



FIRST QUANTUM
MINERALS

Annual Report 2019



RELIABLE
GROWTH

COBRE PANAMA | Colón Province, PANAMA

Ownership	90%
Primary	Copper
Secondary	Gold, molybdenum, silver
2019 Production	Copper 147kt, Gold 60koz

PYHÄSALMI | Pyhäjärvi, FINLAND

Ownership	100%
Primary	Copper
Secondary	Pyrite, Zinc
2019 Production	Copper 8kt, Zinc 12kt

GUELB MOGHREIN | Akjoujt, MAURITANIA

Ownership	100%
Primary	Copper
Secondary	Gold
2019 Production	Copper 30kt, Gold 45koz

HAQUIRA | Apurimac Region, PERU**TACA TACA** | Salta Province, ARGENTINA**CONTENTS**

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Cu Production Growth in 2019

16%

LAS CRUCES | Sevilla Province, SPAIN

Ownership	100%
Primary	Copper
2019 Production	Copper 48kt

ÇAYELI | Rize Province, TURKEY

Ownership	100%
Primary	Copper
Secondary	Zinc
2019 Production	Copper 17kt, Zinc 5kt

SENTINEL | North-Western Province, ZAMBIA

Ownership	100%
Primary	Copper
2019 Production	Copper 220kt

KANSANSHI | North-Western Province, ZAMBIA

Ownership	80%
Primary	Copper
Secondary	Gold
2019 Production	Copper 232kt, Gold 145koz

RAVENSTHORPE | Western Australia, AUSTRALIA

Ownership	100%
Primary	Nickel
Secondary	Cobalt
Care and maintenance	

First Quantum is a global mining company primarily producing copper, with secondary production of gold and zinc and inventories of nickel and cobalt. We operate long life mines in several countries and employ approximately 20,000 people worldwide.

We are well known for our “can do” attitude and specialist technical, engineering, construction and operational skills, which allow us to develop and successfully run complex mines and processing plants.

After 25 years of operations we are now one of the world’s top 10 copper producers, exporting millions of tonnes of concentrate from multiple countries to customers worldwide. We are focused on providing a tangible benefit from everything we do for investors, employees and the many communities that surround our operations.



LETTER TO SHAREHOLDERS



PHILIP PASCALL

Chairman of the Board and Chief Executive Officer

2019 was an important year for First Quantum. The Company's largest development project to date, Cobre Panama, achieved commercial production in September, less than seven months after the introduction of first ore into the milling circuit. In the early years of First Quantum we set a goal of becoming a leading copper-focused mining and metals company and the success at Cobre Panama is a significant step toward that objective. This allowed us to deliver record production and to set a new annual record for copper production.

First Quantum was born out of a belief in the enduring value of copper. After 20 years we remain even more convinced of copper's importance to the modern world. In 2019, we produced over 702,000 tonnes of copper and we expect growth in copper production to continue in 2020 as Cobre Panama continues its ramp-up. In 2020, we expect total copper production to be between 830,000 and 880,000 tonnes, an increase of at least 18%.

We have certainly had our share of ups and downs, but importantly we have learned from every development and continue to improve our operations. We are now running some of the finest copper mines in the world. After we bring Ravensthorpe (our nickel and cobalt mine in Australia), back into production in the first quarter of 2020, First Quantum will have eight operating mines in seven countries. We also have two significant development projects in our project pipeline.

We are determined that each of our mines and projects should be a valued partner to the community where it operates. This is part of an overall sustainability strategy, built on four key pillars: economically viable investments,

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technically innovative operations, environmentally sound practices, and socially responsible actions. At each project, we prioritize local community engagement as we strive to minimize our impact on the environment, and to find practical ways to improve the lives of the people we work amongst and alongside. Our environmental and social programs are developed to meet the unique requirements at every site.

Our Health & Safety systems and our Environmental Management Systems are now both well developed in the group and undergo regular external compliance audits. Since 2015, we have recorded and reported site level environmental incidents according to a proprietary five-level classification system. From 2015 to 2019 we have seen a steady and continuous reduction in environmental incidents and improvement of overall environmental compliance across the group. We have reviewed the risks and management of our tailings storage facilities and these are subjected to regular inspection and reporting by independent experts. The group safety performance also continued to show improvement in 2019, with a 0.05 rolling 12-month Lost Time Injury Frequency Rate. This is an improvement from 0.06 in 2018 and 0.11 in 2017. There were no workplace fatalities in 2019. We continue to do all we can to ensure that every employee gets home safely after every shift.

We prioritize biodiversity protection and we recognize that a focussed approach is required to meet the needs of each site. Our community enhancement, agricultural, health, education, infrastructure and other projects are undertaken to assist each community, and to help them



become healthier, safer and more prosperous long after mining operations have stopped. Disclosure of these programs and the results of our safety, environmental and sustainability efforts are covered by our latest report, the 2019 Environmental, Safety and Social Data Report. This was issued during 2019 and can be found on our website.

By working together, I believe First Quantum has made a tangible, long-term difference to people in many countries around the world. I am very proud of the lives that have been improved through health, education and training delivered as a consequence of our operations; especially to the communities within which we live.

We also recognize that the composition of the Board needs to be refreshed as long-standing directors move on. In 2019, we welcomed Joanne Warner as our newest board member. She brings significant experience and a valuable skill set. Paul Brunner has indicated he will not be standing for re-election at the 2020 Annual and Special Meeting of Shareholders. We thank Paul for his huge contribution and his practical insight over a long period to the Board and its committees. We will continue to seek suitable opportunities to enhance and diversify our Board of Directors.

As urbanisation in developing countries continues to gather pace, copper use will continue to increase. As developed countries move to an increasingly connected, networked and new energy future, copper will remain in demand because of its fundamental importance to networks, electronics and energy storage and delivery.

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There are not many known new projects that might help meet that demand in the future. First Quantum is well positioned with its large operating mines, and a pipeline of new potential.

The commodity markets for copper were very volatile throughout 2019 hitting a low of \$2.51 per pound and a high of \$2.98 per pound on the London Metal Exchange (LME). The LME average copper price for the year was \$2.72 per pound, 8% lower than the average in 2018.

We achieved record production in 2019 with over 702,000 tonnes of copper marking an eighth consecutive year of growth in copper output. This represents a 16% increase over 2018. The increase from Cobre Panama offset lower production from Kansanshi and Las Cruces. The group's 2019 unit costs remained at the low end of the industry cost curve and we expect this to continue through 2020.

We achieved record production in 2019 with over 702,000 tonnes of copper marking an eighth consecutive year of growth in copper output. This represents a 16% increase over 2018.

Gold production for the year increased by 39% over 2018 to almost 257,000 ounces. This is largely attributed to Cobre Panama, which produced just over 60,000 ounces.

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Our Las Cruces mine recovered during the year (after the January 2019 land slippage) to return to normal operations by July. The development of a proprietary process for the recovery of copper, zinc, silver, and lead from primary chalcopryite ore remains a valued technology. The performance of this technology is now well established, and the initial underground mining has confirmed continuation of the resource. We are now working to determine the practical and commercial feasibility of a long-term underground mine.

We have an attractive pipeline of advanced exploration projects in South America. The most advanced is Taca Taca located in the Puna region of the Salta province in Argentina. Work on the Environmental Impact Assessment and other studies, along with stakeholder engagement, continues to advance the project towards a construction decision. Next is Haquira, located in Apurimac in southern Peru, adjacent to the Las Bambas operation. Our current focus is to relocate some small local communities, with whom we have recently made good progress towards obtaining agreements. Our aim is then to complete an evaluation of the deposit and advance towards a production decision.

Meanwhile our Exploration Division continues to focus on a number of very promising higher grade deposits. The objective is to develop projects without the enormous capital demands of low-grade mines.



Overall these projects provide First Quantum with great long-term potential. However, we emphasise that our priority in the short-to-medium-term is to deleverage our balance sheet so that we can provide a reliable return to shareholders.

Our focus in 2020 will primarily be on managing our commodity risk and to establish cash flow stability amid the continuing commodity price uncertainty and volatility. We will consolidate our operations and we will continue to explore options available to us to bring in partners in some aspects that would accelerate the deleveraging. In summary, I am very positive about our outlook over the next few years.

Finally, 2019 was a year of extraordinary achievements in First Quantum. I would like, once again, to thank all our employees who made this possible. I would also like to express my appreciation to our shareholders for their continued support, particularly those who have been long-term supporters. They have believed not only in our vision, but also in our ability to deliver projects where others have struggled and to overcome challenges that others have balked at. We believe First Quantum is a strong company that is positioned well to cope with the current global uncertainties and it will thrive when economic conditions improve.

Philip Pascall

Chairman and Chief Executive Officer

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CAUTIONARY STATEMENT ON FORWARD-LOOKING INFORMATION

Certain statements and information herein, including all statements that are not historical facts, contain forward-looking statements and forward-looking information within the meaning of applicable securities laws. The forward-looking statements include estimates, forecasts and statements as to the Company’s expectations of production and sales volumes, and expected timing of completion of project development at Enterprise and post completion of construction activity at Cobre Panama and are subject to the impact of ore grades on future production, the potential of production disruptions (including at Cobre Las Cruces as a result of the land slippage in January 2019), capital expenditure and mine production costs, the outcome of mine permitting, other required permitting, the outcome of legal proceedings which involve the Company, information with respect to the future price of copper, gold, silver, nickel, zinc, pyrite, cobalt, iron and sulphuric acid, estimated mineral reserves and mineral resources, First Quantum’s exploration and development program, estimated future expenses, exploration and development capital requirements, the Company’s hedging policy, and goals and strategies. Often, but not always, forward-looking statements or information can be identified by the use of words such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate” or “believes” or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved.

With respect to forward-looking statements and information contained herein, the Company has made numerous assumptions including among other things, assumptions about continuing production at all operating facilities, the price of copper, gold, silver, nickel, zinc, pyrite, cobalt, iron and sulphuric acid, anticipated costs and expenditures and the ability to achieve the Company’s goals. Forward-looking statements and information by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. These factors include, but are not limited to, future production volumes and costs, the temporary or permanent closure of uneconomic operations, costs for inputs such as oil, power and sulphur, political stability in Zambia, Peru, Mauritania, Finland, Spain, Turkey, Panama, Argentina and Australia, adverse weather conditions in Zambia, Finland, Spain, Turkey, Mauritania and Panama, labour disruptions, potential social and environmental challenges (including the impact of climate change), power supply, mechanical failures, water supply, procurement and delivery of parts and supplies to the operations, the production of off-spec material and events generally impacting global economic, political and social stability.

See the Company’s Annual Information Form for additional information on risks, uncertainties and other factors relating to the forward-looking statements and information. Although the Company has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking statements or information, there may be other factors that cause actual results, performances, achievements or events not to be anticipated, estimated or intended. Also, many of these factors are beyond First Quantum’s control. Accordingly, readers should not place undue reliance on forward-looking statements or information. The Company undertakes no obligation to reissue or update forward-looking statements or information as a result of new information or events after the date hereof except as may be required by law. All forward-looking statements and information made herein are qualified by this cautionary statement.

Management's Discussion and Analysis

For the year ended December 31, 2019

in United States dollars, with tabular amounts in millions, except where noted

This Management's Discussion and Analysis ("MD&A") should be read in conjunction with the audited consolidated financial statements of First Quantum Minerals Ltd. ("First Quantum" or "the Company") for the year ended December 31, 2019. The Company's results have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and are presented in United States dollars, tabular amounts in millions, except where noted.

For further information on First Quantum, reference should be made to its public filings (including its most recently filed AIF) which are available on SEDAR at www.sedar.com. Information is also available on the Company's website at www.first-quantum.com. This MD&A contains forward-looking information that is subject to risk factors, see "*Cautionary statement on forward-looking information*" for further discussion. Information on risks associated with investing in the Company's securities and technical and scientific information under National Instrument 43-101 concerning the Company's material properties, including information about mineral resources and reserves, are contained in its most recently filed AIF. This MD&A has been prepared as of February 13, 2020.

Overview

2019 has been a transformative year for the Company as its largest development project to date, Cobre Panama, reached commercial production in September, less than seven months after first introduction of ore to the milling circuit. Following the first ore to the Cobre Panama processing plant in the first quarter, operations ramped up with the commissioning of three milling trains, comprising seven mills, and an eighth mill introduced in December. In June, the first shipment of concentrate was dispatched from the operation's port. For the full year, Cobre Panama contributed 147,480 tonnes of copper, of which 79,776 tonnes were commercial production, and 60,074 ounces of gold, of which 35,954 ounces was commercial production, and post-commercial production revenues of \$524 million.

The start of commercial operations at Cobre Panama has accelerated several of First Quantum's strategic objectives. The Company's vision to be a leading copper-focused metals and mining company is greatly advanced. Copper production in 2019 was the highest in its history, with 702,148 contained tonnes of copper produced. This is expected to increase to between 830,000 and 880,000 tonnes next year. In 2020, the Company's geographic production base will begin to shift, with a third of the Company's expected copper production to come from Panama in the next two years reflecting the addition and scale of Cobre Panama.

The Company continuously manages its capital structure and assesses its liquidity and financing sources regularly. Pricing, covenant flexibility and prevailing market conditions are all among considerations that are analyzed when assessing the Company's funding sources. Consistent with these efforts, in February 2019, the Company signed a new \$2.7 billion Term Loan and Revolving Credit Facility, replacing the previous \$1.5 billion Revolving Credit Facility. The new Facility was used to repay \$821 million of the 7.00% Senior Notes due February 2021 with the remainder used for general corporate purposes. More recently, in January 2020, the Company issued \$750 million in Senior Notes, using the proceeds to repay and cancel the remaining \$300 million 7.00% Senior Notes due February 2021, and to repay but not cancel \$450 million due under the senior Revolving Credit Facility. Additionally, with its forecasted reduction in capital expenditures, compared to the previous seven years, the Company expects that it will be in a position to begin executing on its stated commitment of deleveraging its balance sheet.

The Company utilizes a hedge program to manage operational and commodity price risk and ensure stability of cash flows while maintaining financial covenant compliance. The market price for copper fluctuated during the year from a low of \$2.51 per lb to a high of \$2.98 per lb on the London Metal Exchange ("LME"). The average copper price for the year was \$2.72 per lb, 8% lower than 2018.

In the first quarter of 2020, the Company's Ravensthorpe nickel mine is planned to restart operations. Production of between 15,000 to 20,000 tonnes of nickel is expected for the full year 2020 increasing to between 25,000 to 28,000 for the following two years.

Management's Discussion and Analysis (continued)

Effective January 1, 2019, a new Zambian fiscal regime was introduced which included increased mineral royalties, removal of their associated tax deductibility and imposed export levies on precious metals. Two other elements of the 2019 National Budget, the abolition of the value-added ("VAT") and implementation of a goods and services tax were not enacted during the year and later abandoned in the 2020 National Budget in favour of amending the existing VAT regime.

An amicable settlement agreement was reached with the Zambian Revenue Authority ("ZRA") in July 2019, with respect to the assessment claim on Kalumbila duties, in line with the Company's expectations.

Full Year Highlights

OPERATIONAL AND FINANCIAL

- Copper production for the year was a record 702,148 tonnes, an increase of 16% or 96,295 tonnes from 2018, and within guidance range, reflecting a contribution of 147,480 tonnes from Cobre Panama, of which 79,776 tonnes were commercial.
- Cobre Panama achieved a successful ramp-up in the year, including the declaration of commercial production from September 1, 2019 and the eighth mill coming on line in mid-December, which will increase annualized milling capacity to approximately 85 million tonnes.
- Copper production at Las Cruces and Kansanshi was lower in the year compared with 2018. At Las Cruces, production was impacted by an interruption to mining activity until July from a land slippage in January 2019 and a ball mill failure in September. Lower Kansanshi copper production was attributable to lower oxide ore grades and recoveries.
- The Kansanshi smelter processed 1,317,826 dry metric tonnes ("DMT") of copper concentrate, produced 324,281 tonnes of copper anode and 1,236,000 tonnes of sulphuric acid and maintained a 97% recovery rate for the year, which included a planned two-week maintenance shutdown of the smelter acid plant in the third quarter.
- Total gold production of 256,913 ounces was 39% higher than in 2018, reflecting Cobre Panama's contribution of 60,074 ounces and higher gold production at Kansanshi following operational enhancements.
- Gross profit of \$790 million and comparative EBITDA⁷ of \$1,609 million for the full year 2019 include the contribution of \$92 million and \$203 million, respectively, from Cobre Panama subsequent to the declaration of commercial production. Also reflected are a 5% decrease in the realized copper price compared with 2018 and a \$44 million gain realized by the corporate copper sales hedge program.
- Following finalization of the Las Cruces post-land slippage mine plan, 2020 is expected to be the final year of production for the open-pit operation. As a result, and with the volatility in the short-term copper price, an impairment charge of \$97 million has been recognized.
- Financial results include comparative earnings of \$249⁷ million (\$0.36 per share⁷), net loss attributable to shareholders of the Company of \$57 million (\$0.08 per share), and cash flows from operating activities of \$889 million (\$1.29 per share). Comparative earnings include net interest expense of \$250 million, of which a significant proportion would previously have been eligible for capitalization but is now expensed following declaration of commercial production at Cobre Panama on September 1, 2019. Net loss attributable to shareholders includes a \$182 million charge for the discounting of Zambian VAT balances as well as the \$97 million impairment charge recognized on Las Cruces.
- Copper all-in sustaining cost ("AISC") was \$1.78 per lb and cash cost of copper production ("C1") was \$1.31 per lb for the year, a \$0.04 per lb and \$0.03 per lb increase, respectively, compared to 2018. The AISC and C1 cash cost reflects four months of commercial production at Cobre Panama as well as the impact of lower production at Las Cruces and Kansanshi.

Management's Discussion and Analysis (continued)

Consolidated Operational Information

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper production (tonnes) ^{1,2}	204,270	192,510	158,304	702,148	605,853
Copper sales (tonnes) ^{2,4}	205,964	203,827	156,212	689,386	596,513
Cash cost of copper production (C1)(per lb) ^{5,6}	\$ 1.24	\$ 1.36	\$ 1.23	\$ 1.31	\$ 1.28
Total cost of copper production (C3)(per lb) ^{5,6}	\$ 2.07	\$ 2.20	\$ 2.04	\$ 2.16	\$ 2.11
All-in sustaining cost (AISC)(per lb) ^{5,6}	\$ 1.73	\$ 1.86	\$ 1.68	\$ 1.78	\$ 1.74
Realized copper price (per lb) ²	\$ 2.62	\$ 2.62	\$ 2.83	\$ 2.70	\$ 2.84
Gold production (ounces) ²	77,789	70,120	48,039	256,913	185,414
Gold sales (ounces) ^{2,3}	79,409	71,664	53,221	254,785	193,072

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper production (tonnes) – commercial	204,270	155,727	158,304	634,444	605,853
Copper production (tonnes) – pre-commercial	–	36,783	–	67,704	–
Copper production (tonnes)	204,270	192,510	158,304	702,148	605,853
Gold production (ounces) – commercial	77,789	56,550	48,039	232,793	185,414
Gold production (ounces) – pre-commercial	–	13,570	–	24,120	–
Gold production (ounces)	77,789	70,120	48,039	256,913	185,414

Consolidated Financial Information

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Sales revenues	1,284	987	1,054	4,067	3,966
Gross profit	259	150	280	790	978
Net earnings (loss) attributable to shareholders of the Company	(115)	(73)	198	(57)	441
Basic and diluted earnings (loss) per share	\$ (0.17)	\$ (0.11)	\$ 0.29	\$ (0.08)	\$ 0.64
Comparative EBITDA ^{7,8}	511	354	481	1,609	1,737
Comparative earnings ⁷	35	32	182	249	487
Comparative earnings per share ⁷	\$ 0.05	\$ 0.05	\$ 0.26	\$ 0.36	\$ 0.71

Management's Discussion and Analysis (continued)

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Net earnings (loss) attributable to shareholders of the Company	(115)	(73)	198	(57)	441
Adjustments attributable to shareholders of the Company:					
Finance charge on discounting Zambian VAT	22	160	5	182	5
(Gain) loss on debt instruments	4	(3)	–	23	–
Total adjustments to comparative EBITDA excluding depreciation ⁸	152	21	(3)	228	64
Tax and minority interest relating to foreign exchange revaluation and comparative adjustments	(28)	(73)	(18)	(127)	(23)
Comparative earnings	35	32	182	249	487

1 Production is presented on a contained basis, and is presented prior to processing through the Kansanshi smelter.

2 Copper production volumes includes production from Cobre Panama of 60,338 tonnes and 147,480 tonnes for the three months and year ended December 31, 2019, respectively (nil production to December 31, 2018). Copper sales volumes include sales from Cobre Panama of 48,841 tonnes and 132,864 tonnes for the three months and year ended December 31, 2019, respectively (nil sales to December 31, 2018). Gold production volumes include production from Cobre Panama of 28,040 ounces and 60,074 ounces for the three months and year ended December 31, 2019, respectively (nil production to December 31, 2018). Gold sales volumes include sales from Cobre Panama of 23,336 ounces and 55,069 ounces for the three months and year ended December 31, 2019, respectively (nil sales to December 31, 2018).

The Company determined that commercial production at Cobre Panama commenced effective September 1, 2019, therefore, revenue and operating costs at Cobre Panama have been recorded for the period September 1, 2019, to December 31, 2019, in the Company's Consolidated Statement of Earnings (Loss). Consequently, production and sales at Cobre Panama that are pre-commercial production are excluded from earnings, C1 cash cost, AISC and C3 total cost and net realized copper price. Please see Cobre Panama operation summary on page 26 below for further discussion.

3 Excludes purchased gold delivered to Franco-Nevada Corporation ("Franco-Nevada") under precious metal streaming arrangement.

4 Copper sales exclude the sale of copper anode produced from third-party concentrate purchased at Kansanshi. Sales of copper anode attributable to third-party concentrate purchases were nil and 1,182 tonnes for the three months and year ended December 31, 2019, respectively, (5,884 tonnes and 7,349 tonnes for the three months and year ended December 31, 2018, respectively). There were no sales of copper anode attributable to third-party concentrate purchases in the three months to September 30, 2019.

5 C1 cash cost, C3 total cost, AISC exclude third-party concentrate purchased at Kansanshi.

6 C1 cash cost, C3 total cost, AISC are not recognized under IFRS. These measures are disclosed as they reflect those used by the Company's management in reviewing operational performance. A reconciliation of these measures to the costs disclosed in the Company's Consolidated Statement of Earnings (Loss) is included within the "Regulatory Disclosures" section from page 49.

7 Net earnings (loss) attributable to shareholders of the Company has been adjusted to exclude items which are not considered by management to be reflective of underlying performance to arrive at comparative earnings. Comparative earnings, comparative earnings per share, comparative EBITDA and cash flows per share are not measures recognized under IFRS and do not have a standardized meaning prescribed by IFRS. The Company has disclosed these measures to assist with the understanding of results and to provide further financial information about the results to investors. See "Regulatory Disclosures" from page 49 for a reconciliation of comparative EBITDA and comparative earnings to the IFRS measures. The use of comparative earnings and comparative EBITDA represents the Company's adjusted earnings metrics.

8 Adjustments to comparative EBITDA relate principally to foreign exchange, impairments, write-off of assets and costs associated with the land slippage at Las Cruces, and also include other losses on disposal of assets, and movements in restoration provision estimates at closed sites.

Full Year Financial Summary

COBRE PANAMA BOOSTS SALES REVENUES

- Sales revenues of \$4,067 million in the year exceeded the 2018 level by \$101 million. Gold sales revenues drove the increase on account of a 22% increase in commercial gold sales volumes, due principally to the declaration of commercial production at Cobre Panama, and a higher realized gold price. Copper sales revenues were broadly in line with 2018, with 7% higher commercial copper sales volumes mitigating the lower realized copper price.
- The Company's realized price for copper of \$2.70 per lb for 2019 was 5% lower than in 2018. This compares to a decrease of 8% in the average LME price of copper for the same period. The Company's copper sales hedge program contributed \$44 million, \$0.03 per lb, to sales revenues in the year compared to a \$110 million sales hedge loss, \$0.08 per lb in 2018.

COMPARATIVE EBITDA OF \$1,609 MILLION

- Comparative EBITDA was \$1,609 million compared to \$1,737 million in 2018. This result excludes impairments and write-off of assets and other costs of \$112 million, foreign exchange losses of \$96 million, loss on disposal of assets and associated costs of \$12 million and revisions in estimates of restoration provisions at closed sites of \$8 million.

Gross profit – Cobre Panama contribution offset mostly by lower realized copper prices and Las Cruces

Gross profit in 2018	978
Lower realized metal prices	(258)
Movement in hedge program	154
Change in sales volumes mix	(88)
Lower by-product contribution	(14)
Cobre Panama contribution (excluding depreciation)	205
Las Cruces movement (excluding depreciation)	(136)
Movement in cash costs (excluding Zambian royalties)	(11)
Increase in depreciation	(43)
Increase in Zambian royalty rate	(40)
Ravensthorpe restart preparations	(15)
Positive impact of foreign exchange on operating costs	58
Gross profit in 2019 ¹	790

¹ Gross profit is reconciled to comparative EBITDA by including exploration costs of \$19 million, general and administrative costs of \$82 million, other income of \$13 million, adding back depreciation of \$907 million (a reconciliation of comparative EBITDA is included on page 54).

COMPARATIVE EARNINGS OF \$249 MILLION

- Comparative earnings for 2019 of \$249 million compares to \$487 million in 2018. A reconciliation of comparative metrics is included on page 54. The principal driver for the reduction was net interest cost included within comparative earnings totalling \$250 million for the year, following the cessation of capitalization of interest expense upon the declaration of commercial production at Cobre Panama on September 1, 2019. \$549 million was capitalized to the Cobre Panama project with respect to interest expense incurred by the Company during the year ended December 31, 2019 (\$653m for the year ended December 31, 2018).
- Net loss attributable to shareholders of \$57 million for the year compared to net earnings attributable to shareholders of \$441 million in 2018. The 2019 result included \$182 million with respect to the discounting of Zambian VAT balances, \$101 million in impairments and \$11 million write-off of assets and other costs, \$96 million in foreign exchange losses, \$23 million in debt modification and extinguishment losses, \$12 million losses on disposal of assets, \$8 million in closed property restoration costs and \$127 million in tax and minority interest adjustments relating to foreign exchange revaluation and other comparative adjustments.

Fourth Quarter Financial Summary

- Sales revenues of \$1,284 million were 22% higher than the same period in 2018 reflecting a \$314 million contribution from Cobre Panama in its first full quarter of commercial production.

Gross profit of \$259 million

Gross profit in Q4 2018	280
Lower realized metal prices	(31)
Movement in hedge program	(26)
Change in sales volumes mix	(14)
Lower by-product contribution	(7)
Panama contribution (excluding depreciation)	137
Las Cruces movement (excluding depreciation)	(1)
Movement in cash costs (excluding Zambian royalties)	(3)
Increase in depreciation	(66)
Increase in Zambian royalty rate	(10)
Ravensthorpe restart preparations	(13)
Positive impact of foreign exchange on operating costs	13
Gross profit in Q4 2019 ¹	259

¹ Gross profit is reconciled to comparative EBITDA by including exploration costs of \$7 million, general and administrative costs of \$25 million, other expenses of \$6 million, adding back depreciation of \$290 million (a reconciliation of comparative EBITDA is included on page 54).

COMPARATIVE EARNINGS OF \$35 MILLION

- Comparative earnings for the quarter ended December 31, 2019, of \$35 million compared to \$182 million in the comparable period of 2018. A reconciliation of comparative metrics to the consolidated financial statements is included on pages 54. The decrease was largely attributable to a net interest expense of \$183 million that was expensed in the current quarter rather than capitalized following the declaration of commercial production at Cobre Panama on September 1, 2019.
- Net loss attributable to shareholders of \$115 million for the quarter compared to net earnings attributable to shareholders of \$198 million in the same period in 2018. The 2019 result included impairments of \$101 million, discounting of Zambian VAT balances of \$22 million, foreign exchange losses of \$47 million and a \$4 million modification loss on the senior Revolving Credit Facility, \$5 million closed property restoration expense and a \$28 million tax and minority interest adjustment relating to foreign exchange revaluation and other comparative adjustments.

Financial Position and Operating Cash Flow

- The Company ended the year with \$523 million of net unrestricted cash and cash equivalents in addition to \$250 million of committed undrawn senior debt facilities and was in full compliance with all financial covenants.
- On January 13, 2020, the Company issued an additional \$500 million aggregate principal amount of 7.25% Senior Notes due 2023 (the "2023 New Notes") and an additional \$250 million aggregate principal amount of 7.50% Senior Notes due 2025 (the "2025 New Notes", collectively the "Notes"). The 2023 New Notes were priced at 102.50%, representing a yield to maturity of 6.373%, and the 2025 New Notes were priced at 103.00%, representing a yield to maturity of 6.804%. The Notes represent an additional offering to the Company's existing \$1.1 billion of Senior Notes due 2023 (the "Existing 2023 Notes"), and the existing \$1.1 billion of Senior Notes due 2025 (the "Existing 2025 Notes") issued under the same indentures. The Company intends to use the proceeds from the issuance of the Notes to redeem in full the outstanding \$300 million of 7.00% Senior Notes due February 15, 2021, including the payment of accrued and unpaid interest, and to repay (but not cancel commitments) \$450 million of amounts outstanding under the Company's revolving credit facility. On January 16, 2020, the Company issued notice of redemption of the 7.00% Senior Notes due 2021.

Management's Discussion and Analysis (continued)

- At December 31, 2019, the Company had 80,000 tonnes of unmarginated zero cost copper collar sales contracts with weighted average prices of \$2.65 to \$2.91 per lb outstanding with maturities to December 2020, 30,000 tonnes of outstanding unmarginated copper forward sales contracts at an average price of \$2.81 per lb at December 31, 2019, with maturities to June 2020, and unmarginated nickel forward sales contracts for 12,046 tonnes at an average price of \$6.77 per lb outstanding with maturities to February 2021.
- Taking into account forecast operating cash inflows, capital expenditure outflows and available committed facilities, the Company expects to have sufficient liquidity through the next 12 months to carry out its operating and capital expenditure plans and remain in full compliance with financial covenants. The Company continues to take action to manage operational and price risk and further strengthen the balance sheet.

Other Developments

CHANGES TO THE ZAMBIAN TAX REGIME

Following the 2020 National Budget, presented on September 27 2019, the Government of the Republic of Zambia ("GRZ") has enacted the proposed changes into law, with effect from January 1, 2020. No material changes have been made to the provisions previously announced. The preliminary estimated impact of these changes on Group C1 and AISC is approximately \$0.04 per lb.

Further guidance on these changes is still expected and the Company is continuing to refine its assessment of the estimated impact of the proposed changes.

The Company's Zambian operations have continued to accrue VAT receivable amounts during the quarter with no cash refunds received and limited offsets to other tax liabilities approved. The Company considers that the outstanding VAT claims are fully recoverable and has reclassified all VAT balances due to the Zambian operations as non-current. A finance charge of \$182 million has been recognized in the year-ended December 31, 2019, representing the discounting over the expected timeframe to repayment. The Minister reaffirmed that the GRZ remains committed to settling outstanding VAT claims and the Company continues to engage in regular discussions with the relevant government authorities. See additional disclosure *Liquidity and Capital Resources* on page 38. The total amount of discounted VAT accrued by the Company's Zambian operations at December 31, 2019, was \$398 million, of which \$233 million is related to Kansanshi.

ZAMBIAN POWER SUPPLY

Low water levels in the Kariba Dam have resulted in the country's state-owned power company ("ZESCO") implementing load shedding for domestic users, however, no restrictions are currently in place for the Company's mining operations.

DIVIDENDS

First Quantum has declared a final dividend of CDN\$0.005 per share, in respect of the financial year ended December 31, 2019. The final dividend together with the interim dividend of CDN\$0.005 per share is a total of CDN\$0.01 per share for the 2019 financial year.

For the year ended December 31, 2019, 10,000 common shares (7,000 common shares for the year ended December 31, 2018) were issued through the Company's Dividend Reinvestment Plan.

Material Legal Proceedings

PANAMA CONSTITUTIONAL PROCEEDINGS

In February 1996, the Republic of Panama and Minera Panama SA ("MPSA"), now a Panamanian subsidiary of the Company, entered into a mining concession contract in respect of the Cobre Panama project.

On February 26, 1997, Contract-Law No. 9 ("Law 9") was passed by the Panamanian National Assembly. Law 9 granted the status of national law to the mining concession contract, establishing a statutory legal and fiscal regime for the development of the Cobre Panama project. On December 30, 2016, the Government of Panama signed and issued Resolution No. 128 by which it extended the mining concession contract held by MPSA for a second 20-year term commencing March 1, 2017 up to February 28, 2037. The Company remains eligible for consideration of a third 20-year term of the MPSA mining concession contract commencing March 1, 2037.

Management's Discussion and Analysis (continued)

In September 2018, the Company became aware of a ruling of the Supreme Court of Panama ("Supreme Court") in relation to the constitutionality of Law 9. The Company understands that the ruling of the Supreme Court with respect to the constitutionality of Law 9 relates to the enactment of Law 9 and does not affect the legality of the MPSA mining concession contract itself, which remains in effect, and allows continuation of the development and operation of the Cobre Panama project by MPSA.

In respect of the Supreme Court ruling on Law 9, which remains subject to various procedural processes, the Company notes the following:

- The ruling is not yet in effect.
- The Supreme Court decision was in respect of ongoing legal filings made since 2009 with regard to specific environmental petitions.
- In reviewing the process of approval of Law 9 of 1997, the Supreme Court found that the National Assembly had failed to consider whether Law 9 complied with applicable legislation at the time, namely Cabinet Decree 267 of 1969.
- The applicable Cabinet Decree of 1969, which was repealed in 1997 by Law 9, required the Ministry of Commerce and Industry ("MICI") to issue a request for proposals before awarding the Law 9 mining concession.
- The Attorney General of Panama has provided two formal opinions favourable to the constitutionality of Law 9 as required in this type of proceedings by Panamanian law.
- The Supreme Court ruling did not make a declaration as to the annulment of the MPSA mining concession contract.

Subsequently, MPSA has submitted filings to the Supreme Court for ruling, which it has accepted, prior to the ruling in relation to the constitutionality of Law 9 taking effect. On September 26, 2018, the Government of Panama issued a news release affirming support for Cobre Panama. The release confirmed that MICI considers that the MPSA mining concession contract, and its extension, remains in effect in all its parts while the Company seeks to clarify the legal position. (The MICI release is available at www.twitter.com/MICIPMA/status/1044915730209222657).

The newly elected Government of Panama, inaugurated on July 1, 2019, has established a multidisciplinary high-level commission including the Minister of Commerce and Industries (mining regulator), Minister of Environment, and Minister of Employment to discuss the Law 9 matter and seek resolution. Based on support from the Government of Panama, the Chamber of Commerce and Industries of Panama, the Panamanian Mining Chamber, other Panamanian business and industry chambers and its legal advice, the Company is confident of resolving the Law 9 matter in the near-medium term.

ZAMBIAN POWER

In June 2018, without any warning, ZESCO reduced power supply to the Kansanshi operation. The reduction was due to Kansanshi and Sentinel's rejection of ZESCO's demand for payment of higher tariffs, contrary to the existing contractual agreements between the parties.

On June 26, 2018, Kansanshi sought an injunction against ZESCO before the English courts, as the contracts on tariff are governed by English law. On June 28, 2018, ZESCO resisted the application and requested an extension to respond. On July 6, 2018, the Court awarded Kansanshi's request by way of a sanctioned consent order ("Order") which requires ZESCO to restore the full capacity as demanded by Kansanshi. In turn, Kansanshi is required to deposit the difference between the contractual tariff and the disputed higher tariff into a segregated account until an arbitration between Kansanshi and ZESCO on these facts are concluded. The Order continues to apply as ZESCO is restrained from making any reductions without incurring further sanction from the Court.

Management's Discussion and Analysis (continued)

On August 22, 2018, Kansanshi served on ZESCO a Notice of Arbitration in respect of these facts. A procedural timetable of the arbitration has been agreed, with the merits hearing set for summer 2020. Pursuant to the Procedural Order, Kansanshi has submitted its Statement of Claim and ZESCO has submitted its response and the parties have exchanged evidence. Following exchange of documents, witness statements were submitted on January 31, 2020 and expert evidence is planned to be submitted on February 21, 2020. A hearing on the merits is scheduled for the week of June 15, 2020.

Despite this dispute, the Company's operations generally maintain a constructive relationship with ZESCO, particularly with regards to the management of technical and supply issues. Operational and technical dialogue between the parties is expected to continue in the normal course.

KANSANSHI MINORITY PARTNER

In October 2016, the Company, through its subsidiary Kansanshi Holdings Limited, received a Notice of Arbitration from ZCCM International Holdings PLC ("ZCCM") under the Kansanshi Mining PLC ("KMP") Shareholders Agreement. ZCCM is a 20% shareholder in KMP and filed the Notice of Arbitration against Kansanshi Holdings Limited ("KHL"), the 80% shareholder, and against KMP. The Company also received a Statement of Claim filed in the Lusaka High Court naming additional defendants, including the Company, and certain directors and an executive of the named corporate defendants. Aside from the parties, the allegations made in the Notice of Arbitration and the High Court for Zambia were the same. The Company is firmly of the view that the allegations are in their nature inflammatory, vexatious and untrue.

The dispute was stated as a request for a derivative action, requiring ZCCM to obtain permission to proceed in each forum of the Arbitration and the Lusaka High Court. The dispute arose from facts originating in 2007, and concerned the rate of interest paid on select deposits by KMP with the Company. The deposits were primarily retained for planned investment by KMP in Zambia. In particular, KMP deposits were used to fund a major investment program at Kansanshi, including the successful construction and commissioning of the Kansanshi smelter and expansion of the processing plant and mining operations. The entirety of the deposit sums has been paid down from the Company to KMP, with interest. The interest was based on an assessment of an arm's length fair market rate, which is supported by independent third-party analysis. ZCCM disputed that interest rate paid to KMP on the deposits was sufficient.

In July 2019, the Arbitral Tribunal issued a final award in favour of KMP. The parties have reached an agreement on costs, in total exceeding \$1 million payable by ZCCM, bringing this particular matter to an end.

In parallel, several preliminary procedural applications to dismiss the High Court Action were lodged on behalf of the Company, and other defendants, in the Lusaka High Court. By a decision dated January 25, 2018, the Lusaka High Court used its discretion to rectify ZCCM's procedural errors. The Court granted leave to the Company, FQM Finance, a wholly-owned subsidiary of the Company, and the individual defendants to appeal against this decision and the litigants have agreed to a stay pending the appeal. The appeal hearing took place on November 21, 2018, with submissions made by all parties. The Court of Appeal delivered judgment on January 11, 2019, dismissing the appeal. An appeal to the Supreme Court of Zambia was heard on April 24, 2019, and has been dismissed. The High Court was scheduled to resume hearing two further procedural applications, including whether ZCCM is allowed to maintain the derivative action. However, before these hearings could take place the defendants brought an application requesting dismissal of the case on grounds of abuse of process/ res judicata, on the basis that the action cannot be allowed to continue for risk of producing conflicting judgment from the London arbitration, which has already adjudicated the facts of this particular complaint. ZCCM objected to the defendants' application. ZCCM also tried to bring an application to set aside the registration of the Arbitral award in Zambia. The defendants' have resisted this application. Both applications have now had an oral hearing, in October 2019, and the parties are awaiting a decision of the High Court.

Development Activities

COBRE PANAMA PROJECT, PANAMA

Please also see Cobre Panama operating review on page 26 below.

The final mill in Cobre Panama (the eighth mill), came on line in mid-December, providing additional capacity on the third milling train. Annual milling throughput can now ramp up to 85 million tonnes. Milled throughput for the month of December was 6.6 million tonnes.

Key milestones achieved through the fourth quarter of 2019 include:

- Completed flotation upgrades to support 100 million tonnes per annum (“mtpa”) operation,
- Achieved daily peak mill throughput of 251,000 tonnes per day,
- Tailings management facility sand embankment building is now operational, and
- Mine trolley assist line commissioned and operational.

Project construction and commissioning is essentially complete. The molybdenum plant is expected to be commissioned in 2020 and associated capital expenditure of approximately \$12 million is included in total capital expenditure guidance. There was significant demobilization of the construction workforce during the quarter.

The operational workforce is in place, of which approximately 82% has been contracted as permanent employees with the remainder providing supplementary skills and labour from construction and commissioning assisting with initial operations. Approximately 88% of the current workforce is Panamanian.

The total project capital expenditure for the year ended December 31, 2019 was \$697 million (First Quantum's share \$662 million). Project spending to completion amounted to \$6.77 billion, including \$2.1 billion contributed by third parties. The Company's share of project capital expenditure increased following the acquisition from LS-Nikko of its 50% share in Korea Panama Mining Corporation (“KPMC”) in November 2017.

Further to these capital expenditures, \$549 million was capitalized to the Cobre Panama project with respect to interest expense incurred by the Company during the year ended December 31, 2019. Subsequent to the declaration of commercial production on September 1, 2019, capitalization of interest to the project ceased. The net interest expense recognized by the Company in the income statement for the year was \$248 million.

Exploration

A global exploration program continues to be focused on identifying high quality porphyry and sediment hosted copper deposits in prospective belts around the world. This program includes work at advanced stage exploration projects at Taca Taca in Argentina and Haquira in Peru as well as near-mine resource expansion around Las Cruces and Kansanshi.

In recent years, early stage exploration has expanded to cover systematic investigation of properties throughout the Andean belt in Argentina, Chile, Peru, Ecuador and Colombia but also includes evaluation of high priority targets in several other jurisdictions. Exploration in the fourth quarter of 2019 included drill programs to test greenfield targets in Argentina, Chile, Zambia, Ireland and Papua New Guinea. Some encouraging results from prospects in Argentina and Papua New Guinea in particular, will require more detailed follow up drilling during 2020.

Management's Discussion and Analysis (continued)

At Taca Taca, located in the Salta province of Argentina, the Company is continuing with the project pre-development and feasibility activities, focusing on confirming the mineral resource, metallurgical sampling and test work, and other technical work required to increase the definition of project engineering, cost and operating estimates. Confirmatory work for project water supply is continuing with additional drilling and pump testing of bore holes, and aquifer modeling and bore field simulation. The primary Environmental and Social Impact Assessment for the project, which covers the principal proposed project sites, was submitted to the Secretariat of Mining of Salta Province in February 2019.

At the Haquira project, located in the Apurímac region of Peru, the focus remains on community and environmental aspects. The environmental Impact Assessment studies continue and formal negotiations with the communities with respect to their resettlement have now commenced.

Near-mine exploration programs are planned to continue at Las Cruces, in Spain, as well as on satellite targets around Kansanshi, in Zambia.

Health & Safety

The health and safety of all of the Company's employees and contractors is our top priority and the Company is focused on the continual strengthening and improvement of the safety culture at all of our operations. The Lost Time Injury Frequency Rates ("LTIFR") is an area of continued focus and a key performance metric for the Company, our rolling 12-month LTIFR is 0.05 per 200,000 hours worked on average over the 12-month period to December 31, 2019 (2018: 0.06).

Guidance

Guidance for the three years following is given once a year as part of year-end reporting. On a quarterly basis, guidance for the current year will be updated as necessary or reaffirmed.

Guidance provided below is based on a number of assumptions and estimates as of December 31, 2019, including among other things, assumptions about metal prices and anticipated costs and expenditures. Guidance involves estimates of known and unknown risks, uncertainties and other factors which may cause the actual results to be materially different.

Production guidance

000's	2020	2021	2022
Copper (tonnes)	830 - 880	800 - 850	800 - 850
Gold (ounces)	280 - 300	280 - 300	280 - 300
Nickel (tonnes)	15 - 20	25 - 28	25 - 28

Production guidance by operation

Copper

000's tonnes	2020	2021	2022
Cobre Panama	285 - 310	310 - 330	310 - 340
Kansanshi	220 - 235	220 - 235	220 - 230
Sentinel	230 - 240	240 - 255	250 - 260
Las Cruces	52	-	-
Other sites	43	30	20

Gold

000's ounces	2020	2021	2022
Cobre Panama	120 - 130	125 - 135	135 - 145
Kansanshi	120 - 130	120 - 130	120 - 130
Other sites	40	35	25

Nickel

000's tonnes	2020	2021	2022
Ravensthorpe	15 - 20	25 - 28	25 - 28

Cash cost and all-in sustaining cost

Copper	2020	2021	2022
C1 (per lb)	\$1.20 - \$1.40	\$1.20 - \$1.40	\$1.20 - \$1.40
AISC (per lb)	\$1.70 - \$1.85	\$1.70 - \$1.85	\$1.70 - \$1.85

Management's Discussion and Analysis (continued)

Nickel

Production at Ravensthorpe is expected to ramp-up through 2020. In the first two full years of production, 2021 and 2022, C1 and all-in sustaining costs are expected to be between \$4.60 per lb to \$4.80 per lb, and \$5.10 per lb to \$5.40 per lb, respectively.

Capital expenditure

	2020	2021	2022
Capitalized stripping	250	250	250
Sustaining capital and other projects	600	600	600
Total capital expenditure	850	850	850

Guidance for the Company's sustaining capital and other projects includes expenditure relating to Cobre Panama for the completion of construction and commissioning of the molybdenum plant, continuation of construction work for the tailings management facility and ongoing development work associated with the expansion to 100 mtpa capacity. Other projects in 2020 include: the fourth crusher at Sentinel and construction work on the Shoemaker Levy deposit at Ravensthorpe. Underlying sustaining capital expenditure is expected to average approximately \$250 million per annum.

INTEREST

Interest has largely been capitalized in the period prior to declaration of commercial production at Cobre Panama. Interest expense of \$549 million was capitalized to the Cobre Panama project for the eight months ended August 31, 2019. From September 1, 2019, the date of declaration of commercial production at Cobre Panama, all interest was expensed to the income statement rather than capitalized. Net interest expense for the year ended December 31, 2019, was \$248 million. The majority of the Company's interest expense is incurred by Canadian entities, where no tax credit is recognized. Interest expense for the full year 2020 is expected to range between \$770 million and \$810 million, this includes interest accrued on related party loans to Cobre Panama and a finance cost accreted on the precious metal streaming arrangement.

TAX

Excluding Cobre Panama, the impact of the changes to the Zambian mining tax regime, and the impact of interest expense, the effective tax rate for 2020 is expected to be approximately 30%. Excluding these items but including Cobre Panama it is expected to be approximately 15%.

Including the impact of the changes to the Zambian mining tax regime, which increased mineral royalties by 1.5% and made them non-deductible for tax purposes, and excluding the impact of interest being expensed following the declaration of commercial production at Cobre Panama, the expected effective rate is approximately 20%.

DEPRECIATION

Depreciation expense for the year ended December 31, 2019 was \$907 million, including Cobre Panama. The full year 2020 depreciation expense is expected to range between \$1,300 million and \$1,350 million. The increase from 2019 reflects a full twelve months of depreciation expense from Cobre Panama.

Cobre Panama depreciation expense commenced in September 2019 following the declaration of commercial production. The depreciation expense was \$113 million for the year ended December 31, 2019 and is expected to be approximately \$500 million for the full year 2020.

OTHER

The recent coronavirus outbreak in China has affected short term LME commodity prices, though the Company has not experienced any disruption to the sale of metals. The Company will continue to monitor the impact of the coronavirus outbreak.

Operating Review

Production summary

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper production (tonnes) ¹					
Kansanshi	60,808	58,888	61,780	232,243	251,522
Sentinel	50,874	56,439	60,840	220,006	223,656
Cobre Panama	60,338	19,438	–	79,776	–
Las Cruces	17,611	9,479	18,470	48,090	70,738
Guelb Moghrein	8,220	6,203	8,319	29,620	28,137
Çayeli	4,725	3,218	5,931	16,706	19,896
Pyhäsalmi	1,694	2,062	2,964	8,003	11,904
Total copper production (tonnes) – commercial	204,270	155,727	158,304	634,444	605,853
Cobre Panama – pre-commercial	–	36,783	–	67,704	–
Total copper production (tonnes) – including pre-commercial	204,270	192,510	158,304	702,148	605,853
Total gold production (ounces) – commercial ²					
Cobre Panama – pre-commercial	–	13,570	–	24,120	–
Total gold production (ounces) – including pre-commercial	77,789	70,120	48,039	256,913	185,414
Total zinc production (tonnes)	2,462	4,429	7,687	17,332	26,807

¹ Production is presented on a contained basis, and is presented prior to processing through the Kansanshi smelter.

² Commercial gold production for the year ended December 31, 2019, includes 35,954 ounces from Cobre Panama, which was declared in commercial production September 1, 2019.

FULL YEAR

The Company achieved record copper production in the year of 702,148 tonnes, 16% higher than 2018 and including 147,480 tonnes from Cobre Panama, of which 79,776 tonnes were commercial. Following first production in March 2019, Cobre Panama completed a successful ramp-up to commercial production, which was declared effective September 1, 2019. Lower production at Las Cruces and Kansanshi was mitigated by the contribution from Cobre Panama.

Copper production at Las Cruces was 32% lower than the prior year, as a result of continued processing of lower grade ore stockpiles until July, following the land slippage that halted mining in January 2019. This was followed by a ball mill failure in September 2019 that resulted in the loss of several days of production. Fourth quarter production was close to pre-land slippage levels of the comparable quarter of 2018.

Higher sulphide grade ore mined at Kansanshi in 2019 was accompanied by lower oxide grade ore and lower recoveries on the oxide and mixed ore circuits. These combined with the processing of higher acid-consuming ores, and resulted in 8% lower copper production in the year compared with 2018.

Copper production at Sentinel was 2% below the prior year, mainly due to lower grade and recoveries resulting from the mining of transitional ore in the fourth quarter. Lower copper production at Çayeli was attributable to decreased throughput and grade. At Pyhäsalmi, production was impacted by lower copper grade, throughput and copper recoveries.

Gold production was 39% higher than the prior year due to Cobre Panama, which contributed 60,074 ounces to total gold production in the year, and the benefits from operational enhancements at Kansanshi.

Management's Discussion and Analysis (continued)

Ravensthorpe remained on care and maintenance throughout the year following the suspension of operations at the mine in October 2017. Operational readiness works began in the third quarter and the mining contract was awarded in the fourth quarter, in preparation for restart of operations planned for the first quarter of 2020.

FOURTH QUARTER

Copper production was 29% higher than the comparable period of 2018 reflecting the contribution from Cobre Panama in the quarter, which more than offset lower production at Sentinel. Production at Cobre Panama continued to ramp-up, with copper production of 60,338 tonnes in its first full quarter of commercial production, following the declaration effective September 1, 2019.

Las Cruces and Kansanshi production in the quarter recovered from lower copper production earlier in the year, and copper production volumes were broadly in line with the same period in 2018. This reflected mining and processing being fully operational at Las Cruces in the fourth quarter, and, at Kansanshi, higher sulphide grade ore and recoveries and higher mixed ore grade were limited by lower oxide grade and recoveries compared to the same period in 2018.

Sentinel copper production was 16% below that of the same period in 2018, due to lower grade ore from the areas mined as well as lower recoveries due to a higher volume of transitional ore mined from the east cutback.

Copper production at Çayeli was affected by lower throughput and ore grade and copper recoveries.

Gold production was 62% higher than the comparable quarter in 2018. Cobre Panama produced 28,040 ounces of gold in the quarter while Kansanshi benefited from operational enhancements.

Sales Volume Summary

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper sales volume (tonnes)					
Kansanshi ¹	73,986	47,138	56,330	235,381	229,832
Sentinel	53,272	58,201	60,257	218,282	238,211
Cobre Panama	48,841	35,056	–	83,897	–
Las Cruces	16,284	10,405	18,345	48,244	71,523
Guelb Moghrein	6,010	5,969	9,099	28,046	27,366
Çayeli	5,553	2,934	9,153	18,118	17,397
Pyhäsalmi	2,018	1,699	3,028	8,451	12,184
Total copper sales (tonnes) – commercial	205,964	161,402	156,212	640,419	596,513
Cobre Panama – pre-commercial	–	42,425	–	48,967	–
Total copper sales volume (tonnes) – including pre-commercial	205,964	203,827	156,212	689,386	596,513
Total gold sales volume (ounces) – commercial ^{2,3}	79,409	55,632	53,221	236,126	193,072
Cobre Panama – pre-commercial	–	16,032	–	18,659	–
Total gold sales volume (ounces) – including pre-commercial ³	79,409	71,664	53,221	254,785	193,072
Total zinc sales volume (tonnes)	2,979	2,297	8,268	16,372	26,112

¹ Copper sales exclude the sale of copper anode produced from third-party concentrate purchased at Kansanshi. Sales of copper anode attributable to third-party concentrate purchases were nil and 1,182 tonnes for the three months and year ended December 31, 2019, respectively, (5,884 tonnes and 7,349 tonnes for the three months and year ended December 31, 2018, respectively). There were no sales of copper anode attributable to third-party concentrate purchases in the three months to September 30, 2019.

² Commercial gold sales for the three months and year ended December 31, 2019, includes 23,336 ounces and 36,410 ounces, respectively, from Cobre Panama that was declared in commercial production September 1, 2019.

³ Excludes purchased gold delivered to Franco-Nevada under precious metal streaming arrangement.

Management's Discussion and Analysis (continued)

FULL YEAR

Commercial copper sales volumes were 7% higher for the year compared with 2018, primarily reflecting the sales volumes from Cobre Panama. Cobre Panama recorded copper and gold sales volumes of 83,897 tonnes and 36,410 ounces, respectively, in the four-month period September to December 2019, following the declaration of commercial production effective September 1, 2019.

Sales volumes from Las Cruces and Sentinel were below 2018 due to lower copper production at both operations.

FOURTH QUARTER

Copper sales volumes were 32% higher than in the same period of 2018, reflecting the contribution from Cobre Panama.

Unit Cost Summary

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper C1¹ cash cost (\$ per lb)					
Kansanshi ²	\$ 1.03	\$ 1.10	\$ 1.04	\$ 1.13	\$ 1.03
Sentinel	\$ 1.71	\$ 1.58	\$ 1.55	\$ 1.61	\$ 1.70
Cobre Panama ³	\$ 1.28	\$ 1.34	–	\$ 1.29	–
Las Cruces	\$ 0.73	\$ 1.46	\$ 0.94	\$ 1.17	\$ 0.90
Other sites ⁴	\$ 1.16	\$ 1.23	\$ 1.23	\$ 1.05	\$ 0.96
Total copper C1 cash cost (\$ per lb)²	\$ 1.24	\$ 1.36	\$ 1.23	\$ 1.31	\$ 1.28
Copper AISC¹ (\$ per lb)					
Kansanshi ²	\$ 1.48	\$ 1.74	\$ 1.61	\$ 1.65	\$ 1.55
Sentinel	\$ 2.22	\$ 2.12	\$ 2.02	\$ 2.12	\$ 2.22
Cobre Panama ³	\$ 1.85	\$ 1.56	–	\$ 1.78	–
Las Cruces	\$ 0.91	\$ 1.74	\$ 1.16	\$ 1.35	\$ 1.16
Other sites ⁴	\$ 1.51	\$ 1.60	\$ 1.40	\$ 1.33	\$ 1.26
Total copper AISC (\$ per lb)²	\$ 1.73	\$ 1.86	\$ 1.68	\$ 1.78	\$ 1.74

1 Copper production for the year ended December 31, 2019 includes 67,704 tonnes of pre-commercial production from Cobre Panama, which is not included in C1, C3 and AISC calculations.

2 Copper C1 cash cost and AISC for Kansanshi and total copper exclude purchases of copper concentrate from third parties treated through the Kansanshi smelter.

3 Copper C1 cash cost and AISC for Cobre Panama are calculated from the date of commercial production, September 1, 2019.

4 Other sites include Guelb Moghrein, Çayeli and Pyhäsalmi.

Management's Discussion and Analysis (continued)

FULL YEAR

Total C1 cash cost of \$1.31 per lb in the year was \$0.03 per lb higher than the prior year, and includes the impact of four months of commercial production at Cobre Panama from September 1, 2019 of \$1.29 per lb. The higher C1 cash cost reflects lower production at Las Cruces, which resulted in an increase to its C1 cash cost of \$0.27 per lb in the year and increased total C1 cash cost by \$0.04 per lb. Lower copper production resulted in an increase of \$0.10 per lb to the Kansanshi C1 cash cost compared to 2018 and which resulted in an increase of \$0.04 per lb to total C1 cash cost. These increases were mitigated by a \$0.09 per lb decrease in Sentinel C1 cash cost due to various cost improvements mainly in fuel, consumables and employee costs.

Total AISC of \$1.78 per lb includes AISC at Cobre Panama of \$1.78 per lb from the date of commercial production. Total AISC was \$0.04 per lb higher compared to 2018, reflecting the higher C1 cash cost. Total AISC for 2019 also includes a \$0.01 per lb increase with respect to lease payments following the adoption of *IFRS 16 Leases*, which is matched by a corresponding decrease to C1 cash cost.

FOURTH QUARTER

Total copper C1 cash cost of \$1.24 per lb in the fourth quarter includes the impact of a full quarter of commercial production at Cobre Panama of \$1.28 per lb. Total C1 cash cost was \$0.01 per lb higher than the same period in 2018, reflecting the impact of lower copper production at Sentinel, mitigated by lower C1 cash cost at Las Cruces, attributed to cost reduction efforts.

Total AISC of \$1.73 per lb includes AISC for Cobre Panama of \$1.85 per lb for the quarter. Total AISC was \$0.05 per lb higher than the same period in 2018, reflecting the higher total C1 cash cost and the deferred stripping activity at Cobre Panama. Lower sustaining capital expenditure at Kansanshi and Las Cruces as well as lower deferred stripping costs at Las Cruces, reduced total AISC.

Total AISC for the fourth quarter of 2019 includes a \$0.01 per lb increase with respect to lease payments following the adoption of *IFRS 16 Leases*, which is matched by a corresponding decrease to C1 cash cost.

Operations

KANSANSHI

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Sulphide ore milled (000's tonnes) ¹	3,211	3,301	3,301	12,908	12,978
Sulphide ore grade processed (%)	0.95	0.86	0.81	0.89	0.78
Sulphide copper recovery (%)	93	92	88	91	91
Mixed ore milled (000's tonnes) ¹	1,900	1,939	2,165	7,699	8,186
Mixed ore grade processed (%)	1.11	1.02	1.08	1.05	1.06
Mixed copper recovery (%)	79	81	76	77	82
Oxide ore milled (000's tonnes) ¹	1,893	1,918	1,668	7,201	6,916
Oxide ore grade processed (%)	1.07	1.04	1.33	1.12	1.44
Oxide copper recovery (%)	79	85	92	82	89
Copper production (tonnes) ²	60,808	58,888	61,780	232,243	251,522
Copper smelter					
Concentrate processed (DMT) ³	342,550	281,800	349,424	1,317,826	1,381,637
Copper anode produced (tonnes) ³	86,690	69,952	89,894	324,281	347,037
Smelter copper recovery (%)	97	97	97	97	97
Acid tonnes produced (000's)	327	264	320	1,236	1,255
Copper sales (tonnes) ^{4,5}	73,986	47,138	56,330	235,381	229,832
Gold production (ounces)	36,105	38,925	33,465	145,386	130,019
Gold sales (ounces)	45,342	32,022	35,616	146,363	134,890
All-in sustaining cost (AISC) (per lb) ^{6,7}	\$ 1.48	\$ 1.74	\$ 1.61	\$ 1.65	\$ 1.55
Cash costs (C1) (per lb) ^{6,7}	\$ 1.03	\$ 1.10	\$ 1.04	\$ 1.13	\$ 1.03
Total costs (C3) (per lb) ^{6,7}	\$ 1.68	\$ 1.84	\$ 1.71	\$ 1.84	\$ 1.74
Sales revenues	495	314	417	1,581	1,672
Gross profit	166	74	140	472	623
Comparative EBITDA ⁶	232	126	198	705	859

1 DMT

2 Production presented on a copper concentrate basis, i.e.. mine production only. Production does not include output from the smelter.

3 Concentrate processed in smelter and copper anodes produced are disclosed on a 100% basis, inclusive of Sentinel and third-party concentrate processed. Concentrate processed is measured in DMT. For the three months and year ended December 31, 2019, nil and 1,881 DMT of third-party purchased copper concentrate was treated, respectively (9,402 DMT and 11,682 DMT for the three months and year ended December 31, 2018, respectively). There was no third-party purchased concentrate treated for the three months ended September 30, 2019.

4 Sales of copper anode attributable to anode produced from third-party purchased concentrate are excluded. For the three months and year ended December 31, 2019, sales of copper anode produced from purchased concentrate were nil and 1,182 tonnes, respectively, (5,884 tonnes and 7,349 tonnes for the three months and year ended December 31, 2018, respectively). There were no sales of copper anode attributable to third-party concentrate purchases in the three months to September 30, 2019.

5 Sales include third-party sales of concentrate, cathode and anode attributable to Kansanshi (excluding copper anode sales attributable to Sentinel).

6 AISC, C1 cash cost, and C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

7 Excluding purchases of copper concentrate from third parties treated through the Kansanshi smelter.

Management's Discussion and Analysis (continued)

Kansanshi Mining Operations

Full year

Copper production during the year was 8% lower compared to 2018, mainly due to lower grade ore processed through the oxide circuit and lower plant recoveries in the oxide and mixed ore circuits, reflecting high acid-consuming ore mined and the restriction of acid consumption to the acid available from the smelter. Higher grade ore on the sulphide circuit mitigated some of the impact to production.

Gold production was 12% higher than the same period of 2018, reflecting the impact of operational enhancements achieved through projects commissioned during the second quarter of 2019.

AISC of \$1.65 per lb was \$0.10 per lb higher than 2018, due to higher C1 cash costs. C1 cash cost was \$0.10 per lb higher than the same period in 2018, reflecting the impact of lower copper production and movements in the value of ore stockpiles processed during the current year. Higher by-product credits and lower fuel costs mitigated some of the impact of the above.

Sales revenues of \$1,581 million were 5% lower year-over-year, reflecting lower realized copper prices, excluding the impact of the corporate sales hedge program. Higher gold sales volumes and realized gold prices provided some mitigation to the above.

Gross profit of \$472 million was 24% below 2018, reflecting the decrease in sales revenues, the negative impact of the higher royalty rates introduced by the Zambian government from January 1, 2019, of \$21 million, and movements in the value of ore stockpiles processed in the period.

Fourth quarter

Copper production was 2% below that of the comparable period in 2018, mainly due to lower ore grade and plant recoveries on the oxide circuit, and lower throughput on the mixed ore and sulphide circuits, though higher ore grade and recoveries on the sulphide and mixed ore circuits limited the impact. The decline in the oxide ore grade was expected due to the depletion of higher-grade areas as the mine ages. Lower oxide ore grade combined with high acid-consuming ore impacted the leach efficiencies and circuit recovery on the oxide circuit. The high-pressure leach unit was in partial use during the quarter with one autoclave in operation.

Gold production was 8% higher than the fourth quarter of 2018, reflecting the impact of operational enhancements achieved through projects commissioned during the second quarter.

AISC of \$1.48 per lb was \$0.13 per lb below that of the same period in 2018, due to lower sustaining capital expenditure.

Sales revenues of \$495 million were 19% above the same period in 2018, reflecting higher copper and gold sales volumes and higher realized gold prices.

Gross profit of \$166 million was 19% above the same period in 2018, reflecting higher sales revenues. The increase was in spite of the \$5 million impact of the higher royalty rates introduced by the Zambian government from January 1, 2019.

Kansanshi Copper Smelter

Full year

The smelter treated 1,317,826 DMT of concentrate, produced 324,281 tonnes of copper in anode and 1,236,000 tonnes of sulphuric acid and maintained a consistent overall copper recovery rate of 97%. The volume of concentrate was 5% lower than 2018 on account of a two-week shutdown in the third quarter of 2019.

Fourth quarter

The smelter treated 342,550 DMT of concentrate, 2% lower than the same period of 2018, and produced 86,690 tonnes of copper anode and 327,000 tonnes of sulphuric acid. The concentrate grade treated in the quarter was 25.2%.

Outlook

Production in 2020 is expected to be between 220,000 and 235,000 tonnes of copper, and between 120,000 and 130,000 ounces of gold.

Management's Discussion and Analysis (continued)

SENTINEL

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper ore processed (000's tonnes) ¹	12,385	13,005	12,434	48,858	48,750
Copper ore grade processed (%)	0.47	0.47	0.53	0.50	0.50
Copper recovery (%)	87	91	92	91	91
Copper production (tonnes)	50,874	56,439	60,840	220,006	223,656
Copper sales (tonnes)	53,272	58,201	60,257	218,282	238,211
All-in sustaining cost (AISC) (per lb) ²	\$ 2.22	\$ 2.12	\$ 2.02	\$ 2.12	\$ 2.22
Cash cost (C1) (per lb) ²	\$ 1.71	\$ 1.58	\$ 1.55	\$ 1.61	\$ 1.70
Total cost (C3) (per lb) ²	\$ 2.45	\$ 2.29	\$ 2.26	\$ 2.34	\$ 2.42
Sales revenues	281	303	344	1,199	1,454
Gross profit	25	40	72	176	288
Comparative EBITDA ²	86	110	141	423	553

¹ DMT

² AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Full year

Sentinel achieved record throughput in 2019. The mining of transitional ore in the fourth quarter, however, resulted in lower grade ore and recoveries, resulting in full year copper production that was 2% lower than 2018.

AISC of \$2.12 per lb was \$0.10 per lb below 2018, despite higher royalties, reflecting lower C1 cash cost and sustaining capital expenditure. C1 cash cost was \$0.09 per lb lower than 2018, due to cost improvements mainly in fuel, consumables, employee and contractor costs.

Sales revenues of \$1,199 million were 18% below 2018 due to both lower realized copper prices, excluding the impact of the corporate sales hedge program, and lower sales volumes. Sales revenues comprised sales of both concentrate and anode, with a higher proportion of revenue realized from copper anode. The lower sales revenues together with the negative impact of higher royalty rates introduced by the Zambian government from January 1, 2019, of \$19 million resulted in a 39% decrease in gross profit.

Fourth quarter

Copper production was 16% lower than the comparable 2018 quarter as a result of lower processed feed ore grade and recoveries. The lower feed ore grade resulted from mining of the south east extent of the main pit while recoveries were impacted by the increased transitional ore feed from the east cutback. Mill throughput was in line with the comparable period of 2018 despite the non-availability of secondary crushing during periods of competent ore treatment.

AISC of \$2.22 per lb was \$0.20 per lb above the same period of 2018, reflecting higher C1 cash cost and increased Zambian royalty rate, though sustaining capital expenditure was lower. C1 cash cost was \$0.16 per lb higher than the comparable period of 2018 due to the lower production and higher selling costs attributable to an increased proportion of third party copper concentrate in the sales ratio.

Sales revenues of \$281 million were 18% lower than the same period in 2018 due to lower realized copper prices, excluding the impact of the corporate sales hedge program, and lower sales volumes. Sales revenues comprised sales of both concentrate and anode, with a higher proportion of revenue realized from copper anode. Gross profit was 65% lower than the same period in 2018, reflecting the decrease in sales revenues and a \$5 million negative impact of the higher royalty rates enacted as of January 1, 2019.

Management's Discussion and Analysis (continued)

Outlook

Copper production in 2020 is expected to be between 230,000 and 240,000 tonnes.

Copper production during 2020 is expected to benefit from increased and consistent ore supply from the east cutback as well as improved ore grades during the second half of the year, and improved process operations and treatment of transitional ore. Mining will continue to focus on operational improvements with expansion of the trolley assist program planned, as well as improved fleet availability and reliability. The remaining secondary crusher is expected to be re-commissioned during the second quarter.

A five-day planned maintenance shutdown has been scheduled for July 2020.

COBRE PANAMA

	Q4 2019	Q3 2019	Q3 2019	Q4 2018	2019	2019	2018
		Post-commercial production	Pre-commercial production		Post-commercial production	Pre-commercial production	
Copper ore processed (000's tonnes) ¹	16,493	4,437	8,375	–	20,930	17,653	–
Copper ore grade processed (%)	0.41	0.49	0.51	–	0.43	0.47	–
Copper recovery (%)	89	89	86	–	89	85	–
Copper production (tonnes)	60,338	19,438	36,783	–	79,776	67,704	–
Copper sales (tonnes)	48,841	35,056	42,425	–	83,897	48,967	–
Gold production (ounces)	28,040	7,914	13,570	–	35,954	24,120	–
Gold sales (ounces) ²	23,336	13,074	16,032	–	36,410	18,659	–
Silver production (ounces)	452,663	152,243	269,800	–	604,906	527,341	–
Silver sales (ounces) ²	354,689	271,774	350,982	–	626,463	406,135	–
All-in sustaining cost (AISC) (per lb) ³	\$ 1.85	\$ 1.56	–	–	\$ 1.78	–	–
Cash cost (C1) (per lb) ³	\$ 1.28	\$ 1.34	–	–	\$ 1.29	–	–
Total cost (C3) (per lb) ³	\$ 2.12	\$ 2.28	–	–	\$ 2.15	–	–
Sales revenues	314	210	–	–	524	–	–
Gross profit	56	36	–	–	92	–	–
Comparative EBITDA ³	136	67	–	–	203	–	–

1 DMT

2 Excludes purchased gold delivered to Franco-Nevada under precious metal streaming arrangement.

3 AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Management's Discussion and Analysis (continued)

Full year

Cobre Panama achieved a successful ramp-up to commercial production in the year, following first copper production in March 2019. Commercial production was declared from September 1, 2019, with 79,776 tonnes and 35,954 ounces of commercial copper and gold production, respectively, to December 31, 2019.

Cobre Panama's eighth and final mill came on line in mid-December, providing additional capacity on the third milling train. Mill throughput can now ramp up to annualized throughput of 85 million tonnes. Mill throughput for the month of December was 6.6 million tonnes.

Revenue and operating costs have been recorded for the period from September 1, 2019 to December 31, 2019, in the Statement of Earnings. Comparative financial information has not been presented as all pre-commercial production revenue and costs have been capitalized.

AISC and C1 cash cost for the post-commercial production period to December 31, 2019 were \$1.78 and \$1.29 per lb, respectively, in line with expectations.

Sales revenues for the period September 1 to December 31, 2019, post-declaration of commercial production, amounted to \$524 million. Gross profit for the same period was \$92 million, with comparative EBITDA of \$203 million. Cobre Panama successfully dispatched 20 concentrate shipments during 2019, reflecting a total of 132,864 tonnes of contained copper sold, including 83,897 tonnes in the post-commercial production period.

Fourth quarter

Production at Cobre Panama continued to ramp up during the fourth quarter, with copper and gold production of 60,338 tonnes and 28,040 ounces, respectively. During the quarter, 16.5 million tonnes of ore with a grade of 0.41% were processed, and recoveries of 89% were achieved.

AISC and C1 cash cost of \$1.85 per lb and \$1.28 per lb, respectively, for the three months ended December 31, 2019 were in line with expectations.

Sales revenues for the three months ended December 31, 2019, were \$314 million. Gross profit for the same period was \$56 million, with comparative EBITDA of \$136 million. A total of 48,841 tonnes of contained copper were sold in the fourth quarter.

Outlook

Production ramp-up and reliability is expected to progress through the first quarter of 2020 and across the first half of 2020 according to plan, and throughput rates are expected to reach steady state consistency by the second half of 2020. Cobre Panama remains on track to achieve the expected annual production of between 285,000 and 310,000 tonnes of copper and between 120,000 and 130,000 ounces of gold in 2020.

The National Instrument 43-101 technical report released in March 2019 includes the plan for expansion of Cobre Panama from 85 Mtpa to 100 Mtpa starting in 2023. There has been no change in this development plan and the assumptions used in the National Instrument 43-101 technical report, including the provisions for development capital. A final decision to proceed with the capital deployment and upgrades to the mobile fleet and equipment is expected within the timeframe required to meet the 2023 project schedule. At the 100 Mtpa throughput rate Cobre Panama is expected to reach estimated copper production of over 350,000 tonnes per year.

Management's Discussion and Analysis (continued)

LAS CRUCES

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper ore processed (000's tonnes) ¹	364	305	400	1,354	1,544
Copper ore grade processed (%)	5.71	3.73	5.00	4.17	4.95
Copper recovery (%)	85	83	93	85	93
Copper cathode production (tonnes)	17,611	9,479	18,470	48,090	70,738
Copper cathode sales (tonnes)	16,284	10,405	18,345	48,244	71,523
All-in sustaining cost (AISC) (per lb) ²	\$ 0.91	\$ 1.74	\$ 1.16	\$ 1.35	\$ 1.16
Cash cost (C1) (per lb) ²	\$ 0.73	\$ 1.46	\$ 0.94	\$ 1.17	\$ 0.90
Total cost (C3) (per lb) ²	\$ 2.43	\$ 3.61	\$ 2.28	\$ 3.08	\$ 2.25
Sales revenues	97	61	113	291	470
Gross profit (loss)	7	(20)	19	(38)	116
Comparative EBITDA ²	71	29	76	167	326

¹ DMT

² AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Full year

Copper production for 2019 decreased by 32% compared to 2018 as a result of the interruption to mining from the land slippage in January. Mining activities recommenced in July following the receipt of the required regulatory approvals. A remediation plan was implemented during the suspension of mining activities and plant production continued using available low-grade stockpiles until August, when fresh ore was available from the mine. Plant throughput, grade and recoveries were further impacted by problems caused by sticky ore feed and the ball mill failure in September caused by wearing in its cylinder, which is planned to be replaced in the first quarter of 2020.

AISC of \$1.35 per lb was \$0.19 per lb higher compared to same period in 2018, mainly due to higher C1 cash cost driven by lower production. This was caused by the land slippage and the ball mill failure in September which had a \$0.26 per lb impact on C1 cash cost, with some mitigation provided by cost reduction efforts.

Sales revenues of \$291 million was 38% below that of 2018, due to lower sales volumes and realized copper prices, excluding the impact of the corporate sales hedge program. The lower revenues contributed to a gross loss of \$38 million for the year.

A \$97 million impairment charge was recognized in 2019 as well as an \$11 million charge relating to the write-off of specific assets and other costs associated with the land slippage.

Fourth quarter

Copper production decreased by 5% compared to the 2018 quarter. Following the repair of the ball mill cylinder and the resumption of mining fresh ore in August, production in the fourth quarter was close to design capacity and benefited from higher grade ore processed. However, plant throughput and recoveries in the quarter continued to be impacted by challenges of processing sticky ore.

AISC of \$0.91 per lb for the quarter was \$0.25 per lb below the comparative 2018 quarter reflecting lower C1 cash cost driven by cost reduction efforts and lower deferred stripping and sustaining capital expenditure.

Sales revenues of \$97 million were 14% lower compared with same period in 2018 due to lower realized copper prices, excluding the impact of the corporate sales hedge program, and lower copper sales volumes. Gross profit of \$7 million in the quarter compared to \$19 million in same period in 2018 reflects the lower sales revenue. An impairment of \$97 million was recognized as Las Cruces enters its expected final year of open-pit mining following finalization of the post-land slippage mine plan and the short-term volatility in the copper price.

Management's Discussion and Analysis (continued)

Outlook

2020 is expected to be the final year of production for the open-pit. Copper production guidance for 2020 is 52,000 tonnes.

Ongoing remediation of the mine and cost optimization are expected to be the focus in 2020. Remediation activities in the pit are expected to be finalized in the first quarter of 2020.

Research on the technical and economic feasibility of the polymetallic refinery project is progressing, as well as permits required to carry out this project in the medium term.

GUELB MOGHREIN

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Sulphide ore milled (000's tonnes) ¹	1,029	810	983	3,851	3,684
Sulphide ore grade processed (%)	0.89	0.88	0.93	0.87	0.85
Sulphide copper recovery (%)	89	87	91	89	90
Copper production (tonnes)	8,220	6,203	8,319	29,620	28,137
Copper sales (tonnes)	6,010	5,969	9,099	28,046	27,366
Gold production (ounces)	12,027	8,187	12,236	44,673	45,974
Gold sales (ounces)	8,415	9,074	14,224	44,946	48,195
Magnetite concentrate production (WMT) ²	152,202	106,634	97,052	541,560	425,389
Magnetite concentrate sales (WMT) ²	90,032	123,274	85,914	525,699	376,956
All-in sustaining cost (AISC) (per lb) ³	\$ 1.37	\$ 1.62	\$ 1.95	\$ 1.36	\$ 1.93
Cash costs (C1) (per lb) ³	\$ 0.98	\$ 1.11	\$ 1.73	\$ 1.00	\$ 1.50
Total costs (C3) (per lb) ³	\$ 1.78	\$ 1.93	\$ 2.79	\$ 1.87	\$ 2.46
Sales revenues	50	52	70	243	235
Gross profit (loss)	9	12	1	45	30
Comparative EBITDA ³	16	19	13	87	66

¹ DMT

² Magnetite concentrate production and sales volumes are measured in wet metric tonnes ("WMT").

³ AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Full year and fourth quarter

Copper production for the year and three months ended December 31, 2019 was 5% higher and 1% lower, respectively, than the same periods in 2018. Higher copper production for the year resulted from improvements in plant throughput and higher feed grade. The lower production in the fourth quarter was due to lower ore grade and copper recovery, despite higher throughput.

Gold production for the year and three months ended December 31, 2019, decreased by 3% and 2%, respectively, compared to the same periods in 2018, primarily due to lower gold circuit recovery and, for the fourth quarter, lower ore grade. The lower recoveries resulted from higher magnetite content in the ore.

The magnetite plant produced 541,560 WMT in the year and 152,202 WMT in the quarter, representing a 27% and 57% increase, respectively, over the comparable periods of 2018. The higher production reflected higher magnetite ore grade and overall improvements in the magnetite plant performance.

Management's Discussion and Analysis (continued)

AISC for the year and three months ended December 31, 2019, were \$0.57 per lb and \$0.58 per lb lower, respectively, than the same periods in 2018, primarily reflecting lower C1 cash cost, although there were higher deferred stripping costs relating to waste development of the Oriental pit, and for the year, increased mineral royalty costs. C1 cash cost for the year and three months ended December 31, 2019, were \$0.50 per lb and \$0.75 per lb lower, respectively, than the same periods in 2018, due to higher magnetite by-product credits and lower fuel and personnel costs, as well as other cost improvement initiatives including mining sequencing, fleet reduction and productivity improvements.

Sales revenues for the year and three months ended December 31, 2019, were 3% higher and 29% lower, respectively, than the comparable periods of 2018. Sales revenues were higher for the year despite lower realized copper prices, excluding the impact of the corporate copper sales hedge program, due to higher copper and magnetite sales volumes. Lower sales revenues in the quarter were impacted by lower copper and gold sales volumes, and lower realized copper prices. Gross profit of \$45 million and \$9 million for the year and three months ended December 31, 2019, respectively, were higher than the same periods in 2018, with the quarter benefiting from lower costs.

Outlook

Production in 2020 is expected to be 25,000 tonnes of copper, 40,000 ounces of gold, and 500,000 WMT of concentrate of magnetite.

The focus for the year will be on optimizing plant operations, improving gold recovery, mining cost reductions and productivity improvement.

ÇAYELI

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper ore milled (000's tonnes) ¹	236	207	252	916	1,007
Copper ore grade processed (%)	2.29	1.78	2.64	2.07	2.26
Copper recovery (%)	87	87	89	88	88
Zinc ore grade processed (%)	1.94	1.37	1.50	1.51	1.40
Zinc recovery (%)	42	41	27	38	29
Copper production (tonnes)	4,725	3,218	5,931	16,706	19,896
Copper sales (tonnes)	5,553	2,934	9,153	18,118	17,397
Zinc production (tonnes)	1,896	1,176	1,034	5,252	4,091
Zinc sales (tonnes)	2,046	–	2,154	3,879	4,313
All-in sustaining cost (AISC) (per lb) ²	\$ 1.51	\$ 2.12	\$ 1.28	\$ 1.65	\$ 1.48
Cash cost (C1) (per lb) ²	\$ 1.11	\$ 1.82	\$ 1.09	\$ 1.35	\$ 1.21
Total cost (C3) (per lb) ²	\$ 1.60	\$ 2.83	\$ 1.75	\$ 2.16	\$ 2.03
Sales revenues	32	13	52	95	100
Gross profit (loss)	11	(1)	19	22	23
Comparative EBITDA ²	16	4	30	55	51

¹ DMT

² AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Management's Discussion and Analysis (continued)

Full year and fourth quarter

Copper production for the year and three months ended December 31, 2019, was 16% and 20% lower, respectively, compared to the same periods in 2018 due to lower throughput as a result of production from fewer mining locations and smaller stope dimensions, as well as lower copper ore grade. Lower copper recovery further impacted production in the fourth quarter.

Zinc production for the year and three months ended December 31, 2019 was 28% and 83% higher, respectively, compared to the same periods in 2018, reflecting higher zinc grades and recovery. Continuous operation of the zinc circuit has yielded improved zinc recovery rates for the year and three months ended December 31, 2019, compared with 2018.

AISC for the year and three months ended December 31, 2019, increased by \$0.17 per lb and \$0.23 per lb, respectively, compared to the same periods in 2018, mainly driven by higher C1 cash cost, and higher sustaining capital expenditure for the year. C1 cash cost was higher by \$0.14 per lb and \$0.02 per lb, respectively, for the year and quarter ended December 31, 2019, compared to the same periods in 2018 mainly due to impact of lower copper production.

Sales revenues of \$95 million for the year ended December 31, 2019 and \$32 million in the fourth quarter were 5% and 38% lower compared to the same periods in 2018, mainly due to lower realized metal prices excluding the impact of the corporate sales hedge program, though copper sales volumes were higher for the year ended December 31, 2019. For the quarter, the 38% lower sales revenues was a result of approximately 60% of the prior years sales occurring in the fourth quarter combined with the lower realized metal prices in 2019, excluding the impact of the corporate sales hedge program.

Gross profit for the year and quarter ended December 31, 2019, was below the same periods in 2018, mainly due to the lower sales revenues.

Outlook

Production for 2020 is expected to be 15,000 tonnes of copper and 6,000 tonnes of zinc, reflecting a declining number of work areas as the mine approaches reserve depletion in 2023.

Production is expected to be challenging due to poor ground conditions in the areas planned to be mined, therefore ground stabilization will continue to be critical to achieving the expected production levels.

Management's Discussion and Analysis (continued)

PYHÄSALMI

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Copper ore milled (000's tonnes) ¹	230	248	312	1,066	1,248
Copper ore grade processed (%)	0.77	0.90	0.98	0.83	0.99
Copper recovery (%)	95	94	97	91	96
Zinc ore grade processed (%)	0.33	1.50	2.35	1.27	2.01
Zinc recovery (%)	75	88	91	89	91
Copper production (tonnes)	1,694	2,062	2,964	8,003	11,904
Copper sales (tonnes)	2,018	1,699	3,028	8,451	12,184
Zinc production (tonnes)	566	3,253	6,653	12,080	22,716
Zinc sales (tonnes)	933	2,297	6,114	12,493	21,799
Pyrite production (tonnes)	120,687	127,960	168,881	553,644	645,885
Pyrite sales (tonnes)	110,823	90,619	124,109	423,330	445,181
All-in sustaining cost (AISC) (per lb) ²	\$ 2.11	\$ 0.64	\$ (0.59)	\$ 0.55	\$ (0.46)
Cash cost (C1) (per lb) ²	\$ 2.02	\$ 0.61	\$ (0.59)	\$ 0.51	\$ (0.46)
Total cost (C3) (per lb) ²	\$ 2.17	\$ 1.62	\$ 1.57	\$ 1.77	\$ 1.70
Sales revenues	17	16	34	90	144
Gross profit (loss)	5	3	9	24	40
Comparative EBITDA ²	5	7	23	45	94

¹ DMT

² AISC, C1 cash cost, C3 total cost and comparative EBITDA are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Full year and fourth quarter

Copper production decreased by 33% and 43% in the year and three months ended December 31, 2019, respectively, compared to the same periods in 2018, mainly due to lower copper grade, throughput and copper recovery. Zinc production was lower in the year and three months ended December 31, 2019, compared to the same periods in 2018 due to lower zinc grade and recovery. The lower throughput and grades in 2019 reflect the nearly depleted mineral reserve and the constraint on available work areas at this stage of the mine life.

AISC of \$0.55 per lb and \$2.11 per lb for the year and three months ended December 31, 2019, respectively, were higher than the comparable periods in 2018 mainly due to higher C1 cash cost, which reflected lower by-product credits and lower copper production.

Sales revenues of \$90 million and \$17 million were 38% and 50% lower, respectively, for the year and three months ended December 31, 2019. Lower copper and zinc sales volumes and realized metal prices, excluding the impact of the corporate sales hedge program, were the main drivers of lower sales revenues. Gross profit of \$24 million and \$5 million for the year and fourth quarter were lower than the same periods in 2018, mainly reflecting the lower sales revenues.

Management's Discussion and Analysis (continued)

Outlook

The life of the mine has been extended into June 2021 with an assumed lower copper cut-off grade. Production guidance for the year 2020 is 3,000 tonnes of copper, 2,000 ounces of gold and 1,000 tonnes of zinc. The operation is also expected to produce 450,000 tonnes of pyrite.

Throughput is expected to be 700,000 tonnes in 2020 in line with the anticipated depletion of economic ore.

A total of 167 days of shutdown time is planned for 2020 to optimize plant throughput, reflecting two weeks of shutdown each month.

RAVENSTHORPE

Ravensthorpe remained on care and maintenance during the year, and continued operational readiness works during the fourth quarter in preparation for the restart of operations in the first quarter of 2020. During the quarter, the mining contract was awarded, and commissioning works on crushing, beneficiation and acid leaching circuits continued. Also, recruitment of personnel commenced. Costs in the fourth quarter and twelve months of 2019 were \$18 million and \$38 million, respectively, reflecting the increase in operational readiness work and activities.

Outlook

The mining contractor mobilized and commenced mine production early in the first quarter of 2020. On the process plant, commissioning works and recruitment of operations personnel are planned to continue to ramp up ahead of expected first nickel and cobalt production during the quarter. The first two shipments of sulphur, a critical process reagent, were received in January 2020.

Following restart, Ravensthorpe is expected to produce between 15,000 and 20,000 tonnes of nickel in 2020.

Engineering design and the relevant governmental approval process for development of the Shoemaker Levy orebody is ongoing ahead of a capital works program, expected to commence in 2020, to bring Shoemaker Levy into production, with first ore to the plant scheduled for early 2021.

Sales Revenues

		Q4 2019	Q3 2019	Q4 2018	2019	2018
Kansanshi	- copper	424	265	371	1,363	1,491
	- gold	65	45	41	197	160
	- acid	6	4	5	21	21
Sentinel	- copper	281	303	344	1,199	1,454
Cobre Panama ²	- copper	253	178	-	431	-
	- gold	53	26	-	79	-
	- other	8	6	-	14	-
Las Cruces	- copper	97	61	113	291	470
Guelb Moghrein	- copper	30	30	48	145	154
	- gold	12	12	17	58	58
	- magnetite	8	10	5	40	23
Çayeli	- copper	26	13	44	85	87
	- zinc, gold and silver	6	-	8	10	13
Pyhäsalmi	- copper	10	9	17	45	70
	- zinc	1	2	11	22	45
	- pyrite, gold and silver	6	5	6	23	29
Corporate ¹		(2)	18	24	44	(109)
Sales revenues ²		1,284	987	1,054	4,067	3,966
	Copper	1,120	877	963	3,603	3,616
	Gold	132	86	61	342	228
	Zinc	4	2	15	28	53
	Other	28	22	15	94	69
		1,284	987	1,054	4,067	3,966

¹ Corporate sales include sales hedges (see "Hedging programs" for further discussion).

² The Company determined that commercial production at Cobre Panama commenced effective September 1, 2019. Pre-commercial sales revenues attributable to Cobre Panama are capitalized and are excluded from earnings.

Full year

Total sales revenues were 3% higher than 2018, including sales at Cobre Panama, following declaration of commercial production on September 1, 2019, which contributed \$431 million and \$79 million in copper and gold sales revenues, respectively, in the year. Copper sales revenues were in line with 2018, reflecting the contribution by Cobre Panama notwithstanding the impact of a 5% decrease in the realized copper price. Included within copper sales revenues is \$44 million realized gain on the corporate copper sales hedge program, compared with a \$110 million loss in 2018.

Management's Discussion and Analysis (continued)

Gold revenues, which include Cobre Panama, increased by \$114 million compared to 2018 and benefited from a 23% increase to the realized gold price which increased gold sales revenues by \$63 million compared to 2018. The higher gold sales volumes, inclusive of Cobre Panama, represented \$51 million of the increased gold sales revenues.

Fourth quarter

Total sales revenues were \$230 million higher than the comparable period of 2018 benefiting from the first full quarter of commercial production at Cobre Panama, which contributed \$314 million.

Copper sales volumes for the quarter were 32% higher than the same period of 2018 which resulted in a \$260 million increase to copper sales revenues, despite a 7% decrease in the realized copper price which reduced copper sales revenues by \$101 million. Included within copper sales revenues was a \$1 million loss of the copper sales hedge program, compared with a \$25 million gain in 2018.

Gold sales revenues were \$71 million higher than the comparable period of 2018, reflecting a 49% increase in gold sales volumes, mainly attributable to Cobre Panama which contributed \$53 million, as well as the impact of higher realized gold prices in the period compared to 2018.

Realized Prices

Copper selling price (per lb)

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Average LME cash price	\$ 2.67	\$ 2.63	\$ 2.80	\$ 2.72	\$ 2.96
Realized copper price	\$ 2.62	\$ 2.62	\$ 2.83	\$ 2.70	\$ 2.84
Treatment/refining charges ("TC/RC") and freight	\$ (0.15)	\$ (0.16)	\$ (0.14)	\$ (0.15)	\$ (0.13)
Net realized copper price	\$ 2.47	\$ 2.46	\$ 2.69	\$ 2.55	\$ 2.71

Given the volatility in copper prices, significant variances can arise between average LME cash price and net realized prices due to the timing of sales during the period.

The copper sales hedging program added \$44 million to the full year, an impact of \$0.03 per lb on the net realized copper price. The impact on the quarter was a hedge loss of \$1 million but with a modest impact on the net realized copper price achieved.

Details of the Company's hedging program and the contracts held are included on page 41.

Summary Financial Results ¹

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Gross profit (loss)					
Kansanshi	166	74	140	472	623
Sentinel	25	40	72	176	288
Cobre Panama	56	36	–	92	–
Las Cruces	7	(20)	19	(38)	116
Guelb Moghrein	9	12	1	45	30
Çayeli	11	(1)	19	22	23
Pyhäsalmi	5	3	9	24	40
Ravensthorpe	(18)	(8)	(4)	(38)	(16)
Corporate ²	(2)	14	24	35	(126)
Total gross profit	259	150	280	790	978
Exploration	(7)	(4)	(7)	(19)	(26)
General and administrative	(25)	(21)	(19)	(82)	(74)
Impairment	(101)	–	–	(101)	–
Other income (expense)	(57)	(17)	6	(114)	(69)
Net finance expense	(187)	(59)	(1)	(248)	(13)
Loss on partial redemption of senior notes	–	–	–	(25)	–
Finance charge on discounting of Zambian VAT	(22)	(160)	(5)	(182)	(5)
Income tax credit (expense)	17	33	(41)	(70)	(283)
Net earnings (loss)	(123)	(78)	213	(51)	508
Net earnings (loss) attributable to:					
Non-controlling interests	(8)	(5)	15	6	67
Shareholders of the Company	(115)	(73)	198	(57)	441
Comparative earnings	35	32	182	249	487
Earnings (loss) per share					
Basic	\$ (0.17)	\$ (0.11)	\$ 0.29	\$ (0.08)	\$ 0.64
Diluted	\$ (0.17)	\$ (0.11)	\$ 0.29	\$ (0.08)	\$ 0.64
Comparative	\$ 0.05	\$ 0.05	\$ 0.26	\$ 0.36	\$ 0.71
Basic weighted average number of shares (in 000's)	688,083	688,425	687,074	687,596	686,747

1 The Company determined that commercial production at Cobre Panama commenced effective September 1, 2019. Pre-commercial production operating results attributable to Cobre Panama are capitalized and are excluded from earnings.

2 Corporate gross profit (loss) relates primarily to the sales hedge contracts.

Management's Discussion and Analysis (continued)

Full year

Gross profit, inclusive of a \$92 million contribution from Cobre Panama, was 19% lower than the comparable period of 2018 due principally to lower realized copper prices and lower sales volumes at Las Cruces and Sentinel, and increased Zambian mineral royalty rates. These were mitigated by the positive contribution of Cobre Panama, gains on the copper sales hedge program and a positive impact of foreign exchange on operational costs.

In 2018 there was a sell-down of Sentinel inventory resulting in a comparatively lower copper sales volume in 2019, although aligned to production levels. Lower copper sales volumes at Las Cruces were due to the interruption to mining from January until July 2019, as well as the ball mill failure in September that impacted production.

An impairment charge of \$101 million was recognized which includes \$97 million at Las Cruces resulting from volatility in the short-term copper price, reflecting production for 2020 following finalization of the post-land slippage mine plan, which is expected to be the final year of production for the open-pit operation. This is in addition to specific asset write-offs and associated costs of \$11 million, included in other expenses, that were recognized following the land slippage that occurred in January 2019.

Other expense for 2019 includes a foreign exchange loss of \$96 million, primarily due to the depreciation of the Zambian kwacha against the US dollar and the impact on the VAT balances due to Kansanshi and Sentinel. This compared with a \$64 million loss in the same period of 2018. In 2019, an \$11 million loss representing the equity share of earnings from the KPMC joint venture has been included in other expense, this represents the share of earnings from the Cobre Panama mine.

Following declaration of commercial production at Cobre Panama on September 1, 2019, the Company ceased capitalization of interest costs to the project and a net interest expense of \$248 million was reported in the statement of earnings, compared with \$13 million in 2018. Interest expense for 2019 also includes a modification gain of \$3 million on the senior Revolving Credit Facility, as a result of adjustments to the timings of drawdowns on the facility.

A \$25 million loss on partial redemption of the Company's 7.00% Notes due February 2021, was recognized in the first quarter of 2019.

Included within the net loss of \$51 million for the year is a finance charge of \$182 million with respect to the discounting of Zambian VAT balances. The tax expense of \$70 million reflects the applicable statutory tax rates, which range from 20% to 35% for the Company's operations. No tax charge has been recognized with respect to the gain realized on the Company's copper sales hedge program, the modification gain on the senior Revolving Credit Facility, or the loss on partial redemption of the senior notes.

The effective tax rate, excluding the sales hedge program, comparative finance charges, and the impact of Zambian mining tax regime changes effective January 1, 2019, which increased mineral royalties by 1.5% and made them non-deductible for tax, and the impact of interest that would previously have been eligible for capitalization but is now expensed following declaration of commercial production at Cobre Panama on September 1, 2019, was approximately 15%. The effective tax rate, including the impact of the Zambian mining tax regime changes effective January 1, 2019, and excluding interest expense for the four months ended December 31, 2019, was approximately 30%.

Fourth quarter

Gross profit for the quarter of \$259 million including Cobre Panama, which contributed \$56 million following the declaration of commercial production on September 1, 2019, was 8% lower than the comparable quarter of 2018, as a result of a lower realized copper price and increased Zambian mineral royalty rates.

A \$97 million impairment charge was recognized at Las Cruces, resulting from volatility in the short-term copper price, reflecting production for 2020 following finalization of the post-land slippage mine plan, which is expected to be the final year of production for the open-pit operation. A \$4 million impairment charge with respect to Ecuadorean exploration assets was also recognized in the period. Included within other expense is a \$47 million foreign exchange loss, mainly attributable to the depreciation of the Zambian kwacha against the US dollar and the impact on the locally denominated VAT balances

Management's Discussion and Analysis (continued)

due to Kansanshi and Sentinel, compared with a \$13 million gain in the comparable period of 2018. A \$4 million modification loss was recognized in the quarter on the senior revolving credit facility, as a result of adjustments to the timings of drawdowns on the senior Revolving Credit Facility.

Net loss of \$123 million included a finance charge of \$22 million with respect to the discounting of Zambian VAT balances and net interest expense of \$187 million. Also included is a tax credit of \$17 million reflecting applicable statutory tax rates, which range from 20% to 35% for the Company's operations. No tax charge has been recognized with respect to the gain realized on the Company's copper sales hedge program or the modification loss on the senior revolving credit facility.

Liquidity and Capital Resources

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Cash flows from operating activities	400	151	338	889	1,980
Cash flows from (used by) investing activities					
Payments and deposits for property, plant and equipment	(325)	(270)	(606)	(1,455)	(2,143)
Capitalized borrowing costs paid in cash	–	(101)	(49)	(388)	(441)
Acquisition of KPMC	(100)	–	(80)	(100)	(185)
Other investing activities	9	2	6	23	17
Cash flows from (used by) financing activities					
Net movement in debt and trading facilities	203	(122)	413	883	948
Early redemption costs on senior notes	–	–	–	(14)	–
Other financing activities	(70)	(56)	19	(103)	(68)
Exchange gains (losses) on cash and cash equivalents	–	–	(6)	–	(22)
Net cash inflow (outflow)	117	(396)	35	(265)	86
Cash balance	523	406	788	523	788
Total assets	24,747	24,453	23,537	24,747	23,537
Total current liabilities	2,523	2,081	1,644	2,523	1,644
Total long-term liabilities	11,562	11,614	11,171	11,562	11,171
Net debt ¹	7,675	7,579	6,497	7,675	6,497
Cash flows from operating activities per share ¹	\$ 0.58	\$ 0.22	\$ 0.49	\$ 1.29	\$ 2.88

¹ Cash flows per share and Net debt are not recognized under IFRS. See "Regulatory Disclosures" for further information.

Cash flows from operating activities in the year were \$1,091 million lower than 2018. The prior period included receipts from Franco-Nevada of \$630 million under the precious metal stream arrangement. Comparative EBITDA was \$128 million lower in 2019 compared to 2018 which flowed through to operating activities and working capital outflows were \$294 million higher, due to VAT claims in Zambia and higher trade receivables from increased revenue in the respective final quarters. Cashflows used by investing activities included \$100 million instalment paid with respect to the acquisition of KPMC in 2017.

Management's Discussion and Analysis (continued)

The total VAT receivable accrued by the Company's Zambian operations at December 31, 2019, was \$398 million, of which \$233 million relates to Kansanshi. A finance charge of \$160 million had previously been recognized in the nine months ended September 30, 2019, to reflect the impact of discounting the balance over the expected timeframe to repayment. A further \$22 million finance charge was recognized in the quarter ended December 31, 2019, representing the discounting of all Zambian VAT balances over the expected timeframe to repayment, using a Zambian kwacha risk-free rate. As at December 31, 2018, the impact of discounting non-current VAT was \$25 million. In February 2015, the GRZ implemented a change in the Statutory Instrument regarding VAT. Claims totalling Zambian kwacha 1,585 million (currently equivalent to \$113 million) made by Kansanshi prior to this date remain outstanding. Cash totalling \$99 million has been received to date for claims subsequent to February 2015. The accrual for historical VAT receivables stems from the application of discretionary rules established and applied by the Commissioner General relating to exports from Zambia. The Company is in regular discussions with the relevant government authorities and continues to consider that the outstanding claims are fully recoverable.

Zambian VAT

	December 31, 2019	December 31, 2018
Receivable at date of claim	847	645
Impact of depreciation of Zambian kwacha against US\$	(242)	(177)
	605	468
Impact of discounting non-current portion	(207)	(25)
Total receivable	398	443
Comprising:		
Current portion, included within trade and other receivables	2	334
Non-current VAT receivable	396	109

Cash flows used by investing activities in 2019 included capital expenditure of \$1,455 million compared to \$2,143 million for the same period in 2018, mostly related to bringing the Cobre Panama operation into commercial production. Interest paid and capitalized to property, plant and equipment of \$388 million compares to \$441 million in 2018. Following the declaration of commercial production at Cobre Panama, effective September 1, 2019, and the cessation of capitalization, interest paid is included within cash flows from financing activities.

Cash inflows from financing activities of \$766 million (2018: \$880 million) included net proceeds from debt of \$726 million and interest paid of \$181 million compared with \$1,022 million and \$22 million in 2018, respectively.

Liquidity outlook

At December 31, 2019, the Company had \$250 million of committed undrawn senior debt facilities, \$523 million in net unrestricted cash, and current working capital of \$994 million. These, together with expected future cash flows, support the Company's belief in its ability to meet current obligations as they become due. The Company was in full compliance with all its financial covenants at December 31, 2019, and expects to remain in compliance throughout the next 12 months.

On January 13, 2020, the Company issued an additional \$500 million aggregate principal amount of 7.25% Senior Notes due 2023 (the "2023 New Notes") and an additional \$250 million aggregate principal amount of 7.50% Senior Notes due 2025 (the "2025 New Notes", collectively the "Notes"). The 2023 New Notes were priced at 102.50% and the 2025 New Notes were priced at 103.00%. The Notes represent an additional offering to the Company's existing \$1.1 billion of Senior Notes due 2023 (the "Existing 2023 Notes"), and the existing \$1.1 billion of Senior Notes due 2025 (the "Existing 2025 Notes") issued under the same indentures.

Interest on the 2023 New Notes will accrue from October 1, 2019 at a rate of 7.25% per annum and will be payable semi-annually. Interest on the 2025 New Notes will accrue from October 1, 2019 at a rate of 7.50% per annum and will be payable semi-annually. The Notes will be senior unsecured obligations of the Company and will be guaranteed by certain of the Company's subsidiaries.

Management's Discussion and Analysis (continued)

The Company intends to use the proceeds from the issuance of the Notes to redeem in full the outstanding \$300 million of 7.00% Senior Notes due February 15, 2021, including the payment of accrued and unpaid interest, and to repay (but not cancel commitments) \$450 million of amounts outstanding under the Company's revolving credit facility. On January 16, 2020, the Company issued notice of redemption of the 7.00% Senior Notes due 2021.

On July 18, 2019, Fitch Ratings ("Fitch") reaffirmed a B rating with a stable outlook for both the Long-Term Issuer Default Rating and Senior Unsecured Rating. On September 6, 2019, Standard & Poor's ("S&P") lowered the rating from B to B- with a stable outlook following a downgrade in the sovereign credit rating from CCC+ as the Company's rating is currently capped at one notch above the Zambia sovereign rating. The rating of the Company published by Moody's is unsolicited and non-participating.

At December 31, 2019, the Company had total commitments of \$137 million, all of which related to the 12 months following the period end.

Contractual and other obligations as at December 31, 2019, are as follows:

Contractual and other obligations as at December 31, 2019

	Carrying value	Contractual cashflows	< 1 year	1 – 3 years	3 – 5 years	Thereafter
Debt – principal repayments	7,936	8,004	804	3,150	1,950	2,100
Debt – finance charges	–	2,014	544	901	425	144
Trading facilities	262	262	262	–	–	–
Trade and other payables	637	637	637	–	–	–
Derivative instruments	31	31	31	–	–	–
Liability to joint venture ¹	1,238	2,312	–	–	–	2,312
Joint venture consideration	182	200	100	100	–	–
Current taxes payable	141	141	141	–	–	–
Deferred payments	42	42	4	8	8	22
Leases	36	41	14	13	8	6
Commitments	–	137	137	–	–	–
Restoration provisions	699	1,103	9	81	51	962

¹ Refers to distributions to KPMC, a joint venture that holds a 20% non-controlling interest in MPSA of which the Company has joint control, and not scheduled repayments.

Hedging programs

The Company has hedging programs in respect of future copper sales and provisionally priced sales contracts. Below is a summary of the fair values of unsettled derivative financial instruments for commodity contracts recorded on the consolidated balance sheet.

Commodity contracts

	December 31, 2019	December 31, 2018
Asset position	9	43
Liability position	(31)	(3)

Management's Discussion and Analysis (continued)

The Company has entered into derivative contracts to ensure that the exposure to the price of copper on future sales is managed to ensure stability of cash flows as the Company expects to be in a position to begin deleveraging its balance sheet, while maintaining compliance with financial covenants.

At February 13, 2020, the Company has 160,000 tonnes of unmarginated zero cost copper collar sales contracts with maturities to January 2021 at weighted average prices of \$2.66 per lb to \$2.92 per lb. In addition, the Company has 55,000 tonnes of unmarginated copper forward sales contracts at an average price of \$2.81 per lb outstanding with periods of maturity to January 2021. The Company also has unmarginated nickel forward sales contracts for 12,046 tonnes at an average price of \$6.77 per lb outstanding with maturities to February 2021.

Approximately a third of expected copper sales in the first half of 2020, are hedged to unmarginated forward and zero cost collar sales contracts, at an average floor price of \$2.71 per lb.

During the year ended December 31, 2019, a gain for settled hedges of \$44 million was realized through sales revenues. Fair value gains on outstanding contracts of \$8 million have been recognized as a derivative asset at December 31, 2019.

Provisional pricing and derivative contracts

A portion of the Company's metal sales is sold on a provisional pricing basis whereby sales are recognized at prevailing metal prices when title transfers to the customer and final pricing is not determined until a subsequent date, typically two months later. The difference between final price and provisional invoice price is recognized in net earnings. In order to mitigate the impact of these adjustments on net earnings, the Company enters into derivative contracts to directly offset the pricing exposure on the provisionally priced contracts. The provisional pricing gains or losses and offsetting derivative gains or losses are both recognized as a component of cost of sales. Derivative assets are presented in other assets and derivative liabilities are presented in other liabilities with the exception of copper and gold embedded derivatives which are included within accounts receivable.

As at December 31, 2019, the following derivative positions in provisionally priced sales and commodity contracts not designated as hedged instruments were outstanding:

	Open positions (tonnes/ozs)	Average contract price	Closing market price	Maturities through
Embedded derivatives in provisionally priced sales contracts:				
Copper	119,336	\$ 2.71/lb	\$ 2.79/lb	April 2020
Gold	28,333	\$ 1,502/oz	\$ 1,523/oz	April 2020
Commodity contracts:				
Copper	119,550	\$ 2.71/lb	\$ 2.79/lb	April 2020
Gold	28,336	\$ 1,502/oz	\$ 1,523/oz	April 2020

As at December 31, 2019, substantially all of the Company's metal sales contracts subject to pricing adjustments were hedged by offsetting derivative contracts.

Equity

At the date of this report, the Company had 689,401,007 shares outstanding.

Joint Venture

On November 8, 2017, the Company completed the purchase of a 50% interest in KPMC from LS-Nikko Copper Inc. KPMC is jointly owned and controlled with Korea Resources Corporation ("KORES") and holds a 20% interest in Cobre Panama. The purchase consideration of \$664 million comprised the acquisition consideration of \$635 million and the reimbursement of cash advances of \$29 million with \$179 million paid on closing. Consideration of \$100 million was paid in the year ended December 31, 2019 (year ended December 31, 2018: \$185 million). The remaining consideration is payable in two instalments to November 2021. \$100 million is included within trade and other payables and \$82 million within other non-current liabilities (note 11).

A \$589 million investment in the joint venture representing the discounted consideration value and the Company's proportionate share of the loss in KPMC of \$11 million (note 22) is recognized. The earnings in KPMC relate to the 20% equity accounted share of loss reported by MPSA, a subsidiary of the Company. The material assets and liabilities of KPMC are an investment in MPSA of \$359 million, shareholder loans receivable from the Company (note 11b) and shareholder loans payable of \$1,238 million due to the Company and its joint venture partner KORES.

Franco-Nevada Stream

The Company, through its subsidiary, MPSA, has a precious metal streaming arrangement with Franco-Nevada. The arrangement comprises two tranches, the first of which ("Tranche 1") was finalized on October 5, 2015. Under the terms of Tranche 1, Franco-Nevada, through a wholly owned subsidiary, agreed to provide a \$1 billion deposit to be funded on a pro-rata basis of 1:3 with the Company's 80% share of the capital costs of Cobre Panama in excess of \$1 billion. The full Tranche 1 deposit amount has been fully funded to MPSA. The second tranche ("Tranche 2") was finalized on March 16, 2018, and \$356 million was received on completion. Proceeds received from Franco-Nevada under the terms of the precious metals streaming arrangement are accounted for as deferred revenue.

The amount of precious metals deliverable under both tranches is indexed to total copper-in-concentrate sold by Cobre Panama. Under the terms of Tranche 1 the ongoing payment of the Fixed Payment Stream is fixed per ounce payments of \$430.91 per oz gold and \$6.46 per oz silver subject to an annual inflation adjustment for the first 1,341,000 ounces of gold and 21,510,000 ounces of silver (approximately the first 20 years of expected deliveries). Thereafter the greater of \$430.91 per oz for gold and \$6.46 per oz for silver, subject to an adjustment for inflation, and one half of the then prevailing market price. Under Tranche 2 the ongoing price per ounce for deliveries is 20% of the spot price for the first 604,000 ounces of gold and 9,618,000 ounces of silver (approximately the first 25 years of production), and thereafter the price per ounce rises to 50% of the spot price of gold and silver.

Although the market price feature represents an embedded derivative, the value of this derivative is not material. In all cases the amount paid is not to exceed the prevailing market price per ounce of gold and silver.

The Company commenced the recognition of delivery obligations to Franco-Nevada under the terms of the arrangement in June 2019 following the first sale of copper concentrate. Deferred revenue will continue to be recognized as revenue over the life of the mine, which is expected to be 35 years.

Management's Discussion and Analysis (continued)

Summary of Results

The following unaudited tables set out a summary of quarterly and annual results for the Company:

Consolidated Operations	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Sales revenues											
Copper	\$ 2,802	\$ 798	\$ 951	\$ 904	\$ 963	\$ 3,616	\$ 770	\$ 836	\$ 877	\$ 1,120	\$ 3,603
Nickel	148	–	–	–	–	–	–	–	–	–	–
Gold	236	61	59	47	61	228	57	67	86	132	342
Zinc and other elements	124	26	39	27	30	122	30	36	24	32	122
Total sales revenues	3,310	885	1,049	978	1,054	3,966	857	939	987	1,284	4,067
Gross profit	335	181	271	246	280	978	185	196	150	259	790
Comparative EBITDA	1,154	363	466	427	481	1,737	368	376	354	511	1,609
Net earnings (loss) attributable to shareholders of the Company	(316)	47	135	61	198	441	53	78	(73)	(115)	(57)
Comparative earnings (loss)	(111)	49	128	128	182	487	95	87	32	35	249
Basic earnings (loss) per share	\$ (0.46)	\$ 0.07	\$ 0.20	\$ 0.09	\$ 0.29	\$ 0.64	\$ 0.08	\$ 0.11	\$ (0.11)	\$ (0.17)	\$ (0.08)
Comparative earnings (loss) per share	\$ (0.16)	\$ 0.07	\$ 0.19	\$ 0.19	\$ 0.26	\$ 0.71	\$ 0.14	\$ 0.13	\$ 0.05	\$ 0.05	\$ 0.36
Diluted earnings (loss) per share	\$ (0.46)	\$ 0.07	\$ 0.20	\$ 0.09	\$ 0.29	\$ 0.64	\$ 0.08	\$ 0.11	\$ (0.11)	\$ (0.17)	\$ (0.08)
Dividends declared per common share (CDN\$ per share)	\$ 0.010	\$ 0.005	–	\$ 0.005	–	\$ 0.010	\$ 0.005	–	\$ 0.005	–	\$ 0.010
Basic weighted average shares ('000's) ¹	685,936	686,387	686,423	687,108	687,074	686,747	687,100	687,130	688,425	688,083	687,596
Cash flows per share from operating activities	\$ 1.33	\$ 1.16	\$ 0.59	\$ 0.64	\$ 0.49	\$ 2.88	\$ 0.23	\$ 0.26	\$ 0.22	\$ 0.58	\$ 1.29
Copper statistics											
Total copper production (tonnes) ³	573,963	145,358	150,950	151,241	158,304	605,853	136,969	168,399	192,510	204,270	702,148
Total copper sales (tonnes) ³	580,130	138,021	152,403	149,877 ²	156,212 ²	596,513 ²	130,262 ²	149,333	203,827	205,964	689,386 ²
Realized copper price (per lb)	\$ 2.33	\$ 2.74	\$ 2.95	\$ 2.84	\$ 2.83	\$ 2.84	\$ 2.79	\$ 2.80	\$ 2.62	\$ 2.62	\$ 2.70
TC/RC (per lb)	\$ (0.09)	\$ (0.07)	\$ (0.08)	\$ (0.09)	\$ (0.09)	\$ (0.08)	\$ (0.09)	\$ (0.10)	\$ (0.12)	\$ (0.12)	\$ (0.11)
Freight charges (per lb)	\$ (0.05)	\$ (0.05)	\$ (0.04)	\$ (0.04)	\$ (0.05)	\$ (0.05)	\$ (0.04)	\$ (0.04)	\$ (0.04)	\$ (0.03)	\$ (0.04)
Net realized copper price (per lb)	\$ 2.19	\$ 2.62	\$ 2.83	\$ 2.71	\$ 2.69	\$ 2.71	\$ 2.66	\$ 2.66	\$ 2.46	\$ 2.47	\$ 2.55
Cash cost – copper (C1) (per lb) ³	\$ 1.23	\$ 1.27	\$ 1.28	\$ 1.31	\$ 1.23	\$ 1.28	\$ 1.34	\$ 1.32	\$ 1.36	\$ 1.24	\$ 1.31
All-in sustaining cost (AISC) (per lb) ³	\$ 1.65	\$ 1.72	\$ 1.76	\$ 1.80	\$ 1.68	\$ 1.74	\$ 1.77	\$ 1.77	\$ 1.86	\$ 1.73	\$ 1.78
Total cost – copper (C3) (per lb) ³	\$ 2.06	\$ 2.16	\$ 2.11	\$ 2.11	\$ 2.04	\$ 2.11	\$ 2.21	\$ 2.17	\$ 2.20	\$ 2.07	\$ 2.16
Nickel statistics											
Nickel produced (contained tonnes)	17,837	–	–	–	–	–	–	–	–	–	–
Nickel sales (contained tonnes)	18,683	–	–	–	–	–	–	–	–	–	–
Nickel produced (payable tonnes)	13,694	–	–	–	–	–	–	–	–	–	–
Nickel sales (payable tonnes)	14,338	–	–	–	–	–	–	–	–	–	–
Realized nickel price (per payable lb)	\$ 4.67	–	–	–	–	–	–	–	–	–	–
TC/RC (per payable lb)	–	–	–	–	–	–	–	–	–	–	–
Net realized price (per payable lb)	\$ 4.67	–	–	–	–	–	–	–	–	–	–
Cash cost – (C1) (per lb)	\$ 4.45	–	–	–	–	–	–	–	–	–	–
All-in sustaining cost (AISC) (per lb)	\$ 5.29	–	–	–	–	–	–	–	–	–	–
Total cost – nickel (C3) (per lb)	\$ 6.17	–	–	–	–	–	–	–	–	–	–
Gold statistics											
Total gold production (ounces)	199,736	45,929	46,467	44,979	48,039	185,414	49,357	59,647	70,120	77,789	256,913
Total gold sales (ounces) ⁴	201,376	48,815	48,172	42,864	53,221	193,072	46,790	56,922	71,664	79,409	254,785
Net realized gold price (per ounce)	\$ 1,174	\$ 1,249	\$ 1,227	\$ 1,086	\$ 1,151	\$ 1,181	\$ 1,226	\$ 1,235	\$ 1,388	\$ 1,380	\$ 1,318
Zinc statistics											
Zinc production (tonnes)	20,723	5,227	6,545	7,348	7,687	26,807	6,318	4,123	4,429	2,462	17,332
Zinc sales (tonnes)	21,851	4,810	6,856	6,178	8,268	26,112	6,646	4,450	2,297	2,979	16,372

1 Fluctuations in average weighted shares between quarters reflects shares issued and changes in levels of treasury shares held for performance share units.

2 Sales of copper anode attributable to anode produced from third-party purchased concentrate are excluded.

3 The Company determined that commercial production at Cobre Panama commenced effective September 1, 2019. Copper production for the three and twelve months ended December 31, 2019, includes commercial production from Cobre Panama of 60,338 tonnes and 79,776 tonnes, respectively. Copper sales for the three and twelve months ended December 31, 2019, includes commercial sales from Cobre Panama of 48,841 tonnes and 83,897 tonnes, respectively. Pre-commercial production and sales volumes and operating results at Cobre Panama are not included in earnings or C1, C3 and AISC calculations.

4 Excludes purchased gold delivered to Franco-Nevada under precious metal streaming arrangement.

Management's Discussion and Analysis (continued)

Kansanshi statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Waste mined (000's tonnes)	55,255	10,941	14,692	13,175	9,911	48,719	10,249	12,210	17,232	13,077	52,768
Ore mined (000's tonnes)	36,603	9,846	10,082	9,631	8,922	38,481	7,363	11,252	8,995	8,715	36,325
Processing											
Sulphide ore processed (000's tonnes)	12,970	3,182	3,105	3,390	3,301	12,978	3,084	3,312	3,301	3,211	12,908
Sulphide ore grade processed (%)	0.75	0.79	0.81	0.72	0.81	0.78	0.9	0.85	0.86	0.95	0.89
Sulphide ore recovery (%)	91	88	91	95	88	91	89	91	92	93	91
Sulphide concentrate grade (%)	22.2	22.5	23.2	23.3	22.1	22.8	21.5	21.7	23.3	23.3	22.5
Mixed ore processed (000's tonnes)	7,997	2,009	1,930	2,082	2,165	8,186	1,870	1,990	1,939	1,900	7,699
Mixed ore grade processed (%)	1.05	1.16	0.93	1.04	1.08	1.06	1.00	1.06	1.02	1.11	1.05
Mixed ore recovery (%)	85	81	87	86	76	82	75	74	81	79	77
Mixed concentrate grade (%)	30.4	30.3	25.7	31.2	29.9	29.3	25.7	26.5	28.8	28.0	27.3
Oxide ore processed (000's tonnes)	6,916	1,791	1,708	1,749	1,668	6,916	1,534	1,856	1,918	1,893	7,201
Oxide ore grade processed (%)	1.51	1.59	1.53	1.31	1.33	1.44	1.14	1.24	1.04	1.07	1.12
Oxide ore recovery (%)	87	80	92	95	92	89	87	76	85	79	82
Oxide concentrate grade (%)	31.3	32.2	28.9	27.8	28.5	29.4	25	26.3	27.7	24.5	25.9
Copper cathode produced (tonnes)	78,742	22,514	18,528	16,303	15,049	72,394	10,705	11,325	11,526	11,490	45,046
Copper in concentrate produced (tonnes)	172,059	41,071	43,942	47,384	46,731	179,128	43,208	47,309	47,362	49,318	187,197
Total copper production (tonnes)	250,801	63,585	62,470	63,687	61,780	251,522	53,913	58,634	58,888	60,808	232,243
Gold produced (ounces)	140,595	32,080	33,536	30,938	33,465	130,019	34,743	35,613	38,925	36,105	145,386
Smelting ¹											
Concentrate processed (DMT) ¹	1,211,740	350,591	326,187	355,435	349,424	1,381,637	342,307	351,169	281,800	342,550	1,317,826
Copper anodes produced (tonnes) ¹	297,553	86,777	80,097	90,269	89,894	347,037	83,134	84,505	69,952	86,690	324,281
Smelter copper recovery (%)	96	97	97	97	97	97	97	97	97	97	97
Acid tonnes produced (000's)	1,128	325	291	319	320	1,255	322	323	264	327	1,236
Cash Costs (per lb)											
Mining	\$ 0.54	\$ 0.56	\$ 0.58	\$ 0.52	\$ 0.53	\$ 0.55	\$ 0.64	\$ 0.64	\$ 0.68	\$ 0.59	\$ 0.64
Processing	0.49	0.49	0.49	0.47	0.49	0.49	0.58	0.49	0.5	0.45	0.51
Site administration ²	–	0.08	0.09	0.10	0.11	0.09	0.11	0.10	0.10	0.14	0.11
TC/RC and freight charges	0.18	0.14	0.14	0.14	0.14	0.14	0.16	0.18	0.14	0.14	0.15
By-product credits	(0.27)	(0.36)	(0.38)	(0.27)	(0.33)	(0.34)	(0.38)	(0.38)	(0.46)	(0.43)	(0.41)
Total smelter costs	0.11	0.09	0.10	0.10	0.10	0.10	0.13	0.12	0.14	0.14	0.13
Cash cost (C1) (per lb)	\$ 1.05	\$ 1.00	\$ 1.02	\$ 1.06	\$ 1.04	\$ 1.03	\$ 1.24	\$ 1.15	\$ 1.10	\$ 1.03	\$ 1.13
All-in sustaining cost (AISC) (per lb)	\$ 1.54	\$ 1.46	\$ 1.55	\$ 1.59	\$ 1.61	\$ 1.55	\$ 1.73	\$ 1.66	\$ 1.74	\$ 1.48	\$ 1.65
Total cost (C3) (per lb)	\$ 1.71	\$ 1.82	\$ 1.70	\$ 1.73	\$ 1.71	\$ 1.74	\$ 1.98	\$ 1.87	\$ 1.84	\$ 1.68	\$ 1.84
Revenues (\$ millions)											
Copper cathodes	\$ 481	\$ 145	\$ 128	\$ 97	\$ 82	\$ 452	\$ 57	\$ 71	\$ 65	\$ 78	\$ 271
Copper anode	972	194	251	295	289	1,029	245	252	200	346	1,043
Copper in concentrates	121	10	–	–	–	10	17	32	–	–	49
Gold	166	42	41	36	41	160	39	48	45	65	197
Acid	–	2	8	6	5	21	6	5	4	6	21
Total sales revenues	\$ 1,740	\$ 393	\$ 428	\$ 434	\$ 417	\$ 1,672	\$ 364	\$ 408	\$ 314	\$ 495	\$ 1,581
Copper cathode sales (tonnes)	79,735	21,334	19,172	16,461	13,698	70,665	9,452	12,160	11,412	13,285	46,309
Copper anode sales (tonnes) ³	163,560	28,846	37,828	48,357	42,632	157,663	40,220	42,610	35,726	60,701	179,257
Copper in concentrate sales (tonnes)	24,405	1,504	–	–	–	1,504	3,361	6,454	–	–	9,815
Total copper sales (tonnes)	267,700	51,684	57,000	64,818	56,330	229,832	53,033	61,224	47,138	73,986	235,381
Gold sales (ounces)	139,735	33,666	32,902	32,706	35,616	134,890	31,082	37,917	32,022	45,342	146,363

¹ Concentrate processed in smelter and copper anodes produced are disclosed on a 100% basis, inclusive of Sentinel and third-party concentrate processed.

² Includes movements in previously recognized operational provisions in 2017 that are not expected to continue in future periods.

³ Sales of copper anode attributable to anode produced from third-party purchased concentrate are excluded.

Management's Discussion and Analysis (continued)

Sentinel statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Waste mined (000's tonnes)	88,495	21,611	23,744	25,931	24,321	95,607	19,335	23,609	24,970	24,912	92,826
Ore mined (000's tonnes)	44,644	10,172	11,996	11,334	12,016	45,518	11,507	12,017	12,704	14,035	50,263
Processing											
Copper ore processed (000's tonnes)	42,087	11,735	11,979	12,602	12,434	48,750	11,581	11,887	13,005	12,385	48,858
Copper ore grade processed (%)	0.52	0.47	0.51	0.49	0.53	0.50	0.54	0.50	0.47	0.47	0.50
Recovery (%)	87	91	92	91	92	91	92	92	91	87	91
Copper in concentrate produced (tonnes)	190,683	50,310	56,080	56,426	60,840	223,656	57,716	54,977	56,439	50,874	220,006
Concentrate grade (%)	24.4	24.9	25.6	25.3	24.5	25.0	26.9	26.5	26.3	26.6	26.6
Cash Costs (per lb)											
Mining	\$ 0.67	\$ 0.71	\$ 0.62	\$ 0.61	\$ 0.42	\$ 0.58	\$ 0.55	\$ 0.51	\$ 0.47	\$ 0.53	\$ 0.52
Processing	0.62	0.68	0.66	0.65	0.68	0.67	0.61	0.61	0.61	0.70	0.63
Site administration	0.05	0.10	0.10	0.10	0.10	0.10	0.09	0.09	0.13	0.12	0.11
TC/RC and freight charges	0.22	0.21	0.23	0.25	0.24	0.23	0.23	0.23	0.28	0.27	0.25
Total smelter costs	0.14	0.13	0.13	0.11	0.11	0.12	0.12	0.11	0.09	0.09	0.10
Cash cost (C1) (per lb)	\$ 1.70	\$ 1.83	\$ 1.74	\$ 1.72	\$ 1.55	\$ 1.70	\$ 1.60	\$ 1.55	\$ 1.58	\$ 1.71	\$ 1.61
All-in sustaining cost (AISC) (per lb)	\$ 2.19	\$ 2.36	\$ 2.29	\$ 2.25	\$ 2.02	\$ 2.22	\$ 2.07	\$ 2.06	\$ 2.12	\$ 2.22	\$ 2.12
Total cost (C3) (per lb)	\$ 2.45	\$ 2.60	\$ 2.46	\$ 2.39	\$ 2.26	\$ 2.42	\$ 2.34	\$ 2.29	\$ 2.29	\$ 2.45	\$ 2.34
Revenues (\$ millions)											
Copper anode	\$ 851	\$ 328	\$ 321	\$ 254	\$ 266	\$ 1,169	\$ 237	\$ 251	\$ 198	\$ 190	\$ 876
Copper in concentrates	\$ 175	\$ 57	\$ 71	\$ 79	\$ 78	\$ 285	\$ 59	\$ 68	\$ 105	\$ 91	\$ 323
Total sales revenues	\$ 1,026	\$ 385	\$ 392	\$ 333	\$ 344	\$ 1,454	\$ 296	\$ 319	\$ 303	\$ 281	\$ 1,199
Copper anode sales (tonnes)	142,394	48,227	47,947	42,557	44,641	183,372	38,815	42,410	35,087	32,974	149,286
Copper concentrate sales (tonnes)	34,966	10,115	12,596	16,512	15,616	54,839	12,372	13,212	23,114	20,298	68,996

Management's Discussion and Analysis (continued)

Cobre Panama statistics

	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19 ¹	Q3 19 ¹	Q4 19	2019
						Pre-commercial production	Post-commercial production		
Mining									
Waste mined (000's tonnes)	-	-	-	18,815	18,590	9,579	3,636	15,950	66,570
Ore mined (000's tonnes)	-	-	-	8,841	11,580	7,767	5,252	18,439	51,879
Processing									
Copper ore processed (000's tonnes)	-	-	-	1,055	8,223	8,375	4,437	16,493	38,583
Copper ore grade processed (%)	-	-	-	-	0.43	0.51	0.49	0.41	0.44
Copper Recovery (%)	-	-	-	-	82	86	89	89	86
Concentrate grade (%)	-	-	-	-	21.5	22.0	21.8	22.1	21.9
Copper in concentrate produced (tonnes)	-	-	-	25	30,896	36,783	19,438	60,338	147,480
Gold produced (ounces)	-	-	-	-	10,550	13,570	7,914	28,040	60,074
Silver produced (ounces)	-	-	-	175	257,366	269,800	152,243	452,663	1,132,247
Cash Costs (per lb)									
Mining	-	-	-	-	-	-	\$ 0.44	\$ 0.33	\$ 0.36
Processing	-	-	-	-	-	-	0.46	0.57	0.54
Site administration	-	-	-	-	-	-	0.38	0.29	0.31
TC/RC and freight charges	-	-	-	-	-	-	0.32	0.36	0.34
By-product credits	-	-	-	-	-	-	(0.26)	(0.27)	(0.26)
Cash cost (C1) (per lb)	-	-	-	-	-	-	\$ 1.34	\$ 1.28	\$ 1.29
All-in sustaining cost (AISC) (per lb)	-	-	-	-	-	-	\$ 1.56	\$ 1.85	\$ 1.78
Total cost (C3) (per lb)	-	-	-	-	-	-	\$ 2.28	\$ 2.12	\$ 2.15
Revenues (\$ millions)									
Copper in concentrates	-	-	-	-	-	-	\$ 178	\$ 253	\$ 431
Gold	-	-	-	-	-	-	26	53	79
Silver	-	-	-	-	-	-	6	8	14
Total sales revenues	-	-	-	-	-	-	\$ 210	\$ 314	\$ 524
Copper sales (tonnes)	-	-	-	-	6,542	42,425	35,056	48,841	132,864
Gold sales (ounces) ²	-	-	-	-	2,627	16,032	13,074	23,336	55,069
Silver sales (ounces) ²	-	-	-	-	55,153	350,982	271,774	354,689	1,032,598

¹ The Company determined that commercial production at Cobre Panama commenced effective September 1, 2019.

² Excludes purchased gold and silver delivered to Franco-Nevada under precious metal streaming arrangement.

Las Cruces statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Waste mined (000's tonnes)	14,589	1,631	4,835	6,268	2,202	14,936	460	-	2,082	342	2,884
Ore mined (000's tonnes)	2,422	648	368	410	256	1,682	96	-	355	446	897
Processing											
Copper ore processed (000's tonnes)	1,619	390	416	338	400	1,544	325	360	305	364	1,354
Copper ore grade processed (%)	5.07	5.07	4.87	4.84	5.00	4.95	3.75	3.35	3.73	5.71	4.17
Recovery (%)	90	92	93	93	93	93	87	86	83	85	85
Copper cathode produced (tonnes)	73,664	18,238	18,849	15,181	18,470	70,738	10,634	10,366	9,479	17,611	48,090
Cash Costs (per lb)											
Cash cost (C1) (per lb)	\$ 0.86	\$ 0.86	\$ 0.83	\$ 1.02	\$ 0.94	\$ 0.90	\$ 1.31	\$ 1.51	\$ 1.46	\$ 0.73	\$ 1.17
All-in sustaining cost (AISC) (per lb)	\$ 1.06	\$ 1.03	\$ 1.09	\$ 1.41	\$ 1.16	\$ 1.16	\$ 1.46	\$ 1.65	\$ 1.74	\$ 0.91	\$ 1.35
Total cost (C3) (per lb)	\$ 2.15	\$ 2.15	\$ 2.11	\$ 2.50	\$ 2.28	\$ 2.25	\$ 3.19	\$ 3.59	\$ 3.61	\$ 2.43	\$ 3.08
Revenues (\$ millions)											
Copper cathode	\$ 461	\$ 131	\$ 133	\$ 93	\$ 113	\$ 470	\$ 71	\$ 62	\$ 61	\$ 97	\$ 291
Copper cathode sales (tonnes)	74,664	18,771	19,269	15,138	18,345	71,523	11,443	10,112	10,405	16,284	48,244

Management's Discussion and Analysis (continued)

Guelb Moghrein statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Waste mined (000's tonnes)	14,052	3,961	2,737	4,277	4,087	15,062	3,581	3,107	2,528	1,917	11,133
Ore mined (000's tonnes)	3,104	97	296	445	752	1,590	953	1,345	1,265	1,561	5,124
Processing											
Sulphide ore processed (000's tonnes)	3,389	861	938	902	983	3,684	994	1,018	810	1,029	3,851
Sulphide ore grade processed (%)	0.93	0.79	0.73	0.94	0.93	0.85	0.85	0.84	0.88	0.89	0.87
Recovery (%)	92	90	85	94	91	90	88	90	87	89	89
Copper produced (tonnes)	28,791	6,135	5,781	7,902	8,319	28,137	7,447	7,750	6,203	8,220	29,620
Gold produced (ounces)	49,213	11,740	10,354	11,644	12,236	45,974	12,498	11,961	8,187	12,027	44,673
Magnetite concentrate produced (WMT)	-	93,472	123,100	111,765	97,052	425,389	119,169	163,555	106,634	152,202	541,560
Cash Costs (per lb)											
Mining	\$ 0.66	\$ 0.51	\$ 1.11	\$ 0.66	\$ 1.02	\$ 0.82	\$ 0.78	\$ 0.57	\$ 0.52	\$ 0.38	\$ 0.55
Processing	0.93	1.07	1.23	1.10	0.98	1.09	0.87	1.00	1.06	0.96	0.97
Site administration	0.18	0.19	0.24	0.17	0.17	0.19	0.18	0.18	0.22	0.16	0.18
TC/RC and freight charges	0.51	0.61	0.41	0.66	0.52	0.54	0.49	0.35	0.35	0.58	0.44
Gold and magnetite credit	(1.00)	(1.39)	(1.24)	(1.02)	(0.96)	(1.14)	(1.21)	(1.19)	(1.04)	(1.10)	(1.14)
Cash cost (C1) (per lb)	\$ 1.28	\$ 0.99	\$ 1.75	\$ 1.57	\$ 1.73	\$ 1.50	\$ 1.11	\$ 0.91	\$ 1.11	\$ 0.98	\$ 1.00
All-in sustaining cost (AISC) (per lb)	\$ 1.65	\$ 1.84	\$ 2.16	\$ 1.93	\$ 1.95	\$ 1.93	\$ 1.37	\$ 1.19	\$ 1.62	\$ 1.37	\$ 1.36
Total cost (C3) (per lb)	\$ 2.13	\$ 1.86	\$ 2.84	\$ 2.42	\$ 2.79	\$ 2.46	\$ 2.22	\$ 1.65	\$ 1.93	\$ 1.78	\$ 1.87
Revenues (\$ millions)											
Copper in concentrates	\$ 150	\$ 39	\$ 40	\$ 27	\$ 48	\$ 154	\$ 42	\$ 43	\$ 30	\$ 30	\$ 145
Gold	60	16	16	9	17	58	16	18	12	12	58
Magnetite concentrate	7	5	8	5	5	23	6	16	10	8	40
Total sales revenues	\$ 217	\$ 60	\$ 64	\$ 41	\$ 70	\$ 235	\$ 64	\$ 77	\$ 52	\$ 50	\$ 243
Copper sales (tonnes)	28,999	6,387	6,772	5,108	9,099	27,366	7,924	8,143	5,969	6,010	28,046
Gold sales (ounces)	50,453	13,008	12,863	8,100	14,224	48,195	13,301	14,156	9,074	8,415	44,946
Magnetite concentrate sold (WMT)	-	79,560	150,167	61,315	85,914	376,956	89,631	222,762	123,274	90,032	525,699

Çayeli statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Ore mined (000's tonnes)	941	259	250	242	249	1,000	242	236	218	234	930
Processing											
Ore milled (000's tonnes)	943	257	255	243	252	1,007	241	232	207	236	916
Copper ore grade processed (%)	1.96	1.88	2.13	2.39	2.64	2.26	2.25	1.92	1.78	2.29	2.07
Copper ore Recovery (%)	89	88	86	87	89	88	90	87	87	87	88
Zinc ore grade processed (%)	1.05	1.05	1.37	1.69	1.50	1.40	1.19	1.55	1.37	1.94	1.51
Zinc ore Recovery (%)	34	26	30	32	27	29	26	40	41	42	38
Copper produced (tonnes)	16,523	4,225	4,684	5,056	5,931	19,896	4,891	3,872	3,218	4,725	16,706
Zinc produced (tonnes)	3,326	701	1,051	1,305	1,034	4,091	752	1,428	1,176	1,896	5,252
Cash Costs (per lb)											
Cash cost (C1) (per lb)	\$ 1.50	\$ 1.31	\$ 1.29	\$ 1.18	\$ 1.09	\$ 1.21	\$ 1.42	\$ 1.32	\$ 1.82	\$ 1.11	\$ 1.35
All-in sustaining cost (AISC) (per lb)	\$ 1.75	\$ 1.56	\$ 1.59	\$ 1.45	\$ 1.28	\$ 1.48	\$ 1.68	\$ 1.54	\$ 2.12	\$ 1.51	\$ 1.65
Total cost (C3) (per lb)	\$ 2.37	\$ 2.14	\$ 2.15	\$ 2.05	\$ 1.75	\$ 2.03	\$ 2.32	\$ 2.25	\$ 2.83	\$ 1.60	\$ 2.16
Revenues (\$ millions)											
Copper	\$ 87	\$ (1)	\$ 31	\$ 13	\$ 44	\$ 87	\$ 18	\$ 28	\$ 13	\$ 26	\$ 85
Zinc	9	-	4	-	4	8	-	3	-	3	6
Other	2	-	1	-	4	5	-	1	-	3	4
Total sales revenues	\$ 98	\$ (1)	\$ 36	\$ 13	\$ 52	\$ 100	\$ 18	\$ 32	\$ 13	\$ 32	\$ 95
Copper sales (tonnes)	17,716	-	5,491	2,753	9,153	17,397	3,814	5,817	2,934	5,553	18,118
Zinc sales (tonnes)	4,435	-	2,159	-	2,154	4,313	-	1,833	-	2,046	3,879

Management's Discussion and Analysis (continued)

Pyhäsalmi statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Mining											
Ore mined (000's tonnes)	1,315	323	299	318	297	1,237	292	267	264	213	1,036
Processing											
Ore milled (000's tonnes)	1,260	301	315	320	312	1,248	303	285	248	230	1,066
Copper ore grade processed (%)	1.11	0.98	1.02	0.98	0.98	0.99	0.91	0.74	0.90	0.77	0.83
Copper ore Recovery (%)	97	97	96	95	97	96	85	90	94	95	91
Zinc ore grade processed (%)	1.55	1.66	1.94	2.07	2.35	2.01	2.04	1.05	1.50	0.33	1.27
Zinc ore Recovery (%)	89	91	90	91	91	91	90	90	88	75	89
Copper produced (tonnes)	13,501	2,865	3,086	2,989	2,964	11,904	2,343	1,904	2,062	1,694	8,003
Zinc produced (tonnes)	17,397	4,526	5,494	6,043	6,653	22,716	5,566	2,695	3,253	566	12,080
Pyrite produced (tonnes)	692,124	145,975	159,674	171,355	168,881	645,885	152,475	152,522	127,960	120,687	553,644
Cash Costs (per lb)											
Cash cost (C1) (per lb)	\$ (0.26)	\$ (0.81)	\$ (0.02)	\$ (0.48)	\$ (0.59)	\$ (0.46)	\$ (0.39)	\$ 0.21	\$ 0.61	\$ 2.02	\$ 0.51
All-in sustaining cost (AISC) (per lb)	\$ (0.26)	\$ (0.81)	\$ (0.02)	\$ (0.48)	\$ (0.59)	\$ (0.46)	\$ (0.39)	\$ 0.25	\$ 0.64	\$ 2.11	\$ 0.55
Total cost (C3) (per lb)	\$ 2.06	\$ 1.24	\$ 2.23	\$ 1.67	\$ 1.57	\$ 1.70	\$ 1.67	\$ 1.75	\$ 1.62	\$ 2.17	\$ 1.77
Revenues (\$ millions)											
Copper	\$ 74	\$ 16	\$ 21	\$ 16	\$ 17	\$ 70	\$ 16	\$ 10	\$ 9	\$ 10	\$ 45
Zinc	37	12	12	10	11	45	12	7	2	1	22
Pyrite	16	6	3	4	4	17	4	3	3	3	13
Other	16	4	2	4	2	12	4	1	2	3	10
Total sales revenues	\$ 143	\$ 38	\$ 38	\$ 34	\$ 34	\$ 144	\$ 36	\$ 21	\$ 16	\$ 17	\$ 90
Copper sales (tonnes)	13,691	2,837	3,328	2,991	3,028	12,184	2,861	1,873	1,699	2,018	8,451
Zinc sales (tonnes)	17,416	4,810	4,697	6,178	6,114	21,799	6,646	2,617	2,297	933	12,493
Pyrite sales (tonnes)	418,743	120,572	99,606	100,894	124,109	445,181	124,667	97,221	90,619	110,823	423,330

Ravensthorpe statistics

	2017	Q1 18	Q2 18	Q3 18	Q4 18	2018	Q1 19	Q2 19	Q3 19	Q4 19	2019
Processing											
Beneficiated ore (000's tonnes)	2,211	-	-	-	-	-	-	-	-	-	-
Beneficiated ore grade (%)	1.11	-	-	-	-	-	-	-	-	-	-
Nickel recovery – leach feed to Nickel produced (%)	79	-	-	-	-	-	-	-	-	-	-
Nickel produced (contained tonnes)	17,837	-	-	-	-	-	-	-	-	-	-
Nickel produced (payable tonnes)	13,694	-	-	-	-	-	-	-	-	-	-
Cash Costs (per lb)											
Mining	\$ 1.12	-	-	-	-	-	-	-	-	-	-
Processing	3.25	-	-	-	-	-	-	-	-	-	-
Site administration	0.37	-	-	-	-	-	-	-	-	-	-
TC/RC and freight charges	0.27	-	-	-	-	-	-	-	-	-	-
Cobalt credit	(0.56)	-	-	-	-	-	-	-	-	-	-
Cash cost (C1) (per lb)	\$ 4.45	-	-	-	-	-	-	-	-	-	-
All-in sustaining cost (AISC) (per lb)	\$ 5.29	-	-	-	-	-	-	-	-	-	-
Total cost (C3) (per lb)	\$ 6.17	-	-	-	-	-	-	-	-	-	-
Revenues (\$ millions)											
Nickel	\$ 146	-	-	-	-	-	-	-	-	-	-
Cobalt	17	-	-	-	-	-	-	-	-	-	-
Total sales revenues	\$ 163	-	-	-	-	-	-	-	-	-	-
Nickel sales (contained tonnes)	18,683	-	-	-	-	-	-	-	-	-	-
Nickel sales (payable tonnes)	14,338	-	-	-	-	-	-	-	-	-	-

Regulatory Disclosures

SEASONALITY

The Company's results as discussed in this MD&A are subject to seasonal aspects, in particular the wet season in Zambia. The wet season in Zambia generally starts in November and continues through April, with the heaviest rainfall normally experienced in the months of December, January, February and March. As a result of the wet season, pit access and the ability to mine ore is lower in the first quarter of the year than other quarters and the cost of mining is higher.

OFF-BALANCE SHEET ARRANGEMENTS

The Company had no off-balance sheet arrangements as of the date of this report.

NON-GAAP FINANCIAL MEASURES

This document refers to cash cost (C1), all-in sustaining cost (AISC) and total cost (C3) per unit of payable production, operating cash flow per share, comparative EBITDA, Net debt and comparative earnings, which are not measures recognized under IFRS, do not have a standardized meaning prescribed by IFRS and are not necessarily comparable to similar measures presented by other issuers. These measures are used internally by management in measuring the performance of the Company's operations and serve to provide additional information and should not be considered in isolation to measures prepared under IFRS.

C1, AISC and C3 are measures based on production and sales volumes for which there is no directly comparable measure under IFRS, though a reconciliation from the cost of sales, as stated in the Company's financial statements, and which should be read in conjunction with this Management Discussion and Analysis, to C1, AISC and C3 can be found on the following pages. These reconciliations set out the components of each of these measures in relation to the cost of sales for the Company as per the consolidated financial statements.

The calculation of these measures is described below, and may differ from those used by other issuers. The Company discloses these measures in order to provide assistance in understanding the results of the operations and to provide additional information to investors.

CALCULATION OF CASH COST, ALL-IN SUSTAINING COST, TOTAL COST, SUSTAINING CAPITAL EXPENDITURE AND DEFERRED STRIPPING COSTS CAPITALIZED

The consolidated cash cost (C1), all-in sustaining cost (AISC) and total cost (C3) presented by the Company are measures that are prepared on a basis consistent with the industry standard definitions but are not measures recognized under IFRS. In calculating the C1 cash cost, AISC and C3 total cost for each segment, the costs are measured on the same basis as the segmented financial information that is contained in the financial statements.

C1 cash cost includes all mining and processing costs less any profits from by-products such as gold, silver, zinc, pyrite, cobalt, sulphuric acid, or iron magnetite and is used by management to evaluate operating performance. TC/RC and freight deductions on metal sales, which are typically recognized as a component of sales revenues, are added to C1 cash cost to arrive at an approximate cost of finished metal.

AISC is defined as cash cost (C1) plus general and administrative expenses, sustaining capital expenditure, deferred stripping, royalties and lease payments and is used by management to evaluate performance inclusive of sustaining expenditure required to maintain current production levels.

C3 total cost is defined as AISC less sustaining capital expenditure, deferred stripping and general and administrative expenses net of insurance, plus depreciation and exploration. This metric is used by management to evaluate the operating performance inclusive of costs not classified as sustaining in nature such as exploration and depreciation.

Sustaining capital expenditure is defined as capital expenditure during the production phase, incurred to sustain and maintain the existing assets to achieve constant planned levels of production, from which future economic benefits will be derived. This includes expenditure for assets to retain their existing productive capacity, and to enhance assets to minimum reliability, environmental and safety standards.

Management's Discussion and Analysis (continued)

Deferred stripping costs capitalized are defined as waste material stripping costs in excess of the strip ratio, for the production phase, and from which future economic benefits will be derived from future access to ore. Deferred stripping costs are capitalized to the mineral property, and will be depreciated on a units-of-production basis.

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Purchase and deposits on property, plant and equipment	325	270	606	1,455	2,143
Sustaining capital expenditure and deferred stripping excluding Cobre Panama	65	87	32	262	320
Sustaining capital expenditure and deferred stripping – Cobre Panama	58	6	–	150	–
Project capital expenditure – Cobre Panama development	143	183	212	697	1,332
Project capital expenditure – other ¹	59	131	255	437	384
Pre-commercial costs	–	(137)	107	(91)	107
Total capital expenditure	325	270	606	1,455	2,143

¹ Represents other project capital expenditure at all sites including expenditure at Cobre Panama to enable commencement of the expansion to 100mtpa capacity, including the initial development and engineering work allowing mining to proceed to the Colina pit.

The following tables provide a reconciliation of C1, C3 and AISC to the consolidated financial statements:

For the three months ended December 31, 2019	Kansanshi	Sentinel	Cobre Panama	Las Cruces	Guelb Moghrein	Çayeli	Pyhäsalmi	Copper	Corporate & other	Ravens-thorpe	Total
Cost of sales ¹	(329)	(256)	(258)	(90)	(41)	(21)	(12)	(1,007)	–	(18)	(1,025)
Adjustments:											
Depreciation	70	62	81	61	7	6	1	288	–	2	290
By-product credits	71	–	61	–	20	6	7	165	–	–	165
Royalties	29	22	6	1	2	1	–	61	–	–	61
Treatment and refining charges	(11)	(15)	(23)	–	(4)	(3)	(2)	(58)	–	–	(58)
Freight costs	1	(10)	(2)	(1)	–	(2)	–	(14)	–	–	(14)
Finished goods	39	2	(29)	(2)	(4)	3	1	10	–	–	10
Other	2	9	4	3	–	(1)	(2)	15	–	16	31
Cash cost (C1)	(128)	(186)	(160)	(28)	(20)	(11)	(7)	(540)	–	–	(540)
Adjustments:											
Depreciation (excluding depreciation in finished goods)	(59)	(59)	(96)	(64)	(10)	(4)	–	(292)	–	(2)	(294)
Royalties	(29)	(22)	(6)	(1)	(2)	(1)	–	(61)	–	–	(61)
Other	(3)	(1)	(4)	(2)	(1)	–	–	(11)	–	–	(11)
Total cost (C3)	(219)	(268)	(266)	(95)	(33)	(16)	(7)	(904)	–	(2)	(906)
Cash cost (C1)	(128)	(186)	(160)	(28)	(20)	(11)	(7)	(540)	–	–	(540)
Adjustments:											
General and administrative expenses	(6)	(9)	(7)	(2)	(1)	–	–	(25)	–	–	(25)
Sustaining capital expenditure and deferred stripping	(29)	(26)	(58)	(4)	(3)	(3)	–	(123)	–	–	(123)
Royalties	(29)	(22)	(6)	(1)	(2)	(1)	–	(61)	–	–	(61)
Lease payments	(1)	(1)	(1)	–	–	–	–	(3)	–	–	(3)
AISC	(193)	(244)	(232)	(35)	(26)	(15)	(7)	(752)	–	–	(752)
AISC (per lb)	\$ 1.48	\$ 2.22	\$ 1.85	\$ 0.91	\$ 1.37	\$ 1.51	\$ 2.11	\$ 1.73	–	–	
Cash cost – (C1) (per lb)	\$ 1.03	\$ 1.71	\$ 1.28	\$ 0.73	\$ 0.98	\$ 1.11	\$ 2.02	\$ 1.24	–	–	
Total cost – (C3) (per lb)	\$ 1.68	\$ 2.45	\$ 2.12	\$ 2.43	\$ 1.78	\$ 1.60	\$ 2.17	\$ 2.07	–	–	

¹ Total cost of sales per the Consolidated Statement of Earnings (Loss) in the Company's annual audited financial statements.

Management's Discussion and Analysis (continued)

For the year ended December 31, 2019	Kansanshi ¹	Sentinel	Cobre Panama	Las Cruces	Guelb Moghrein	Çayeli	Pyhäsalmi	Copper	Corporate & other	Ravens- thorpe	Total
Cost of sales ²	(1,109)	(1,023)	(432)	(329)	(198)	(73)	(66)	(3,230)	(9)	(38)	(3,277)
Adjustments:											
Depreciation	244	252	113	198	44	27	21	899	2	6	907
By-product credits	218	–	93	–	98	10	45	464	–	–	464
Royalties	108	88	9	4	8	2	–	219	–	–	219
Treatment and refining charges	(38)	(57)	(37)	–	(16)	(10)	(6)	(164)	–	–	(164)
Freight costs	(3)	(34)	(2)	(1)	–	(6)	(1)	(47)	–	–	(47)
Finished goods	15	8	34	1	(3)	1	–	56	–	–	56
Other	7	14	6	3	1	1	–	32	7	32	71
Cash cost (C1)	(558)	(752)	(216)	(124)	(66)	(48)	(7)	(1,771)	–	–	(1,771)
Adjustments:											
Depreciation (excluding depreciation in finished goods)	(240)	(250)	(131)	(198)	(44)	(26)	(21)	(910)	–	(6)	(916)
Royalties	(108)	(88)	(9)	(4)	(8)	(2)	–	(219)	–	–	(219)
Other	(7)	(5)	(6)	(2)	(2)	–	–	(22)	–	–	(22)
Total cost (C3)	(913)	(1,095)	(362)	(328)	(120)	(76)	(28)	(2,922)	–	(6)	(2,928)
Cash cost (C1)	(558)	(752)	(216)	(124)	(66)	(48)	(7)	(1,771)	–	–	(1,771)
Adjustments:											
General and administrative expenses	(26)	(35)	(10)	(6)	(3)	(2)	–	(82)	–	–	(82)
Sustaining capital expenditure and deferred stripping	(124)	(115)	(64)	(8)	(9)	(6)	–	(326)	–	–	(326)
Royalties	(108)	(88)	(9)	(4)	(8)	(2)	–	(219)	–	–	(219)
Lease payments	(4)	(3)	(1)	(1)	(2)	–	–	(11)	–	–	(11)
AISC	(820)	(993)	(300)	(143)	(88)	(58)	(7)	(2,409)	–	–	(2,409)
AISC (per lb)	\$ 1.65	\$ 2.12	\$ 1.78	\$ 1.35	\$ 1.36	\$ 1.65	\$ 0.55	\$ 1.78	–	–	
Cash cost – (C1) (per lb)	\$ 1.13	\$ 1.61	\$ 1.29	\$ 1.17	\$ 1.00	\$ 1.35	\$ 0.51	\$ 1.31	–	–	
Total cost – (C3) (per lb)	\$ 1.84	\$ 2.34	\$ 2.15	\$ 3.08	\$ 1.87	\$ 2.16	\$ 1.77	\$ 2.16	–	–	

1 C1 cash cost, C3 total cost and AISC exclude third-party concentrate purchased at Kansanshi.

2 Total cost of sales per the Consolidated Statement of Earnings (Loss) in the Company's annual audited financial statements.

Management's Discussion and Analysis (continued)

For the three months ended December 31, 2018	Kansanshi ¹	Sentinel	Cobre Panama	Las Cruces	Guelb Moghrein	Çayeli	Pyhäsalmi	Copper	Corporate & other	Ravens- thorpe	Total
Cost of sales ²	(277)	(272)	-	(94)	(69)	(33)	(25)	(770)	-	(4)	(774)
Adjustments:											
Depreciation	60	69	-	53	16	11	13	222	1	1	224
By-product credits	46	-	-	-	22	8	19	95	-	-	95
Royalties	23	22	-	4	1	-	-	50	-	-	50
Treatment and refining charges	(6)	(15)	-	-	(5)	(6)	(2)	(34)	-	-	(34)
Freight costs	6	(8)	-	(2)	-	(3)	-	(7)	-	-	(7)
Finished goods	(19)	3	-	1	4	7	(2)	(6)	-	-	(6)
Other ¹	29	1	-	-	1	1	1	33	(1)	3	35
Cash cost (C1)	(138)	(200)	-	(38)	(30)	(15)	4	(417)	-	-	(417)
Adjustments:											
Depreciation (excluding depreciation in finished goods)	(62)	(68)	-	(52)	(17)	(8)	(13)	(220)	(1)	(1)	(222)
Royalties	(23)	(22)	-	(4)	(1)	-	-	(50)	-	-	(50)
Other	(2)	(2)	-	2	(1)	-	-	(3)	1	-	(2)
Total cost (C3)	(225)	(292)	-	(92)	(49)	(23)	(9)	(690)	-	(1)	(691)
Cash cost (C1)	(138)	(200)	-	(38)	(30)	(15)	4	(417)	-	-	(417)
Adjustments:											
General and administrative expenses	(7)	(9)	-	(1)	(1)	(1)	-	(19)	-	-	(19)
Sustaining capital expenditure and deferred stripping	(43)	(31)	-	(5)	(2)	(2)	-	(83)	-	-	(83)
Royalties	(23)	(22)	-	(4)	(1)	-	-	(50)	-	-	(50)
AISC	(211)	(262)	-	(48)	(34)	(18)	4	(569)	-	-	(569)
AISC (per lb)	\$ 1.61	\$ 2.02	-	\$ 1.16	\$ 1.95	\$ 1.28	\$ (0.59)	\$ 1.68	-	-	
Cash cost – (C1) (per lb)	\$ 1.04	\$ 1.55	-	\$ 0.94	\$ 1.73	\$ 1.09	\$ (0.59)	\$ 1.23	-	-	
Total cost – (C3) (per lb)	\$ 1.71	\$ 2.26	-	\$ 2.28	\$ 2.79	\$ 1.75	\$ 1.57	\$ 2.04	-	-	

¹ C1 cash cost, C3 total cost and AISC exclude third-party concentrate purchased at Kansanshi.

² Total cost of sales per the Consolidated Statement of Earnings (Loss) in the Company's annual audited financial statements.

Management's Discussion and Analysis (continued)

For the year ended December 31, 2018	Kansanshi ¹	Sentinel	Cobre Panama	Las Cruces	Guelb Moghrein	Çayeli	Pyhäsalmi	Copper	Corporate & other	Ravens- thorpe	Total
Cost of sales²	(1,049)	(1,166)	-	(354)	(205)	(77)	(104)	(2,955)	(17)	(16)	(2,988)
Adjustments:											
Depreciation	250	276	-	203	45	30	54	858	1	5	864
By-product credits	181	-	-	-	81	13	76	351	-	-	351
Royalties	105	88	-	9	6	2	-	210	-	-	210
Treatment and refining charges	(24)	(59)	-	-	(16)	(11)	(8)	(118)	-	-	(118)
Freight costs	(11)	(27)	-	(2)	-	(5)	(1)	(46)	-	-	(46)
Finished goods	(53)	61	-	1	(4)	(3)	(2)	-	-	-	-
Other ¹	40	4	-	2	2	1	(2)	47	16	11	74
Cash cost (C1)	(561)	(823)	-	(141)	(91)	(50)	13	(1,653)	-	-	(1,653)
Adjustments:											
Depreciation (excluding depreciation in finished goods)	(263)	(252)	-	(201)	(49)	(31)	(54)	(850)	(1)	(5)	(856)
Royalties	(105)	(88)	-	(9)	(6)	(2)	-	(210)	-	-	(210)
Other	(7)	(6)	-	1	(2)	-	-	(14)	1	-	(13)
Total cost (C3)	(936)	(1,169)	-	(350)	(148)	(83)	(41)	(2,727)	-	(5)	(2,732)
Cash cost (C1)	(561)	(823)	-	(141)	(91)	(50)	13	(1,653)	-	-	(1,653)
Adjustments:											
General and administrative expenses	(26)	(36)	-	(6)	(4)	(2)	-	(74)	-	-	(74)
Sustaining capital expenditure and deferred stripping	(141)	(130)	-	(27)	(15)	(7)	-	(320)	-	-	(320)
Royalties	(105)	(88)	-	(9)	(6)	(2)	-	(210)	-	-	(210)
AISC	(833)	(1,077)	-	(183)	(116)	(61)	13	(2,257)	-	-	(2,257)
AISC (per lb)	\$ 1.55	\$ 2.22	-	\$ 1.16	\$ 1.93	\$ 1.48	\$ (0.46)	\$ 1.74	-	-	
Cash cost – (C1) (per lb)	\$ 1.03	\$ 1.70	-	\$ 0.90	\$ 1.50	\$ 1.21	\$ (0.46)	\$ 1.28	-	-	
Total cost – (C3) (per lb)	\$ 1.74	\$ 2.42	-	\$ 2.25	\$ 2.46	\$ 2.03	\$ 1.70	\$ 2.11	-	-	

¹ C1 cash cost, C3 total cost and AISC exclude third-party concentrate purchased at Kansanshi.

² Total cost of sales per the Consolidated Statement of Earnings (Loss) in the Company's annual audited financial statements.

COMPARATIVE EBITDA AND COMPARATIVE EARNINGS

Comparative EBITDA and comparative earnings are the Company's adjusted earnings metrics, and are used to evaluate operating performance by management. The Company believes that the comparative metrics presented are useful as the adjusted items do not reflect the underlying operating performance of its current business and are not necessarily indicative of future operating results.

CALCULATION OF OPERATING CASH FLOW PER SHARE, NET DEBT, COMPARATIVE EBITDA AND COMPARATIVE EARNINGS

In calculating the operating cash flow per share, the operating cash flow calculated for IFRS purposes is divided by the basic weighted average common shares outstanding for the respective period.

Management's Discussion and Analysis (continued)

Net debt comprises unrestricted cash and cash equivalents, bank overdrafts and total debt. Comparative EBITDA, comparative earnings and comparative earnings per share are non-GAAP measures which measure the performance of the Company. Comparative EBITDA, comparative earnings and comparative earnings per share exclude certain impacts which the Company believes are not reflective of the Company's underlying performance for the reporting period. These include impairment and related charges, foreign exchange gains and losses, gains and losses on disposal of assets and liabilities, one-time costs related to acquisitions, dispositions, restructuring and other transactions, revisions in estimates of restoration provisions at closed sites, debt extinguishment and modification gains and losses, and discounting of non-current VAT.

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Operating profit	69	108	260	474	809
Depreciation	290	225	224	907	864
Other adjustments					
Impairment charges, write-off of assets and other costs associated with the mine interruption at Las Cruces	99	-	-	112	-
Foreign exchange loss (gain)	47	12	(13)	96	64
(Gain) loss on disposal of assets and liabilities	1	8	2	12	(6)
Other expense	-	-	8	-	8
Revisions in estimates of restoration provisions at closed sites	5	1	-	8	(2)
Total adjustments excluding depreciation	152	21	(3)	228	64
Comparative EBITDA	511	354	481	1,609	1,737

	Q4 2019	Q3 2019	Q4 2018	2019	2018
Net earnings (loss) attributable to shareholders of the Company	(115)	(73)	198	(57)	441
Adjustments attributable to shareholders of the Company:					
Finance charge on discounting Zambian VAT	22	160	5	182	5
(Gain) loss on debt instruments	4	(3)	-	23	-
Total adjustments to comparative EBITDA excluding depreciation	152	21	(3)	228	64
Tax and minority interest relating to foreign exchange revaluation and comparative adjustments	(28)	(73)	(18)	(127)	(23)
Comparative earnings	35	32	182	249	487
Earnings (loss) per share as reported	\$ (0.17)	\$ (0.11)	\$ 0.29	\$ (0.08)	\$ 0.64
Comparative earnings per share	\$ 0.05	\$ 0.05	\$ 0.26	\$ 0.36	\$ 0.71

ADOPTION OF NEW STANDARDS

IFRS 16 Leases

The Company has adopted *IFRS 16 – Leases* (IFRS 16) as of January 1, 2019. In accordance with the transitional provisions within IFRS 16, the Company has elected to apply the modified transition approach and therefore the comparative information has not been restated and continues to be reported under IAS 17 and IFRIC 4. The details of accounting policies under IAS 17 and IFRIC 4 are disclosed separately if they are different from those under IFRS 16.

The details and quantitative impact of the changes in accounting policies are disclosed below.

Policy applicable from January 1, 2019

At inception of a contract, the Company assesses whether a contract is, or contains, 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. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether:

- The contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, the asset is not identified.
- The Company has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use.
- The Company has the right to direct the use of the asset (such as the decision-making rights).

Policy applicable before January 1, 2019

For contracts entered into before January 1, 2019, the Company determined whether the arrangement was or contained a lease based on the assessment of whether:

- Fulfilment of the arrangement was dependent on the use of a specific asset or assets.
- The arrangement had conveyed a right to use the asset. An arrangement conveyed the right to use the asset if one of the following was met:
 - The Company had the ability or right to operate the asset while obtaining or controlling more than an insignificant amount of the amount; or
 - The Company had the ability or right to control physical access to the asset while obtaining or controlling more than an insignificant amount of the output.

(i) Measurement of leases

All leases are accounted for by recognizing a right-of-use asset and a lease liability with the exception of short-term leases and low-value assets. If the Company deems a lease to be short-term or low-value, the Company recognizes the lease payments associated with these leases as an expense on either a straight-line basis over the lease term or another systematic basis.

The lease liabilities are measured at the present value of the contractual payments due to the lessor over the lease term, with the discount rate determined by reference to the rate inherent in the lease. If that rate cannot be determined, the Company's incremental borrowing rate is used. Variable lease payments are only included in the measurement of the lease liability if they depend on an index or rate. In such cases, the initial measurement of the lease liability assumes the variable element will remain unchanged throughout the lease term. Other variable lease payments are expensed in the period to which they relate.

Management's Discussion and Analysis (continued)

Right-of-use assets are initially measured at the amount of the lease liability, reduced for any lease incentives received, and increased for:

- Lease payments made at or before commencement of the lease;
- Initial direct costs incurred, and
- The amount of any provision recognized where the Company is contractually required to dismantle, remove or restore the leased asset.

Subsequent to initial measurement lease liabilities increase as a result of interest charged at a constant rate on the balance outstanding and are reduced for lease payments made. The interest rate used to calculate the interest charged is determined by the jurisdiction of the lease and the length of the lease. Right-of-use assets are amortized on a straight-line basis over the remaining term of the lease or over the remaining economic life of the asset if, rarely, this is judged to be shorter than the lease term. When the Company revises its estimate of the term of any lease (because, for example, it re-assesses the probability of a lessee extension or termination option being exercised), it adjusts the carrying amount of the lease liability to reflect the payments to make over the revised term, which are discounted at the same discount rate that applied on lease commencement. The carrying value of lease liabilities is similarly revised when the variable element of future lease payments dependent on a rate or index is revised. In both cases an equivalent adjustment is made to the carrying value of the right-of-use asset, with the revised carrying amount being amortized over the remaining (revised) lease term.

(ii) Quantitative analysis

The details and quantitative impact of the changes in accounting policy are disclosed below:

- The Company has recognized lease liabilities in relation to leases which had previously been classified as 'operating leases' under the principle of IAS 17. The Company has elected to apply practical expedients of IFRS 16 in relation to applying the same discount rate to leases with reasonably similar characteristics, relying on previous assessments of onerous leases, not recognizing leases for which the lease term ended within 12 months of the date of initial application, and by excluding initial direct costs from the measurement of right-of-use assets at the date of initial application. Through the adoption of IFRS 16, an extensive detailed review of the Company's leases resulted in increases to property, plant and equipment (note 6) and provisions and other liabilities (note 11) on 1 January, 2019 of \$20 million.
- The total cash outflow for leases in the year ended December 31, 2019 was \$29 million.
- Additions to right-of-use assets in the year ended December 31, 2019 was \$27 million, inclusive of the \$20 million recognized on adoption of IFRS 16. The weighted average incremental borrowing rate for lease liabilities initially recognized as of December 31, 2019 is 8.8%.

Operating lease commitments disclosed in the financial statements for the year ending December 31, 2018 of \$32 million are different to the lease liabilities recognized on the initial application of \$20 million due to non-inclusion of short-term leases, non-capital payments and payments for low value assets, and are after the impact of discounting at the incremental borrowing rate, or if readily available, the interest rate implicit in the lease.

SIGNIFICANT JUDGMENTS, ESTIMATES AND ASSUMPTIONS

Many of the amounts disclosed in the financial statements involve the use of judgments, estimates and assumptions. These judgments and estimates are based on management's knowledge of the relevant facts and circumstances at the time, having regard to prior experience, and are continually evaluated.

Management's Discussion and Analysis (continued)

(i) Significant judgments

➤ Determination of ore reserves and resources

Judgments about the amount of product that can be economically and legally extracted from the Company's properties are made by management using a range of geological, technical and economic factors, history of conversion of mineral deposits to proven and probable reserves as well as data regarding quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. This process may require complex and difficult geological judgments to interpret the data. The Company uses qualified persons (as defined by the Canadian Securities Administrators' National Instrument 43-101) to compile this data.

Changes in the judgments surrounding proven and probable reserves may impact the carrying value of property, plant and equipment (note 6), restoration provisions included in provisions and other liabilities (note 11), recognition of deferred income tax amounts (note 13) and depreciation (note 6).

➤ Achievement of commercial production

Once a mine or smelter reaches the operating levels intended by management, depreciation of capitalized costs begins. Significant judgment is required to determine when certain of the Company's assets reach this level.

Management considers several factors, including, but not limited to the following:

- completion of a reasonable period of commissioning;
- consistent operating results achieved at a pre-determined level of design capacity and indications exist that this level will continue;
- mineral recoveries at or near expected levels;
- and the transfer of operations from development personnel to operational personnel has been completed.

During the year ended December 31, 2019, the Company concluded that the Cobre Panama mine, was operating in a manner intended by management and commercial production was achieved from September 1, 2019.

➤ Taxes

Judgment is required in determining the recognition and measurement of deferred income tax assets and liabilities on the balance sheet. In the normal course of business, the Company is subject to assessment by taxation authorities in various jurisdictions. These authorities may have different interpretations of tax legislation or tax agreements than those applied by the Company in computing current and deferred income taxes. These different judgments may alter the timing or amounts of taxable income or deductions. The final amount of taxes to be paid or recovered depends on a number of factors including the outcome of audits, appeals and negotiation. Amounts to be recovered and the timings of recoveries with respect to indirect taxes, such as VAT, are subject to judgment which, in the instance of a change of circumstances, could result in material adjustments

The Company operates in a specialized industry and in a number of tax jurisdictions. As a result, its income is subject to various rates of taxation. The breadth of its operations and the global complexity and interpretation of tax regulations require assessment and judgement of uncertainties and of the taxes that the Company will ultimately pay. These are dependent on many factors, including negotiations with tax authorities in various jurisdictions, outcomes of tax litigation and resolution of disputes. The resolution of these uncertainties may result in adjustments to the Company's tax assets and liabilities.

Management assesses the likelihood and timing of taxable earnings in future periods in recognizing deferred income tax assets on unutilized tax losses. Future taxable income is based on forecast cash flows from operations and the application of existing tax laws in each jurisdiction. Forecast cash flows are based on life of mine projections.

Management's Discussion and Analysis (continued)

To the extent that future cash flows and taxable income differ significantly from forecasts, the ability of the Company to realize the net deferred income tax assets recorded at the balance sheet date could be impacted. In addition, future changes in tax laws could limit the ability of the Company to obtain tax deductions in future periods from deferred income tax assets are disclosed in note 13.

➤ Precious metal stream arrangement

On October 5, 2015, the Company finalized an agreement with Franco-Nevada Corporation ("Franco-Nevada") for the delivery of precious metals from the Cobre Panama project. Franco-Nevada have provided \$1 billion deposit to the Cobre Panama project against future deliveries of gold and silver produced by the mine. A further stream was completed on March 26, 2018, with an additional \$356 million received from Franco-Nevada.

Management has determined that the under the terms of the agreement the Company meets the 'own-use' exemption criteria under *IFRS 9: Financial Instruments*. The Company also retains significant business risk relating to the operation of the mine and as such has accounted for the proceeds received as deferred revenue.

Management has exercised judgement in determining the appropriate accounting treatment for the Franco-Nevada streaming agreement. Management has determined, with reference to the agreed contractual terms in conjunction with the Cobre Panama reserves and mine plan, that funds received from Franco-Nevada constitute a prepayment of revenues deliverable from future Cobre Panama production.

Following the first sale of copper concentrate by Cobre Panama in June 2019, the Company commenced deliveries of gold and silver to Franco-Nevada under the terms of the arrangement.

➤ Assessment of impairment indicators

Management applies significant judgement in assessing each cash-generating units and assets for the existence of indicators of impairment at the reporting date. Internal and external factors are considered in assessing whether indicators of impairment are present that would necessitate impairment testing. Significant assumptions regarding commodity prices, production, operating costs, capital expenditures and discount rates are used in determining whether there are any indicators of impairment. These assumptions are reviewed regularly by senior management and compared, where applicable, to relevant market consensus views.

The Company's most significant CGUs are longer-term assets and therefore their value is assessed on the basis of longer-term pricing assumptions. Shorter-term assets are more sensitive to short term commodity prices assumptions that are used in the review of impairment indicators.

The carrying value of property, plant and equipment and goodwill at the balance sheet date is disclosed in note 6 and note 7 respectively, and by mine location in note 23.

Asset impairments are disclosed in note 20.

➤ Derecognition of financial liabilities

Judgment is required when determining if an exchange of instruments or modification of debt constitute an extinguishment of the original financial liability and establishment of a new financial liability. In 2019, qualitative factors such as new terms and changes to the existing lending group were considered for the Company's senior debt facility and were judged to constitute an extinguishment of the previous \$1.5 billion RCF (see note 10).

(ii) Significant accounting estimates

Estimates are inherently uncertain and therefore actual results may differ from the amounts included in the financial statements, potentially having a material future effect on the Company's consolidated financial statements. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below:

Management's Discussion and Analysis (continued)

➤ Determination of ore reserves and life of mine plan

Reserves are estimates of the amount of product that can be economically and legally extracted from the Company's properties. Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies or fields to be determined by analyzing geological data such as drilling samples. Following this, the quantity of ore that can be extracted in an economical manner is calculated using data regarding the life of mine plans and forecast sales prices (based on current and long-term historical average price trends).

The majority of the Company's property, plant and equipment are depreciated over the estimated lives of the assets on a units-of-production basis. The calculation of the units-of-production rate, and therefore the annual depreciation expense could be materially affected by changes in the underlying estimates which are driven by the life of mine plans. Changes in estimates can be the result of actual future production differing from current forecasts of future production, expansion of mineral reserves through exploration activities, differences between estimated and actual costs of mining and differences in the commodity prices used in the estimation of mineral reserves.

Management made significant estimates of the strip ratio for each production phase. Waste material stripping costs in excess of this ratio, and from which future economic benefit will be derived from future access to ore, will be capitalized mineral property and depreciated on a units-of-production basis.

Changes in the proven and probable reserves estimates may impact the carrying value of property, plant and equipment (note 6), restoration provisions (note 11), recognition of deferred income tax amounts (note 13) and depreciation (note 6).

➤ Review of asset carrying values and impairment charges

The Company reviews the carrying value of assets each reporting period to determine whether there is any indication of impairment using both internal and external sources of information. The Company has determined that each mining operation and smelter is a cash-generating unit.

External sources of information regarding indications of impairment include considering the changes in market, economic and legal environment in which the Company operates that are not within its control and affect the recoverable amount of, or the timing of economic benefits from mining assets. Internal sources of information include changes to the life of mine plans and economic performance of the assets.

Management's determination of recoverable amounts includes estimates of mineral prices, recoverable reserves, and operating, capital and restoration costs are subject to certain risks and uncertainties that may affect the recoverability of mineral property costs. The calculation of the recoverable amount can also include assumptions regarding the appropriate discount rate and inflation and exchange rates. Although management has made its best estimate of these factors, it is possible that changes could occur in the near term that could adversely affect management's estimate of the net cash flow to be generated from its projects.

An impairment was recognized on Las Cruces at December 31, 2019. A 5% change in the production and short-term copper price would result in a \$24 million change to the impairment value recognized.

➤ Estimation of the amount and timing of restoration and remediation costs

Accounting for restoration provisions requires management to make estimates of the future costs the Company will incur to complete the restoration and remediation work required to comply with existing laws, regulations and agreements in place at each mining operation and any environmental and social principles the Company is in compliance with. The calculation of the present value of these costs also includes assumptions regarding the timing of restoration and remediation work, applicable risk-free interest rate for discounting those future cash outflows, inflation and foreign exchange rates and assumptions relating to probabilities of alternative estimates of future cash outflows. Actual costs incurred may differ from those amounts estimated. Also, future changes to environmental laws

Management's Discussion and Analysis (continued)

and regulations could increase the extent of restoration work required to be performed by the Company. Increases in future costs could materially impact the amounts charged to operations for restoration. A 10% increase in costs would result in an increase to restoration provisions of \$90 million at December 31, 2019.

The provision represents management's best estimate of the present value of the future restoration and remediation costs. The actual future expenditures may differ from the amounts currently provided; any increase in future costs could materially impact the amounts included in the liability disclosed in the consolidated balance sheet. The carrying amount of the Company's restoration provision is disclosed in note 11c.

➤ Estimation and assumptions relating to the timing of VAT receivables in Zambia

In addition to the recoverability of VAT receivables being a key judgment, calculating the present value of these recoveries also includes assumptions regarding the timing of recoveries. Changes to the timings could materially impact the amounts charged to finance costs. The impact of repayments being one year later than estimated at December 31, 2019 would lead to a decrease to the carrying value and an increase to finance costs of \$43 million. The carrying amount of the Company's VAT receivables is disclosed in note 4b.

FINANCIAL INSTRUMENTS RISK EXPOSURE

The Company's activities expose it to a variety of risks arising from financial instruments. These risks, and management's objectives, policies and procedures for managing these risks are disclosed as follows:

Credit risk

The Company's credit risk is primarily attributable to cash and bank balances, short-term deposits, derivative instruments and trade and other receivables. The Company's exposure to credit risk is represented by the carrying amount of each class of financial assets, including commodity contracts, recorded in the consolidated balance sheet.

The Company limits its credit exposure on cash held in bank accounts by holding its key transactional bank accounts with highly rated financial institutions. The Company manages its credit risk on short-term deposits by only investing with counterparties that carry investment grade ratings as assessed by external rating agencies and spreading the investments across these counterparties. Under the Company's risk management policy, allowable counterparty exposure limits are determined by the level of the rating unless exceptional circumstances apply. A rating of investment grade or equivalent is the minimum allowable rating required as assessed by international credit rating agencies. Likewise, it is the Company's policy to deal with banking counterparties for derivatives who are rated investment grade or above by international credit rating agencies and graduated counterparty limits are applied depending upon the rating.

Exceptions to the policy for dealing with relationship banks with ratings below investment grade are reported to, and approved by, the Audit Committee. As at December 31, 2019, substantially all cash and short-term deposits are with counterparties of investment grade.

The Company's credit risk associated with trade accounts receivable is managed through establishing long-term contractual relationships with international trading companies using industry-standard contract terms. 36% of the Company's trade receivables are outstanding from three customers together representing 23% of the total sales for the year. No amounts were past due from these customers at the balance sheet date. The Company continues to trade with these customers. Revenues earned from these customers are included within the Kansanshi and Sentinel segments. Other accounts receivable consist of amounts owing from government authorities in relation to the refund of value-added taxes applying to inputs for the production process and property, plant and equipment expenditures and prepaid taxes.

Management's Discussion and Analysis (continued)

Liquidity risk

The Company manages liquidity risk by maintaining cash and cash equivalent balances and available credit facilities to ensure that it is able to meet its short-term and long-term obligations as and when they fall due. Company-wide cash projections are managed centrally and regularly updated to reflect the dynamic nature of the business and fluctuations caused by commodity price and exchange rate movements.

In addition, the Company was obligated under its corporate revolving credit and term loan facility to maintain liquidity and satisfy various covenant ratio tests on a historical cash flow basis. These ratios were in compliance during the year ended December 31, 2019, and December 31, 2018. If the Company breaches a covenant in its Financing Agreements, this would be an event of default which, if un-addressed, would entitle the lenders to make the related borrowings immediately due and payable and if made immediately due and payable all other borrowings would also be due and payable.

MARKET RISKS

Commodity price risk

The Company is subject to commodity price risk from fluctuations in the market prices of copper, gold, nickel, zinc and other elements.

As part of the hedging program, the Company has elected to apply hedge accounting for a portion of copper and nickel sales. For the year ended December 31, 2019, a fair value gain of \$8 million (2018: fair value gain of \$27 million) has been recognized on derivatives designated as hedged instruments through accumulated other comprehensive income and a fair value gain of \$44 million (2018: fair value loss of \$110 million) has been recognized through sales revenues.

For the year ended December 31, 2018, the Company had unmargined copper forward sales contracts for 30,000 tonnes at an average price of \$2.81 per lb outstanding with periods of maturity to June 2020. In addition, the Company has zero cost collar unmargined sales contracts for 80,000 tonnes at weighted average prices of \$2.65 per lb to \$2.91 per lb outstanding with maturities to December 2020. The Company also had unmargined nickel forward sales contracts for 12,046 tonnes at an average price of \$6.77 per lb outstanding with maturities to February 2021.

The Company is also exposed to commodity price risk on diesel fuel required for mining operations and sulphur required for acid production. The Company's risk management policy allows for the management of these exposures through the use of derivative financial instruments. As at December 31, 2019, and December 31, 2018, the Company had not entered into any diesel or sulphur derivatives.

The Company's commodity price risk related to changes in fair value of embedded derivatives in accounts receivable reflecting copper, nickel, gold and zinc sales provisionally priced based on the forward price curve at the end of each quarter.

Interest rate risk

The majority of the Company's interest expense is fixed however it is also exposed to an interest rate risk arising from interest paid on floating rate debt and the interest received on cash and short-term deposits. The majority of interest charges were capitalized in 2019 until commencement of commercial production in Panama on September 1, 2019, and therefore the risk exposure is primarily on cash, and net earnings in relation to the depreciation of capitalized interest charges.

Deposits are invested on a short-term basis to ensure adequate liquidity for payment of operational and capital expenditures. To date, no interest rate management products are used in relation to deposits.

The Company manages its interest rate risk on borrowings on a net basis. The Company has a policy allowing floating-to-fixed interest rate swaps targeting 50% of exposure over a five-year period. As at December 31, 2019, and December 31, 2018, the Company held no floating-to-fixed interest rate swaps.

Management's Discussion and Analysis (continued)

Foreign exchange risk

The Company's functional and reporting currency is USD. As virtually all of the Company's revenues are derived in USD and the majority of its business is conducted in USD, foreign exchange risk arises from transactions denominated in currencies other than USD. Commodity sales are denominated in USD, the majority of borrowings are denominated in USD and the majority of operating expenses are denominated in USD. The Company's primary foreign exchange exposures are to the local currencies in the countries where the Company's operations are located, principally the Zambian kwacha ("ZMW"), Australian dollar ("A\$") Mauritanian ouguiya ("MRU"), the euro ("EUR") and the Turkish lira ("TRY"); and to the local currencies suppliers who provide capital equipment for project development, principally the A\$, EUR and the South African rand ("ZAR").

The Company's risk management policy allows for the management of exposure to local currencies through the use of financial instruments at a targeted amount of up to 100% for exposures within one year down to 50% for exposures in five years.

DISCLOSURE CONTROLS AND PROCEDURES

The Company's disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is communicated to senior management, to allow timely decisions regarding required disclosure.

An evaluation of the effectiveness of the Company's disclosure controls and procedures, as defined under the rules of the Canadian Securities Administration, was conducted as of December 31, 2019, under the supervision of the Company's Audit Committee and with the participation of management. Based on the results of the evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of the end of the period covered by this report in providing reasonable assurance that the information required to be disclosed in the Company's annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported in accordance with the securities legislation.

Since the December 31, 2019 evaluation, there have been no adverse changes to the Company's controls and procedures and they continue to remain effective.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of the Company's financial reporting and the preparation of financial statements in compliance with IFRS. The Company's internal control over financial reporting includes policies and procedures that:

- pertain to the maintenance of records that accurately and fairly reflect the transactions of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS;
- ensure the Company's receipts and expenditures are made only in accordance with authorization of management and the Company's directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized transactions that could have a material effect on the annual or interim financial statements.

An evaluation of the effectiveness of the Company's internal control over financial reporting was conducted as of December 31, 2019 by the Company's management, including the Chief Executive Officer and Chief Financial Officer, based on the Control-Integrated Framework (2013) established by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Based on this evaluation, management has concluded that the Company's internal controls over financial reporting were effective.

There were no changes in the Company's business activities during the year-ended December 31, 2019, that have materially affected, or are reasonably likely to materially affect, its internal controls over financial reporting.

LIMITATIONS OF CONTROLS AND PROCEDURES

The Company's management, including the Chief Executive Officer and Chief Financial Officer, believe that any disclosure controls and procedures or internal control over financial reporting, no matter how well conceived and operated, can provide only reasonable and not absolute assurance that the objectives of the control system are met. Further, the design of a control system reflects the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been prevented or detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. The design of any systems of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost effective control system, misstatements due to error or fraud may occur and not be detected.

Management's Responsibility for Financial Reporting

The consolidated financial statements of First Quantum Minerals Ltd. and the information contained in the annual report have been prepared by and are the responsibility of the Company's management. The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and, where appropriate, reflect management's best estimates and judgments based on currently available information.

Management has developed and is maintaining a system of internal controls to obtain reasonable assurance that the Company's assets are safeguarded, transactions are authorized and financial information is reliable.

The Company's independent auditors, PricewaterhouseCoopers LLP, who are appointed by the shareholders, conduct an audit in accordance with Canadian generally accepted auditing standards. Their report outlines the scope of their audit and gives their opinion on the consolidated financial statements.

The Audit Committee of the Board of Directors meets periodically with management and the independent auditors to review the scope and results of the annual audit, and to review the consolidated financial statements and related financial reporting matters prior to approval of the consolidated financial statements.



Philip K.R. Pascall
Chairman and Chief Executive Officer



Hannes Meyer
Chief Financial Officer

February 13, 2020

Independent Auditor's Report

To the Shareholders of First Quantum Minerals Ltd.

Our opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the financial position of First Quantum Minerals Ltd. and its subsidiaries (together, the Company) as at December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

WHAT WE HAVE AUDITED

- The Company's consolidated financial statements comprise:
- the Consolidated Balance Sheets as at December 31, 2019 and 2018;
- the Consolidated Statements of Earnings (Loss) for the years then ended;
- the Consolidated Statements of Comprehensive Income (Loss) for the years then ended;
- the Consolidated Statements of Changes in Equity for the years then ended;
- the Consolidated Statements of Cash Flows for the years then ended; and
- the Notes to the Consolidated Financial Statements, which include a summary of significant accounting policies.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. 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 believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

INDEPENDENCE

We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada. We have fulfilled our other ethical responsibilities in accordance with these requirements.

Other information

Management is responsible for the other information. The other information comprises the Management's Discussion and Analysis, which we obtained prior to the date of this auditor's report and the information, other than the consolidated financial statements and our auditor's report thereon, included in the annual report, which is expected to be made available to us after that date.

Our opinion on the consolidated financial statements does not cover the other information and we do not and will not express an opinion or any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above 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 on the other information that we obtained prior to the date of this auditor's report, 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. When we read the information, other than the consolidated financial statements and our auditor's report thereon, included in the annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines 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, management is responsible for assessing the Company'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 management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

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. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards 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.

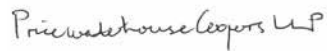
As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- 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 Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's 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 Company'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 Company to cease to continue as a going concern. Because not all future events or conditions can be predicted, our conclusions are not a guarantee as to the Company's ability 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 Company 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, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Jason Burkitt.

A handwritten signature in black ink that reads "PricewaterhouseCoopers LLP". The signature is written in a cursive, slightly slanted style.

PricewaterhouseCoopers LLP

London, United Kingdom

February 13, 2020

Consolidated Statements of Earnings (Loss)

(expressed in millions of U.S. dollars, except where indicated and share and per share amounts)

	Note	2019	2018
Sales revenues	17	4,067	3,966
Cost of sales	18	(3,277)	(2,988)
Gross profit		790	978
Exploration		(19)	(26)
General and administrative		(82)	(74)
Impairments and related charges	20	(101)	–
Other income (expense)	22	(114)	(69)
Operating profit		474	809
Finance income		37	20
Finance costs	21	(285)	(33)
Finance charge on Zambian VAT discount	4c	(182)	(5)
Loss on partial redemption of senior notes	10	(25)	–
Earnings before income taxes		19	791
Income tax expense	13	(70)	(283)
Net earnings (loss)		(51)	508
Net earnings (loss) attributable to:			
Non-controlling interests		6	67
Shareholders of the Company	15	(57)	441
Earnings (loss) per common share attributable to the shareholders of the Company			
Net earnings (loss) (\$ per share)			
Basic	15	(0.08)	0.64
Diluted	15	(0.08)	0.64
Weighted average shares outstanding (000's)			
Basic	15	687,596	686,747
Diluted	15	687,596	689,387
Total shares issued and outstanding (000's)	14a	689,401	689,391

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Comprehensive Income (Loss)

(expressed in millions of U.S. dollars)

	Note	2019	2018
Net earnings (loss) for the year		(51)	508
Other comprehensive income (loss)			
Items that have been/may subsequently be reclassified to net earnings (loss):			
Cash flow hedges reclassified to net earnings (loss)		(27)	228
Gains on cash flow hedges arising during the year	24	8	27
Items that will not subsequently be reclassified to net earnings (loss):			
Loss on termination of Pebble framework agreement ¹		-	(38)
Unrealized gain (loss) on investments	8	1	(7)
Other		-	12
Total comprehensive income (loss) for the year		(69)	730
Total comprehensive income (loss) for the year attributable to:			
Non-controlling interests		6	67
Shareholders of the Company		(75)	663
Total comprehensive income (loss) for the year		(69)	730

¹ In May 2018, the Company and Northern Dynasty Minerals elected to terminate their framework agreement, announced on December 15, 2017, in accordance with its terms after being unable to reach agreement on the contemplated option and partnership transaction on the Pebble project. A \$38 million fair value loss on the investment was recognized in other comprehensive income.

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows

(expressed in millions of U.S. dollars)

	Note	2019	2018
Cash flows from operating activities			
Net earnings (loss)		(51)	508
Adjustments for			
Depreciation	18, 19	907	864
Income tax expense	13	70	283
Impairment and related charges	20	101	–
Net finance expense		248	13
Finance charge on Zambian VAT discount	4c	182	5
Unrealized foreign exchange loss		89	92
Loss on partial redemption of senior notes	10	25	–
Other		24	31
		1,595	1,796
Taxes paid		(251)	(285)
Franco–Nevada Corporation precious metal stream arrangement	12	–	630
Movements in non–cash operating working capital		(455)	(161)
Net cash from operating activities		889	1,980
Cash flows used by investing activities			
Purchase and deposits on property, plant and equipment	6, 23	(1,455)	(2,143)
Acquisition of Korea Panama Mining Corp (“KPMC”)	9	(100)	(185)
Interest paid and capitalized to property, plant and equipment	6	(388)	(441)
Other		23	17
Net cash used by investing activities		(1,920)	(2,752)
Cash flows from financing activities			
Net movement in trading facility		157	(74)
Movement in restricted cash		51	10
Proceeds from debt		3,045	3,146
Repayments of debt		(2,319)	(2,124)
Early redemption costs on senior notes	10	(14)	–
Proceeds from joint venture (KPMC shareholder loan)	9, 11b	159	178
Repayments to joint venture (KPMC shareholder loan)	9, 11b	–	(152)
Proceeds from joint venture (KPMC)	9, 11b	–	304
Repayments to joint venture (KPMC)	9, 11b	(102)	(356)
Dividends paid to shareholders of the Company		(5)	(5)
Dividends paid to non–controlling interest		(9)	(20)
Interest paid		(181)	(22)
Other		(16)	(5)
Net cash from financing activities		766	880
Increase (decrease) in cash and cash equivalents and bank overdrafts		(265)	108
Cash and cash equivalents and bank overdrafts – beginning of year		788	702
Exchange losses on cash and cash equivalents		–	(22)
Cash and cash equivalents and bank overdrafts – end of year		523	788
Cash and cash equivalents and bank overdrafts comprising:			
Cash and cash equivalents		1,138	1,255
Bank overdrafts		(615)	(467)

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Balance Sheets

(expressed in millions of U.S. dollars)

	Note	December 31, 2019	December 31, 2018
Assets			
Current assets			
Cash and cash equivalents		1,138	1,255
Trade and other receivables	4	512	658
Inventories	5	1,367	1,196
Current portion of other assets	8	135	155
		3,152	3,264
Non-current assets			
Current assets			
Cash and cash equivalents - restricted cash		27	78
Non-current VAT receivable	4b	396	109
Property, plant and equipment	6	19,972	19,098
Goodwill	7	237	237
Investment in joint venture	9	589	600
Other assets	8	374	151
Total assets		24,747	23,537
Liabilities			
Current liabilities			
Bank overdraft		615	467
Trade and other payables		737	731
Current taxes payable		141	125
Current debt	10	838	174
Current portion of provisions and other liabilities	11	192	147
		2,523	1,644
Non-current liabilities			
Debt	10	7,360	7,111
Provisions and other liabilities	11	2,172	1,818
Deferred revenue	12	1,421	1,452
Deferred income tax liabilities	13	609	790
Total liabilities		14,085	12,815
Equity			
Share capital	14	5,615	5,592
Retained earnings		3,880	3,942
Accumulated other comprehensive loss		(45)	(27)
Total equity attributable to shareholders of the Company		9,450	9,507
Non-controlling interests		1,212	1,215
Total equity		10,662	10,722
Total liabilities and equity		24,747	23,537
Commitments & contingencies	25		

The accompanying notes are an integral part of these consolidated financial statements.

Approved by the Board of Directors and authorized for issue on February 13, 2020.


Simon Scott, Director


Robert Harding, Director

Consolidated Statements of Changes in Equity

(expressed in millions of U.S. dollars)

	Share capital	Retained earnings	Accumulated other comprehensive loss	Total equity attributable to shareholders of the Company	Non-controlling interests	Total Equity
Balance at December 31, 2018	5,592	3,942	(27)	9,507	1,215	10,722
Net earnings (loss)	–	(57)	–	(57)	6	(51)
Other comprehensive income (loss)	–	–	(18)	(18)	–	(18)
Total comprehensive income (loss)	–	(57)	(18)	(75)	6	(69)
Share-based compensation expense ¹	23	–	–	23	–	23
Dividends	–	(5)	–	(5)	(9)	(14)
Balance at December 31, 2019	5,615	3,880	(45)	9,450	1,212	10,662

¹ Net of capitalized amounts

	Share capital	Retained earnings	Accumulated other comprehensive loss	Total equity attributable to shareholders of the Company	Non-controlling interests	Total Equity
Balance at December 31, 2017	5,575	3,612	(227)	8,960	1,168	10,128
IFRS 9 and IFRS 15 transition adjustments	–	(106)	(22)	(128)	–	(128)
Balance at January 1, 2018	5,575	3,506	(249)	8,832	1,168	10,000
Net earnings	–	441	–	441	67	508
Other comprehensive income	–	–	222	222	–	222
Total comprehensive income	–	441	222	663	67	730
Share-based compensation expense ¹	17	–	–	17	–	17
Dividends	–	(5)	–	(5)	(20)	(25)
Balance at December 31, 2018	5,592	3,942	(27)	9,507	1,215	10,722

¹ Net of capitalized amounts

Notes to the Consolidated Financial Statements

(expressed in millions of U.S. dollars, except where indicated and share and per share amounts)

1. Nature of Operations

First Quantum Minerals Ltd. (“First Quantum” or “the Company”) is engaged in the production of copper, nickel, gold, zinc and acid, and related activities including exploration and development. The Company has operating mines located in Zambia, Panama, Finland, Turkey, Spain and Mauritania. The Company’s Ravensthorpe mine in Australia, which was placed under care and maintenance in October 2017, is currently undergoing re-commissioning work, with production expected to re-commence first quarter 2020. The Company is exploring the Haquira copper deposit in Peru and the Taca Taca copper-gold-molybdenum deposit in Argentina.

The Company’s shares are publicly listed for trading on the Toronto Stock Exchange and has Depository Receipts listed on the Lusaka Stock Exchange.

The Company is registered and domiciled in Canada, and its registered office is the 14th Floor – 543 Granville Street, Vancouver, BC, Canada, V6C 1X8.

2. Significant Accounting Policies

The significant accounting policies used in the preparation of these consolidated financial statements are described below.

a) BASIS OF PRESENTATION

These consolidated financial statements have been prepared in compliance with International Financial Reporting Standards (“IFRS”). For these purposes, IFRS comprise the standards issued by the International Accounting Standards Board (“IASB”) and Interpretations issued by the IFRS Interpretations Committee (“IFRICs”).

These consolidated financial statements have been prepared under the historical cost convention, with the exception of derivative assets and liabilities and investments which are measured at fair value.

These consolidated financial statements have been prepared on a going concern basis. In making the assessment that the Company is a going concern, management have taken into account all available information about the future, which is at least, but is not limited to, twelve months from December 31, 2019.

At December 31, 2019, the Company had \$250 million of committed undrawn senior debt facilities and \$523 million of net unrestricted cash (inclusive of overdrafts), as well as future cash flows in order to meet all current obligations as they become due. The Company was in compliance with all existing facility covenants as at December 31, 2019.

b) PRINCIPLES OF CONSOLIDATION

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (its “subsidiaries”). Control is achieved where the Company has the right to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. The results of subsidiaries acquired or disposed of during the year are included in the consolidated statement of earnings from the effective date of acquisition or up to the effective date of disposal, as appropriate.

The principal operating subsidiaries are Kansanshi Mining Plc (“Kansanshi”), Minera Panama S.A. (“MPSA” or “Cobre Panama”), Kalumbila Minerals Limited (“Sentinel”), First Quantum Mining and Operations Limited (“FQMO”), Mauritanian Copper Mines SARL (“Guelb Moghrein”), Ravensthorpe Nickel Operations Pty Ltd. (“Ravensthorpe”), Cobre Las Cruces S.A. (“Las Cruces”), Çayeli Bakir Isletmeleri A.S. (“Çayeli”), Pyhäsalmi Mine Oy (“Pyhäsalmi”) and Metal Corp Trading AG (“Metal Corp”). The exploration and development subsidiaries include Minera Antares Peru S.A.C. (“Haquira”) and Corriente Argentina S.A. (“Taca Taca”). All the above operating subsidiaries are 100% owned, with the exception of Kansanshi (80%) and Cobre Panama, in which the Company holds a 90% interest, 10% of which is held indirectly through the joint venture, Korea Panama Mining Corp (“KPMC”), a jointly controlled Canadian entity acquired in November 2017.

Notes to the Consolidated Financial Statements (continued)

Non-controlling interests

At December 31, 2019, ZCCM Investments Holdings Plc (“ZCCM”, a Zambian government controlled entity) owned 20% of Kansanshi and KPMC owned 20% of Cobre Panama. A non-controlling interest is held by African Energy Resources Ltd, a publicly listed entity, in the Company’s consolidated subsidiary, African Energy Holdings SRL.

Through the operations in Zambia and Panama, there are a number of transactions with the respective governments in the ordinary course of business, including taxes, royalties, utilities and power. The Company is limited in its ability to use the assets of Kansanshi and Cobre Panama as a result of the agreement with the other owners of these subsidiaries.

Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the Company’s equity therein. Non-controlling interests consist of the amount of those interests at the date of the original business combination and the non-controlling interest’s share of changes in equity since the date of the combination.

c) ACCOUNTING POLICIES

Foreign currency translation

The presentation currency and the functional currency of the Company and all of the Company’s operations is the USD. The Company’s foreign currency transactions are translated into USD at the rate of exchange in effect at the date of the transaction. Monetary assets and liabilities are translated using period end exchange rates with any gains and losses included in the determination of net earnings. Non-monetary assets and liabilities are translated using historical rates.

Inventories

Product inventories comprise ore in stockpiles, work-in-progress and finished goods. Product inventories are recorded at the lower of average cost and net realizable value. Cost includes materials, direct labour, other direct costs and production overheads and depreciation of plant, equipment and mineral properties directly involved in the mining and production processes. Costs are determined primarily on the basis of average costs for ore in stockpiles and on a first-in first-out basis for work-in-progress and finished goods.

Waste material stripping costs related to production at, or below, the life-of-phase strip ratio are inventoried as incurred, with the excess capitalized to mineral property and depreciated in future periods.

When inventories have been written down to net realizable value, a new assessment of net realizable value is made at each subsequent reporting date that the inventory is still held.

Consumable stores are valued at the lower of purchase cost and net realizable value and recorded as a current asset.

Property, plant and equipment

(i) Mineral properties and mine development costs

Exploration and evaluation costs are expensed in the period incurred. Property acquisition costs and amounts paid under development option agreements are capitalized. Development costs relating to specific properties are capitalized once management determines a property will be developed. A development decision is made based upon consideration of project economics, including future metal prices, reserves and resources, and estimated operating and capital costs. Capitalization of costs incurred and proceeds received during the development phase ceases when the property is capable of operating at levels intended by management.

Property acquisition and mine development costs, including costs incurred during the production phase to increase future output by providing access to additional reserves (deferred stripping costs), are deferred and depreciated on a units-of-production basis over the component of the reserves to which they relate.

(ii) Property, plant and equipment

Property, plant and equipment are recorded at cost less accumulated depreciation. Costs recorded for assets under construction include all expenditures incurred in connection with the development and construction of the assets. No depreciation is recorded until the assets are substantially complete and ready for productive use. Where relevant, the Company has estimated residual values on certain plant and equipment.

Notes to the Consolidated Financial Statements (continued)

Property, plant and equipment are depreciated using either the straight-line or units-of-production basis over the shorter of the estimated useful life of the asset or the life of mine. Depreciation calculated on a straight-line basis is as follows for major asset categories:

Office equipment	33%
Furniture and fittings	15%
Infrastructure and buildings	2%- 5%
Motor vehicles	20%-25%

Depreciation on equipment utilized in the development of assets, including open pit and underground mine development, is depreciated and recapitalized as development costs attributable to the related asset.

(iii) Borrowing costs

Borrowing costs attributable to the acquisition, construction or production of a qualifying asset are capitalized as part of the cost of the asset until such time as the asset is substantially complete and ready for its intended use or sale. Where funds have been borrowed specifically to finance an asset, the amount capitalized is the actual borrowing costs incurred. Where the funds are used to finance an asset form part of general borrowings, the amount capitalized is calculated using a weighted average of rates applicable to relevant general borrowings of the Company during the period. With Cobre Panama achieving commercial production on September 1, 2019, capitalization of qualifying finance costs ceased.

Business combinations and goodwill

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Company. The results of businesses acquired during the year are included in the consolidated financial statements from the effective date of acquisition. The identifiable assets, liabilities and contingent liabilities of the business which can be measured reliably are recorded at provisional fair values at the date of acquisition. Provisional fair values are finalized within twelve months of the acquisition date. Acquisition-related costs are expensed as incurred.

Goodwill arising in a business combination is measured as the excess of the sum of the consideration transferred and the amount of any non-controlling interest over the net identifiable assets acquired and liabilities assumed.

Asset impairment

(i) Property, plant and equipment

The Company performs impairment tests on property, plant and equipment, mineral properties and mine development costs when events or changes in circumstances occur that indicate the assets may not be recoverable. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. Where it is not possible to estimate the recoverable amount of an individual asset, for example due to no distinctive cashflows, the Company estimates the recoverable amount of the cash-generating unit to which the assets belong. Cash-generating units are individual operating mines, smelters or exploration projects.

Recoverable amount is the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties. For mining assets this would generally be determined based on the present value of the estimated future cash flows arising from the continued development, use or eventual disposal of the asset. In assessing these cash flows and discounting them to present value, assumptions used are those that an independent market participant would consider appropriate. Value in use is the estimated future cash flows expected to arise from the continuing use of the assets in their present form and from their disposal, 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. The Company generally adopts the fair value less costs of disposal when accounting for impairment.

Notes to the Consolidated Financial Statements (continued)

If the recoverable amount of an asset or cash-generating unit is estimated to be less than its carrying amount, the carrying amount of the asset or cash-generating unit is reduced to its recoverable amount. An impairment loss is recognized immediately in net earnings.

Where an impairment loss subsequently reverses, the carrying amount of the asset or cash-generating unit is increased to the revised estimate of its recoverable amount, such that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or cash-generating unit in prior years. A reversal of an impairment loss is recognized in net earnings immediately.

(ii) Goodwill

Goodwill arising on business combinations is allocated to each of the Company's cash-generating units (or groups of cash-generating units) that is expected to benefit from the synergies of the combination. Goodwill is allocated to the lowest level at which the goodwill is monitored by the Company's board of directors for internal management purposes. The recoverable amount of the cash-generating unit to which goodwill has been allocated is tested for impairment at the same time every year.

Any impairment loss is recognized in net earnings immediately. Impairment of goodwill is not subsequently reversed.

Restoration provisions

The Company recognizes liabilities for constructive or legislative and regulatory obligations, including those associated with the reclamation of mineral properties and property, plant and equipment, when those obligations result from the acquisition, construction, development or normal operation of assets. Provisions are measured at the present value of the expected expenditures required to settle the obligation using a pre-tax discount rate reflecting the time value of money and risks specific to the liability. The liability is increased for accretion expense, representing the unwinding of the discount applied to the provision, and adjusted for changes to the current market-based risk-free discount rate, and the amount or timing of the underlying cash flows needed to settle the obligation. The associated restoration costs are capitalized as part of the carrying amount of the related long-lived asset and depreciated over the expected useful life of the asset or expensed in the period for closed sites.

Revenue recognition

The Company produces copper, gold and zinc products which are sold under pricing arrangements where final prices are set at a specified date based on market prices.

The Company identifies contracts with customers, the performance obligations within it, the transaction price and its allocation to the performance obligations.

Revenues are recognized when control of the product passes to the customer and are measured based on expected consideration. Control typically passes on transfer of key shipping documents which typically occurs around the shipment date. Shipping services provided are a separate performance obligation and the revenue for these services is recognized over time. For bill-and-hold arrangements, whereby the Company invoices but retains physical possession of products, revenue recognition is also subject to the arrangement being substantive, as well as the product concerned being separately identifiable, ready for transfer and not transferable to another customer.

For provisionally priced sales, changes between the prices recorded upon recognition of revenue and the final price due to fluctuations in metal market prices result in the existence of an embedded derivative in the accounts receivable. This is recorded at fair value, with changes in fair value classified as a component of cost of sales.

The Company recognizes deferred revenue in the event it receives payments from customers before a sale meets criteria for revenue recognition. The transaction price is adjusted to reflect any significant financing component at the rate that reflects the credit characteristics of the entity receiving the financing.

Current and deferred income taxes

Tax expense for the period comprises current and deferred tax. Tax is recognized in the income statement, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively.

Notes to the Consolidated Financial Statements (continued)

Current tax expense is calculated using income tax rates that have been enacted or substantively enacted at the balance sheet date. Periodically, the positions taken by the Company with respect to situations in which applicable tax regulation is subject to interpretation are evaluated to establish provisions, where appropriate, on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognized on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and are accounted for using the liability method. Deferred income tax liabilities are generally recognized for all taxable temporary differences, and deferred income tax assets are generally recognized for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit. Deferred income tax assets and liabilities are not recognized in respect of taxable temporary differences associated with investments in subsidiaries and associates where the timing of the reversal of the temporary differences can be controlled by the Company and it is probable that temporary differences will not reverse in the foreseeable future.

The carrying amount of deferred income tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred income 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 realized, based on income tax rates and income tax laws that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred income tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects to recover or settle the carrying amount of its assets and liabilities.

Deferred income 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 by the same taxation authority and the Company intends to settle its current tax assets and liabilities on a net basis.

Share-based compensation

The grant-date fair value of equity-settled share-based payment arrangements granted to employees is generally recognized as an expense, with a corresponding increase in equity, over the vesting period of the options. The amount recognized as an expense is adjusted to reflect the number of options for which the related service and non-market performance conditions are expected to be met, such that the amount ultimately recognized is based on the number of options that meet the related service and non-market performance conditions at the vesting date.

For share-based payment options with non-vesting conditions, the grant-date fair value of the share-based payment is measured to reflect such conditions and there is no true-up for differences between expected and actual outcomes.

The Company grants stock options under its stock option plan and performance stock units (“PSUs”), restricted stock units (“RSUs”) and key restricted stock units (“KRSUs”) under its long-term incentive plan to directors and employees. The Company expenses the fair value of stock options, PSUs, RSUs and KRSUs granted over the vesting period.

The fair value of stock options is determined using an option pricing model that takes into account, as of the grant date, the exercise price, the expected life of the option, the current price of the underlying stock and its expected volatility, expected dividends on the stock, and the risk-free interest rate over the expected life of the option. Cash consideration received from employees when they exercise the options is credited to capital stock.

PSUs typically vest at the end of a three-year period if certain performance and vesting criteria, based on the Company's share price performance relative to a representative group of other mining companies, have been met. The fair value of PSUs is determined using a valuation model that takes into account, as of the grant date, the expected life of the PSU, expected volatility, expected dividend yield, and the risk-free interest rate over the life of the PSU to generate potential outcomes for share prices, which are used to estimate the probability of the PSUs vesting at the end of the performance measurement period.

Notes to the Consolidated Financial Statements (continued)

RSUs typically vest at the end of a three-year period and the fair value of RSUs is determined by reference to the share price of the Company at the date of grant.

KRSUs vest in tranches over a four to eight-year period and the fair value of RSUs is determined by reference to the share price of the Company at the date of grant.

Details of share-based compensation are disclosed in note 16.

Earnings per share

Earnings per share are calculated using the weighted average number of shares outstanding during the period. Shares acquired under the long-term incentive plan are treated as treasury shares and are deducted from the number of shares outstanding for the calculation of basic earnings per share. Diluted earnings per share are calculated using the treasury share method whereby all “in the money” share-based arrangements are assumed to have been exercised at the beginning of the period and the proceeds from the exercise are assumed to have been used to purchase common shares at the average market price during the period.

Financial instruments

The Company's financial instruments consist of cash and cash equivalents, bank overdrafts, restricted cash, trade receivables, investments, trade payables, debt and derivative instruments.

Financial assets are classified as measured at amortized cost, fair value through other comprehensive income (“FVOCI”) and fair value through profit and loss (“FVTPL”). Financial liabilities are measured at amortized cost or FVTPL.

(i) Cash and cash equivalents, bank overdrafts and restricted cash

Cash and cash equivalents and bank overdrafts comprise cash at banks and on hand and other short-term investments with initial maturities of less than three months. Restricted cash comprises cash deposits used to guarantee letters of credit issued by the Company or held for escrow purposes.

Cash and cash equivalents and restricted cash are measured at amortized cost. Cash pooling arrangements are presented on a gross basis unless physical cash settlement of balances has been made at the balance sheet date.

(ii) Trade receivables

Provisionally priced sales included in trade and other receivables are classified as FVTPL. All other trade receivables are classified as amortized cost financial assets and are recorded at the transaction price, net of transaction costs incurred and expected credit losses.

(iii) Investments

Investments are designated as fair value through other comprehensive income (“FVOCI”). Fair value is determined in the manner described in note 24. Unrealized gains and losses are recognized in other comprehensive income. Dividends on equity investments are recognized in the income statement when the right to receive payment is established.

(iv) Derivatives and hedging

A portion of the Company's metal sales are sold on a provisional basis whereby sales are recognized at prevailing metal prices when title transfers to the customer and final pricing is not determined until a subsequent date, typically two months later. The Company enters into derivative contracts to directly offset the exposure to final pricing adjustments on the provisionally priced sales contracts. The Company also periodically enters into derivative instruments to mitigate cash flow exposure to commodity prices, foreign exchange rates and interest rates. Derivative financial instruments, including embedded derivatives related to the provisionally priced sales contracts, are classified as fair value through profit or loss and measured at fair value as determined by active market prices and valuation models, as appropriate. Valuation models require the use of assumptions concerning the amount and timing of estimated future cash flows and discount rates. In determining these assumptions, the Company uses readily observable market inputs where available or, where not available, inputs generated by the Company. Changes in the fair value of derivative instruments are recorded in net earnings.

Notes to the Consolidated Financial Statements (continued)

At the inception of a designated hedging relationship, the Company documents the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedging transactions. The Company also documents its assessment, both at hedge inception and on an ongoing basis, of whether derivatives that are used in hedging transactions are highly effective in offsetting changes in cash flows of hedged items.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in the Statements of Earnings within 'Other income (expense)'. No ineffective hedges were recognized in the year ended December 31, 2019 (December 31, 2018: nil).

Amounts accumulated in equity are reclassified to the Statements of Earnings in the periods when the hedged item affects net earnings.

(v) Trade and other payables, debt and amounts due to joint ventures

Trade payables, debt and amounts due to joint ventures are classified as amortized cost financial liabilities and are recognized initially at fair value, net of transaction costs incurred, and are subsequently stated at amortized cost. For debt, any difference between the amounts originally received, net of transaction costs, and the redemption value is recognized in net earnings over the period to maturity using the effective interest rate method.

Exchanges of instruments and modifications to debt are assessed using quantitative and qualitative factors to consider whether the exchange or modification constitutes an extinguishment of the original financial liability and establishment of a new financial liability. In the case of extinguishment, any fees or costs incurred are recognized in the Statement of Earnings. Where the terms in an exchange or modification are not assessed to be substantially different, a modification gain or loss is recognized at an amount equal to the difference between the modified cash flows discounted at the original effective interest rate and the carrying value of the debt. The carrying value of the debt is adjusted for this modification gain or loss, directly attributable transaction costs, and any cash paid to or received from the debt holder.

(vi) Impairment of financial assets

Expected credit losses ("ECL") are recognized for financial assets held at amortized cost. This is based on credit losses that result from default events that are possible within a 12-month period, except for trade receivables, whose ECLs are on a simplified lifetime basis, and any financial assets for which there has been a significant increase in credit risk since initial recognition, for which ECLs over the lifetime are recognized.

Investments in joint ventures

Joint arrangements whereby joint control exists are accounted for using the equity method and presented separately in the balance sheet. The investment is initially recognized at cost and adjusted thereafter for the post-acquisition share of profit or loss. Further detail of the investment in joint venture is provided in note 9.

d) ADOPTION OF NEW STANDARDS

IFRS 16 Leases

The Company has adopted *IFRS 16 - Leases* (IFRS 16) as of January 1, 2019. In accordance with the transitional provisions within IFRS 16, the Company has elected to apply the modified transition approach and therefore the comparative information has not been restated and continues to be reported under IAS 17 and IFRIC 4. The details of accounting policies under IAS 17 and IFRIC 4 are disclosed separately if they are different from those under IFRS 16.

The details and quantitative impact of the changes in accounting policies are disclosed below.

Policy applicable from January 1, 2019

At inception of a contract, the Company assesses whether a contract is, or contains, 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. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether:

Notes to the Consolidated Financial Statements (continued)

- The contract involves the use of an identified asset – this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, the asset is not identified.
- The Company has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use.
- The Company has the right to direct the use of the asset (such as the decision-making rights).

Policy applicable before January 1, 2019

For contracts entered into before January 1, 2019, the Company determined whether the arrangement was or contained a lease based on the assessment of whether:

- Fulfilment of the arrangement was dependent on the use of a specific asset or assets.
- The arrangement had conveyed a right to use the asset. An arrangement conveyed the right to use the asset if one of the following was met:
 - The Company had the ability or right to operate the asset while obtaining or controlling more than an insignificant amount of the amount; or
 - The Company had the ability or right to control physical access to the asset while obtaining or controlling more than an insignificant amount of the output.

(i) Measurement of leases

All leases are accounted for by recognizing a right-of-use asset and a lease liability with the exception of short-term leases and low-value assets. If the Company deems a lease to be short-term or low-value, the Company recognizes the lease payments associated with these leases as an expense on either a straight-line basis over the lease term or another systematic basis.

The lease liabilities are measured at the present value of the contractual payments due to the lessor over the lease term, with the discount rate determined by reference to the rate inherent in the lease. If that rate cannot be determined, the Company's incremental borrowing rate is used. Variable lease payments are only included in the measurement of the lease liability if they depend on an index or rate. In such cases, the initial measurement of the lease liability assumes the variable element will remain unchanged throughout the lease term. Other variable lease payments are expensed in the period to which they relate.

Right-of-use assets are initially measured at the amount of the lease liability, reduced for any lease incentives received, and increased for:

- Lease payments made at or before commencement of the lease;
- Initial direct costs incurred; and
- The amount of any provision recognized where the Company is contractually required to dismantle, remove or restore the leased asset.

Subsequent to initial measurement, lease liabilities increase as a result of interest charged at a constant rate on the balance outstanding and are reduced for lease payments made. The interest rate used to calculate the interest charged is determined by the jurisdiction of the lease and the length of the lease. Right-of-use assets are amortized on a straight-line basis over the remaining term of the lease or over the remaining economic life of the asset if, rarely, this is judged to be shorter than the lease term. When the Company revises its estimate of the term of any lease (because, for example, it re-assesses the probability of a lessee extension or termination option being exercised), it adjusts the carrying amount of the lease liability to reflect the payments to make over the revised term, which are discounted at the same discount rate that applied on lease commencement. The carrying value of lease liabilities is similarly revised when the variable element of future lease payments dependent on a rate or index is revised. In both cases an equivalent adjustment is made to the carrying value of the right-of-use asset, with the revised carrying amount being amortized over the remaining (revised) lease term.

Notes to the Consolidated Financial Statements (continued)

(ii) Quantitative analysis

The details and quantitative impact of the changes in accounting policy are disclosed below:

- The Company has recognized lease liabilities in relation to leases which had previously been classified as 'operating leases' under the principle of IAS 17. The Company has elected to apply practical expedients of IFRS 16 in relation to applying the same discount rate to leases with reasonably similar characteristics, relying on previous assessments of onerous leases, not recognizing leases for which the lease term ended within 12 months of the date of initial application, and by excluding initial direct costs from the measurement of right-of-use assets at the date of initial application. Through the adoption of IFRS 16, an extensive detailed review of the Company's leases resulted in increases to property, plant and equipment (note 6) and provisions and other liabilities (note 11) on January 1, 2019 of \$20 million.
- The total cash outflow for leases in the year ended December 31, 2019 was \$29 million.
- Additions to right-of-use assets in the year ended December 31, 2019 was \$27 million, inclusive of the \$20 million recognized on adoption of IFRS 16. The weighted average incremental borrowing rate for lease liabilities initially recognized as of December 31, 2019 is 8.8%.

Operating lease commitments disclosed in the financial statements for the year ending December 31, 2018 of \$32 million are different to the lease liabilities recognized on the initial application of \$20 million due to non-inclusion of short-term leases, non-capital payments and payments for low value assets, and are after the impact of discounting at the incremental borrowing rate, or if readily available, the interest rate implicit in the lease.

3. Significant Judgments, Estimates and Assumptions

Many of the amounts disclosed in the financial statements involve the use of judgments, estimates and assumptions. These judgments and estimates are based on management's knowledge of the relevant facts and circumstances at the time, having regard to prior experience, and are continually evaluated.

(i) SIGNIFICANT JUDGMENTS

➤ Determination of ore reserves and resources

Judgments about the amount of product that can be economically and legally extracted from the Company's properties are made by management using a range of geological, technical and economic factors, history of conversion of mineral deposits to proven and probable reserves as well as data regarding quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates. This process may require complex and difficult geological judgments to interpret the data. The Company uses qualified persons (as defined by the Canadian Securities Administrators' National Instrument 43-101) to compile this data.

Changes in the judgments surrounding proven and probable reserves may impact the carrying value of property, plant and equipment (note 6), restoration provisions included in provisions and other liabilities (note 11), recognition of deferred income tax amounts (note 13) and depreciation (note 6).

➤ Achievement of commercial production

Once a mine or smelter reaches the operating levels intended by management, depreciation of capitalized costs begins. Significant judgment is required to determine when certain of the Company's assets reach this level.

Management considers several factors, including, but not limited to the following:

- completion of a reasonable period of commissioning;
- consistent operating results achieved at a pre-determined level of design capacity and indications exist that this level will continue;
- mineral recoveries at or near expected levels; and
- the transfer of operations from development personnel to operational personnel has been completed.

Notes to the Consolidated Financial Statements (continued)

During the year ended December 31, 2019, the Company concluded that the Cobre Panama mine, was operating in a manner intended by management and commercial production was achieved from September 1, 2019.

➤ Taxes

Judgment is required in determining the recognition and measurement of deferred income tax assets and liabilities on the balance sheet. In the normal course of business, the Company is subject to assessment by taxation authorities in various jurisdictions. These authorities may have different interpretations of tax legislation or tax agreements than those applied by the Company in computing current and deferred income taxes. These different judgments may alter the timing or amounts of taxable income or deductions. The final amount of taxes to be paid or recovered depends on a number of factors including the outcome of audits, appeals and negotiation. Amounts to be recovered and the timings of recoveries with respect to indirect taxes, such as VAT, are subject to judgment which, in the instance of a change of circumstances, could result in material adjustments.

The Company operates in a specialized industry and in a number of tax jurisdictions. As a result, its income is subject to various rates of taxation. The breadth of its operations and the global complexity and interpretation of tax regulations require assessment and judgement of uncertainties and of the taxes that the Company will ultimately pay. These are dependent on many factors, including negotiations with tax authorities in various jurisdictions, outcomes of tax litigation and resolution of disputes. The resolution of these uncertainties may result in adjustments to the Company's tax assets and liabilities.

Management assesses the likelihood and timing of taxable earnings in future periods in recognizing deferred income tax assets on unutilized tax losses. Future taxable income is based on forecast cash flows from operations and the application of existing tax laws in each jurisdiction. Forecast cash flows are based on life of mine projections.

To the extent that future cash flows and taxable income differ significantly from forecasts, the ability of the Company to realize the net deferred income tax assets recorded at the balance sheet date could be impacted. In addition, future changes in tax laws could limit the ability of the Company to obtain tax deductions in future periods from deferred income tax assets are disclosed in note 13.

➤ Precious metal stream arrangement

On October 5, 2015, the Company finalized an agreement with Franco-Nevada Corporation ("Franco-Nevada") for the delivery of precious metals from the Cobre Panama project. Franco-Nevada have provided \$1 billion deposit to the Cobre Panama project against future deliveries of gold and silver produced by the mine. A further stream was completed on March 26, 2018, with an additional \$356 million received from Franco-Nevada.

Management has determined that the under the terms of the agreement the Company meets the 'own-use' exemption criteria under *IFRS 9: Financial Instruments*. The Company also retains significant business risk relating to the operation of the mine and as such has accounted for the proceeds received as deferred revenue.

Management has exercised judgement in determining the appropriate accounting treatment for the Franco-Nevada streaming agreement. Management has determined, with reference to the agreed contractual terms in conjunction with the Cobre Panama reserves and mine plan, that funds received from Franco-Nevada constitute a prepayment of revenues deliverable from future Cobre Panama production.

Following the first sale of copper concentrate by Cobre Panama in June 2019, the Company commenced deliveries of gold and silver to Franco-Nevada under the terms of the arrangement.

➤ Assessment of impairment indicators

Management applies significant judgement in assessing each cash-generating units and assets for the existence of indicators of impairment at the reporting date. Internal and external factors are considered in assessing whether indicators of impairment are present that would necessitate impairment testing. Significant assumptions regarding commodity prices, production, operating costs, capital expenditures and discount rates are used in determining whether there are any indicators of impairment. These assumptions are reviewed regularly by senior management and compared, where applicable, to relevant market consensus views.

Notes to the Consolidated Financial Statements (continued)

The Company's most significant CGUs are longer-term assets and therefore their value is assessed on the basis of longer-term pricing assumptions. Shorter-term assets are more sensitive to short term commodity prices assumptions that are used in the review of impairment indicators.

The carrying value of property, plant and equipment and goodwill at the balance sheet date is disclosed in note 6 and note 7 respectively, and by mine location in note 23.

Asset impairments are disclosed in note 20.

➤ Derecognition of financial liabilities

Judgment is required when determining if an exchange of instruments or modification of debt constitute an extinguishment of the original financial liability and establishment of a new financial liability. In 2019, qualitative factors such as new terms and changes to the existing lending group were considered for the Company's senior debt facility and were judged to constitute an extinguishment of the previous \$1.5 billion RCF (see note 10).

(ii) SIGNIFICANT ACCOUNTING ESTIMATES

Estimates are inherently uncertain and therefore actual results may differ from the amounts included in the financial statements, potentially having a material future effect on the Company's consolidated financial statements. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below:

➤ Determination of ore reserves and life of mine plan

Reserves are estimates of the amount of product that can be economically and legally extracted from the Company's properties. Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies or fields to be determined by analyzing geological data such as drilling samples. Following this, the quantity of ore that can be extracted in an economical manner is calculated using data regarding the life of mine plans and forecast sales prices (based on current and long-term historical average price trends).

The majority of the Company's property, plant and equipment are depreciated over the estimated lives of the assets on a units-of-production basis. The calculation of the units-of-production rate, and therefore the annual depreciation expense could be materially affected by changes in the underlying estimates which are driven by the life of mine plans. Changes in estimates can be the result of actual future production differing from current forecasts of future production, expansion of mineral reserves through exploration activities, differences between estimated and actual costs of mining and differences in the commodity prices used in the estimation of mineral reserves.

Management made significant estimates of the strip ratio for each production phase. Waste material stripping costs in excess of this ratio, and from which future economic benefit will be derived from future access to ore, will be capitalized to mineral property and depreciated on a units-of-production basis.

Changes in the proven and probable reserves estimates may impact the carrying value of property, plant and equipment (note 6), restoration provisions (note 11), recognition of deferred income tax amounts (note 13) and depreciation (note 6).

➤ Review of asset carrying values and impairment charges

The Company reviews the carrying value of assets each reporting period to determine whether there is any indication of impairment using both internal and external sources of information. The Company has determined that each mining operation and smelter is a cash-generating unit.

External sources of information regarding indications of impairment include considering the changes in market, economic and legal environment in which the Company operates that are not within its control and affect the recoverable amount of, or the timing of economic benefits from mining assets. Internal sources of information include changes to the life of mine plans and economic performance of the assets.

Notes to the Consolidated Financial Statements (continued)

Management's determination of recoverable amounts includes estimates of mineral prices, recoverable reserves, and operating, capital and restoration costs are subject to certain risks and uncertainties that may affect the recoverability of mineral property costs. The calculation of the recoverable amount can also include assumptions regarding the appropriate discount rate and inflation and exchange rates. Although management has made its best estimate of these factors, it is possible that changes could occur in the near term that could adversely affect management's estimate of the net cash flow to be generated from its projects.

An impairment was recognized on Las Cruces at December 31, 2019 (note 20). A 5% change in the production and short-term copper price would result in a \$24 million change to the impairment value recognized.

› Estimation of the amount and timing of restoration and remediation costs

Accounting for restoration provisions requires management to make estimates of the future costs the Company will incur to complete the restoration and remediation work required to comply with existing laws, regulations and agreements in place at each mining operation and any environmental and social principles the Company is in compliance with. The calculation of the present value of these costs also includes assumptions regarding the timing of restoration and remediation work, applicable risk-free interest rate for discounting those future cash outflows, inflation and foreign exchange rates and assumptions relating to probabilities of alternative estimates of future cash outflows. Actual costs incurred may differ from those amounts estimated. Also, future changes to environmental laws and regulations could increase the extent of restoration work required to be performed by the Company. Increases in future costs could materially impact the amounts charged to operations for restoration. A 10% increase in costs would result in an increase to restoration provisions of \$90 million at December 31, 2019.

The provision represents management's best estimate of the present value of the future restoration and remediation costs. The actual future expenditures may differ from the amounts currently provided; any increase in future costs could materially impact the amounts included in the liability disclosed in the consolidated balance sheet. The carrying amount of the Company's restoration provision is disclosed in note 11c.

› Estimation and assumptions relating to the timing of VAT receivables in Zambia

In addition to the recoverability of VAT receivables being a key judgment, calculating the present value of these recoveries also includes assumptions regarding the timing of recoveries. Changes to the timings could materially impact the amounts charged to finance costs. The impact of repayments being one year later than estimated at December 31, 2019 would lead to a decrease to the carrying value and an increase to finance costs of \$43 million. The carrying amount of the Company's VAT receivables is disclosed in note 4b.

4. Trade Receivables

a) TRADE AND OTHER RECEIVABLES

	December 31, 2019	December 31, 2018
Trade receivables	369	241
VAT receivable (current)	20	353
Other receivables	123	64
	512	658

Notes to the Consolidated Financial Statements (continued)

b) VAT RECEIVABLE

	December 31, 2019	December 31, 2018
Kansanshi Mining PLC	233	282
Kalumbila Minerals Limited	141	137
First Quantum Mining and Operations Limited (Zambia)	24	24
VAT receivable from the Company's Zambian operations	398	443
Cobre Las Cruces SA	10	11
Çayeli Bakır İşletmeleri A.Ş.	5	5
Other	3	3
Total VAT receivable	416	462
Less: current portion, included within trade and other receivables	(20)	(353)
Non-current VAT receivable	396	109

c) VAT RECEIVABLE BY THE COMPANY'S ZAMBIAN OPERATIONS

	December 31, 2019	December 31, 2018
Receivable at date of claim	847	645
Impact of depreciation of Zambian kwacha against U.S. dollar ¹	(242)	(177)
	605	468
Impact of discounting non-current portion ²	(207)	(25)
Total receivable	398	443
Consisting:		
Current portion, included within trade and other receivables	2	334
Non-current VAT receivable	396	109

1 The impact of depreciation of the Zambian kwacha against the U.S. dollar in the year ended December 31, 2019 on the Company's Zambian operations VAT receivable is included within other expense in the Statement of Earnings.

2 A finance charge of \$182 million has been recognized in the year-ended December 31, 2019, (year-ended December 31, 2018: \$5 million), representing the discounting over the expected timeframe to repayment. Discussions with the relevant government authorities are ongoing and management continues to consider that the outstanding VAT claims are fully recoverable.

5. Inventories

	December 31, 2019	December 31, 2018
Ore in stockpiles	267	250
Work-in-progress	27	26
Finished product	284	259
Total product inventory	578	535
Consumable stores	789	661
	1,367	1,196

6. Property, Plant and Equipment

	Plant and equipment	Capital work-in-progress	Mineral properties and mine development costs		Total
			Operating mines	Development projects	
Net book value, as at January 1, 2019	4,634	10,125	2,097	2,242	19,098
Change in accounting policy – IFRS 16	20	–	–	–	20
Additions	–	1,274	–	–	1,274
Disposals	(32)	–	–	–	(32)
Impairments (note 20)	(76)	–	(25)	–	(101)
Transfers between categories	6,897	(11,097)	5,305	(1,105)	–
Restoration provision (note 11c)	–	–	96	–	96
Capitalized interest (note 21)	–	549	–	–	549
Depreciation charge (note 18)	(641)	–	(291)	–	(932)
Net book value, as at December 31, 2019	10,802	851	7,182	1,137	19,972
Cost	15,371	851	9,061	1,137	26,420
Accumulated depreciation	(4,569)	–	(1,879)	–	(6,448)

	Plant and equipment	Capital work-in-progress	Mineral properties and mine development costs		Total
			Operating mines	Development projects	
Net book value, as at January 1, 2018	4,686	7,881	2,374	2,232	17,173
Additions	–	2,166	–	–	2,166
Disposals	(9)	–	–	–	(9)
Transfers between categories	538	(575)	42	(5)	–
Restoration provision	–	–	(50)	15	(35)
Capitalized interest	–	653	–	–	653
Depreciation charge	(581)	–	(269)	–	(850)
Net book value, as at December 31, 2018	4,634	10,125	2,097	2,242	19,098
Cost	8,638	10,125	3,672	2,242	24,677
Accumulated depreciation	(4,004)	–	(1,575)	–	(5,579)

During the year ended December 31, 2019, \$549 million of interest (December 31, 2018: \$653 million) was capitalized relating to the development of Cobre Panama. The amount capitalized to December 31, 2019, was determined by applying the weighted average cost of borrowings of 6.8% (December 31, 2018: 7.2%) to the accumulated qualifying expenditures. With commercial production achieved September 1, 2019, capitalization of qualifying finance costs ceased.

Included within capital work-in-progress and mineral properties – operating mines at December 31, 2019, is an amount of \$682 million related to capitalized deferred stripping costs (December 31, 2018: \$632 million).

Disposals during the year ended December 31, 2019 include a \$9 million write-off of assets as a result of a land slippage at the Las Cruces mine in January 2019.

7. Goodwill

Goodwill of \$237 million arose through the acquisition of Inmet Mining Corporation (“Inmet”) in 2013 after the application of IAS 12 – Income taxes, due to the requirement to recognize a deferred tax liability calculated as the tax effect of the difference between the fair value of the assets acquired and their respective tax bases. Goodwill is not deductible for tax purposes. The goodwill was assigned to the Cobre Panama cash-generating unit.

The carrying value of Cobre Panama at December 31, 2019, was \$10,611 million inclusive of deferred revenue (December 31, 2018: \$9,327 million).

The annual impairment test has been performed at December 31, 2019. For the purposes of the goodwill impairment test, the recoverable amount of Cobre Panama has been determined using a fair value less costs of disposal calculation based on a discounted cash flow model over a period of 35 years, which uses a post-tax discount rate, taking account of assumptions that would be made by market participants. The future cash flows used in this model are inherently uncertain and could materially change over time as a result of changes to ore reserves and resources estimates, commodity prices, discount rates, future production costs and future capital expenditure. Reserves and resources are estimated based on the National Instrument 43-101 compliant report produced by qualified persons. The production profile used in the cash flow model is consistent with the reserves and resource volumes approved as part of the Company’s process for the estimation of proven and probable reserves. Such production volumes are dependent on a number of variables, including the recovery of metal from the ore, production costs, duration of mining rights, and the selling price of extracted minerals. Commodity prices are management’s estimates of the views of market participants, including a long-term copper price of \$3.00 per lb. The estimates are derived from the median of consensus forecasts. A nominal discount rate of 9.5% (December 31, 2018: 11%) has been applied to future cash flows, derived from Cobre Panama’s weighted average cost of capital (in nominal terms). Future production costs and future capital expenditure are based on the latest available engineering reports and are consistent with technical reports prepared in accordance with National Instrument 43-101 Standards of Disclosure for Mineral Projects. The measurement is classified as level 3 in the fair value hierarchy (see note 24).

The calculated recoverable amount of the cash-generating unit exceeds the carrying value of Cobre Panama at December 31, 2019, and therefore no impairment charge has been recognized.

8. Other assets

	December 31, 2019	December 31, 2018
Prepaid expenses	142	109
KPMC shareholder loan	246	62
Other investments	19	18
Deferred income tax assets (note 13)	93	74
Derivative instruments (note 24)	9	43
Total other assets	509	306
Less: current portion of other assets	(135)	(155)
	374	151

Included within prepaid expenses is \$28 million (December 31, 2018: \$28 million) in relation to Sentinel which will be recovered through deductions on electricity invoices from ZESCO under the terms of the agreement to transfer powerline ownership.

9. Joint Venture

On November 8, 2017, the Company completed the purchase of a 50% interest in KPMC from LS-Nikko Copper Inc. KPMC is jointly owned and controlled with Korea Resources Corporation (“KORES”) and holds a 20% interest in Cobre Panama. The purchase consideration of \$664 million comprised the acquisition consideration of \$635 million and the reimbursement of cash advances of \$29 million with \$179 million paid on closing. Consideration of \$100 million was paid in the year ended December 31, 2019 (year ended December 31, 2018: \$185 million). The remaining consideration is payable in two instalments to November 2021. \$100 million is included within trade and other payables and \$82 million within other non-current liabilities (note 11).

A \$589 million investment in the joint venture representing the discounted consideration value and the Company’s proportionate share of the loss in KPMC of \$11 million (note 22) is recognized. The earnings in KPMC relate to the 20% equity accounted share of loss reported by MPSA, a subsidiary of the Company. The material assets and liabilities of KPMC are an investment in MPSA of \$359 million, shareholder loans receivable from the Company (note 11b) and shareholder loans payable of \$1,238 million due to the Company and its joint venture partner KORES.

10. Debt

		December 31, 2019	December 31, 2018
Drawn debt			
Senior notes:			
First Quantum Minerals Ltd. 7.00% due February 2021	(a)	298	1,105
First Quantum Minerals Ltd. 7.25% due May 2022	(b)	846	844
First Quantum Minerals Ltd. 7.25% due April 2023	(c)	1,093	1,090
First Quantum Minerals Ltd. 6.50% due March 2024	(d)	843	842
First Quantum Minerals Ltd. 7.50% due April 2025	(e)	1,091	1,089
First Quantum Minerals Ltd. 6.875% due March 2026	(f)	991	990
First Quantum Minerals Ltd. senior debt facility	(g)	2,422	800
Kalumbila term loan	(h)	341	397
Trading facilities	(i)	262	106
Equipment financing	(j)	11	22
Total debt		8,198	7,285
Less: current maturities and short term debt		(838)	(174)
		7,360	7,111
Undrawn debt			
First Quantum Minerals Ltd. senior debt facility	(g)	250	700
Trading facilities	(i)	138	229

The movement in total debt of \$913 million is inclusive of deferred charges that are consequently not reflected in financing activities in the Consolidated Statement of Cash Flows.

a) FIRST QUANTUM MINERALS LTD. 7.00% DUE FEBRUARY 2021

The notes are part of the senior obligations of the Company and are guaranteed by certain of the Company’s subsidiaries. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after February 15, 2018, at redemption prices ranging from 103.5% in the first year to 100% in the final year, plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant.

The Company is subject to certain restrictions on asset sales, payments, and incurrence of indebtedness and issuance of preferred stock.

Notes to the Consolidated Financial Statements (continued)

In March 2019, the Company made a partial redemption of \$821 million of the notes at a redemption price of 101.75%. The redemption premium is presented within cash flows from financing activities in the Statement of Cash Flows. The loss arising from the partial redemption of senior notes of \$25 million has been recognized in earnings before income taxes in the Statement of Earnings.

On January 16, 2020, the Company gave notice of redemption of the remaining 2021 Notes at 100% of principal (see note 26).

b) FIRST QUANTUM MINERALS LTD. 7.25% DUE MAY 2022

The notes are part of the senior obligations of the Company and are guaranteed by certain of the Company's subsidiaries. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after May 15, 2017 at redemption prices ranging from 105.438% in the first year to 100% from 2020, plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant.

The Company is subject to certain restrictions on asset sales, payments, and incurrence of indebtedness and issuance of preferred stock.

c) FIRST QUANTUM MINERALS LTD. 7.25% DUE APRIL 2023

The notes are part of the senior obligations of the Company and are guaranteed by certain of the Company's subsidiaries. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after October 1, 2019, at redemption prices ranging from 105.438% in the first six months to 100% in the final year, plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant.

The Company and its subsidiaries are subject to certain restrictions on asset sales, payments, incurrence of indebtedness and issuance of preferred stock.

On January 13, 2020, the Company issued an additional \$500 million of 2023 Notes (see note 26).

d) FIRST QUANTUM MINERALS LTD. 6.50% DUE FEBRUARY 2024

In February 2018, the Company issued \$850 million in senior notes due in 2024, bearing interest at an annual rate of 6.50%. These senior notes have certain restrictions on the Company and its subsidiaries. The Company and its subsidiaries are subject to certain restrictions on asset sales, payments, incurrence of indebtedness and issuance of preferred stock.

The notes are part of the senior obligations of the Company and are guaranteed by certain subsidiaries of the Company. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after September 1, 2020, at redemption prices ranging from 103.25% in the first year to 100% from 2022, plus accrued interest. In addition, until September 1, 2020, the Company may redeem up to 35% of the principal amount of notes, in an amount not greater than the net proceeds of certain equity offerings, at a redemption price of 106.50% plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant.

e) FIRST QUANTUM MINERALS LTD. 7.50% DUE APRIL 2025

The notes are part of the senior obligations of the Company and are guaranteed by certain of the Company's subsidiaries. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after April 1, 2020, at redemption prices ranging from 105.625% in the first year to 100% from 2023, plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant. Prior to April 1, 2020, the notes may be redeemed at 100% plus a make-whole premium, and accrued interest. In addition, until April 1, 2020, the Company may redeem up to 35% of the principal amount of notes, in an amount not greater than the net proceeds of certain equity offerings, at a redemption price of 107.50% plus accrued interest.

Notes to the Consolidated Financial Statements (continued)

The Company and its subsidiaries are subject to certain restrictions on asset sales, payments, incurrence of indebtedness and issuance of preferred stock.

On January 13, 2020, the Company issued an additional \$250 million of 2025 Notes (see note 26).

f) FIRST QUANTUM MINERALS LTD. 6.875% DUE MARCH 2026

In February 2018, the Company issued \$1 billion in senior notes due in 2026, bearing interest at an annual rate of 6.875%. These senior notes have certain restrictions on the Company and its subsidiaries. The Company and its subsidiaries are subject to certain restrictions on asset sales, payments, incurrence of indebtedness and issuance of preferred stock.

The notes are part of the senior obligations of the Company and are guaranteed by certain subsidiaries of the Company. Interest is payable semi-annually.

The Company may redeem some or all of the notes at any time on or after March 1, 2021, at redemption prices ranging from 105.156% in the first year to 100% from 2024, plus accrued interest. In addition, until March 1, 2021, the Company may redeem up to 35% of the principal amount of notes, in an amount not greater than the net proceeds of certain equity offerings, at a redemption price of 106.875% plus accrued interest. Although part of this redemption feature indicates the existence of an embedded derivative, the value of this derivative is not significant.

g) FIRST QUANTUM MINERALS LTD. SENIOR DEBT FACILITY

On February 6, 2019, the Company signed a Term Loan and Revolving Credit Facility ("RCF", together "The 2019 Facility") replacing the previous \$1.5 billion RCF, which was extinguished with no extinguishment gain or loss. The 2019 Facility has an accordion feature to increase it to \$3.0 billion before the end of June 2020 and comprises a \$1.5 billion Term Loan Facility and a \$1.2 billion RCF (which can be upsized to \$1.5 billion if the accordion feature is activated), maturing on December 31, 2022. Interest is charged at LIBOR plus a margin. This margin can change relative to certain financial ratios of the Company.

Transaction costs for the new facilities have been deducted from the principal drawn on initial recognition.

At December 31, 2019, \$950 million of the RCF has been drawn, leaving \$250 million available for the Company to draw.

h) KALUMBILA TERM LOAN

On February 5, 2018, Kalumbila Minerals Limited, the owner of the Sentinel copper mine, signed a \$230 million unsecured term loan facility (the "Kalumbila Facility") with an initial termination date of December 31, 2020 (with the right of Kalumbila Minerals Limited to request an extension of one or two years subject to lender consent). The facility was upsized to \$400 million in March 2018 in accordance with the accordion feature of the facility agreement. Repayments on the facility commenced in December 2019. Of the principal outstanding at December 31, 2019 of \$343 million, \$114 million is due within 12 months.

i) TRADING FACILITIES

The Company's metal marketing division has four uncommitted borrowing facilities totalling \$400 million. The facilities are used to finance purchases and the term hedging of copper, gold and other metals, undertaken by the metal marketing division. Interest on the facilities is calculated at the bank's benchmark rate plus a margin. The loans are collateralized by physical inventories.

j) EQUIPMENT FINANCING

In April 2014, Sentinel entered into an agreement with Caterpillar Financial Services Corporation ("Caterpillar") to finance equipment purchases up to \$102 million. The agreement is secured by equipment that was purchased from Caterpillar, incurs interest at LIBOR plus a margin and amounts are repayable over a period to December 2020. The full amount outstanding at December 31, 2019 of \$11 million is due within twelve months of the balance sheet date (December 31, 2018: \$11 million).

11. Provisions and Other Liabilities

a) PROVISIONS AND OTHER LIABILITIES

	December 31, 2019	December 31, 2018
Amount owed to joint venture (note 11b)	1,238	946
Restoration provisions (note 11c)	699	585
Derivative instruments (note 24)	31	3
Non-current consideration for acquisition of joint venture ¹ (note 9)	82	164
Leases	36	17
Retirement provisions	40	51
Deferred revenue (note 12)	95	38
Other deferred revenue	31	18
Other	112	143
Total other liabilities	2,364	1,965
Less: current portion	(192)	(147)
	2,172	1,818

¹ The current portion of the consideration for acquisition of joint venture of \$100 million (December 31, 2018: \$100 million) has been included in trade and other payables.

b) AMOUNT OWED TO JOINT VENTURE

	December 31, 2019	December 31, 2018
Balance at the beginning of the year	946	925
Repayment of shareholder loans	–	(356)
Funding provided to MPSA for the development of Cobre Panama	190	304
Interest accrued	102	73
Balance at end of year due to KPMC	1,238	946

In September 2013, the Company and KPMC entered into a shareholder loan agreement with Minera Panama S.A. (“MPSA”) for development of the Cobre Panama project, in which KPMC is a 20% shareholder. Interest is calculated semi-annually at an annual rate of 9%. In November 2017, the Company acquired a 50% interest in KPMC from LS-Nikko Copper Inc. inclusive of the above shareholder loans. The assets and liabilities of KPMC are an investment in MPSA, a subsidiary of the Company, a loan receivable from MPSA, and loans due to shareholders. Interest income and expense earned on these loans are on the same terms.

Following completion of the additional precious metal streaming agreement with Franco-Nevada, the receipt of \$356 million proceeds by MPSA was used entirely to repay shareholder loans by MPSA to KPMC. Of this \$356 million shareholder loan repayment, \$178 million was received by the Company.

As at December 31, 2019, the accrual for interest payable is \$326 million (December 31, 2018: \$224 million) and is included in the carrying value of the amount owed to the joint venture, as this has been deferred under the loan agreement. Amounts due to KPMC are specifically excluded from the calculation of net debt as defined under the Company’s banking covenant ratios.

Notes to the Consolidated Financial Statements (continued)

c) RESTORATION PROVISIONS

The Company has restoration and remediation obligations associated with its operating mines, processing facilities, closed sites and development projects. The following table summarizes the movements in the restoration provisions:

	2019	2018
As at January 1	585	618
Changes in estimate – operating sites (note 6)	96	(27)
Changes in estimate – closed sites (note 22)	8	(10)
Other adjustments	(4)	(10)
Accretion expense (note 21)	14	14
As at December 31	699	585
Less: current portion	(4)	(5)
	695	580

The Company has issued letters of credit which are guaranteed by cash deposits, classified as restricted cash on the balance sheet at December 31, 2019, totalling \$10 million (December 31, 2018: \$71 million).

The restoration provisions have been recorded initially as a liability based on management's best estimate of cash flows, using a risk-free discount rate between 1.6% and 2.5% and an inflation factor between 1.5% and 7.0%. Reclamation activity is expected to occur over the life of each of the operating mines, a period of up to 35 years, with the majority payable in the years following the cessation of mining operations.

12. Deferred Revenue

	December 31, 2019	December 31, 2018
Balance at the beginning of the year	1,490	726
Change in accounting policy – IFRS 15	–	74
Balance at the beginning of the year, as adjusted	1,490	800
Cash deposits received from Franco-Nevada – Tranche 1	–	274
Cash deposits received from Franco-Nevada – Tranche 2	–	356
Accretion of finance costs	64	60
Amortization of gold and silver revenue	(38)	–
Balance at the end of the year	1,516	1,490
Less: current portion (included within provisions and other liabilities)	(95)	(38)
Non-current deferred revenue	1,421	1,452

FRANCO-NEVADA PRECIOUS METAL STREAM ARRANGEMENT

The Company, through its subsidiary, MPSA, has a precious metal streaming arrangement with Franco-Nevada. The arrangement comprises two tranches, the first of which ("Tranche 1") was finalized on October 5, 2015. Under the terms of Tranche 1, Franco-Nevada, through a wholly owned subsidiary, agreed to provide a \$1 billion deposit to be funded on a pro-rata basis of 1:3 with the Company's 80% share of the capital costs of Cobre Panama in excess of \$1 billion. The full Tranche 1 deposit amount has been fully funded to MPSA. The second tranche ("Tranche 2") was finalized on March 16, 2018, and \$356 million was received on completion. Proceeds received from Franco-Nevada under the terms of the precious metals streaming agreement are accounted for as deferred revenue.

Notes to the Consolidated Financial Statements (continued)

The amount of precious metals deliverable under both tranches is indexed to total copper-in-concentrate sold by Cobre Panama. Under the terms of Tranche 1 the ongoing payment of the Fixed Payment Stream is fixed per ounce payments of \$430.91/oz gold and \$6.46/oz silver subject to an annual inflation adjustment for the first 1,341,000 ounces of gold and 21,510,000 ounces of silver (approximately the first 20 years of expected deliveries). Thereafter the greater of \$430.91oz for gold and \$6.46/oz for silver, subject to an adjustment for inflation, and one half of the then prevailing market price. Under Tranche 2 the ongoing price per ounce for deliveries is 20% of the spot price for the first 604,000 ounces of gold and 9,618,000 ounces of silver (approximately the first 25 years of production), and thereafter the price per ounce rises to 50% of the spot price of gold and silver.

Although the market price feature represents an embedded derivative, the value of this derivative is not material. In all cases the amount paid is not to exceed the prevailing market price per ounce of gold and silver.

The Company commenced the recognition of delivery obligations to Franco-Nevada under the terms of the arrangement in June 2019 following the first sale of copper concentrate. Deferred revenue will continue to be recognized as revenue over the life of the mine, which is expected to be 35 years. The Company recognized the first delivery obligation to Franco-Nevada under the terms of the arrangement in June 2019 following the first sale of copper concentrate. The amortization of the deferred revenue balance and the ongoing payments due from Franco-Nevada are included within gold and silver revenues. The Company uses refinery credits as the mechanism for satisfying its delivery obligations under the arrangement. These are included within cost of sales.

13. Income Tax Expense

The significant components of the Company's income tax expense are as follows:

	2019	2018
Current income tax expense	270	315
Deferred income tax credit	(200)	(32)
	70	283

The income taxes shown in the consolidated statements of earnings differ from the amounts obtained by applying statutory rates to the earnings before income taxes due to the following:

	2019		2018	
	Amount \$	%	Amount \$	%
Earnings before income taxes	19		791	
Income tax expense at Canadian statutory rates	5	27	214	27
Difference in foreign tax rates	1	5	7	1
Non-deductible expenses	46	242	4	1
Losses not recognized	32	168	43	5
Impact of foreign exchange and other	(14)	(74)	15	2
Income tax expense	70	369	283	36

Losses not recognized consists largely of hedge losses and financing costs incurred in Canada, where such losses cannot be used to offset operating income in other countries.

Notes to the Consolidated Financial Statements (continued)

The deferred income tax assets and liabilities included on the balance sheet are as follows:

	December 31, 2019	December 31, 2018
Deferred income tax assets	93	74
Deferred income tax liabilities	(609)	(790)
	(516)	(716)

The significant components of the Company's deferred income taxes are as follows:

	2019	2018
Temporary differences relating to property, plant and equipment and finance leases	(1,353)	(1,402)
Unused operating losses	554	518
Temporary differences relating to non-current liabilities (including restoration provisions)	112	97
Temporary differences relating to inventory	11	6
Unrealized foreign exchange loss and discounting on Zambian VAT receivable	134	39
Other	26	26
Net deferred income tax liabilities	(516)	(716)

The Company believes that it is probable that the results of future operations will generate sufficient taxable income to realize the above noted deferred income tax assets.

The Company has unrecognized deductible temporary differences relating to operating loss carryforwards that may be available for tax purposes in Canada totalling \$3,659 million (December 31, 2018: \$3,463 million) expiring between 2025 and 2039, and in the United States of America totalling \$22 million (December 31, 2018: \$37 million) expiring between 2020 and 2038.

The Company also has unrecognized deductible temporary differences relating to restoration provisions of \$57 million in Canada (December 31, 2018: \$47 million) and \$33 million in Finland (December 31, 2018: \$29 million).

The Company has non-Canadian resident subsidiaries that have undistributed earnings of \$3,458 million (December 31, 2018: \$3,676 million). These undistributed earnings are not expected to be repatriated in the foreseeable future and the Company has control over the timing of such, therefore taxes that may apply on repatriation have not been provided for.

14. Share Capital

a) COMMON SHARES

Authorized

Unlimited common shares without par value

Issued

	Number of shares (000's)
Balance as at December 31, 2018	689,391
Shares issued through Dividend Reinvestment Plan	10
Balance as at December 31, 2019	689,401

The balance of share capital at December 31, 2019 was \$5,642 million (December 31, 2018: \$5,642 million).

On January 6, 2020, the Company announced adoption of a Shareholders Rights Plan. The Shareholders Rights Plan ("the Rights Plan") applies in the event of any person or persons acting in concert having beneficial ownership of 20 per cent or more of the Company's outstanding common shares without having complied with bid provisions under the Rights Plan. In the occurrence of such an event, each outstanding common share has a right attached to it to purchase additional common shares of the Company, at a substantial discount to the then market price.

Notes to the Consolidated Financial Statements (continued)

b) TREASURY SHARES

The Company established an independent trust to purchase, on the open market, the common shares pursuant to the long-term incentive plan (note 16a). The Company consolidates the trust as it is subject to control by the Company. Consequently, shares purchased by the trust to satisfy obligations under the long-term incentive plan are recorded as treasury shares in shareholders' equity. Generally, dividends received on shares held in the trust will be paid to plan participants in cash as received.

	Number of shares (000's)
Balance as at January 1, 2018	5,366
Shares purchased	–
Shares vested	(1,213)
Balance as at December 31, 2018	4,153
Shares purchased	–
Shares vested	(1,791)
Balance as at December 31, 2019	2,362

The balance of shares held in the trust as at December 31, 2019 was \$114 million (December 31, 2018: \$125 million).

c) DIVIDENDS

On February 13, 2020, the Company declared a final dividend of CDN\$0.005 per share, in respect of the financial year ended December 31, 2019 (February 14, 2019: CDN\$0.005 per share or \$3 million) to be paid on May 7, 2020 to shareholders of record on April 16, 2020.

On July 29, 2019, the Company declared an interim dividend of CDN\$0.005 per share, or \$2 million, in respect of the financial year ended December 31, 2019 (July 30, 2018: CDN\$0.005 per share or \$2 million) to be paid on September 19, 2019 to shareholders of record on August 28, 2019.

15. Earnings (Loss) per Share

	2019	2018
Basic and diluted (loss) earnings attributable to shareholders of the Company	(57)	441
Basic weighted average number of shares outstanding (000's of shares)	687,596	686,747
Potential dilutive securities:	–	2,640
Diluted weighted average number of shares outstanding (000's of shares)	687,596	689,387
Earnings (loss) per common share – basic (expressed in \$ per share)	(0.08)	0.64
Earnings (loss) per common share – diluted (expressed in \$ per share)	(0.08)	0.64

16. Share-Based Compensation and Related Party Transactions

a) LONG-TERM INCENTIVE PLANS

The Company has a long-term incentive plan (the "Plan"), which provides for the issuance of performance stock units ("PSUs"), restricted stock units ("RSUs") in such amounts as approved by the Company's Compensation Committee. Included in general and administrative expense is share-based compensation expense of \$13 million (December 31, 2018: \$12 million) related to this Plan.

Notes to the Consolidated Financial Statements (continued)

Under the Plan, each PSU entitles participants, which includes directors, officers, and employees, to receive up to one-and-a-half common shares of the Company at the end of a three-year period if certain performance and vesting criteria, which are based on the Company's performance relative to a representative group of other mining companies, have been met. The fair value of each PSU is recorded as compensation expense over the vesting period. The fair value of each PSU is estimated using a Monte Carlo Simulation approach. A Monte Carlo Simulation is a technique used to approximate the probability of certain outcomes, called simulations, based on normally distributed random variables and highly subjective assumptions. This model generates potential outcomes for stock prices and allows for the simulation of multiple stocks in tandem resulting in an estimated probability of vesting.

Under the Plan, each RSU entitles the participant to receive one common share of the Company subject to vesting criteria. RSU grants typically vest fully at the end of the three-year period. The fair value of each RSU is recorded as compensation expense over the vesting period. The fair value of each RSU is estimated based on the market value of the Company's shares at the grant date and an estimated forfeiture rate of 11.5% (December 31, 2018: 11.5%).

The Company has a long term compensation scheme for the next generation of operational business leaders (current directors do not participate in the scheme), KRSUs. The scheme allows for full vesting over eight years with partial vesting commencing in the fourth year. The objectives of the scheme are to promote a long-term strategic focus amongst participants and to facilitate the Company's management succession plans as the roles of the founding directors transition during the scheme period.

The Company will meet its obligations under the scheme through market purchases. Full details of the scheme are contained in the Management Information Circular.

Notes to the Consolidated Financial Statements (continued)

	2019 Number of units (000's)	2018 Number of units (000's)
Performance stock units		
Outstanding – beginning of year	3,079	3,677
Granted	1,458	745
Vested	(803)	(460)
Forfeited	(604)	(883)
Outstanding – end of year	3,130	3,079
Restricted stock units		
Outstanding – beginning of year	2,868	3,231
Granted	1,936	690
Vested	(1,181)	(837)
Forfeited	(212)	(216)
Outstanding – end of year	3,411	2,868
Key restricted stock units		
Outstanding – beginning of year	4,400	–
Granted	–	4,400
Outstanding – end of year	4,400	4,400

The following assumptions were used in the Monte Carlo Simulation model to calculate compensation expense in respect of the PSUs granted in the following years:

	2019	2018
Risk-free interest rate	1.74%	2.63%
Vesting period	3 years	3 years
Expected volatility	55.2%	81.6%
Expected forfeiture per annum	4%	4%
Weighted average probability of vesting	51.8%	33.4%

b) SHARE OPTION PLAN

Share options for common shares in the Company are granted to certain key management. Options are exercisable at a price equal to the closing quoted price of the Company's shares on the date of grant. The vesting period varies from one to three years. Options are forfeited if the employee leaves the Company before the options vest. If the options remain unexercised after a period of five years from the grant date the options expire.

Each share option converts into one common share on exercise. An amount equal to the share price at the date of grant is payable by the recipient on the exercise of each option. The options carry neither rights to dividends nor voting rights.

Options may be exercised at any time from the date of vesting to the date of their expiry.

Notes to the Consolidated Financial Statements (continued)

	2019 Number of options (000's)	2018 Number of options (000's)
Share options		
Outstanding – beginning of year	2,676	2,190
Granted	1,703	600
Exercised	–	(72)
Forfeited	(46)	(42)
Outstanding – end of year	4,333	2,676
Exercisable – end of year	1,941	1,156

Share options grants have been measured using the binomial pricing model. The weighted average inputs of options granted in the year are as follows:

	2019	2018
Fair value of option	3.99	9.96
Exercise price (Canadian dollars)	13.72	21.95
Expected volatility	52.0%	67.0%
Expected life	5 years	5 years
Risk-free rate	1.35%	2.25%
Expected dividend yields	0.1%	0.1%

Volatility was calculated with reference to the Company's historical share price volatility up to the grant date to reflect a term approximate to the expected life of the option.

The Company recognized total expenses of \$4 million (December 31, 2018: \$4 million) related to equity-settled share-based payments on share options issued under the above plan for the year ended December 31, 2019.

c) KEY MANAGEMENT COMPENSATION

Key management personnel include the members of the senior management team and directors.

	2019	2018
Salaries, fees and other benefits	4	4
Bonus payments	2	2
Share-based compensation	5	8
Total compensation paid to key management	11	14

d) OTHER RELATED PARTY TRANSACTIONS

Amounts paid to related parties were incurred in the normal course of business and on an arm's length basis. During the year, \$9 million (December 31, 2018: \$8 million) was paid to parties related to key management for chartering aircraft, accommodation, machinery and services. As at December 31, 2019, nil (December 31, 2018: nil) was included in trade and other payables concerning related party amounts payable.

17. Sales Revenues

	2019	2018
Copper	3,603	3,616
Gold	342	228
Zinc	28	53
Other	94	69
	4,067	3,966

18. Cost of Sales

	2019	2018
Costs of production	(2,287)	(2,127)
Depreciation	(932)	(850)
Movement in inventory	(83)	3
Movement in depreciation in inventory	25	(14)
	(3,277)	(2,988)

19. Expenses by Nature

	2019	2018
Depreciation	(907)	(864)
Employment costs, benefits and contractor	(697)	(625)
Raw materials and consumables	(567)	(453)
Repairs and maintenance	(278)	(235)
Royalties	(219)	(210)
Utilities	(200)	(211)
Fuel	(199)	(202)
Freight	(139)	(114)
Change in inventories	(83)	3
Travel	(18)	(15)
Copper concentrate purchases	(7)	(40)
Other	(64)	(122)
	(3,378)	(3,088)

Expenses presented above include cost of sales, general and administrative and exploration expenses.

20. Impairment and Related Charges

As at December 31, 2019, a detailed review of impairment indicators was performed by management across all operations, development projects and investments. Management continues to monitor commodity prices, discount rates, operating costs, capital expenditure, in addition to any other key factors that may result in an indicator of impairment.

It should be noted that, particularly given the current volatility in commodity markets, the Company's longer life assets and operations are more likely to be impacted by changes in long-term commodity prices.

This review resulted in the identification of impairment indicators in relation to the Las Cruces mine as at December 31, 2019.

Notes to the Consolidated Financial Statements (continued)

	2019	2018
Las Cruces	97	–
Other	4	–
	101	–

Impairment of Las Cruces

Following finalization of the Las Cruces post-land slippage mine plan, 2020 is expected to be the final year of production for the open-pit. As a result, and with the volatility in the short-term copper price and given the purchase price allocated to Las Cruces property, plant and equipment following the acquisition of Inmet Mining Corporation in 2013, a full impairment test was performed using a discounted cashflow model based on estimated future cashflows and a copper price of \$2.75 per lb consistent with market consensus. Since other inputs were unobservable, the fair value is classified as level 3 in the fair value hierarchy (see note 24). An impairment charge of \$97 million was recognized against property, plant and equipment due to the recoverable amount being lower than the carrying amount. The remaining carrying value of non-current assets is disclosed in note 23. Sensitivity to key assumptions is disclosed within significant accounting estimates in note 3.

21. Finance Costs

	2019	2018
Interest expense on financial liabilities measured at amortized cost	(820)	(672)
Accretion on restoration provision (note 11c)	(14)	(14)
Total finance costs	(834)	(686)
Less: interest capitalized (note 6)	549	653
	(285)	(33)

\$549 million was capitalized to the Cobre Panama development project for the year ended December 31, 2019 (December 31, 2018: \$653 million). Following declaration of commercial production at Cobre Panama, effective September 1, 2019, and in the absence of any major capital projects, the Company ceased capitalization of interest expense.

22. Other Income (Expense)

	2019	2018
Foreign exchange losses ¹	(96)	(64)
Change in restoration provision for closed properties (note 11c)	(8)	(10)
Share of loss in joint venture (note 9)	(11)	–
Other income	1	5
	(114)	(69)

¹ The majority of foreign exchange losses are unrealized and arise on translating Zambian Kwacha monetary assets, in particular VAT receivables (see note 4c), at the period end exchange rate.

23. Segmented Information

The Company's reportable operating segments are individual mine development projects or mine operations. Each of the mines and development projects reports information separately to the CEO, the chief operating decision maker.

The Corporate & other segment is responsible for the evaluation and acquisition of new mineral properties, regulatory reporting, treasury and finance and corporate administration. Included in the Corporate & other segment is the Company's metal marketing division which purchases and sells third party material, and the exploration projects.

Notes to the Consolidated Financial Statements (continued)

The Company's operations are subject to seasonal aspects, in particular the rain season in Zambia. The rain season in Zambia generally starts in November and continues through April, with the heaviest rainfall normally experienced in the months of January, February and March. As a result of the rain season, mine pit access and the ability to mine ore is lower in the first quarter of the year than other quarters and the cost of mining is higher.

EARNINGS BY SEGMENT

For the year ended December 31, 2019, segmented information for the statement of earnings (loss) is presented as follows:

	Revenue	Cost of sales (excluding depreciation)	Depreciation	Other	Operating profit (loss) ¹	Income tax (expense) credit
Kansanshi ²	1,581	(865)	(244)	(76)	396	(102)
Sentinel	1,199	(771)	(252)	(39)	137	(17)
Cobre Panama ³	524	(319)	(113)	(2)	90	–
Las Cruces	291	(131)	(198)	(98)	(136)	68
Guelb Moghrein	243	(154)	(44)	(7)	38	(12)
Çayeli	95	(46)	(27)	6	28	(18)
Pyhäsalmi	90	(45)	(21)	2	26	5
Ravensthorpe	–	(32)	(6)	(1)	(39)	13
Corporate & other ⁴	44	(7)	(2)	(101)	(66)	(7)
Total	4,067	(2,370)	(907)	(316)	474	(70)

1 Operating profit (loss) less net finance costs and taxes equals net earnings (loss) for the year on the consolidated statement of earnings.

2 Kansanshi Mining Plc, the most significant contributor to the Kansanshi segment, is 20% owned by ZCCM, a Zambian government owned entity.

3 Cobre Panama declared commercial production September 1, 2019. Prior to this date, revenue and development costs were capitalized.

4 Revenue includes hedge gains recognized on forward copper sales and zero cost collar options.

For the year ended December 31, 2018, segmented information for the statement of earnings is presented as follows:

	Revenue	Cost of sales (excluding depreciation)	Depreciation	Other	Operating profit (loss) ¹	Income tax (expense) credit
Kansanshi ²	1,672	(799)	(250)	(68)	555	(145)
Sentinel	1,454	(890)	(276)	(28)	260	(63)
Las Cruces	470	(151)	(203)	4	120	(18)
Guelb Moghrein	235	(160)	(45)	(9)	21	(5)
Çayeli	100	(47)	(30)	1	24	(31)
Pyhäsalmi	144	(50)	(54)	7	47	(5)
Ravensthorpe	–	(11)	(5)	1	(15)	7
Corporate & other ^{3,4}	(109)	(16)	(1)	(77)	(203)	(23)
Total	3,966	(2,124)	(864)	(169)	809	(283)

1 Operating profit (loss) less net finance costs and taxes equals net earnings (loss) for the year on the consolidated statement of earnings.

2 Kansanshi Mining Plc, the most significant contributor to the Kansanshi segment, is 20% owned by ZCCM, a Zambian government owned entity.

3 No segmented information for Cobre Panama is disclosed for the statement of earnings, as the project is under development. The development costs for this project are capitalized.

4 Revenue includes hedge losses recognized on forward copper sales and zero cost collar options.

Notes to the Consolidated Financial Statements (continued)

BALANCE SHEET BY SEGMENT

Segmented information on balance sheet items is presented as follows:

	December 31, 2019			December 31, 2018		
	Non-current assets ¹	Total assets	Total liabilities	Non-current assets ¹	Total assets	Total liabilities
Kansanshi ²	2,641	3,939	923	2,706	4,490	944
Sentinel	3,056	3,633	623	3,150	3,673	711
Cobre Panama ³	12,006	12,623	3,124	10,640	10,992	2,745
Las Cruces	213	848	194	499	1,077	308
Guelb Moghrein	89	190	50	126	228	36
Çayeli	83	132	28	104	150	43
Pyhäsalmi	11	79	45	28	92	56
Ravensthorpe	710	812	173	689	776	142
Corporate & other ⁴	1,427	2,491	8,925	1,212	2,059	7,830
Total	20,236	24,747	14,085	19,154	23,537	12,815

1 Non-current assets include \$19,972 million of property plant and equipment (December 31, 2018: \$19,098 million) and exclude financial instruments, deferred tax assets, VAT receivable and goodwill.

2 Kansanshi Mining Plc, the most significant contributor to the Kansanshi segment, is 20% owned by ZCCM, a Zambian government owned entity. This segment includes the Kansanshi smelter.

3 Cobre Panama is 20% owned by KPMC, a joint venture.

4 Included within the corporate segment are assets relating to the Haquira project, \$689 million (December 31, 2018: \$683 million), and to the Taca Taca project, \$441 million (December 31, 2018: \$434 million).

CAPITAL EXPENDITURE BY SEGMENT

Additions to non-current assets other than financial instruments, deferred tax assets and goodwill represent additions to property, plant and equipment, for which capital expenditure is presented as follows:

	2019	2018
Kansanshi	150	194
Sentinel	154	236
Cobre Panama	1,082	1,640
Las Cruces	24	34
Guelb Moghrein	9	15
Çayeli	6	6
Pyhäsalmi	–	–
Ravensthorpe	6	4
Corporate & other	24	14
Total	1,455	2,143

GEOGRAPHICAL INFORMATION

	2019	2018
Revenue by destination ¹		
China	1,415	1,476
Zambia	486	368
India	389	147
Spain	383	472
South Africa	379	504
Singapore	351	539
Belgium	190	–
Finland	88	144
Egypt	70	36
The Philippines	51	–
Taiwan	40	36
Barbados	36	–
Bulgaria	31	16
Germany	29	268
Mexico	24	14
DR Congo	23	15
Other	38	41
Hedge gains (losses) ²	44	(110)
	4,067	3,966

1 Presented based on the ultimate destination of the product if known. If the eventual destination of the product sold through traders is not known, then revenue is allocated to the location of the product at the time when control passes.

2 Relates to hedge gains (losses) recognized on forward sales and zero cost collar options.

	December 31, 2019	December 31, 2018
Non-current assets by location		
Panama	12,006	10,640
Zambia	5,685	5,844
Australia	716	694
Peru	686	680
Argentina	440	432
Spain	177	463
Mauritania	89	126
Turkey	83	104
Finland	11	28
Other	343	143
	20,236	19,154
Investments, deferred income tax assets, goodwill, restricted cash, other deposits and VAT receivable	1,360	1,119
	21,596	20,273

24. Financial Instruments

The Company classifies its financial assets as amortized cost, FVOCI or FVTPL. Financial liabilities are measured at amortized cost or FVTPL.

The following provides a comparison of carrying and fair values of each classification of financial instrument at December 31, 2019:

	Amortized cost	Fair value through profit or loss	Fair value through OCI	Total
Financial assets				
Trade and other receivables ¹	123	369	–	492
Due from KPMC (note 8)	246	–	–	246
Derivative instruments in designated hedge relationships	–	–	8	8
Other derivative instruments ²	–	1	–	1
Investments ³	–	–	19	19
Financial liabilities				
Trade and other payables	737	–	–	737
Other derivative instruments ²	–	31	–	31
Leases	36	–	–	36
Liability to joint venture	1,238	–	–	1,238
Debt	8,198	–	–	8,198

1 Commodity products are sold under pricing arrangements where final prices are set at a specified future date based on market commodity prices.

Changes between the prices recorded upon recognition of revenue and the final price due to fluctuations in commodity market prices give rise to an embedded derivative in the accounts receivable related to the provisionally priced sales contracts.

2 Other derivative instruments related to provisionally priced sales contracts are classified as fair value through profit or loss and recorded at fair value, with changes in fair value recognized as a component of cost of sales.

3 Investments held by the Company are held at fair value through other comprehensive income.

The following provides a comparison of carrying and fair values of each classification of financial instruments at December 31, 2018, on the same classification basis as above:

	Amortized cost	Fair value through profit or loss	Fair value through OCI	Total
Financial assets				
Trade and other receivables ¹	64	241	–	305
Derivative instruments in designated hedge relationships	–	27	–	27
Other derivative instruments ²	–	16	–	16
Investments ³	–	–	18	18
Financial liabilities				
Trade and other payables	731	–	–	731
Other derivative instruments ²	–	3	–	3
Finance leases	17	–	–	17
Liability to joint venture	946	–	–	946
Debt	7,285	–	–	7,285

1 Commodity products are sold under pricing arrangements where final prices are set at a specified future date based on market commodity prices.

Changes between the prices recorded upon recognition of revenue and the final price due to fluctuations in commodity market prices give rise to an embedded derivative in the accounts receivable related to the provisionally priced sales contracts.

2 Other derivative instruments related to provisionally priced sales contracts are classified as fair value through profit or loss and recorded at fair value, with changes in fair value recognized as a component of cost of sales.

3 The Company holds investments in privately held entities which were measured at cost prior to the adoption of IFRS 9.

Notes to the Consolidated Financial Statements (continued)

FAIR VALUES

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1 Quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3 Inputs for the asset or liability that are not based on observable market data.

The following table sets forth the Company's assets and liabilities measured at fair value on the balance sheet at December 31, 2019:

	Level 1	Level 2	Level 3	Total fair value
Financial assets				
Derivative instruments – LME contracts ¹	1	–	–	1
Derivative instruments – OTC contracts ²	–	8	–	8
Investments ³	19	–	–	19
Financial liabilities				
Derivative instruments – LME contracts ¹	17	–	–	17
Derivative instruments – OTC contracts ²	–	14	–	14

¹ Futures for copper, gold and zinc were purchased on the London Metal Exchange (“LME”) and London Bullion Market and have direct quoted prices, therefore these contracts are classified within Level 1 of the fair value hierarchy.

² The Company's derivative instruments are valued by the Company's brokers using pricing models based on active market prices. All forward swap contracts held by the Company are OTC and therefore the valuation models require the use of assumptions concerning the amount and timing of estimated future cash flows and discount rates using inputs which can generally be verified and do not involve significant management judgment. Such instruments are classified within Level 2 of the fair value hierarchy. Derivative assets are included within other assets on the balance sheet and derivative liabilities are included within provisions and other liabilities on the balance sheet.

³ The Company's investments in marketable equity securities are valued using quoted market prices in active markets and as such are classified within Level 1 of the fair value hierarchy. The fair value of the marketable equity securities is calculated as the quoted market price of the marketable security multiplied by the quantity of shares held by the Company.

The following table sets forth the Company's assets and liabilities measured at fair value on the balance sheet at December 31, 2018, in the fair value hierarchy:

	Level 1	Level 2	Level 3	Total fair value
Financial assets				
Derivative instruments – LME contracts ¹	14	–	–	14
Derivative instruments – OTC contracts ²	–	29	–	29
Investments ³	18	–	–	18
Financial liabilities				
Derivative instruments – LME contracts ¹	2	–	–	2
Derivative instruments – OTC contracts ²	–	1	–	1

¹ Futures for copper, nickel, gold and zinc were purchased on the London Metal Exchange (“LME”) and London Bullion Market and have direct quoted prices, therefore these contracts are classified within Level 1 of the fair value hierarchy.

² The Company's derivative instruments are valued by the Company's brokers using pricing models based on active market prices. All forward swap contracts held by the Company are OTC and therefore the valuation models require the use of assumptions concerning the amount and timing of estimated future cash flows and discount rates using inputs which can generally be verified and do not involve significant management judgment. Such instruments are classified within Level 2 of the fair value hierarchy. Derivative assets are included within other assets on the balance sheet and derivative liabilities are included within provisions and other liabilities on the balance sheet.

³ The Company's investments in marketable equity securities are valued using quoted market prices in active markets and as such are classified within Level 1 of the fair value hierarchy. The fair value of the marketable equity securities is calculated as the quoted market price of the marketable security multiplied by the quantity of shares held by the Company.

FINANCIAL RISK MANAGEMENT

Credit risk

The Company's credit risk is primarily attributable to cash and bank balances, short-term deposits, derivative instruments and trade and other receivables. The Company's exposure to credit risk is represented by the carrying amount of each class of financial assets, including commodity contracts, recorded in the consolidated balance sheet.

The Company limits its credit exposure on cash held in bank accounts by holding its key transactional bank accounts with highly rated financial institutions. The Company manages its credit risk on short-term deposits by only investing with counterparties that carry investment grade ratings as assessed by external rating agencies and spreading the investments across these counterparties. Under the Company's risk management policy, allowable counterparty exposure limits are determined by the level of the rating unless exceptional circumstances apply. A rating of investment grade or equivalent is the minimum allowable rating required as assessed by international credit rating agencies. Likewise, it is the Company's policy to deal with banking counterparties for derivatives who are rated investment grade or above by international credit rating agencies and graduated counterparty limits are applied depending upon the rating.

Exceptions to the policy for dealing with relationship banks with ratings below investment grade are reported to, and approved by, the Audit Committee. As at December 31, 2019, substantially all cash and short-term deposits are with counterparties of investment grade.

The Company's credit risk associated with trade accounts receivable is managed through establishing long-term contractual relationships with international trading companies using industry-standard contract terms. 36% of the Company's trade receivables are outstanding from three customers together representing 23% of the total sales for the year. No amounts were past due from these customers at the balance sheet date. The Company continues to trade with these customers. Revenues earned from these customers are included within the Kansanshi and Sentinel segments. Other accounts receivable consist of amounts owing from government authorities in relation to the refund of value-added taxes applying to inputs for the production process and property, plant and equipment expenditures and prepaid taxes.

Significant credit risk exposures to any single counterparty or group of counterparties having similar characteristics are as follows:

	December 31, 2019	December 31, 2018
Commodity traders and smelters (Trade receivables and other receivables)	492	305
Government authorities (VAT receivable)	416	462
	908	767

The VAT receivable due from government authorities includes \$396 million at December 31, 2019, which is past due (December 31, 2018: \$109 million). See note 4c.

The carrying amount of financial assets recorded in the financial statements, net of any allowances for losses, represents the Company's maximum exposure to credit risk. Expected credit losses on trade and other receivables at December 31, 2019, amount to nil.

Liquidity risk

The Company manages liquidity risk by maintaining cash and cash equivalent balances and available credit facilities to ensure that it is able to meet its short-term and long-term obligations as and when they fall due. Company-wide cash projections are managed centrally and regularly updated to reflect the dynamic nature of the business and fluctuations caused by commodity price and exchange rate movements.

Notes to the Consolidated Financial Statements (continued)

In addition, the Company was obligated under its corporate revolving credit and term loan facility to maintain liquidity and satisfy various covenant ratio tests on a historical cash flow basis. These ratios were in compliance during the year ended December 31, 2019, and December 31, 2018. If the Company breaches a covenant in its Financing Agreements, this would be an event of default which, if un-addressed, would entitle the lenders to make the related borrowings immediately due and payable and if made immediately due and payable all other borrowings would also be due and payable.

The Company had the following balances and facilities available to them at the balance sheet dates:

	December 31, 2019	December 31, 2018
Cash and cash equivalents and bank overdrafts – unrestricted cash	523	788
Working capital balance	994	1,039
Undrawn debt facilities (note 10)	388	929

Contractual and other obligations as at December 31, 2019 are as follows:

	Carrying Value	Contractual Cashflows	< 1 year	1 – 3 years	3 – 5 years	Thereafter
Debt – principal	7,936	8,004	804	3,150	1,950	2,100
Debt – finance charges	–	2,014	544	901	425	144
Trading facilities	262	262	262	–	–	–
Trade and other payables	637	637	637	–	–	–
Derivative instruments	31	31	31	–	–	–
Liability to joint venture ¹	1,238	2,312	–	–	–	2,312
Joint venture consideration	182	200	100	100	–	–
Current taxes payable	141	141	141	–	–	–
Deferred payments	42	42	4	8	8	22
Leases	36	41	14	13	8	6
Commitments	–	137	137	–	–	–
Restoration provisions	699	1,103	9	81	51	962

¹ Refers to distributions to KPMC, a joint venture that holds a 20% non-controlling interest in MPSA of which the Company has joint control, and not scheduled repayments.

Notes to the Consolidated Financial Statements (continued)

Contractual and other obligations as at December 31, 2018 are as follows:

	Carrying Value	Contractual Cashflows	< 1 year	1 – 3 years	3 – 5 years	Thereafter
Debt – principal repayments	7,179	7,245	69	2,276	1,950	2,950
Debt – finance charges	–	2,299	516	897	563	323
Trading facilities	106	106	106	–	–	–
Trade and other payables	631	631	631	–	–	–
Derivative instruments	3	3	3	–	–	–
Liability to joint venture ¹	946	1,446	–	–	1,446	–
Joint venture consideration	264	300	100	200	–	–
Current taxes payable	125	125	125	–	–	–
Deferred payments	42	42	–	18	14	10
Finance leases	17	23	3	7	7	6
Operating leases	–	32	25	6	1	–
Commitments	–	392	358	29	5	–
Restoration provisions	585	1,048	5	68	80	895

¹ Refers to distributions to KPMC, a joint venture that holds a 20% non-controlling interest in MPSA of which the Company has joint control, and not scheduled repayments.

Market risks

a) Commodity price risk

The Company is subject to commodity price risk from fluctuations in the market prices of copper, gold, nickel, zinc and other elements.

As part of the hedging program, the Company has elected to apply hedge accounting for a portion of copper and nickel sales. For the year ended December 31, 2019, a fair value gain of \$8 million (2018: fair value gain of \$27 million) has been recognized on derivatives designated as hedged instruments through accumulated other comprehensive income and a fair value gain of \$44 million (2018: fair value loss of \$110 million) has been recognized through sales revenues.

For the year ended December 31, 2018, the Company had unmargined copper forward sales contracts for 30,000 tonnes at an average price of \$2.81 per lb outstanding with periods of maturity to June 2020. In addition, the Company has zero cost collar unmargined sales contracts for 80,000 tonnes at weighted average prices of \$2.65 per lb to \$2.91 per lb outstanding with maturities to December 2020. The Company also had unmargined nickel forward sales contracts for 12,046 tonnes at an average price of \$6.77 per lb outstanding with maturities to February 2021.

The Company is also exposed to commodity price risk on diesel fuel required for mining operations and sulphur required for acid production. The Company's risk management policy allows for the management of these exposures through the use of derivative financial instruments. As at December 31, 2019, and December 31, 2018, the Company had not entered into any diesel or sulphur derivatives.

The Company's commodity price risk related to changes in fair value of embedded derivatives in accounts receivable reflecting copper, nickel, gold and zinc sales provisionally priced based on the forward price curve at the end of each quarter.

Notes to the Consolidated Financial Statements (continued)

Derivatives designated as hedged instruments

The Company has elected to apply hedge accounting with the following contracts expected to be highly effective in offsetting changes in the cash flows of designated future sales. Commodity contracts outstanding as at December 31, 2019, were as follows:

	Open Positions (tonnes/ozs)	Average Contract price	Closing Market price	Maturities Through
Commodity contracts:				
Copper forward	30,000	\$ 2.81/lb	\$ 2.79/lb	June 2020
Copper zero cost collar	80,000	\$ 2.65–2.91/lb	\$ 2.79/lb	December 2020
Nickel forward	12,046	\$ 6.77/lb	\$ 6.35/lb	February 2021

Other derivatives

As at December 31, 2019, and December 31, 2018, the Company had entered into the following derivative contracts for copper, gold and zinc in order to reduce the effects of fluctuations in metal prices between the time of the shipment of metal from the mine site when the sale is provisionally priced and the date agreed for pricing the final settlement.

Excluding the copper contracts noted above, as at December 31, 2019, the following derivative positions were outstanding:

	Open Positions (tonnes/ozs)	Average Contract price	Closing Market price	Maturities Through
Embedded derivatives in provisionally priced sales contracts:				
Copper	119,336	\$ 2.71/lb	\$ 2.79/lb	April 2020
Gold	28,333	\$ 1,502/oz	\$ 1,523/oz	April 2020
Commodity contracts:				
Copper	119,550	\$ 2.71/lb	\$ 2.79/lb	April 2020
Gold	28,336	\$ 1,502/oz	\$ 1,523/oz	April 2020

As at December 31, 2018, the following derivative positions were outstanding:

	Open Positions (tonnes/ozs)	Average Contract price	Closing Market price	Maturities Through
Embedded derivatives in provisionally priced sales contracts:				
Copper	90,633	\$ 2.78/lb	\$ 2.71/lb	April 2019
Gold	16,069	\$ 1,235/oz	\$ 1,282/oz	April 2019
Zinc	2,175	\$ 1.18/lb	\$ 1.14/lb	January 2019
Commodity contracts:				
Copper	90,425	\$ 2.78/lb	\$ 2.71/lb	April 2019
Gold	16,069	\$ 1,235/oz	\$ 1,282/oz	April 2019
Zinc	2,175	\$ 1.18/lb	\$ 1.14/lb	January 2019

Notes to the Consolidated Financial Statements (continued)

A summary of the fair values of unsettled derivative financial instruments for commodity contracts recorded on the consolidated balance sheet.

	December 31, 2019	December 31, 2018
Commodity contracts:		
Asset position	9	43
Liability position	(31)	(3)

The following table shows the impact on net earnings from changes in the fair values of financial instruments of a 10% change in the copper and gold commodity prices, based on prices at December 31, 2019. There is no impact of these changes on other comprehensive income except indirectly through the impact on the fair value of the available-for-sale investments. The impact of a 10% movement in commodity prices is as follows:

	Average contract price on December 31		Impact of price change on net earnings	
	2019	2018	2019	2018
Copper	\$ 2.71/lb	\$ 2.78/lb	1	1
Gold	\$ 1,502/oz	\$ 1,235/oz	-	-

b) Interest rate risk

The majority of the Company's interest expense is fixed however it is also exposed to an interest rate risk arising from interest paid on floating rate debt and the interest received on cash and short-term deposits. The majority of interest charges were capitalized in 2019 until commencement of commercial production in Panama on September 1, 2019, and therefore the risk exposure is primarily on cash, and net earnings in relation to the depreciation of capitalized interest charges.

Deposits are invested on a short-term basis to ensure adequate liquidity for payment of operational and capital expenditures. To date, no interest rate management products are used in relation to deposits.

The Company manages its interest rate risk on borrowings on a net basis. The Company has a policy allowing floating-to-fixed interest rate swaps targeting 50% of exposure over a five-year period. As at December 31, 2019, and December 31 2018, the Company held no floating-to-fixed interest rate swaps.

At December 31, 2019, the impact on cash interest payable of a 100 basis point change in interest rate would be as follows:

	December 31, 2019	Impact of interest rate change on net earnings	
		100 basis point increase	100 basis point decrease
Interest-bearing deposits, cash at bank and bank overdrafts	523	7	(7)
Floating rate borrowings drawn	3,024	(9)	9

At December 31, 2018, the impact on cash interest payable of a 100 basis point change in interest rate would be as follows:

	December 31, 2018	Impact of interest rate change on net earnings	
		100 basis point increase	100 basis point decrease
Interest-bearing deposits and cash at bank	788	8	(8)
Floating rate borrowings drawn	1,223	(12)	12

Notes to the Consolidated Financial Statements (continued)

c) Foreign exchange risk

The Company's functional and reporting currency is USD. As virtually all of the Company's revenues are derived in USD and the majority of its business is conducted in USD, foreign exchange risk arises from transactions denominated in currencies other than USD. Commodity sales are denominated in USD, the majority of borrowings are denominated in USD and the majority of operating expenses are denominated in USD. The Company's primary foreign exchange exposures are to the local currencies in the countries where the Company's operations are located, principally the Zambian kwacha ("ZMW"), Australian dollar ("A\$") Mauritanian ouguiya ("MRU"), the euro ("EUR") and the Turkish lira ("TRY"); and to the local currencies suppliers who provide capital equipment for project development, principally the A\$, EUR and the South African rand ("ZAR").

The Company's risk management policy allows for the management of exposure to local currencies through the use of financial instruments at a targeted amount of up to 100% for exposures within one year down to 50% for exposures in five years.

As at December 31, 2019, the Company is exposed to currency risk through the following assets and liabilities denominated in currencies other than USD:

	Cash and cash equivalents	Trade and other receivables	Investments	Financial liabilities
CAD	1	–	4	2
GBP	1	–	–	6
AUD	4	3	2	38
ZMW	5	4	–	11
EUR	17	24	–	47
TRY	–	–	–	6
ZAR	4	–	–	5
MRU	–	–	–	16
Total	32	31	6	131

Based on the above net exposures as at December 31, 2019, a 10% change in all of the above currencies against the USD would result in a \$7 million increase or decrease in the Company's net earnings and would result in a \$1 million increase or decrease in the Company's other comprehensive income.

As at December 31, 2018, the Company is exposed to currency risk through the following assets and liabilities denominated in currencies other than USD:

	Cash and cash equivalents	Trade and other receivables	Investments	Financial liabilities
CAD	13	–	4	–
AUD	12	–	1	22
ZMW	23	1	–	25
EUR	25	51	–	52
TRY	–	–	–	9
ZAR	4	–	–	22
MRU	–	1	–	16
Other	4	–	–	–
Total	81	53	5	146

Based on the above net exposures as at December 31, 2018, a 10% change in all of the above currencies against the USD would result in a \$1 million increase or decrease in the Company's net earnings and would result in a \$1 million increase or decrease in the Company's other comprehensive income.

Notes to the Consolidated Financial Statements (continued)

Capital management

The Company's objectives when managing capital are to continue to provide returns for shareholders, and comply with lending requirements while safeguarding the Company's ability to continue as a going concern. The Company considers the items included in equity to be capital.

The Company manages the capital structure and makes adjustments in light of changes in economic conditions and the risk characteristics of the Company's assets. In order to maintain or adjust the capital structure, the Company may adjust the amount of dividends paid to shareholders, issue new shares, or sell assets to reduce debt.

The Company uses a combination of short-term and long-term debt to finance its operations and development projects. Typically, floating rates of interest are attached to short-term debt, and fixed rates on senior notes.

25. Commitments & Contingencies

CAPITAL COMMITMENTS

The Company has committed to \$137 million (December 31, 2018: \$392 million) in capital expenditures.

Other commitments & contingencies

Due to the size, complexity and nature of the Company's operations, various legal and tax matters are outstanding from time to time. The Company is routinely subject to audit by tax authorities in the countries in which it operates and has received a number of tax assessments in various locations, including Zambia, which are currently at various stages of progress with the relevant authorities. The outcome of these audits and assessments are uncertain however the Company is confident of its position on the various matters under review.

In December 2018, Cobre Panama reached a full and final settlement for an outstanding claim from a third-party which included closure of the counterclaim made by the Company.

In October 2016, the Company, through its subsidiary Kansanshi Holdings Limited, received a Notice of Arbitration from ZCCM International Holdings PLC ("ZCCM") under the Kansanshi Mining PLC ("KMP") Shareholders Agreement. ZCCM is a 20% shareholder in KMP and filed the Notice of Arbitration against Kansanshi Holdings Limited ("KHL"), the 80% shareholder, and against KMP. The Company also received a Statement of Claim filed in the Lusaka High Court naming additional defendants, including the Company, and certain directors and an executive of the named corporate defendants. Aside from the parties, the allegations made in the Notice of Arbitration and the High Court for Zambia were the same. The Company is firmly of the view that the allegations are in their nature inflammatory, vexatious and untrue.

The dispute was stated as a request for a derivative action, requiring ZCCM to obtain permission to proceed in each forum of the Arbitration and the Lusaka High Court. The dispute arose from facts originating in 2007, and concerned the rate of interest paid on select deposits by KMP with the Company. The deposits were primarily retained for planned investment by KMP in Zambia. In particular, KMP deposits were used to fund a major investment program at Kansanshi, including the successful construction and commissioning of the Kansanshi smelter and expansion of the processing plant and mining operations. The entirety of the deposit sums has been paid down from the Company to KMP, with interest. The interest was based on an assessment of an arm's length fair market rate, which is supported by independent third-party analysis. ZCCM disputed that interest rate paid to KMP on the deposits was sufficient.

In July 2019, the Arbitral Tribunal issued a final award in favour of KMP. The parties have reached an agreement on costs, in total exceeding \$1 million payable by ZCCM, bringing this particular matter to an end.

Notes to the Consolidated Financial Statements (continued)

In parallel, several preliminary procedural applications to dismiss the High Court Action were lodged on behalf of the Company, and other defendants, in the Lusaka High Court. By a decision dated January 25, 2018, the Lusaka High Court used its discretion to rectify ZCCM's procedural errors. The Court granted leave to the Company, FQM Finance, a wholly-owned subsidiary of the Company, and the individual defendants to appeal against this decision and the litigants have agreed to a stay pending the appeal. The appeal hearing took place on November 21, 2018, with submissions made by all parties. The Court of Appeal delivered judgment on January 11, 2019, dismissing the appeal. An appeal to the Supreme Court of Zambia was heard on April 24, 2019, and has been dismissed. The High Court was scheduled to resume hearing two further procedural applications, including whether ZCCM is allowed to maintain the derivative action. However, before these hearings could take place the defendants brought an application requesting dismissal of the case on grounds of abuse of process/ res judicata, on the basis that the action cannot be allowed to continue for risk of producing conflicting judgment from the London arbitration, which has already adjudicated the facts of this particular complaint. ZCCM objected to the defendants' application. ZCCM also tried to bring an application to set aside the registration of the Arbitral award in Zambia. The defendants have resisted this application. Both applications have now had an oral hearing, in October 2019, and the parties are awaiting a decision of the High Court.

26. Post Balance Sheet Events

DIVIDEND DECLARED

The Company has declared a final dividend of CAD\$0.005 per share, in respect of the financial year ended December 31, 2019. The final dividend together with the interim dividend of CAD\$0.005 per share is a total of CAD\$0.01 per share for the 2019 financial year.

SENIOR NOTES TAP ISSUANCE

On January 13, 2020, the Company issued an additional \$500 million aggregate principal amount of 7.25% Senior Notes due 2023 (the "2023 New Notes") and an additional \$250 million aggregate principal amount of 7.50% Senior Notes due 2025 (the "2025 New Notes", collectively the "Notes"). The 2023 New Notes were priced at 102.50% and the 2025 New Notes were priced at 103.00%. The new Notes represent an additional offering of the Company's existing 2023 and 2025 Notes, issued under the same indentures.

Interest on the 2023 New Notes will accrue from October 1, 2019 at a rate of 7.25% per annum and will be payable semi-annually. Interest on the 2025 New Notes will accrue from October 1, 2019 at a rate of 7.50% per annum and will be payable semi-annually. The Notes will be senior unsecured obligations of the Company and will be guaranteed by certain of the Company's subsidiaries.

On January 16, 2020, the Company issued notice of redemption of the 7.00% Senior Notes due 2021 at 100% of principal.

DIRECTORS

PHILIP PASCALL

Chairman of the Board and Chief Executive Officer



Mr. Pascall graduated from Sussex University in England with an honours degree in Control Engineering, and later completed an MBA at the University of Cape Town. He worked in general management positions in South Africa from 1973; and in the mining industry there from 1977 with RTZ, and E.L. Bateman, and from 1981, in Australia. He was the Project Manager of the Argyle Diamond Project and then Executive Chairman and part-owner of Nedpac Engineering between 1982 and 1990.

During this time, Mr. Pascall was involved in a wide variety of mineral projects in Australia, New Zealand, S.E. Asia, Chile, the United States, and Zimbabwe. After selling his share of Nedpac in 1990, Mr. Pascall was a consultant in the mining industry, including a period with Rio Tinto's Hamersley Iron, and with various projects in Zimbabwe and Zambia. He is a co-founder and has been Chairman and Chief Executive Officer of the Company since 1996.

CLIVE NEWALL

President and Director

Mr. Newall graduated from the Royal School of Mines, Imperial College, England in 1971 with an honours degree in Mining Geology, and was awarded an MBA from the Scottish Business School at Strathclyde University. He has worked in mining and exploration throughout his career, having held senior management positions with Amax

Exploration Inc., the Robertson Group plc. and was a non-executive Director of Gemfields plc. Mr. Newall is a co-founder and has been President and Director of the Company since its start-up in 1996. He is also a non-executive Director of Baker Steel Resource Trust Limited.



ROBERT HARDING

Lead Independent Director, Chair of the Nominating and Governance Committee



Mr. Harding is a well-known and respected executive in the Canadian business community. He graduated with a Bachelor of Mathematics from the University of Waterloo in 1980 and received his Chartered Accountant designation the following year. Mr. Harding began his career at a major accounting firm before joining Hees International

(now Brookfield) where he served in progressively senior roles including Controller, Chief Financial Officer, Chief Operating Officer, and ultimately, Chief Executive Officer in 1992. He currently serves on the Board of Brookfield Asset Management (Chairman from 1997–2010).

ANDREW ADAMS

Independent Director

Mr. Adams obtained his degree in Social Science from Southampton University and qualified as a Chartered Accountant in the United Kingdom in 1981. He worked for the Anglo American group of companies for twelve years up to 1999, his final position being Vice President and Chief Financial

Officer of AngloGold North America based in Denver, Colorado. Mr. Adams worked for Aber Diamond Corporation as Vice President and Chief Financial Officer from 1999 to 2003. Currently, he serves as an independent non-executive Director of Torex Gold Resources and TMAC Resources Inc.



PAUL BRUNNER
Independent Director



Mr. Brunner served as President and CEO of Boart Longyear Company (USA), a leading provider of drilling services, tools and equipment for the natural resource industry, the construction and quarrying industries and industrial markets worldwide, from 2004 to 2008. During his 21-year career with Boart Longyear, Mr. Brunner held several senior positions including Managing Director – Boart Longyear Limited (South Africa); Regional Director – Boart

Longyear Limitada (Chile/Peru); and, President – Boart Canada Ltd. Prior to Boart Longyear, he spent most of his career working at mining operations in Northern Canada. Mr. Brunner holds an MBA from Harvard Graduate School of Business Administration and is a mining engineering graduate from the Colorado School of Mines. He also attended the British Columbia Institute of Technology with a focus on mining.

KATHLEEN HOGENSON
Independent Director, Chair of EHS & CSR Committee

Ms. Hogenson has extensive operational, leadership and executive experience in the oil and gas sector worldwide having served as an executive at Santos Limited and Unocal Corporation. Currently, she is the Chief Executive Officer of Zone Oil & Gas, a company she founded in 2008. Ms. Hogenson is also an independent director at Verisk Analytics, a New Jersey based publicly traded data analytics and risk assessment firm and Cimarex Energy Co., a US

exploration and production energy company. She previously served on the board of Parallel Petroleum LLC and in an advisory role at Samsung Oil & Gas, LLC and Samsung C&T from 2008 to 2015. She also serves on the Advisory Board of The Women's Global Leadership Conference and was a speaker at the Harvard Business School Women's Conference. Ms. Hogenson earned a Bachelor of Science in Chemical Engineering from The Ohio State University.



SIMON SCOTT
Independent Director, Chair of the Audit Committee



Mr. Scott has some 20 years of experience in the mining industry. He currently serves as a non-executive director of AngloGold Ashanti Holdings Plc. Between 2010 and 2016, he was Chief Financial Officer of Lonmin plc, a London Stock Exchange listed platinum mining company and was acting CEO between 2012 and 2013. Prior to that, Mr. Scott was Chief Financial Officer of Aveng Limited a Johannesburg Stock Exchange listed construction

company providing products and services to the mining industry globally. Mr. Scott also held a variety of senior management positions in Anglo American Platinum Limited including as acting CFO. His early career was spent in various financial positions, including as CFO Southern Africa for JP Morgan Chase. Mr. Scott is a Chartered Accountant and holds degrees in both accounting and commerce from the University of the Witwatersrand in South Africa.

PETER ST. GEORGE
Independent Director, Chair of the Compensation Committee

Mr. St. George worked in the investment banking industry for over 30 years holding senior positions in the United Kingdom and Australia. He was Managing Director and Chief Executive/Co-Chief Executive Officer of Salomon Smith Barney Australia and its predecessor, Natwest Markets Australia, from January 1995 to mid-2001. Up to 1994, he was the Managing Director Corporate Finance Natwest Markets, having previously been a Director of Hill

Samuel & Co. Limited, both London-headquartered merchant and investment banks. He is currently a non-executive Director of Dexus Property Group, an ASX-listed Australian property group specializing in office, industrial and retail properties. He has also served on a number of other public and private company Boards in Australia. Mr. St. George qualified as a Chartered Accountant in South Africa and holds an MBA from the University of Cape Town.



JOANNE WARNER
Independent Director



Dr. Warner has considerable global asset management experience in the metals, mining and energy sectors, having served as Head of Global Resources for Colonial First State Global Asset Management from 2010 – 2017 (previously the Senior Portfolio Manager from 2003 – 2007). She is currently a Non-Executive Director of Geo40 Limited,

a pioneering company focused on the extraction of silica and other minerals from geothermal fluids associated with power generation. Dr. Warner earned a Bachelor of Applied Science (Applied Chemistry) from the University of Technology, Sydney and holds a D.Phil. in Solid State Chemistry from Oxford University, England.

SHAREHOLDER INFORMATION

MANAGEMENT AND OFFICERS OF THE COMPANY

PHILIP PASCALL

*Chairman of the Board,
Chief Executive Officer*

CLIVE NEWALL

President

WYATT BUCK

Director, Operations

HANNES MEYER

Chief Financial Officer

SARAH ROBERTSON

Corporate Secretary

JULIET WALL

General Manager Finance

ZENON WOZNIAK

Director, Projects

TRANSFER AGENT & REGISTRAR

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United Kingdom

EXCHANGE LISTINGS

Common Shares

Toronto Stock Exchange
Symbol: FM

Depository Receipts

Lusaka Stock Exchange
Symbol: FQMZ

ANNUAL AND SPECIAL MEETING OF SHAREHOLDERS

Thursday May 7, 2020 at 09:30am EDT

Vantage Venues

150 King St. West, 27th Floor
Toronto, ON, M5H 1J9

CORPORATE DIRECTORY

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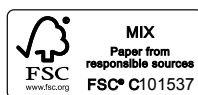
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