bearing bank balances are with short maturity period.

Sensitivity analysis

The sensitivity analysis has been determined based on the exposure to interest rates for floating-rate interest bearing borrowings. The analysis is prepared assuming those balances outstanding at the end of the reporting period were outstanding for the whole year. A 50 basis point increase or decrease which represents the management's assessment of the reasonably possible change in interest rates is used.

If the interest rate on bank borrowings (excluding bank borrowings under cash flow hedges of US\$149,000,000) and amount due to an intermediate holding company and a fellow subsidiary carried at floating rate had been 50 basis points higher/lower and all other variables were held constant, the profit for the year ended 31 December 2021 would have decreased/increased by US\$727,000 (2020: US\$1,154,000).

In the opinion of directors of the Company, the sensitivity analysis is unrepresentative of inherent interest rate risk as the year end exposure does not reflect the exposure during the year.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險(續)

利率風險(續)

以浮息款項交換定息款項的利率掉期合約，一律列為現金流對沖，以減少本集團因銀行借款的可變利率而面臨的現金流量風險。利率掉期及貸款的利息付款同時發生，權益內所累計的金額，在債務浮息付款影響損益的期間重新分類至損益。

本集團之銀行結餘承受因銀行結餘之現行市場利率波動而產生的現金流量利率風險。本公司董事認為，本集團短期銀行存款之利率風險敞口並不重大，原因是計息銀行結餘之到期時間較短。

敏感度分析

敏感度分析乃基於浮息借款的利率風險敞口釐定。編製該項分析時，假設於報告期末之未償還結餘於整個年度概未償還。分析採用50個基點之增減，代表管理層對利率合理可能變動所作出之評估。

倘按浮息計算之銀行借款(不包括於現金流對沖項下之149,000,000美元的銀行借款)以及應付中間控股公司及同系附屬公司款項之利率增加/減少50個基點，而所有其他變量保持不變，則截至二零二一年十二月三十一日止年度之溢利應減少/增加727,000美元(二零二零年：1,154,000美元)。

本公司董事認為，敏感度分析不足以代表固有之利率風險，原因是年末之風險敞口並不反映年內所承擔之風險敞口。

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate risk (Continued)

Interest rate benchmark reform

A fundamental reform of major interest rate benchmarks is being undertaken globally, including the replacement of some interbank offered rate with alternative nearly risk-free rates. As set out in notes 28 and 29, several of the Group's LIBOR-linked bank borrowings and derivative instruments, amount due to an intermediate holding company and amount due to a fellow subsidiary will be subject to the interest rate benchmark reform. The Group is closely monitoring the transition to new benchmark interest rate.

Risks arising from the interest rate benchmark reform arising from the transition

(i) Interest rate related risks

For contracts which have not been transitioned to the relevant alternative benchmark rates and without detailed fallback clauses, if the bilateral negotiations with the Group's counterparties are not successfully concluded before the cessation of LIBOR, there are significant uncertainties with regard to the interest rate that would apply. This gives rise to additional interest rate risk that was not anticipated when the contracts were entered into. There are fundamental differences between IBORs and the various alternative benchmark rates. IBORs are forward-looking term rates published for a period (e.g. 3 months) at the beginning of that period and include an inter-bank credit spread, whereas alternative benchmark rates are typically risk-free overnight rates published at the end of the overnight period with no embedded credit spread. These differences will result in additional uncertainty regarding floating rate interest payments.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險(續)

利率風險(續)

利率基準改革

全球各地正在進行主要銀行利率基準的基本改革，包括以其他近似無風險利率取代部分銀行同業拆息。如附註28及29所載，本集團若干倫敦銀行同業拆息掛鈎銀行借款及衍生工具、應付中間控股公司款項及應付同系附屬公司款項將受限於利率基準改革。本集團正在密切監控新基準利率的過渡。

因過渡產生的利率基準改革風險

(i) 利率相關風險

對於尚未過渡到相關替代基準利率且並無詳細後備方案條款的合約，倘於倫敦銀行同業拆息停止發佈前，未能在與本集團交易對手之間的雙邊磋商中達成共識，適用利率則可能存在重大不確定性。這會產生訂立合約時未預料到的額外利率風險。倫敦銀行同業拆息與各種替代基準利率之間存在根本差異。倫敦銀行同業拆息為就一段時間(例如3個月)開始時公佈的前瞻性期限利率，包括銀行間信貸息差，而替代基準利率通常是在隔夜期結束時公佈的無風險隔夜利率，並無嵌入信貸息差。該等差異可導致有關浮息利率付款的更多不確定性。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Market risk (Continued)

Interest rate risk (Continued)

Interest rate benchmark reform (Continued)

Risks arising from the interest rate benchmark reform arising from the transition (Continued)

(ii) Liquidity risk

The additional uncertainty on various alternative rates which are typically published on overnight basis will require additional liquidity management. The Group's liquidity risk management policy has been updated to ensure sufficient liquid resources to accommodate unexpected increases in overnight rates.

(iii) Litigation risk

The Group has not reached an agreement to implement the interest rate benchmark reform on contracts which have not been transitioned to the relevant alternative benchmark rates (e.g. arising from differing interpretation of existing fallback terms), and there is a risk of prolonged disputes with counterparties which could give rise to additional legal and other costs. The Group is working closely with all counterparties to avoid this from occurring.

(iv) Interest rate basis risk

Interest rate basis risk may arise if a non-derivative instrument and the derivative instrument held to manage the interest risk on the non-derivative instrument transition to alternative benchmark rates at different times. This risk may also arise where back-to-back derivatives transition at different times. The Group will monitor this risk against its risk management policy which has been updated to allow for temporary mismatches of up to 12 months and transact additional basis interest rate swaps if required.

36. 金融工具(續)

財務風險管理目標及政策(續)

市場風險(續)

利率風險(續)

利率基準改革(續)

因過渡產生的利率基準改革風險(續)

(ii) 流動資金風險

通常按隔夜基準公佈的各種替代利率的額外不確定性將需要額外的流動資金管理。本集團的流動資金風險管理政策已更新，以確保有足夠的流動資金資源以應對隔夜利率的意外上漲。

(iii) 訴訟風險

本集團尚未達成協議以就尚未過渡至相關替代基準利率的合約實施利率基準改革(例如，由於對現有後備方案條款的不同詮釋)，及與交易對手發生長期糾紛的風險可能導致額外的法律和其他成本。本集團正與所有交易對手密切合作，以避免這種情況發生。

(iv) 利率基準風險

非衍生工具及就管理非衍生工具的利息風險而持有的衍生工具在不同時間過渡到替代基準利率可能出現利率基準風險。背對背衍生品在不同時間過渡時也可能出現該種風險。本集團將根據其風險管理政策監控此風險，相關政策已更新以允許最長12個月的臨時錯配，並在需要時進行額外的基準利率掉期交易。

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綜合財務報表附註

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截至二零二一年十二月三十一日止年度

36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Progress towards implementation of alternative benchmark interest rates

As part of the Group's risk management for transition, new contracts entered into by the Group are linked to the relevant alternative benchmark rates or interest rates which are not subject to reform to the extent feasible. Otherwise, the Group ensured the relevant contracts include detailed fallback clauses clearly referencing the alternative benchmark rate and the specific triggering event on which the clause is activated.

The Group is planning to transition the LIBOR-linked bank loan contracts and the related interest rate swap contracts, amount due to an intermediate holding company and amount due to a fellow subsidiary with carrying amount of US\$249,657,000 and US\$278,000, US\$102,539,000 and US\$5,234,000 respectively, as at 31 December 2021 through introduction of, or amendments to, fallback clauses into the contracts which will change the basis for determining the interest cash flows from LIBOR to an alternative reference rate at an agreed point in time. The Group will negotiate with the respective parties for the new interest rate in due course.

Commodity price risk

The Group is also exposed to commodity price risk as the Group's sales and purchases are subject to provisional pricing arrangements, predominantly copper and cobalt prices. The Group has appointed a special team to monitor the price risk and will consider hedging the risk exposure should the need arise.

36. 金融工具(續)

財務風險管理目標及政策(續)

替代基準利率的實施進展

作為本集團過渡風險管理的一部分，本集團簽訂的新合約與相關替代基準利率或在可行範圍內毋須改革的利率掛鉤。否則，本集團確保相關合約包括詳盡的後備方案條款，明確參考替代基準利率及激活該條款的具體觸發事件。

本集團計劃將於二零二一年十二月三十一日將賬面值分別為249,657,000美元及278,000美元、102,539,000美元及5,234,000美元的倫敦銀行同業拆息掛鉤銀行貸款合約及相關利率掉期合約、應付中間控股公司款項及應付同系附屬公司款項過渡，方法為在合約中引入或修訂後備方案條款，將於協定的時間點將釐定利息現金流的基準從銀行同業拆息更改為替代參考利率。本集團將適時與相關方磋商新利率。

商品價格風險

本集團亦承受商品價格風險，因為本集團須按臨時定價安排作出買賣(主要為銅價及鈷價)。本集團已委任特別團隊以監控價格風險，並將於必要時考慮對沖風險。

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綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment

The Group's maximum exposure to credit risk in the event of the counterparties' failure to perform their obligations at the end of the reporting period in relation to each class of recognised financial assets is the carrying amount of those assets as stated in the consolidated statement of financial position. In order to minimise the credit risk, the directors of the Company has delegated the management to be responsible for determination of credit limits, credit approvals and other monitoring procedures to ensure that follow-up action is taken to recover overdue debts. In this regard, the directors of the Company consider that the Group's credit risk is significantly reduced.

The credit risk for bank deposits and bank balances exposed is considered minimal as such amounts are placed with various banks with good credit ratings and there is no significant concentration of credit risk for bank deposits and bank balances.

The Group's mineral and metal products are allocated between nine (2020: seventeen) customers all of whom have a good track record with respect to settling receivables within the agreed credit period. As part of the Group's credit risk management, the Group applied internal credit rating for its customers.

For other receivables, in order to minimise the credit risk, directors continuously monitor the settlement status and the level of exposure to ensure that follow-up action is taken to recover overdue debts. In determining the 12m ECL for other receivables, the management of the Group has taken into account the historical default experience and forward-looking information, available without undue cost or effort as appropriate. The Group assessed that the 12m ECL by applying ECL rate of 0.1% after considering forward-looking adjustment, on these balances are not material and thus no loss allowance was recognised.

There has been no changes in the estimation techniques or significant assumptions made during the years ended 31 December 2021 and 2020.

36. 金融工具(續)

財務風險管理目標及政策(續)

信貸風險及減值評估

於報告期末，本集團於交易對手未履行其責任之情況下，就各類已確認金融資產承擔之最大信貸風險敞口，為綜合財務狀況表所列之該等資產賬面值。為將信貸風險降至最低，本公司董事已授權管理層負責釐定信貸限額、信貸批准及其他監察程序，以確保採取跟進行動收回逾期債務。就此而言，本公司董事認為本集團之信貸風險已大幅降低。

銀行存款及銀行結餘面臨之信貸風險被視為極低，原因是該等金額乃存放於多間具有良好信貸評級之銀行，且銀行存款及銀行結餘並無重大集中信貸風險。

本集團向九名(二零二零年：十七名)客戶配給礦產品及金屬產品，該等客戶在於協定信貸期內結清應收款項方面均擁有良好往績記錄。作為本集團信貸風險管理的一部分，本集團對其客戶應用內部信貸評級。

就其他應收款項而言，為盡量降低信貸風險，董事會持續監察結算狀況及風險水平，以確保採取跟進行動來收回逾期債務。在決定其他應收款項的12個月預期信貸虧損時，本集團的管理層已考慮到過往違約經驗及毋須花費不必要成本或努力即可獲得的前瞻性資料(如適用)。本集團考慮前瞻性調整後，按所應用之預期信貸虧損率0.1%評估該等結餘的12個月預期信貸虧損並不重大，因此並無確認虧損撥備。

截至二零二一年及二零二零年十二月三十一日止年度，所作出的估計技術或重大假設均無變動。

36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Credit risk and impairment assessment (Continued)

The Group only invests in debt securities with high credit ratings or issued by reputable companies. The board of directors regularly reviews and monitors the portfolio of debt securities. The debt securities with principal amount of US\$3,000,000 are carried at fair value of US\$2,978,000 at 31 December 2021 are rated at investment grade based on the external credit rating agencies.

Liquidity risk

In management of the liquidity risk, the Group monitors and maintains a level of cash and cash equivalents deemed adequate by the management to finance the Group's operations and mitigate the effects of fluctuations in cash flows. The management monitors the utilisation of borrowings and ensures compliance with loan covenants.

The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities. The table has been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The maturity dates for other non-derivative financial liabilities are based on the agreed repayment dates.

The table includes both interest and principal cash flows, except for trade payables under provisional pricing arrangements. To the extent that interest flows are floating rate, the undiscounted amount is derived from interest rate curve at the end of the reporting period.

For trade payables under provision pricing arrangements, the amount is derived from the estimated future cash payments with reference to the LME future commodity prices at the end of the reporting periods.

36. 金融工具(續)

財務風險管理目標及政策(續)

信貸風險及減值評估(續)

本集團僅投資信貸評級較高或由知名公司發行的債務證券。董事會定期檢討及監察債務證券組合。於二零二一年十二月三十一日，本金額為3,000,000美元的債務證券以2,978,000美元的公平值列賬，並被外部信貸評級機構評級為投資級別。

流動資金風險

就流動資金風險管理而言，本集團監察現金及現金等值項目及將之保持於管理層認為足夠之水平，以撥付本集團經營業務之資金及減低現金流量變動之影響。管理層監察借款使用情況，並確保符合貸款契諾。

下表詳列本集團之非衍生金融負債之餘下合約到期情況。列表乃根據金融負債之未貼現現金流量按本集團可能須支付款項之最早日期編製。其他非衍生金融負債之到期日乃按協定之還款日期釐定。

下表包括利息及本金現金流量，惟臨時定價安排下之貿易應付款項除外。倘利息流量為浮息，有關未貼現金額乃自於報告期末之利率曲線計算得出。

就臨時定價安排下之貿易應付款項而言，有關金額乃經參考於報告期末之倫金所期貨商品價格所估計之未來現金付款計算得出。

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Liquidity risk (Continued)

		Weighted average interest rate	On demand and within one year	Over one year but not more than five years	More than five years	Total undiscounted cash flows	Carrying amount
		加權平均利率	按要求及一年內	一年後但五年內	超過五年	現金流量總額	賬面值
		%	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
		%	千美元	千美元	千美元	千美元	千美元
As at 31 December 2021	於二零二一年十二月三十一日						
Non-derivative financial liabilities	非衍生金融負債						
Trade and other payables (excluding trade payables under provisional pricing arrangements)	貿易及其他應付款項(不包括臨時定價安排下之貿易應付款項)	-	30,403	-	-	30,403	30,403
Amount due to an intermediate holding company	應付中間控股公司款項	2.46	105,043	-	-	105,043	102,539
Amount due to a fellow subsidiary	應付同系附屬公司款項	2.46	5,363	-	-	5,363	5,234
Amount due to a non-controlling shareholder of a subsidiary	應付附屬公司非控股股東款項	-	533	-	-	533	533
Bank borrowings – floating rate	銀行借款 – 浮息	2.93	115,657	107,043	34,654	257,354	249,657
Lease liabilities	租賃負債	5.53	816	1,814	-	2,630	2,349
			257,815	108,857	34,654	401,326	390,715
Trade payables under provisional pricing arrangements	臨時定價安排下之貿易應付款項		39,577	-	-	39,577	39,577
			297,392	108,857	34,654	440,903	430,292

36. 金融工具(續)

財務風險管理目標及政策(續)

流動資金風險(續)

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36. FINANCIAL INSTRUMENTS (Continued)

Financial risk management objectives and policies (Continued)

Liquidity risk (Continued)

	Weighted average interest rate	On demand and within one year	Over one year but not more than five years	Total undiscounted cash flows	Carrying amount
	加權平均利率	按要求及一年內	一年後但五年內	現金流量總額	賬面值
	%	US\$'000	US\$'000	US\$'000	US\$'000
	%	千美元	千美元	千美元	千美元
As at 31 December 2020					
Non-derivative financial liabilities					
Trade and other payables (excluding trade payables under provisional pricing arrangements)		18,468	–	18,468	18,468
Amount due to an intermediate holding company	2.54	134,177	–	134,177	131,257
Amount due to a fellow subsidiary	2.54	5,238	–	5,238	5,111
Amount due to a non-controlling shareholder of a subsidiary	–	441	–	441	441
Bank borrowings – floating rate	3.00	31,658	184,368	216,026	209,736
Lease liabilities	5.53	999	385	1,384	1,318
		190,981	184,753	375,754	366,331
Trade payables under provisional pricing arrangements	–	28,864	–	28,864	28,864
		219,845	184,753	404,598	395,195

36. 金融工具(續)

財務風險管理目標及政策(續)

流動資金風險(續)

	Weighted average interest rate	On demand and within one year	Over one year but not more than five years	Total undiscounted cash flows	Carrying amount
	加權平均利率	按要求及一年內	一年後但五年內	現金流量總額	賬面值
	%	US\$'000	US\$'000	US\$'000	US\$'000
	%	千美元	千美元	千美元	千美元
於二零二零年十二月三十一日					
非衍生金融負債					
貿易及其他應付款項(不包括臨時定價安排下之貿易應付款項)		18,468	–	18,468	18,468
應付中間控股公司款項	2.54	134,177	–	134,177	131,257
應付同系附屬公司款項	2.54	5,238	–	5,238	5,111
應付附屬公司非控股股東款項	–	441	–	441	441
銀行借款—浮息	3.00	31,658	184,368	216,026	209,736
租賃負債	5.53	999	385	1,384	1,318
		190,981	184,753	375,754	366,331
臨時定價安排下之貿易應付款項	–	28,864	–	28,864	28,864
		219,845	184,753	404,598	395,195

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36. FINANCIAL INSTRUMENTS (Continued)

Fair value measurements of financial instruments

Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of the reporting period. The following table gives information about how the fair values of these financial assets and financial liabilities are determined (in particular, the valuation technique(s) and inputs used).

	Fair value as at 31 December 於十二月三十一日之公平值		Fair value hierarchy 公平值級別	Valuation technique(s) and key input(s) 估值技術及主要輸入數據
	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元		
Financial assets 金融資產				
Financial assets at FVTPL 按公平值計入損益之金融資產	2,978	-	Level 2 第二級	Quoted prices in the over-the-counter market 場外市場報價
Trade receivables under provisional pricing arrangements 臨時定價安排下之貿易應收款項	49,268	55,245	Level 2 第二級	The fair value of the trade receivables under provisional pricing arrangements is based on the average LME future commodity prices for the duration up to the date of final pricing. 臨時定價安排下之貿易應收款項之公平值根據截至最終定價日為止期限之倫金所期貨商品平均價格釐定。
Interest rate swap contracts 利率掉期合約	278	-	Level 2 第二級	Discounted cash flow. Future cash flows are estimated based on forward interest rates (from observable yield curves at the end of the reporting period) and contracted interest rates, discounted at an applicable discount rate taking into account the credit risk of the counterparty. 已折讓現金流量。未來現金流量乃基於遠期利率(來自報告期末的可觀察收益曲線)及合約訂立利率作出估計，經計及對手方信貸風險後按適用折讓率折現。
Financial liabilities 金融負債				
Trade payables under provisional pricing arrangements 臨時定價安排下之貿易應付款項	39,577	28,864	Level 2 第二級	The fair value of the trade payables under provisional pricing arrangements is based on the average LME future commodity prices for the duration up to the date of final pricing. 臨時定價安排下之貿易應付款項之公平值根據截至最終定價日為止期限之倫金所期貨商品平均價格釐定。

There were no transfer between Level 1 or 2 during the year.

36. 金融工具(續)

金融工具之公平值計量

本集團按經常性基準以公平值計量之金融資產及金融負債之公平值

本集團若干金融資產及金融負債於報告期末按公平值計量。下表載列有關如何釐定該等金融資產及金融負債之公平值之資料(尤其是估值技術及所使用的輸入數據)。

年內，第一級或第二級之間並無轉撥。

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36. FINANCIAL INSTRUMENTS (Continued)

Fair value measurements of financial instruments (Continued)

Fair value of the Group's financial assets and financial liabilities that are not measured at fair value on a recurring basis

The directors of the Company consider that the carrying amounts of financial assets and financial liabilities recorded at amortised cost approximate their fair values.

The fair values of financial assets and financial liabilities are determined in accordance with generally accepted pricing models based on discounted cash flow analysis.

36. 金融工具(續)

金融工具之公平值計量(續)

并非按經常性基準以公平值計量之本集團金融資產及金融負債之公平值

本公司董事認為，按攤銷成本記賬之金融資產及金融負債之賬面值與其公平值相若。

金融資產及金融負債之公平值乃按照普遍接納之定價模式根據貼現現金流量分析而釐定。

37. CAPITAL COMMITMENTS

37. 資本承擔

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Capital expenditure in respect of construction of property, plant and equipment, mineral rights and exploration and evaluation assets contracted for but not provided in the consolidated financial statements	已訂約但未於綜合財務報表撥備之物業、廠房及設備工程、礦產權以及勘探及評估資產之資本開支	140,333	89,288

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38. RETIREMENT BENEFIT SCHEMES

The Group participates in the Mandatory Provident Fund Scheme registered with the Mandatory Provident Fund Schemes Authority under the Mandatory Provident Fund Schemes Ordinance for all qualifying employees in Hong Kong. The assets of the scheme are held separately from those of the Group in funds under the control of trustee. The Group contributes 5% of relevant payroll costs with a cap of monthly contributions of HK\$1,500 (equivalent to US\$160) (effective from 1 June 2014) to the scheme, which contribution is matched by employee.

Contributions are made by the South African companies to independent pension and provident funds which are defined contribution retirement benefits plans governed by the Pension Funds Act, 1956. All eligible employees are required to become members of these schemes.

DRC employees contribute to the DRC National Social Security Fund in accordance with applicable labour laws. All eligible Zambian employees are required to join and contribute to an external pension fund, Africa Life. Both funds are defined contribution retirement benefits plans.

The assets of each of the retirement benefits schemes are held separately from those of the Group in funds under the control of the trustees. The amounts incurred for retirement benefits schemes contributions are disclosed in notes 10, 11 and 13. According to the respective schemes, those contributions are not refundable nor forfeitable. As at 31 December 2021, there were no forfeited contributions (by employers on behalf of employees who leave these retirement benefit schemes prior to vesting fully in such contributions) in the Group under these retirement benefit schemes. Hence, there is no forfeited contribution available for the Group to reduce its existing level of contributions to these retirement benefit schemes in future years.

38. 退休福利計劃

本集團為香港所有合資格僱員參與一項已根據強制性公積金計劃條例在強制性公積金計劃管理局登記之強積金計劃。該計劃之資產與存置於受託人所控制基金之本集團資產分開持有。本集團按有關薪金成本的5%向該計劃供款，每月供款上限為1,500港元(相當於160美元)(自二零一四年六月一日起生效)，而僱員亦按相同金額作出供款。

南非公司對獨立退休金及公積金(為受一九五六年退休金法案(Pension Funds Act, 1956)管轄之界定供款退休福利計劃)作出供款。所有合資格僱員均須參加此等計劃。

剛果(金)僱員根據適用之勞動法對剛果(金)全國社會保障基金供款。所有合資格之贊比亞僱員均須加入外部退休基金Africa Life並作出供款。兩隻基金均為界定供款退休福利計劃。

各退休福利計劃之資產與存置於受託人所控制基金之本集團資產分開持有。退休福利計劃供款所產生之款項於附註10、11及13披露。根據各項計劃，該等供款為不可退還亦不可沒收。於二零二一年十二月三十一日，根據該等退休福利計劃，本集團並無已被沒收的供款(即僱員在有關供款全數歸屬前退出退休福利計劃，由僱主代僱員處理的供款)。因此，並無被沒收供款可供本集團於未來年度減低現有退休福利計劃供款水平。

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39. RELATED PARTY TRANSACTIONS

The Group itself is part of a larger group of companies under JCG, a state-owned enterprise with its majority equity interest held by the People's Government of Gansu Province, which is controlled by the government of the PRC and the Group operates in an economic environment currently predominated by entities controlled, jointly controlled or significantly influenced by the PRC government.

(a) Transactions with JCG and its subsidiaries

Apart from details of the balances with related parties disclosed in respective notes, the Group entered into the following transactions with JCG and its subsidiaries (excluding the Group) during the year:

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Interest expenses on loan due to an intermediate holding company	應付中間控股公司貸款之利息開支	2,748	3,757
Interest expenses on loan due to a fellow subsidiary	應付同系附屬公司貸款之利息開支	123	163
Interest expenses payable to an intermediate holding company on the perpetual subordinated convertible securities	應付中間控股公司永久次級可換股證券之利息開支	88	88
License fee income received from a fellow subsidiary	自同系附屬公司收取許可費收入	285	280
Mining expenses paid to a fellow subsidiary (Note)	向同系附屬公司支付採礦開支(附註)	13,199	15,027
Maintenance expenses paid to fellow subsidiary (Note)	向同系附屬公司支付維護開支(附註)	900	900
Rental income of equipment received from a fellow subsidiary (Note)	自同系附屬公司收取設備租金收入(附註)	580	1,305
Rental income received from a related party	自關聯公司收取租金收入	183	187
Guarantee fee paid to ultimate holding company	向最終控股公司支付擔保費	707	18
Sale of goods to ultimate holding company (Note)	向最終控股公司銷售貨品(附註)	22,118	-

Note: These transactions are regarded as discloseable continuing connected transactions, pursuant to Chapter 14A of the Listing Rules. The disclosures required by Chapter 14A of the Listing Rules are disclosed in the "Continuing Connected Transactions" section in the annual report.

39. 關聯人士交易

本集團為金川(一家主要股權由甘肅省人民政府持有的國有企業，而甘肅省人民政府受中國政府控制)旗下的大型集團公司之一，亦於目前主要由中國政府所控制、共同控制或發揮重大影響力之實體主導的經濟環境中經營業務。

(a) 與金川及其附屬公司之交易

除於相關附註所披露之關聯人士結餘詳情外，本集團於年內與金川及其附屬公司(不包括本集團)訂立以下交易：

附註：根據上市規則第14A章，該等交易被視為需披露持續關連交易。上市規則第14A章規定披露的內容已於年報「持續關連交易」一節披露。

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39. RELATED PARTY TRANSACTIONS (Continued)

(a) Transactions with JCG and its subsidiaries (Continued)

As at 31 December 2021, corporate guarantee facilities in aggregate amounting to US\$416,363,000 (2020: US\$446,332,000) was provided by JCG for banking facilities obtained by the Group, of which US\$166,363,000 (2020: US\$96,332,000) was utilised.

(b) Transactions/balances with other PRC government controlled entities

The Group has entered into various transactions, including deposits placements, borrowings and other general banking facilities, with certain banks and financial institutions which are government-related entities in its ordinary course of business. In view of the nature of those banking transactions, the directors of the Company are of the opinion that separate disclosure is not meaningful.

(c) Transaction with non-PRC government – related parties

During the year ended 31 December 2021, the Group has royalty paid to non-controlling shareholders of subsidiaries amounting to US\$12,265,000 (2020: US\$9,764,000).

(d) Compensation of key management personnel

The key management personnel of the Company are its directors. Further details of their emoluments are disclosed in note 11(a). The emoluments of Mr. Liu Jian and Mr. Zhang Youda are borne by the ultimate holding company.

39. 關聯人士交易(續)

(a) 與金川及其附屬公司之交易(續)

於二零二一年十二月三十一日，金川已就本集團獲授之銀行信貸額度提供合共416,363,000美元(二零二零年：446,332,000美元)公司擔保信貸，其中已動用166,363,000美元(二零二零年：96,332,000美元)。

(b) 與其他中國政府所控制實體之交易／結餘

此外，本集團已於其日常業務過程中與屬政府相關實體之若干銀行及金融機構訂立多項交易，包括存款、借款及其他一般銀行融資。鑒於該等銀行交易的性質，本公司董事認為分開披露意義不大。

(c) 與非中國政府關聯人士之交易

截至二零二一年十二月三十一日止年度，本集團已支付予附屬公司非控股股東礦權使用費12,265,000美元(二零二零年：9,764,000美元)。

(d) 主要管理人員報酬

本公司之主要管理人員為董事。有關彼等酬金之進一步詳情披露於附註11(a)。劉建先生及張有達先生之酬金由最終控股公司承擔。

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40. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

40. 自融資活動產生之負債之對賬

		Dividends payable	Interest payable	Lease liabilities	Bank borrowings	Amount due to an intermediate holding company	Amount due to a fellow subsidiary	Amount due to a non-controlling shareholder of a subsidiary
		應付股息 US\$'000 千美元	應付利息 US\$'000 千美元	租賃負債 US\$'000 千美元	銀行借款 US\$'000 千美元	應付中間 控股公司款項 US\$'000 千美元	應付同系附屬 公司款項 US\$'000 千美元	應付附屬公司 非控股股東 款項 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	-	-	2,738	237,365	128,284	5,134	482
Interest expenses	利息開支	-	13,997	63	-	-	-	-
Dividend distribution	股息分派	1,617	-	-	-	-	-	-
Return of capital to non-controlling shareholder of a subsidiary	向一間附屬公司之非控股股東返還資本	-	-	-	-	-	-	16,390
Early termination of lease	提前終止租賃	-	-	(316)	-	-	-	-
Financing cash flows	融資現金流量	(1,617)	(13,997)	(1,167)	(27,629)	2,973	(23)	(16,431)
At 31 December 2020	於二零二零年十二月三十一日	-	-	1,318	209,736	131,257	5,111	441
Interest expenses	利息開支	-	10,989	55	-	-	-	-
Dividend distribution	股息分派	2,255	-	-	-	-	-	-
New leases entered	新訂租賃	-	-	1,986	-	-	-	-
Financing cash flows	融資現金流量	(2,255)	(10,989)	(1,010)	39,921	(28,718)	123	92
At 31 December 2021	於二零二一年十二月三十一日	-	-	2,349	249,657	102,539	5,234	533

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41. PARTICULARS OF SUBSIDIARIES

41.1 General information of subsidiaries

Details of the Group's subsidiaries at the end of the reporting period are set out below.

Name of subsidiary 附屬公司名稱	Place of incorporation/ establishment 註冊成立/成立地點	Place of operation 運營地點	Issued and fully paid share/ registered capital 已發行及繳足股份/ 註冊資本	Attributable equity interest of the Group 本集團應佔股權		Principal activities 主要業務
				2021 二零二一年	2020 二零二零年	
Chibuluma Mines plc	Zambia 贊比亞	Zambia 贊比亞	US\$50,000 50,000美元	85%	85%	Copper mining 銅礦開採
Copper Resources Corporation	British Virgin Islands ("BVI") 英屬處女群島 (「英屬處女群島」)	South Africa 南非	US\$104,924,166 104,924,166美元	100%	100%	Investment holding 投資控股
Golden Grand Investment Limited [#]	BVI 英屬處女群島	Hong Kong 香港	US\$1 1美元	100%	100%	Investment holding 投資控股
Golden Harbour International Trading Limited 金港源國際貿易有限公司	Hong Kong 香港	Hong Kong 香港	HK\$1 1港元	100%	100%	Trading of mineral and metal products 礦產品及金屬產品貿易
Golden River Mining Investment Limited [#]	BVI 英屬處女群島	Hong Kong 香港	US\$1 1美元	100%	100%	Investment holding 投資控股
Golden River Management SASU	The DRC 剛果(金)	The DRC 剛果(金)	US\$10,000 10,000美元	100%	100%	Investment holding 投資控股
Jin Rui [#]	Mauritius 毛里求斯	Hong Kong 香港	US\$1 1美元	100%	100%	Investment holding 投資控股
Jinhe Mining Company SASU	The DRC 剛果(金)	The DRC 剛果(金)	US\$10,000 10,000美元	100%	100%	Investment holding 投資控股
Kinsenda Copper Company SA ("Kinsenda")	The DRC 剛果(金)	The DRC 剛果(金)	US\$1,250,000 1,250,000美元	77%	77%	Copper mining 銅礦開採
Metorex Copper Corporation (DRC) (Proprietary) Limited	South Africa 南非	South Africa 南非	ZAR100 100南非蘭特	100%	100%	Investment holding 投資控股

41. 附屬公司詳情

41.1 附屬公司的一般資料

本集團於報告期末之附屬公司詳情載列於下文。

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41. PARTICULARS OF SUBSIDIARIES (Continued)

41. 附屬公司詳情(續)

41.1 General information of subsidiaries (Continued)

41.1 附屬公司的一般資料(續)

Name of subsidiary 附屬公司名稱	Place of incorporation/ establishment 註冊成立/成立地點	Place of operation 運營地點	Issued and fully paid share/ registered capital 已發行及繳足股份/ 註冊資本	Attributable equity interest of the Group 本集團應佔股權		Principal activities 主要業務
				2021 二零二一年	2020 二零二零年	
Metorex Holdings (Proprietary) Limited	South Africa 南非	South Africa 南非	ZAR101 101南非蘭特	100%	100%	Investment holding 投資控股
Metorex (Proprietary) Limited	South Africa 南非	South Africa 南非	US\$597,766,000 597,766,000美元	100%	100%	Investment holding 投資控股
Ruashi Holdings (Proprietary) Limited	South Africa 南非	South Africa 南非	ZAR1,000 1,000南非蘭特	100%	100%	Investment holding 投資控股
Ruashi Mining SAS ("Ruashi")	The DRC 剛果(金)	The DRC 剛果(金)	US\$12,000,000 12,000,000美元	75%	75%	Copper and cobalt mining 銅鈷礦開採
Shanghai Jinchuan Junhe ^Δ 上海金川均和	The PRC 中國	The PRC 中國	N/A 不適用	-	100%	Liquidated during the year 已於年內清算完成

These subsidiaries are directly held by the Company.
Δ The entity was established in PRC in form of sino-foreign equity joint venture.

該等附屬公司由本公司直接持有。
Δ 該實體以中外合資企業形式於中國成立。

None of the subsidiaries had issued any debt securities at the end of the year.

概無附屬公司於年結日發行任何債務證券。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

41. PARTICULARS OF SUBSIDIARIES (Continued)

41. 附屬公司詳情(續)

41.2 Details of non wholly-owned subsidiaries that have material non-controlling interests

41.2 擁有重大非控股權益的非全資附屬公司之詳情

The table below shows details of non wholly-owned subsidiaries of the Group that have material non-controlling interests:

下表顯示本集團擁有重大非控股權益的非全資附屬公司之詳情：

Name of subsidiary 附屬公司名稱	Place of incorporation and principal place of business 註冊成立地點 及主要營業地點	Proportion of ownership interests and voting rights held by non-controlling interests 非控股權益持有的擁有權權益及投票權比例		Profit (loss) allocated to non-controlling interests 劃撥予非控股權益的溢利(虧損)		Accumulated non-controlling interests 累計非控股權益	
		2021 二零二一年	2020 二零二零年	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Kinsenda	Kinsenda The DRC 剛果(金)	23%	23%	14,297	8,081	47,952	33,655
Ruashi	Ruashi The DRC 剛果(金)	25%	25%	27,646	5,191	108,435	81,427
Individually immaterial subsidiary with non-controlling interests	個別具有非控股權益之非重大附屬公司			(25)	(721)	7,356	7,381
				41,918	12,551	163,743	122,463

Summarised financial information in respect of each of the Group's subsidiaries that has material non-controlling interests is set out below. The summarised financial information below represents amounts before intragroup eliminations.

擁有重大非控股權益之本集團各附屬公司的財務資料概要載列如下。以下財務資料概要指集團內對銷前之金額。

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

41. PARTICULARS OF SUBSIDIARIES (Continued)

41. 附屬公司詳情(續)

41.2 Details of non wholly-owned subsidiaries that have material non-controlling interests (Continued)

41.2 擁有重大非控股權益的非全資附屬公司之詳情(續)

		Kinsenda		Ruashi	
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Current assets	流動資產	121,850	88,314	396,536	278,246
Non-current assets	非流動資產	581,404	638,474	739,236	575,040
Current liabilities	流動負債	(74,516)	(69,132)	(108,469)	(84,701)
Non-current liabilities	非流動負債	(420,249)	(511,330)	(593,563)	(442,877)
Equity attributable to owners of the Company	本公司擁有人應佔權益	160,537	112,671	325,305	244,281
Non-controlling interests	非控股權益	47,952	33,655	108,435	81,427
Revenue	收益	253,836	167,438	361,741	310,789
Profit for the year	年內溢利	62,163	35,135	110,584	20,764
Profit attributable to owners of the Company	本公司擁有人應佔溢利	47,866	27,054	82,938	15,573
Profit attributable to the non-controlling interests	非控股權益應佔溢利	14,297	8,081	27,646	5,191
Profit for the year	年內溢利	62,163	35,135	110,584	20,764
Net cash inflow from operating activities	來自經營活動的現金流入淨額	128,438	43,847	83,225	68,465
Net cash outflow from investing activities	來自投資活動的現金流出淨額	(9,946)	(14,675)	(99,723)	(48,305)
Net cash (outflow) inflow from financing activities	來自融資活動的現金(流出)流入淨額	(80,182)	(32,266)	91,946	(5,242)
Net cash inflow (outflow)	現金流入(流出)淨額	38,310	(3,094)	75,448	14,918

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

42. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

42. 本公司的財務狀況表及儲備

		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元
Non-current assets	非流動資產		
Property, plant and equipment	物業、廠房及設備	19	27
Interests in subsidiaries	附屬公司權益	-	-
Amount due from a subsidiary	應收附屬公司款項	667,069	667,069
		667,088	667,096
Current assets	流動資產		
Other receivables	其他應收款項	253	263
Amounts due from subsidiaries	應收附屬公司款項	76,879	113,442
Bank deposits with original maturity over three months	原到期日超出三個月之 銀行存款	17,000	18,271
Bank balances and cash	銀行結餘及現金	35,684	449
		129,816	132,425
Current liabilities	流動負債		
Other payables	其他應付款項	1,004	872
Short-term provision	短期撥備	1,095	1,095
Amount due to an intermediate holding company	應付中間控股公司款項	739	650
		2,838	2,617
Net current assets	流動資產淨值	126,978	129,808
Net assets	資產淨值	794,066	796,904
Capital and reserves	股本及儲備		
Share capital	股本	16,166	16,166
Perpetual subordinated convertible securities	永久次級可換股證券	88,462	88,462
Reserves (Note)	儲備(附註)	689,438	692,276
Total equity	權益總額	794,066	796,904

Notes to the Consolidated Financial Statements

綜合財務報表附註

For the year ended 31 December 2021
截至二零二一年十二月三十一日止年度

42. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (Continued)

Note: Movement of the Company's reserves are as follows:

		Share premium 股份溢價 US\$'000 千美元	Contributed surplus 實繳盈餘 US\$'000 千美元	Accumulated losses 累計虧損 US\$'000 千美元	Total reserves 儲備總額 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	1,332,071	9	(637,613)	694,467
Loss and total comprehensive expenses for the year	年內虧損及全面開支總額	-	-	(574)	(574)
Dividends recognised as distribution	確認為分派之股息	(1,617)	-	-	(1,617)
At 31 December 2020	於二零二零年十二月三十一日	1,330,454	9	(638,187)	692,276
Loss and total comprehensive expenses for the year	年內虧損及全面開支總額	-	-	(1,221)	(1,221)
Dividends recognised as distribution	確認為分派之股息	(1,617)	-	-	(1,617)
At 31 December 2021	於二零二一年十二月三十一日	1,328,837	9	(639,408)	689,438

The Company's reserves available for distribution to shareholders as at 31 December 2021 represented the aggregate of share premium account, contributed surplus and accumulated losses, which amounted to US\$689,438,000 (2020: US\$692,276,000).

42. 本公司的財務狀況表及儲備(續)

附註：本公司儲備變動如下：

		Share premium 股份溢價 US\$'000 千美元	Contributed surplus 實繳盈餘 US\$'000 千美元	Accumulated losses 累計虧損 US\$'000 千美元	Total reserves 儲備總額 US\$'000 千美元
At 1 January 2020	於二零二零年一月一日	1,332,071	9	(637,613)	694,467
Loss and total comprehensive expenses for the year	年內虧損及全面開支總額	-	-	(574)	(574)
Dividends recognised as distribution	確認為分派之股息	(1,617)	-	-	(1,617)
At 31 December 2020	於二零二零年十二月三十一日	1,330,454	9	(638,187)	692,276
Loss and total comprehensive expenses for the year	年內虧損及全面開支總額	-	-	(1,221)	(1,221)
Dividends recognised as distribution	確認為分派之股息	(1,617)	-	-	(1,617)
At 31 December 2021	於二零二一年十二月三十一日	1,328,837	9	(639,408)	689,438

於二零二一年十二月三十一日，本公司可供分派予股東之儲備乃指股份溢價賬、實繳盈餘及累計虧損之總和，金額為689,438,000美元(二零二零年：692,276,000美元)。

Five-Year Financial Summary 五年財務概要

The consolidated results and assets and liabilities of the Group for the last five financial years, as extracted from the audited consolidated financial statements are as follows:

摘錄自本集團過去五個財政年度經審核綜合財務報表之綜合業績、資產及負債報表如下：

		Year ended 31 December 截至十二月三十一日止年度				
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2019 二零一九年 US\$'000 千美元	2018 二零一八年 US\$'000 千美元	2017 二零一七年 US\$'000 千美元
RESULTS	業績					
Revenue	收益	831,899	531,502	465,408	1,399,970	549,188
Profit attributable to owners of the Company	本公司擁有人應佔溢利	120,527	29,943	8,745	66,931	41,624
		At 31 December 於十二月三十一日				
		2021 二零二一年 US\$'000 千美元	2020 二零二零年 US\$'000 千美元	2019 二零一九年 US\$'000 千美元	2018 二零一八年 US\$'000 千美元	2017 二零一七年 US\$'000 千美元
ASSETS AND LIABILITIES	資產及負債					
Total assets	資產總額	2,038,671	1,768,344	1,744,623	1,853,198	1,782,131
Total liabilities	負債總額	(861,712)	(751,415)	(754,434)	(874,403)	(911,649)
Total net assets	總資產淨額	1,176,959	1,016,929	990,189	978,795	870,482
Equity attributable to owners of the Company	本公司擁有人應佔權益	1,013,216	894,466	864,613	857,822	791,710
Non-controlling interests	非控股權益	163,743	122,463	125,576	120,973	78,772
Total equity	權益總額	1,176,959	1,016,929	990,189	978,795	870,482

Note: In 2019, the Group has applied IFRS 16 and other amendments to IFRSs. The comparative information for the years ended 31 December 2017 and 2018 have not been restated on initial application of IFRS 16. In 2020, certain comparative figures have been restated to re-present the results of the discontinued operations of trading of mineral and metal products in the PRC. The comparative information for the years ended 31 December 2017 and 2018 have not been restated.

附註：於二零一九年，本集團已應用國際財務報告準則第16號及國際財務報告準則的其他修訂。於二零一七年及二零一八年十二月三十一日止年度的比較資料並未於首次應用國際財務報告準則第16號時重列。於二零二零年，若干比較數字已經重列，以重新呈列於中國已終止經營之礦產品及金屬產品貿易業務之業績，於二零一七年及二零一八年十二月三十一日止年度的比較資料並未重列。

%

percentage

Acquisition or Combination

the acquisition by the Company of the entire equity interest in Jin Rui (along with the Metorex Group) in November 2013 pursuant to the sale and purchase agreement dated 27 August 2013, the details of which are set out in the circular of the Company dated 30 August 2013; with a total consideration of US\$1,290,000,000 which was satisfied by the allotment and issue of 1,595,880,000 new ordinary shares of the Company at an issue price of HK\$1 per share and the issue of PSCS of the Company in the aggregate amount of US\$1,085,400,000

Articles of Association

the articles of association of the Company

ASCu_Eq

acid soluble copper equivalent

associate

has the meaning ascribed to it under the Listing Rules

Board

the board of Directors

BOMZ

Black Ore Mineral Zone

BVI

the British Virgin Islands

CDBC

China Development Bank Corporation

CDF

Congolese Franc, the lawful currency of the DRC

CG Code

Corporate Governance Code as set out in Appendix 14 to the Listing Rules

Chibuluma

Chibuluma Mines plc, a company incorporated in Zambia and an indirect non wholly-owned subsidiary of the Company

Chibuluma South Mine

an underground copper mine owned by Chibuluma situated in Zambia near the town of Kalulushi

%

百分比

收購事項 或 合併事項

本公司於二零一三年十一月根據日期為二零一三年八月二十七日之買賣協議收購Jin Rui (連同Metorex集團)全部股本權益，總代價為1,290,000,000美元，以按發行價每股1港元配售及發行1,595,880,000股本公司新普通股，以及發行本公司總值1,085,400,000美元之永久次級可換股證券之方式支付，有關詳情載於本公司日期為二零一三年八月三十日之通函

組織章程細則

本公司之組織章程細則

酸溶銅當量

酸溶銅當量

聯繫人

具有上市規則所賦予之涵義

董事會

董事會

BOMZ

黑色礦石礦區

BVI

英屬處女群島

國開行

國家開發銀行股份有限公司

剛果法郎

剛果法郎，剛果(金)法定貨幣

企管守則

上市規則附錄14所載的企業管治守則

Chibuluma

Chibuluma Mines plc，於贊比亞註冊成立之公司，為本公司之間接非全資附屬公司

Chibuluma南礦場

由Chibuluma擁有之地下銅礦，位於贊比亞，鄰近Kalulushi鎮區

Chifupu Deposit

an underground copper mine owned by Chibuluma which is located approximately 1.7km southwest of Chibuluma South Mine

Co

cobalt

Competent Person

has the meaning ascribed to it under Chapter 18 of the Listing Rules

connected person

has the meaning ascribed to it under the Listing Rules

controlling shareholder

has the meaning ascribed to it under the Listing Rules

Conversion

The conversion exercised by various investors including Jinchuan (BVI) Limited, an indirect wholly-owned subsidiary of JCG, which in turn is the controlling shareholder of the Company, in respect of the conversion of the PSCS in an aggregate principal amount of US\$996,938,461 into conversion shares at the conversion price of HK\$1.00 per Share

COVID-19

Novel coronavirus pneumonia epidemic

CO₂-e

carbon dioxide equivalent

Cu

copper

Cu_Eq

copper equivalent

Development Project

Musonoi Project, a constructing copper-cobalt project owned by the Group located in the DRC

Director(s)

the director(s) of the Company

DRC

the Democratic Republic of Congo

EBITDA

Earning before interest (net finance cost), income tax, depreciation and amortisation and impairment loss

Chifupu礦床

由Chibuluma擁有位於Chibuluma南礦場西南約1.7公里之地下銅礦場

鈷

鈷

合資格人士

具有上市規則第18章所賦予之涵義

關連人士

具有上市規則所賦予之涵義

控股股東

具有上市規則所賦予之涵義

該轉換

多名投資者(包括本公司之控股股東金川之間接全資附屬公司金川(BVI)有限公司)按換股價每股股份1.00港元將本金總額為996,938,461美元之永久次級可換股證券轉換為換股股份

新冠肺炎

新型冠狀病毒肺炎

二氧化碳當量

二氧化碳當量

銅

銅

銅當量

銅當量

開發項目

即Musonoi項目，由本集團所擁有位於剛果(金)之銅鈷建設中項目

董事

本公司之董事

剛果(金)

剛果民主共和國

EBITDA

未計利息(淨財務成本)、所得稅、折舊及攤銷以及減值虧損前的盈利

ENFI

China ENFI Engineering Corporation

ESG

Environmental, Social and Governance

Exploration Project

Lubembe Project, an advanced stage exploration project located in the DRC

Gécamines SA

La Générale des Carrières et des Mines, a state-owned mining company in the DRC

GHL

Golden Harbour International Trading Limited, a company incorporated in Hong Kong and an indirectly wholly-owned subsidiary of the Company

Group

the Company and its subsidiaries and associates controlled by the Company from time to time

HK\$

Hong Kong dollars, the lawful currency of Hong Kong

HG

high grade

Hong Kong

the Hong Kong Special Administrative Region of the PRC

IFRS

International Financial Reporting Standards issued by the International Accounting Standards Board

Independent Shareholders

Shareholders other than JCG Group and its associates

Indicated Mineral Resource(s)

that part of Mineral Resources for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on information from exploration, sampling and testing of material gathered from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological or grade continuity but are spaced closely enough for continuity to be assumed

恩菲

中國恩菲工程技術有限公司

環境、社會及管治

環境、社會及管治

勘探項目

即Lubembe項目，一項位於剛果(金)之後期階段勘探項目

Gécamines SA

La Générale des Carrières et des Mines，一間剛果(金)國有礦業公司

金港源

金港源國際貿易有限公司，一間於香港註冊成立公司且為本公司的間接全資附屬公司

本集團

本公司及其附屬公司及由本公司不時控制之聯營公司

港元

港元，香港法定貨幣

高品位

高品位

香港

中國香港特別行政區

國際財務報表準則

國際會計準則委員會頒佈之《國際財務報表準則》

獨立股東

金川集團及其聯繫人以外之股東

控制礦產資源量

礦產資源量中在噸位、體重、形狀、物理特徵、品位及礦物含量方面估算具有合理可信度水平之部分。此乃以從勘探、採樣及測量礦脈露頭、礦槽、礦坑、開採區及鑽孔等地點之物質所收集得來之資料為基準。測量地點過於廣闊或間距不適當，無法確定地域或品位連續性，但其間距緊密而足以假定其連續性

Inferred Mineral Resource(s)

that part of Mineral Resources for which volume or tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geologically or through grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that may be limited, or of uncertain quality and reliability

JCG

金川集團股份有限公司 (Jinchuan Group Co., Ltd.*) , a state-owned enterprise established in the PRC and the ultimate controlling shareholder of the Company

JCG Group

collectively, JCG and its subsidiaries and associates controlled by it from time to time, and for the purpose of this Annual Report, excluding the Group

JCHK

Jinchuan Group (Hongkong) Resources Holdings Limited, an investment holding company incorporated in Hong Kong and a wholly-owned subsidiary of JCG. It directly and indirectly owns 7,593,009,857 Shares, representing approximately 60.21% of the issued share capital of the Company as at the date of this report

JCI or Company

Jinchuan Group International Resources Co. Ltd, a company incorporated in the Cayman Islands with limited liability and the shares of which are listed on the Main Board of the Stock Exchange (Stock Code: 2362)

Jin Gang

Jin Gang (D.R Congo) SA, an indirect non wholly-owned subsidiary of JCG

Jin Gang Framework Agreement

the contract entered into between the Company and Jin Gang on 20 November 2019 in relation to the provision of maintenance work, the bagging and loading work and the mining services, provided or to be provided by Jin Gang to the Group from time to time

Jin Rui

Jin Rui Mining Investment Limited, a company incorporated in the Republic of Mauritius and a direct wholly-owned subsidiary of the Company

Jinchuan BVI

Jinchuan (BVI) Limited, an indirect wholly-owned subsidiary of JCG

推斷礦產資源量

礦產資源量中在數量或噸位、品位及礦物含量方面之估算屬於低可信度水平之部分。此乃根據地質學考證及假設(但未經核實)地質或品位連續性而推斷所得。此乃以藉適當技術從礦脈露頭、礦槽、礦坑、開採區及鑽孔等地點收集得來之資料為基準，惟有關資料可能有限或未能確定其質素及可靠性

金川

金川集團股份有限公司，於中國成立之國有企業，乃本公司之最終控股股東

金川集團

金川及由其不時控制之附屬公司及其聯營公司之統稱，就本年報而言，不包括本集團

金川香港

金川集團(香港)資源控股有限公司，一間於香港註冊成立之投資控股公司，為金川之全資附屬公司。於本報告日期其直接及間接擁有7,593,009,857股股份，佔本公司已發行股本約60.21%

金川國際 或 本公司

金川集團國際資源有限公司，於開曼群島註冊成立之有限公司，其股份於聯交所主板上市(股票代號：2362)

Jin Gang

Jin Gang (D.R Congo) SA，為金川之間接非全資附屬公司

Jin Gang 框架協議

本公司與Jin Gang於二零一九年十一月二十日訂立之合同，內容有關Jin Gang不時向或將向本集團提供維護工作、裝袋及貨物裝載工作以及採礦服務

Jin Rui

Jin Rui Mining Investment Limited，於毛里求斯共和國註冊成立之公司，為本公司之直接全資附屬公司

金川BVI

金川(BVI)有限公司，金川之間接全資附屬公司

Jinchuan R&E

金川鎳鈷研究設計院有限責任公司 (Jinchuan Nickel & Cobalt Research and Engineering Institute Co., Ltd.*), a direct wholly-owned subsidiary of JCG

Junhe Group

Shanghai Junhe Group Co., Ltd, a company established in the PRC and the holding company of Junhe Holdings

Junhe Holdings

Junhe Holdings Limited, a company established in the PRC and a subsidiary of Junhe Group

Kinsenda

Kinsenda Copper Company SA, a company incorporated in the DRC and an indirect non wholly-owned subsidiary of the Company

Kinsenda Mine

an underground copper mine owned by Kinsenda and situated in Katanga Province in the DRC

km

kilometer(s)

kt

thousand tonnes

kV

kilovolt

kWh

Kilowatt hours

lb

pound(s) (2.204 pounds=1 kilogram)

LG

low grade

LIBOR

the London Interbank Offered Rate

Listing Rules

the Rules Governing the Listing of Securities on the Stock Exchange

LME

London Metal Exchange, a recognized investment exchange regulated by the Financial Conduct Authority of the United Kingdom and a recognised publisher of reference prices for various metals which are timely published on its designated website (www.lme.com) on a daily basis for metal and investment communities

鎳鈷設計院

金川鎳鈷研究設計院有限責任公司，為金川之直接全資附屬公司

均和集團

上海均和集團有限公司，一間於中國成立之公司，亦為均和控股之控股公司

均和控股

均和控股有限公司，一間於中國成立之公司，為均和集團之附屬公司

Kinsenda

Kinsenda Copper Company SA，於剛果(金)註冊成立之公司，為本公司之間接非全資附屬公司

Kinsenda礦場

由Kinsenda擁有之地下銅礦場，位於剛果(金)上加丹加省

公里

公里

千噸

千噸

千伏

千伏

千瓦時

千瓦時

磅

磅(2.204磅=1千克)

低品位

低品位

倫敦銀行同業拆息

倫敦銀行同業拆借利率

上市規則

聯交所證券上市規則

倫金所

倫敦金屬交易所(London Metal Exchange)，一間受英國金融行為監管局(Financial Conduct Authority)規管的獲認可投資交易所，並為一間獲認可出版商，其每日於其所設網站(www.lme.com)向金屬及投資社群適時發佈多種金屬之參考價格

LoM

Life of mine

Lubembe Project

a greenfield copper project owned by Kinsenda and situated in the Katanga Province in the DRC

m

metre(s)

m³

cubic metre(s)

MB

Metal Bulletin, a premium intelligence service for metal and steel professionals, being part of group of companies of the Euromoney Institutional Investor Plc and a recognised publisher of reference prices for long-term cobalt trading contracts which are timely published on its designated website (www.metalbulletin.com) on a daily basis for subscribed members and publications

Measured Mineral Resource(s)

that part of Mineral Resources for which the tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable information from exploration, sampling and testing of material from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity

Metorex

Metorex (Proprietary) Limited, a company incorporated in South Africa and an indirect wholly-owned subsidiary of the Company

Metorex Group

Metorex and its subsidiaries (including Chibuluma, Kinsenda and Ruashi), the mining operation arm of the Group

Metorex Holdings

Metorex Holdings (Proprietary) Limited, a company incorporated in South Africa and an indirect wholly-owned subsidiary of the Company

Mine Leased Out Under Finance Lease Agreement

Chibuluma South Mine (including Chifupu Deposit)

Mineral and Metal Products

mineral products, metal products and other raw materials, including but not limited to copper or nickel ores and concentrates, copper or nickel cathodes and other forms of copper, nickel or other metals bearing raw materials, cobalt and its related products

礦場開採期

礦場開採期

Lubembe項目

由Kinsenda擁有之未開發銅礦項目，位於剛果(金)上加丹加省

米

米

立方米

立方米

金屬導報

金屬導報，一項為金屬及鋼鐵專業人士提供的優質情報服務，其屬《歐洲貨幣機構投資人雜誌》(Euromoney Institutional Investor Plc)集團公司的一部分並為一間獲認可出版商，其每日於其所設網站(www.metalbulletin.com)向其訂閱者及期刊適時發佈長期鈷貿易合約之參考價格

探明礦產資源量

礦產資源量中在噸位、體重、形狀、物理特徵、品位及礦物含量方面之估算屬於高可信度水平之部分。此乃以勘探、採樣及測量來自礦脈露頭、礦槽、礦坑、開採區及鑽孔等地點之物質之詳細及可靠資料為基準。測量地點間距緊密而足以確定地質及品位連續性

Metorex

Metorex (Proprietary) Limited，於南非註冊成立之公司，為本公司之間接全資附屬公司

Metorex集團

Metorex及其附屬公司(包括Chibuluma、Kinsenda及Ruashi)，為本集團之礦山營運支部

Metorex Holdings

Metorex Holdings (Proprietary) Limited，於南非註冊成立之公司，為本公司之間接全資附屬公司

融資租賃協議下出租之礦場

Chibuluma南礦場(包括Chifupu礦床)

礦產品及金屬產品

礦產品、金屬產品及其他原材料，包括(但不限於)銅或鎳礦石及精礦、電解銅或電解鎳及其他形式含銅、鎳或其他金屬之原材料、鈷及其相關產品

Mineral Reserve(s)

the economically mineable material derived from a Measured Mineral Resource or Indicated Mineral Resource or both. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project and a LoM plan for an operation must have been completed, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors). Such modifying factors must be disclosed

Mineral Resource(s)

a concentration or occurrence of material of economic interest in or on the earth's crust in such a form, quality, and quantity that there are reasonable and realistic prospects for eventual economic extraction. The location, quantity, grade, continuity and other geological characteristics of a Mineral Resource are known, or estimated from specific geological evidence, sampling and knowledge interpreted from an appropriately constrained and portrayed geological model

Model Code

Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix 10 to the Listing Rules

Mt

million tonnes

Musonoi Project

a brownfield copper and cobalt project owned by Ruashi and situated in Katanga Province in the DRC

MVA

million volt-amperes

MW

megawatt

New Jin Gang Framework Agreement

the contract entered into between the Company and Jin Gang on 30 December 2021 in relation to the provision of mining work, maintenance work, bagging and loading work and various mining related services, provided or to be provided by Jin Gang to the Group from time to time

Northwestern Province Exploration Projects

greenfield projects owned by Chibuluma and situated in the Northwestern Province in Zambia

N/A

not applicable

Operating Mines

Ruashi Mine and Kinsenda Mine

礦產儲量

來自探明礦產資源量或控制礦產資源量可作經濟開採之物質，當中包括貧化及摻雜物質以在開採物質過程中預期會出現之損失必須完成適當評估(至少為就該項目進行預可研報告及就營運進行礦場開採期計劃)，包括對實際假設之採礦、冶金、經濟、營銷、法律、環境、社會及政府因素(可變因素)作出考慮及修正。該等可變因素須予披露

礦產資源量

積聚或存在於地殼內或地表，具內在經濟利益之物質，其形態、質量及數量存在最終可實現經濟開採之合理及實際前景。礦產資源量之位置、數量、品位、連續性及其他地質特性可根據具體地質特徵、採樣及認識得知或估算，並以具有適當約束條件及模擬細緻之地質模型進行詮釋

標準守則

上市規則附錄10所載有關上市發行人董事進行證券交易的標準守則

百萬噸

百萬噸

Musonoi項目

由Ruashi擁有之開發中銅鈷礦項目，位於剛果(金)上加丹加省

百萬伏安

百萬伏安

兆瓦

兆瓦

新Jin Gang框架協議

本公司與Jin Gang於二零二一年十二月三十日訂立之合同，內容有關Jin Gang不時向或將向本集團提供採礦工作、維護工作、裝袋及貨物裝載工作以及多項採礦有關服務

西北省勘探項目

由Chibuluma擁有之未開發項目，位於贊比亞西北省

不適用

不適用

營運礦場

Ruashi礦場及Kinsenda礦場

ppm

parts per million

PRC

the People's Republic of China

Probable Reserve(s)

the economically mineable material derived from a Measured Mineral Resource or Indicated Mineral Resource or both. It is estimated with a lower level of confidence than a Proved Reserve. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project or a LoM plan for an operation must have been completed, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors). Such modifying factors must be disclosed

Proved Reserve(s)

the economically mineable material derived from a Measured Mineral Resource. It is estimated with a high level of confidence. It includes diluting and contaminating materials and allows for losses that are expected to occur when the material is mined. Appropriate assessments to a minimum of a pre-feasibility study for a project or a LoM plan for an operation must have been completed, including consideration of, and modification by, realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors (the modifying factors). Such modifying factors must be disclosed

PSCS or Convertible Securities

the perpetual subordinated convertible securities issued by the Company to satisfy part of the purchase price for the Acquisition

Ruashi

Ruashi Mining SAS, a company incorporated in the DRC and an indirect non wholly-owned subsidiary of the Company

Ruashi Holdings

Ruashi Holdings (Proprietary) Limited, a company incorporated in South Africa and a wholly-owned subsidiary of the Company

Ruashi Mine

an open-cast oxide copper and cobalt mine owned by Ruashi and situated in the DRC on the outskirts of Lubumbashi, the capital of Haut-Katanga Province

SAMREC Code

South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (2016 edition)

ppm

百萬分率

中國

中華人民共和國

概略儲量

來自探明礦產資源量及／或控制礦產資源量中可作經濟開採之物質，其估計之可信度較證實儲量低，當中包括貧化及摻雜物質以及在開採物質過程中預期會出現之損失。必須完成適當評估(至少為就該項目進行預可研報告及就營運進行礦場開採期計劃)，包括對實際假設之採礦、冶金、經濟、營銷、法律、環境、社會及政府因素(可變因素)作出考慮及修正。該等可變因素須予披露

證實儲量

來自探明礦產資源量中可作經濟開採之物質，其估計之可信程度高，當中包括貧化及摻雜物質以及在開採物質過程中預期會出現之損失。必須完成適當評估(至少為就該項目進行預可研報告及就營運進行礦場開採期計劃)，包括對實際假設之採礦、冶金、經濟、營銷、法律、環境、社會及政府因素(可變因素)作出考慮及修正。該等可變因素須予披露

永久次級可換股證券 或 可換股證券

由本公司發行之永久次級可換股證券，用以支付收購事項部分收購價

Ruashi

Ruashi Mining SAS，於剛果(金)註冊成立的公司，為本公司之間接非全資附屬公司

Ruashi Holdings

Ruashi Holdings (Proprietary) Limited，於南非註冊成立的公司，為本公司之全資附屬公司

Ruashi礦場

由Ruashi擁有之露天氧化銅鈷礦，位於剛果(金)上加丹加省省會盧本巴希之郊區

SAMREC規則

南非礦產勘探結果、礦產資源量及礦產儲量報告規則(二零一六年版)

SFO

the Securities and Futures Ordinance, Chapter 571 of the Laws of Hong Kong

Shanghai Jinchuan Junhe

上海金川均和經濟發展有限公司 (Shanghai Jinchuan Junhe Economic Development Co., Ltd*), a company incorporated in the PRC and a subsidiary of the Company

Share(s)

ordinary share(s) with nominal value of HK\$0.01 each in the share capital of the Company and listed on the Stock Exchange

Shareholder(s)

the holder(s) of the Share(s)

SHEC

Safety, Health, Environment and Communities

SO₂

sulphur dioxide

Sodimico

Société de Développement Industriel et Minere du Congo, a state-owned enterprise in the DRC

South Africa

the Republic of South Africa

SNEL

Société Nationale d'Électricité, being the national electricity Company in the DRC

Stock Exchange

The Stock Exchange of Hong Kong Limited

subsidiary(ies)

has the meaning ascribed to it under the Companies Ordinance (Chapter 622 of the Laws of Hong Kong)

SX-EW

solvent extraction – electrowinning

t

tonne(s)

TCo

total cobalt

證券及期貨條例

香港法例第571章證券及期貨條例

上海金川均和

上海金川均和經濟發展有限公司，於中國註冊成立之公司，為本公司之附屬公司

股份

本公司於聯交所上市之股本中每股面值0.01港元之普通股

股東

股份之持有人

SHEC

安全、健康、環境及社區

二氧化硫

二氧化硫

Sodimico

Société de Développement Industriel et Minere du Congo，為剛果(金)國有企業

南非

南非共和國

SNEL

Société Nationale d'Électricité，為剛果(金)國家電力公司

聯交所

香港聯合交易所有限公司

附屬公司

具有香港法例第622章公司條例賦予之涵義

SX-EW

溶劑萃取－電解冶煉法

噸

噸

總鈷

總鈷

Glossary

詞彙

TCu

total copper

TCu_Eq

total copper equivalent

US\$

United States dollars, the lawful currency of the United States of America

Zambia

the Republic of Zambia

ZAR

South African Rand, the lawful currency of South Africa

ZCCM

ZCCM Investment Holdings plc, a Zambian state-owned mining company

ZMW

Zambian Kwacha, the lawful currency of Zambia

總銅

總銅

總銅當量

總銅當量

美元

美元，美利堅合眾國法定貨幣

贊比亞

贊比亞共和國

南非蘭特

南非蘭特，南非法定貨幣

ZCCM

ZCCM Investment Holdings plc，一間贊比亞國有礦業公司

贊比亞克瓦查

贊比亞克瓦查，贊比亞法定貨幣

* for identification purpose only

* 僅供識別



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