Teck Resources Limited

Consolidated Financial Statements
For the Years Ended December 31, 2019 and 2018

Management’s Responsibility for Financial Reporting

Management is responsible for the integrity and fair presentation of the financial information contained in this annual report. Where appropriate, the financial information, including financial statements, reflects amounts based on the best estimates and judgments of management. The financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. Financial information presented elsewhere in the annual report is consistent with that disclosed in the financial statements.

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Any system of internal control over financial reporting, no matter how well-designed, has inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. The system of controls is also supported by a professional staff of internal auditors who conduct periodic audits of many aspects of our operations and report their findings to management and the Audit Committee.

Management has a process in place to evaluate internal control over financial reporting based on the criteria established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 framework.

The Board of Directors oversees management’s responsibility for financial reporting and internal control systems through an Audit Committee, which is composed entirely of independent directors. The Audit Committee meets periodically with management, our internal auditors and independent auditors to review the scope and results of the annual audit, and to review the financial statements and related financial reporting and internal control matters before the financial statements are approved by the Board of Directors and submitted to the shareholders.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, appointed by the shareholders, have audited our financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and have expressed their opinion in the Report of Independent Registered Public Accounting Firm.

Donald R. Lindsay
President and Chief Executive Officer

Ronald A. Millos
Senior Vice President, Finance and Chief Financial Officer

February 26, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Teck Resources Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Teck Resources Limited and its subsidiaries (together, the Company) as of December 31, 2019 and 2018, and the related consolidated statements of income (loss), comprehensive income (loss), cash flows and changes in equity for the years then ended, including the related notes (collectively referred to as the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and its financial performance and its cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS). Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 33 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control Over Financial Reporting, appearing in Management's Discussion and Analysis. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as

evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Steelmaking coal goodwill impairment assessment

As described in Notes 3, 4, 8, and 17 to the consolidated financial statements, management performs its annual impairment assessment of its steelmaking coal goodwill as of October 31 of each year, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired. The total carrying value of the steelmaking coal goodwill as of December 31, 2019 was $702 million. An impairment loss exists if the steelmaking coal operations group of cash generating units' (the "CGU") carrying amount, including goodwill, exceeds its recoverable amount. Management applied significant judgment in determining the recoverable amount of the CGU using a discounted cash flow model. The recoverable amount determined by management exceeded the carrying value of the CGU, and as a result no impairment loss was recognized. Significant assumptions are used in the discounted cash flow model, which include: commodity prices, mineral reserves and resources, mine production, operating costs, capital expenditures,

discount rates, and foreign exchange rates. The Company's mineral reserves and resources have been prepared by or under the supervision of qualified persons (management's specialists).

The principal considerations for our determination that performing procedures relating to the steelmaking coal goodwill impairment assessment is a critical audit matter are: (i) there was significant judgment by management when determining the recoverable amount of the CGU; (ii) management's specialists were used to prepare the reserves and resources; and (iii) a high degree of auditor judgment, subjectivity and effort was required in performing procedures to evaluate management's cash flow projections and significant assumptions used in preparing the discounted cash flow model, including: commodity prices, mineral reserves and resources, mine production, operating costs, capital expenditures, discount rates, and foreign exchange rates. In addition, the audit effort involved the use of professionals with specialized skills and knowledge to assist in performing procedures to evaluate the discount rate.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the determination of the recoverable amount of the CGU. These procedures also included, among others, testing management's process for determining the recoverable amount of the CGU, including evaluating the appropriateness of the discounted cash flow model, testing the completeness, accuracy, and relevance of underlying data and evaluating the reasonability of the significant assumptions used in the discounted cash flow model. Evaluating the reasonability of management's assumptions involved considering their consistency with: (i) external market and industry data for commodity prices and foreign exchange rates, and (ii) recent actual mine production, operating costs and capital expenditures incurred, market data and other third party information, when available. Evaluating the reasonability of management's estimates of mineral reserves and resources involved considering the qualifications and objectivity of management's specialists, obtaining an understanding of the work performed, including the methods and assumptions used by these specialists, testing data on a sample basis, and evaluating their findings. Professionals with specialized skill and knowledge were used to assist in the evaluation of the discount rate.

Provision for post-mine closure water quality management costs for the steelmaking coal operations

As described in Notes 3, 4, and 23 to the consolidated financial statements, as of December 31, 2019 management recorded a decommissioning and restoration provision ("DRP"). The DRP represents the present value of estimated costs for required future decommissioning and other site restoration activities. After the end of the life of certain operations, water quality management costs may extend for periods in excess of 100 years. The provision for these expenditures is $745 million, of which $411 million is for its steelmaking coal operations ("Coal water DRP"). Management applied significant judgment in estimating the Coal water DRP, which involved the use of significant estimates and assumptions with respect to the volume and location of water to be treated, the methods used to treat the water, and the related water treatment costs, all of which relate to the required post-mine closure water quality management activities. The estimates of the volume and location of water to be treated have been developed by management's specialists.

The principal considerations for our determination that performing procedures relating to the provision for post-mine closure water quality management costs for the steelmaking coal operations is a critical audit matter are: (i) there is significant judgment made by management when developing the significant estimates

and assumptions with respect to the volume and location of water to be treated, the methods used to treat the water and the related water treatment costs necessary to complete the required post-mine closure water quality management activities of its steelmaking coal operations; (ii) management's specialists developed the estimates of the volume and location of water to be treated; and (iii) there was significant complexity in evaluating the audit evidence related to the significant assumptions.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's process of estimating the Coal water DRP. These procedures also included, among others, evaluating and testing management's process for estimating the Coal water DRP, which included testing the model used by management. The procedures also included testing the reasonability of management's assumptions in estimating the Coal water DRP, which included comparing the estimated future water treatment costs to actual water quality management operating and capital costs incurred by the Company, and understanding the methods used to treat the water. Evaluating management's estimate of volume and location of water to be treated involved considering the qualifications and objectivity of management's specialists, obtaining an understanding of the work performed, including the methods and assumptions used by management's specialists, testing source data used on a sample basis, and evaluating their findings.

Recoverable amount of the Fort Hills CGU

As described in Notes 3, 4, and 8 to the consolidated financial statements, management performed an impairment assessment of its Fort Hills CGU ("Fort Hills CGU") as of December 31, 2019 and noted an impairment indicator as a result of lower market expectations for the future Western Canadian Select heavy oil prices. As a result, the recoverable amount of the Fort Hills CGU was estimated by management to determine the extent of impairment. Management used a discounted cash flow model to determine the recoverable amount of the Fort Hills CGU in the amount of $3.1 billion. The recoverable amount was lower than the carrying value and as a result, a pre-tax impairment loss of $1.2 billion was recorded to property, plant and equipment in the energy operating segment. In determining the recoverable amount, management used significant assumptions such as: commodity prices, oil reserves and resources, mine production, operating costs, capital expenditures, discount rate and foreign exchange rates. Oil reserves and resources were prepared by qualified reserves evaluators (management's specialists).

The principal considerations for our determination that performing procedures relating to the recoverable amount of the Fort Hills CGU is a critical audit matter are: (i) there was significant judgment by management when determining the recoverable amount of the Fort Hills CGU; (ii) the use of management's specialists in the preparation of oil reserves and resources; (iii) the high degree of auditor judgment, subjectivity, and effort in performing procedures to evaluate management's discounted cash flows and significant assumptions including: commodity prices, oil reserves and resources, mine production, operating costs, capital expenditures, discount rate and foreign exchange rates, and (iv) the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing procedures to evaluate the discount rate.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's impairment assessment, including controls over the determination of the recoverable amount of the Fort Hills CGU. These procedures also included, among

others, testing management's process for determining the recoverable amount of the Fort Hills CGU, including evaluating the appropriateness of the discounted cash flow model, testing the completeness, accuracy, and relevance of underlying data used in the model, and evaluating the reasonability of the significant assumptions used in the discounted cash flow model. Evaluating the reasonability of management's assumptions involved considering their consistency with (i) external market and industry data for commodity prices and foreign exchange rates, and (ii) recent actual mine production, operating costs and capital expenditures incurred, market data and other third party information, when available. Evaluating the reasonableness of the oil reserves and resources involved considering the qualifications and objectivity of management's specialists, obtaining an understanding of the work performed, including the methods and assumptions used in estimating the oil reserves and resources, testing the data used by management's specialists on a sample basis and evaluating overall findings. Professionals with specialized skill and knowledge were used to assist in the evaluation of the discount rate.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

Vancouver, Canada
February 26, 2020

We have served as the Company's auditor since 1964.

Teck Resources Limited

Consolidated Statements of Income (Loss)

Years ended December 31

(CAD$ in millions, except for share data)	2019	2018
Revenues (Note 6)	**$ 11,934**	$ 12,564
Cost of sales	**(8,594)**	(7,943)
Gross profit	**3,340**	4,621
Other operating income (expenses)		
General and administration	**(161)**	(142)
Exploration	**(67)**	(69)
Research and innovation	**(67)**	(35)
Asset impairments (Note 8(a))	**(2,690)**	(41)
Other operating income (expense) (Note 9)	**(505)**	450
Profit (loss) from operations	**(150)**	4,784
Finance income (Note 10)	**48**	33
Finance expense (Note 10)	**(266)**	(252)
Non-operating expense (Note 11)	**(97)**	(52)
Share of loss of associates and joint ventures (Note 15)	**(3)**	(3)
Profit (loss) before taxes	**(468)**	4,510
Provision for income taxes (Note 21)	**(120)**	(1,365)
Profit (loss) for the year	**$ (588)**	$ 3,145
Profit (loss) attributable to:		
Shareholders of the company	**$ (605)**	$ 3,107
Non-controlling interests	**17**	38
Profit (loss) for the year	**$ (588)**	$ 3,145
Earnings (loss) per share (Note 24(f))		
Basic	**$ (1.08)**	$ 5.41
Diluted	**$ (1.08)**	$ 5.34
Weighted average shares outstanding (millions)	**559.8**	573.9
Weighted average diluted shares outstanding (millions)	**559.8**	582.1
Shares outstanding at end of year (millions)	**547.3**	570.7

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

Teck Resources Limited

Consolidated Statements of Comprehensive Income (Loss)

Years ended December 31

(CAD$ in millions)	**2019**	**2018**
Profit (loss) for the year	**$ (588)**	$ 3,145
Other comprehensive income (loss) in the year		
Items that may be reclassified to profit (loss)		
Currency translation differences (net of taxes of $(26) and $40)	**(312)**	393
Change in fair value of debt securities (net of taxes of $nil and $nil)	**1**	–
	(311)	393
Items that will not be reclassified to profit (loss)		
Change in fair value of marketable equity securities (net of taxes of $(1) and $1)	**6**	(9)
Remeasurements of retirement benefit plans (net of taxes of $(31) and $(2))	**74**	8
	80	(1)
Total other comprehensive income (loss) for the year	**(231)**	392
Total comprehensive income (loss) for the year	**$ (819)**	$ 3,537
Total other comprehensive income (loss) attributable to:		
Shareholders of the company	**$ (201)**	$ 382
Non-controlling interests	**(30)**	10
	$ (231)	$ 392
Total comprehensive income (loss) attributable to:		
Shareholders of the company	**$ (806)**	$ 3,489
Non-controlling interests	**(13)**	48
	$ (819)	$ 3,537

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

Teck Resources Limited

Consolidated Statements of Cash Flows

Years ended December 31

(CAD$ in millions)	2019	2018
Operating activities		
Profit (loss) for the year	**$ (588)**	$ 3,145
Depreciation and amortization	**1,619**	1,483
Provision for income taxes	**120**	1,365
Asset impairments	**2,690**	41
Gain on sale of investments and assets	**(17)**	(892)
Foreign exchange losses (gains)	**4**	(16)
Loss on debt redemption or purchase	**224**	26
Loss (gain) on debt prepayment options	**(105)**	42
Net finance expense	**218**	219
Income taxes paid	**(595)**	(780)
Other	**74**	(166)
Net change in non-cash working capital items	**(160)**	(29)
	3,484	4,438
Investing activities		
Expenditures on property, plant and equipment	**(2,788)**	(1,906)
Capitalized production stripping costs	**(680)**	(707)
Expenditures on investments and other assets	**(178)**	(284)
Proceeds from investments and assets	**80**	1,292
	(3,566)	(1,605)
Financing activities		
Redemption or purchase and repayment of debt	**(835)**	(1,355)
Repayment of lease liabilities	**(150)**	(32)
QB2[1] advances from SMM/SC[2]	**938**	–
QB2 equity contributions by SMM/SC	**797**	–
QB2 partnering and financing transaction costs paid	**(113)**	–
Interest and finance charges paid	**(386)**	(430)
Issuance of Class B subordinate voting shares	**10**	54
Purchase and cancellation of Class B subordinate voting shares	**(661)**	(189)
Dividends paid	**(111)**	(172)
Distributions to non-controlling interests	**(26)**	(40)
	(537)	(2,164)
Effect of exchange rate changes on cash and cash equivalents	**(89)**	113
Increase (decrease) in cash and cash equivalents	**(708)**	782
Cash and cash equivalents at beginning of year	**1,734**	952
Cash and cash equivalents at end of year	**$ 1,026**	$ 1,734

Supplemental cash flow information (Note 12)

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

Notes:
1) Quebrada Blanca Phase 2 copper development project.
2) Sumitomo Metal Mining Co., Ltd. (SMM) and Sumitomo Corporation (SC) are referred to together as SMM/SC.

Teck Resources Limited

Consolidated Balance Sheets

As at December 31

(CAD$ in millions)	2019	2018
ASSETS		
Current assets		
Cash and cash equivalents (Note 12)	**$ 1,026**	$ 1,734
Current income taxes receivable	**95**	78
Trade and settlement receivables	**1,062**	1,180
Inventories (Note 13)	**1,981**	2,065
Prepaids and other current assets	**331**	260
	4,495	5,317
Financial and other assets (Note 14)	**1,109**	907
Investments in associates and joint ventures (Note 15)	**1,079**	1,071
Property, plant and equipment (Note 8, Note 16 and Note 20(a))	**31,355**	31,050
Deferred income tax assets (Note 21)	**211**	160
Goodwill (Note 8 and Note 17)	**1,101**	1,121
	$ 39,350	$ 39,626
LIABILITIES AND EQUITY		
Current liabilities		
Trade accounts payable and other liabilities (Note 18)	**$ 2,498**	$ 2,333
Current portion of debt (Note 19)	**29**	–
Current portion of lease liabilities (Note 20(b))	**160**	32
Current income taxes payable	**89**	151
	2,776	2,516
Debt (Note 19)	**4,133**	5,181
Lease liabilities (Note 20(b))	**512**	306
QB2 advances from SMM/SC (Note 5(b))	**912**	–
Deferred income tax liabilities (Note 21)	**5,902**	6,331
Retirement benefit liabilities (Note 22)	**505**	482
Provisions and other liabilities (Note 23)	**2,536**	1,792
	17,276	16,608
Equity		
Attributable to shareholders of the company	**21,304**	22,884
Attributable to non-controlling interests (Note 25)	**770**	134
	22,074	23,018
	$ 39,350	$ 39,626

Contingencies (Note 26)
Commitments (Note 27)

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

Approved on behalf of the Board of Directors

"Tracey L. McVicar"

Tracey L. McVicar
Chair of the Audit Committee

"Una M. Power"

Una M. Power
Director

Teck Resources Limited

Consolidated Statements of Changes in Equity

Years ended December 31

(CAD$ in millions)	2019	2018
Class A common shares (Note 24)	**$ 6**	$ 6
Class B subordinate voting shares (Note 24)		
Beginning of year	**6,595**	6,603
Share repurchases (Note 24(h))	**(285)**	(77)
Issued on exercise of options (Note 24(c))	**13**	69
End of year	**6,323**	6,595
Retained earnings		
Beginning of year	**15,495**	12,796
IFRS 16 transition adjustment on January 1, 2019 (Note 33(a))	**(43)**	–
IFRS 9 transition adjustment on January 1, 2018	**–**	34
Profit (loss) for the year attributable to shareholders of the company	**(605)**	3,107
Dividends paid (Note 24(g))	**(111)**	(172)
Share repurchases (Note 24(h))	**(367)**	(119)
Adjustment from SMM/SC transaction (Note 5(a))	**4**	–
Purchase of non-controlling interests (Note 5(d))	**–**	(159)
Remeasurements of retirement benefit plans	**74**	8
End of year	**14,447**	15,495
Contributed surplus		
Beginning of year	**204**	202
Share option compensation expense (Note 24(c))	**18**	17
Transfer to Class B subordinate voting shares on exercise of options	**(3)**	(15)
End of year	**219**	204
Accumulated other comprehensive income attributable to shareholders of the company (Note 24(e))		
Beginning of year	**584**	244
IFRS 9 transition adjustment on January 1, 2018	**–**	(34)
Other comprehensive income (loss)	**(201)**	382
Less remeasurements of retirement benefit plans recorded in retained earnings	**(74)**	(8)
End of year	**309**	584
Non-controlling interests (Note 25)		
Beginning of year	**134**	142
Profit for the year attributable to non-controlling interests	**17**	38
Other comprehensive income (loss) attributable to non-controlling interests	**(30)**	10
Purchase of non-controlling interests	**–**	(16)
Adjustments from SMM/SC transaction (Note 5(a))	**675**	–
Dividends or distributions	**(26)**	(40)
End of year	**770**	134
Total equity	**$ 22,074**	$ 23,018

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

Notes to Consolidated Financial Statements

Years ended December 31, 2019 and 2018

1. Nature of Operations

Teck Resources Limited and its subsidiaries (Teck, we, us or our) are engaged in mining and related activities including research, exploration and development, processing, smelting, refining and reclamation. Our major products are steelmaking coal, copper, zinc and blended bitumen. We also produce lead, precious metals, molybdenum, fertilizers and other metals. Metal products are sold as refined metals or concentrates.

Teck is a Canadian corporation and our registered office is at Suite 3300, 550 Burrard Street, Vancouver, British Columbia, Canada, V6C 0B3.

2. Basis of Preparation

These annual consolidated financial statements have been prepared by management in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and were approved by the Board of Directors on February 26, 2020.

In 2019, we adopted IFRS 16, Leases (IFRS 16) and IFRIC 23, Uncertainty over Income Tax Treatments (IFRIC 23), which both became effective January 1, 2019. Note 33 discloses the effects of the adoption of these new IFRS pronouncements for all periods presented, including the nature and effect of changes in accounting policies. Certain information has been reclassified to conform with the financial statement presentation adopted for the current year.

3. Summary of Significant Accounting Policies

The significant accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all periods presented, unless otherwise stated.

Basis of Presentation

Our consolidated financial statements include the accounts of Teck and all of its subsidiaries. Our significant operating subsidiaries include Teck Metals Ltd. (TML), Teck Alaska Incorporated (TAK), Teck Highland Valley Copper Partnership (Highland Valley Copper), Teck Coal Partnership (Teck Coal), Teck Washington Incorporated (TWI), Compañía Minera Teck Quebrada Blanca S.A. (QBSA or Quebrada Blanca) and Compañía Minera Teck Carmen de Andacollo (Carmen de Andacollo).

All subsidiaries are entities that we control, either directly or indirectly. Control is defined as the exposure, or rights, to variable returns from involvement with an investee and the ability to affect those returns through power over the investee. Power over an investee exists when our existing rights give us the ability to direct the activities that significantly affect the investee's returns. This control is generally evidenced through owning more than 50% of the voting rights or currently exercisable potential voting rights of a company's share capital. All of our intra-group balances and transactions, including unrealized profits and losses arising from intra-group transactions, have been eliminated in full. For subsidiaries that we control but do not own 100% of, the net assets and net profit attributable to outside shareholders are presented as amounts attributable to non-controlling interests in the consolidated balance sheet and consolidated statements of income and comprehensive income.

Certain of our business activities are conducted through joint arrangements. Our interests in joint operations include Galore Creek Partnership (Galore Creek, 50% share) and Fort Hills Energy L.P. (Fort Hills, 21.3% share), which operate in Canada, and Compañia Minera Antamina S.A. (Antamina, 22.5% share), which operates in Peru. We account for our interests in these joint operations by recording our share of the respective assets, liabilities, revenue, expenses and cash flows. We also have an interest in a joint venture, NuevaUnión SPA (NuevaUnión, 50% share), in Chile that we account for using the equity method (Note 15).

3. Summary of Significant Accounting Policies (continued)

During the year ended December 31, 2018, our share of the Fort Hills oil sands mine increased from 20.89% to 21.3% on resolution of a commercial dispute between the Fort Hills partners. We funded an increased share of the project capital in the amount of $58 million, as consideration for the additional interest in the project.

All dollar amounts are presented in Canadian dollars unless otherwise specified.

Interests in Joint Arrangements

A joint arrangement can take the form of a joint venture or joint operation. All joint arrangements involve a contractual arrangement that establishes joint control, which exists only when decisions about the activities that significantly affect the returns of the investee require unanimous consent of the parties sharing control. A joint operation is a joint arrangement in which we have rights to the assets and obligations for the liabilities relating to the arrangement. A joint venture is a joint arrangement in which we have rights to only the net assets of the arrangement.

Joint ventures are accounted for in accordance with the policy “Investments in Associates and Joint Ventures”. Joint operations are accounted for by recognizing our share of the assets, liabilities, revenue, expenses and cash flows of the joint operation in our consolidated financial statements.

Investments in Associates and Joint Ventures

Investments over which we exercise significant influence but do not control or jointly control are associates. Investments in associates are accounted for using the equity method, except when classified as held for sale. Investments in joint ventures as determined in accordance with the policy “Interests in Joint Arrangements” are also accounted for using the equity method.

The equity method involves recording the initial investment at cost and subsequently adjusting the carrying value of the investment for our proportionate share of the profit or loss, other comprehensive income or loss and any other changes in the associate’s or joint venture’s net assets, such as further investments or dividends.

Our proportionate share of the associate’s or joint venture’s profit or loss and other comprehensive income or loss is based on its most recent financial statements. Adjustments are made to align any inconsistencies between our accounting policies and our associate’s or joint venture’s policies before applying the equity method. Adjustments are also made to account for depreciable assets based on their fair values at the acquisition date of the investment and for any impairment losses recognized by the associate or joint venture.

If our share of the associate’s or joint venture’s losses were equal to or exceeded our investment in the associate or joint venture, recognition of further losses would be discontinued. After our interest is reduced to zero, additional losses would be provided for and a liability recognized only to the extent that we have incurred legal or constructive obligations to provide additional funding or make payments on behalf of the associate or joint venture. If the associate or joint venture subsequently reports profits, we resume recognizing our share of those profits only when we have a positive interest in the entity.

At each balance sheet date, we consider whether there is objective evidence of impairment in associates and joint ventures. If there is such evidence, we determine the amount of impairment to record, if any, in relation to the associate or joint venture.

Foreign Currency Translation

The functional currency of each of our subsidiaries and our joint operations, joint ventures and associates is the currency of the primary economic environment in which the entity operates. Transactions in foreign currencies are translated to the functional currency of the entity at the exchange rate in existence at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are retranslated at the period end date exchange rates.

The functional currency of Teck, the parent entity, is the Canadian dollar, which is also the presentation currency of our consolidated financial statements.

3. Summary of Significant Accounting Policies (continued)

Foreign operations are translated from their functional currencies, generally the U.S. dollar, into Canadian dollars on consolidation. Items in the statements of income and other comprehensive income are translated using weighted average exchange rates that reasonably approximate the exchange rate at the transaction date. Items on the balance sheet are translated at the closing spot exchange rate. Exchange differences on the translation of the net assets of entities with functional currencies other than the Canadian dollar, and any offsetting exchange differences on net debt used to hedge those assets, are recognized in a separate component of equity through other comprehensive income (loss).

Exchange differences that arise relating to long-term intra-group balances that form part of the net investment in a foreign operation are also recognized in this separate component of equity through other comprehensive income (loss).

On disposition or partial disposition of a foreign operation, the cumulative amount of related exchange differences recorded in a separate component of equity is recognized in the statement of income.

Revenue

Our revenue consists of sales of steelmaking coal, copper, zinc and lead concentrates, refined zinc, lead and silver, and blended bitumen. We also sell other by-products, including molybdenum concentrates, various refined specialty metals, chemicals and fertilizers. Our performance obligations relate primarily to the delivery of these products to our customers, with each separate shipment representing a separate performance obligation.

Revenue, including revenue from the sale of by-products, is recognized at the point in time when the customer obtains control of the product. Control is achieved when a product is delivered to the customer, we have a present right to payment for the product, significant risks and rewards of ownership have transferred to the customer according to contract terms and there is no unfulfilled obligation that could affect the customer’s acceptance of the product.

Steelmaking coal

For steelmaking coal, control of the product generally transfers to the customer when an individual shipment parcel is loaded onto a carrier accepted or directly contracted by the customer. For a majority of steelmaking coal sales we are not responsible for the provision of shipping or product insurance after the transfer of control. For certain sales we arrange shipping on behalf of our customers and are agent to these shipping transactions.

Steelmaking coal is sold under spot or average pricing contracts. For spot price contracts, pricing is final when revenue is recognized. For average pricing contracts, the final pricing is determined based on quoted steelmaking coal price assessments over a specific period. Control of the goods may transfer and revenue may be recognized before, during or subsequent to the period in which final average pricing is determined. For all steelmaking coal sales under average pricing contracts where pricing is not finalized when revenue is recognized, revenue is recorded based on estimated consideration to be received at the date of sale with reference to steelmaking coal price assessments. For average pricing contracts, adjustments are made to settlement receivables in subsequent periods based on published price assessments up to the date of final pricing. This adjustment mechanism is based on the market price of the commodity and accordingly, the changes in value of the settlement receivables are not considered to be revenue from contracts with customers. The changes in fair value of settlement receivables are recorded in other operating income (expense).

Steelmaking coal sales are billed based on final quality and quantity measures upon the passage of control to the customer. If pricing is not finalized when control of the product is transferred, a subsequent invoice is issued when pricing is finalized. The payment terms generally require prompt collection from customers; however, payment terms are customer specific and subject to change based on market conditions and other factors. We generally retain title to these products until we receive the first contracted payment, which is typically received shortly after loading, solely to manage the credit risk of the amounts due to us. This retention of title does not preclude the customer from obtaining control of the product.

3. Summary of Significant Accounting Policies (continued)

Base metal concentrates

For copper, lead and zinc concentrates, control of the product generally transfers to the customer when an individual shipment parcel is loaded onto a carrier accepted by the customer. We sell a majority of our concentrates on commercial terms where we are responsible for providing freight services after the date at which control of the product passes to the customer. We are the principal to this freight performance obligation. A minority of zinc and lead concentrate sales are made on consignment. For consignment transactions, control of the product transfers to the customer and revenue is recognized at the time the product is consumed in the customers' process.

The majority of our metal concentrates are sold under pricing arrangements where final prices are determined by quoted market prices in a period subsequent to the date of sale. For these sales, revenue is recorded based on the estimated consideration to be received at the date of sale with reference to relevant commodity market prices. Adjustments are made to settlement receivables in subsequent periods based on movements in quoted commodity prices up to the date of final pricing. This adjustment mechanism is based on the market price of the commodity and accordingly, the changes in value of the settlement receivables are not considered to be revenue from contracts with customers. The changes in fair value of settlement receivables are recorded in other operating income (expense).

Metal concentrate sales are billed based on provisional weights and assays upon the passage of control to the customer. The first provisional invoice is billed to the customer at the time of transfer of control. As final prices, weights and assays are received, additional invoices are issued and collected. In general, consideration is promptly collected from customers; however, the payment terms are customer specific and subject to change based on market conditions and other factors. We generally retain title to these products until we receive the first contracted payment, which is typically received shortly after loading, solely to manage the credit risk of the amounts due to us. This retention of title does not preclude the customer from obtaining control of the product.

Refined metals

For sales of refined metals, control of the product transfers to the customer when the product is loaded onto a carrier specified by the customer. For these products, loading generally coincides with the transfer of title.

Our refined metals are sold under spot or average pricing contracts. For spot sales contracts, pricing is final when revenue is recognized. For refined metal sales contracts where pricing is not finalized when revenue is recognized, revenue is recorded based on the estimated consideration to be received at the date of sale with reference to commodity market prices. Adjustments are made to settlement receivables in subsequent periods based on movements in quoted commodity prices up to the date of final pricing. This adjustment mechanism is based on the market price of the commodity and accordingly, the changes in value of the settlement receivables are not considered to be revenue from contracts with customers. The changes in fair value of settlement receivables are recorded in other operating income (expense).

We sell a portion of our refined metals on commercial terms where we are responsible for providing freight services after the date at which control of the product passes to the customer. We are the principal to this freight performance obligation.

Refined metal sales are billed based on final specification measures upon the passage of control to the customer. If pricing is not finalized when control of the product is transferred, a subsequent invoice is issued when pricing is finalized.

In general, consideration is promptly collected from customers; however, the payment terms are customer specific and subject to change based on market conditions and other factors.

Blended bitumen

For blended bitumen, control of the product generally transfers to the customer when the product passes the delivery point as specified in the contract, which normally coincides with title and risk transfer to the customer. The majority of our blended bitumen is sold under pricing arrangements where final prices are determined based on commodity price indices that are finalized at or near the date of sale. Payments for blended bitumen sales are usually due and settled within 30 days. Our revenue for blended bitumen is net of royalty payments to governments.

3. Summary of Significant Accounting Policies (continued)

Financial Instruments

We recognize financial assets and liabilities on the balance sheet when we become a party to the contractual provisions of the instrument.

Cash and cash equivalents

Cash and cash equivalents include cash on account, demand deposits and money market investments with maturities from the date of acquisition of three months or less, which are readily convertible to known amounts of cash and are subject to insignificant changes in value. Cash is classified as a financial asset that is subsequently measured at amortized cost. Cash equivalents are classified as subsequently measured at amortized cost, except for money market investments, which are classified as subsequently measured at fair value through profit or loss.

Trade receivables

Trade receivables relate to amounts received from sales under our spot pricing contracts for steelmaking coal, refined metals, blended bitumen, chemicals and fertilizers. These receivables are non-interest bearing and are recognized at face amount, except when fair value is materially different, and are subsequently measured at amortized cost. Trade receivables recorded are net of lifetime expected credit losses.

Settlement receivables

Settlement receivables arise from average pricing steelmaking coal contracts and base metal concentrate sales contracts where amounts receivable vary based on steelmaking coal price assessments or underlying commodity prices. Settlement receivables are classified as fair value through profit or loss and are recorded at fair value at each reporting period based on published price assessments or quoted commodity prices up to the date of final pricing. The changes in fair value are recorded in other operating income (expense).

Investments in marketable equity securities

Investments in marketable equity securities are classified, at our election, as subsequently measured at fair value through other comprehensive income. For new investments in marketable equity securities, we can elect the same classification as subsequently measured at fair value through other comprehensive income, or we can elect to classify an investment as at fair value through profit or loss. This election can be made on an investment-by-investment basis and is irrevocable. Investment transactions are recognized on the trade date with transaction costs included in the underlying balance. Fair values are determined by reference to quoted market prices at the balance sheet date.

When investments in marketable equity securities are disposed of, the cumulative gains and losses recognized in other comprehensive income (loss) are not recycled to profit and remain within equity. Dividends are recognized in profit and these investments are not assessed for impairment.

Investments in debt securities

Investments in debt securities are classified as subsequently measured at fair value through other comprehensive income and recorded at fair value. Investment transactions are recognized on the trade date with transaction costs included in the underlying balance. Fair values are determined by reference to quoted market prices at the balance sheet date.

Unrealized gains and losses on debt securities are recognized in other comprehensive income (loss) until investments are disposed of and the cumulative gains and losses recognized in other comprehensive income (loss) are reclassified from equity to profit at that time. Loss allowances and interest income are recognized in profit.

Trade payables

Trade payables are non-interest bearing if paid when due and are recognized at face amount, except when fair value is materially different. Trade payables are subsequently measured at amortized cost.

3. Summary of Significant Accounting Policies (continued)

Debt

Debt is initially recorded at fair value, less transaction costs. Debt is subsequently measured at amortized cost, calculated using the effective interest rate method.

Derivative instruments

Derivative instruments, including embedded derivatives in executory contracts or financial liability contracts, are classified as at fair value through profit or loss and, accordingly, are recorded on the balance sheet at fair value. Unrealized gains and losses on derivatives not designated in a hedging relationship are recorded as part of other operating income (expense) or non-operating income (expense) in profit depending on the nature of the derivative. Fair values for derivative instruments are determined using inputs based on market conditions existing at the balance sheet date or settlement date of the derivative. Derivatives embedded in non-derivative contracts are recognized separately unless they are closely related to the host contract.

Expected credit losses

For trade receivables, we apply the simplified approach to determining expected credit losses, which requires expected lifetime losses to be recognized upon initial recognition of the receivables.

Loss allowances on investments in debt securities are initially assessed based on the expected 12-month credit losses. At each reporting date, we assess whether the credit risk for our debt securities has increased significantly since initial recognition. If the credit risk has increased significantly since initial recognition, the loss allowance is adjusted to be based on the lifetime expected credit losses.

Hedging

Certain derivative investments may qualify for hedge accounting. At inception of hedge relationships, we document the economic relationship between hedging instruments and hedged items and our risk management objective and strategy for undertaking the hedge transactions.

For fair value hedges, any gains or losses on both the hedged item and the hedging instrument are recognized in the same line item in profit.

For cash flow hedges, any unrealized gains or losses on the hedging instrument relating to the effective portion of the hedge are initially recorded in other comprehensive income (loss). Where a cash flow hedge relates to a transaction where a non-financial asset or liability is recognized, accumulated gains or losses are recognized directly in the carrying amount of the non-financial asset or liability. The gains or losses are reclassified to profit in the same period or periods in which the hedged expected future cash flows affect profit or loss, when the hedged item ceases to exist, or when the hedge is determined to be ineffective.

For hedges of net investments in foreign operations, any foreign exchange gains or losses on the hedging instrument relating to the effective portion of the hedge are initially recorded in other comprehensive income (loss). Gains and losses are recognized in profit on the ineffective portion of the hedge, or when there is a disposition or partial disposition of a foreign operation being hedged.

Inventories

Finished products, work in process, raw materials and supplies inventories are valued at the lower of weighted average cost and net realizable value. Raw materials include concentrates for use at smelting and refining operations. Work in process inventory includes inventory in the milling, smelting or refining process and stockpiled ore at mining operations. For our oil sands mining and processing operation, raw materials consist of diluent used in blending, work in process inventory consists of raw bitumen and finished products consist of blended bitumen.

For work in process and finished product inventories, cost includes all direct costs incurred in production, including direct labour and materials, freight, depreciation and amortization, and directly attributable overhead costs. Production stripping costs that are not capitalized are included in the cost of inventories as incurred. Depreciation and amortization of capitalized production stripping costs are included in the cost of inventory.

3. Summary of Significant Accounting Policies (continued)

When inventories have been written down to net realizable value, we make a new assessment of net realizable value in each subsequent period. If the circumstances that caused the write-down no longer exist, the remaining amount of the write-down on inventory not yet sold is reversed.

We use both joint-product and by-product costing for work in process and finished product inventories. Joint-product costing is applied to primary products where the profitability of the operations is dependent upon the production of these products. Joint-product costing allocates total production costs based on the relative values of the products. By-product costing is used for products that are not the primary products produced by the operation. The by-products are allocated only the incremental costs of processes that are specific to the production of that product.

Supplies inventory is valued at the lower of weighted average cost and net realizable value. Cost includes acquisition, freight and other directly attributable costs.

Property, Plant and Equipment

Land, buildings, plant and equipment

Land is recorded at cost and buildings, plant and equipment are recorded at cost less accumulated depreciation and impairment losses. Cost includes the purchase price and the directly attributable costs to bring the assets to the location and condition necessary for them to be capable of operating in the manner intended by management.

Depreciation of mobile equipment, buildings used for production, and plant and processing equipment at our mining operations are calculated on a units-of-production basis. Depreciation of buildings not used for production, and of plant and equipment at our smelting operations is calculated on a straight-line basis over the assets' estimated useful lives. Where components of an asset have different useful lives, depreciation is calculated on each component separately. Depreciation commences when an asset is ready for its intended use. Estimates of remaining useful lives and residual values are reviewed annually. Changes in estimates are accounted for prospectively.

The expected useful lives are as follows:

- Buildings and equipment (not used for production) 1—47 years
- Plant and equipment (smelting operations) 3—30 years

Mineral properties and mine development costs

The cost of acquiring and developing mineral properties or property rights, including pre-production waste rock stripping costs related to mine development and costs incurred during production to increase future output, are capitalized.

Waste rock stripping costs incurred in the production phase of a surface mine are recorded as capitalized production stripping costs within property, plant and equipment when it is probable that the stripping activity will improve access to the orebody, when the component of the orebody or pit to which access has been improved can be identified, and when the costs relating to the stripping activity can be measured reliably. When the actual waste-to-ore stripping ratio in a period is greater than the expected life-of-component waste-to-ore stripping ratio for that component, the excess is recorded as capitalized production stripping costs.

Once available for use, mineral properties and mine development costs are depreciated on a units-of-production basis over the proven and probable reserves to which they relate. Since the stripping activity within a component of a mine improves access to the reserves of the same component, capitalized production stripping costs incurred during the production phase of a mine are depreciated on a units-of-production basis over the proven and probable reserves expected to be mined from the same component.

Underground mine development costs are depreciated using the block depreciation method, where development costs associated with each distinct section of the mine are depreciated over the reserves to which they relate.

3. **Summary of Significant Accounting Policies** (continued)

Exploration and evaluation costs

Property acquisition costs are capitalized. Other exploration and evaluation costs are capitalized if they relate to specific properties for which resources, as defined under National Instrument 43-101, *Standards of Disclosure for Mineral Projects*, exist or are near a specific property with a defined resource, and it is expected that the expenditure can be recovered by future exploitation or sale. All other costs are charged to profit in the year in which they are incurred. Capitalized exploration and evaluation costs are considered to be tangible assets. These assets are not depreciated as they are not currently available for use. When proven and probable reserves are determined and development is approved, capitalized exploration and evaluation costs are reclassified to mineral properties within property, plant and equipment.

Costs of oil sands properties

The costs of acquiring, exploring, evaluating and developing oil sands properties are capitalized when it is expected that these costs will be recovered through future exploitation or sale of the property. Capitalized development costs of oil sands properties are tangible assets. These assets are not depreciated as they are not currently available for use. When proven and probable reserves are determined and development is approved, capitalized development costs for oil sands properties are reclassified to mineral properties within property, plant and equipment.

Construction in progress

Assets in the course of construction are capitalized as construction in progress. On completion, the cost of construction is transferred to the appropriate category of property, plant and equipment, and depreciation commences when the asset is available for its intended use.

Repairs and maintenance

Repairs and maintenance costs, including shutdown maintenance costs, are charged to expense as incurred, except when these repairs significantly extend the life of an asset or result in a significant operating improvement. In these instances, the portion of these repairs relating to the betterment is capitalized as part of plant and equipment.

Borrowing costs

We capitalize borrowing costs that are directly attributable to the acquisition, construction or production of an asset that takes a substantial period of time to construct or prepare for its intended use. We begin capitalizing borrowing costs when there are borrowings, expenditures are incurred, and activities are undertaken to prepare the asset for its intended use. The amount of borrowing costs capitalized cannot exceed the actual amount of borrowing costs incurred during the period. All other borrowing costs are expensed as incurred.

We discontinue the capitalization of borrowing costs when substantially all of the activities necessary to prepare the qualifying asset for its intended use or sale are complete. In addition, we cease capitalization of borrowing costs when there is suspension of activities to prepare an asset for its intended use or sale. Capitalization recommences when the activities are restarted. Capitalized borrowing costs are amortized over the useful life of the related asset.

Impairment of non-current assets

The carrying amounts of assets included in property, plant and equipment and intangible assets are reviewed for impairment whenever facts and circumstances indicate that the carrying amounts are less than the recoverable amounts. If there are indicators of impairment, the recoverable amount of the asset is estimated in order to determine the extent of any impairment. Where the asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit (CGU) to which the asset belongs is determined. The recoverable amount of an asset or CGU is determined as the higher of its fair value less costs of disposal and its value in use. An impairment loss exists if the asset's or CGU's carrying amount exceeds the estimated recoverable amount, and is recorded as an expense immediately.

Fair value is the price that would be received from selling an asset in an orderly transaction between market participants at the measurement date. Costs of disposal are incremental costs directly attributable to the disposal of an asset. For mining assets, when a binding sale agreement is not readily available, fair value less costs of disposal is usually estimated using a discounted cash flow approach, unless comparable market transactions on which to estimate fair value are available. Estimated future cash flows are calculated using estimated future commodity prices, reserves and resources, and operating and capital costs. All inputs used are those that an independent market participant would consider appropriate. Value in use is determined as the present value of the future cash flows expected to be derived from continuing use of an asset or CGU in its present form. These estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset or CGU for which estimates of future cash flows have not been adjusted. A value in use calculation uses a pre-tax discount rate and a fair value less costs of disposal calculation uses a post-tax discount rate.

Indicators of impairment for exploration and evaluation assets are assessed on a project-by-project basis or as part of the mining operation to which they relate.

Tangible or intangible assets that have been impaired in prior periods are tested for possible reversal of impairment whenever events or significant changes in circumstances indicate that the impairment may have reversed. Indicators of a potential reversal of an impairment loss mainly mirror the indicators present when the impairment was originally recorded. If the impairment has reversed, the carrying amount of the asset is increased to its recoverable amount, but not beyond the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior periods. A reversal of an impairment loss is recognized in profit immediately.

Intangible Assets

Intangible assets are recorded at cost less accumulated depreciation and impairment losses. Cost includes the purchase price and the directly attributable costs to bring the assets to the location and condition necessary for them to be capable of operating in the manner intended by management.

Finite life intangible assets are amortized on a straight-line basis over their useful lives. Amortization commences when an asset is ready for its intended use. Estimates of remaining useful lives are reviewed annually. Changes in estimates are accounted for prospectively. The expected useful lives of our finite-life intangible assets are between 7—40 years.

Goodwill

We allocate goodwill arising from business combinations to each CGU or group of CGUs that are expected to receive the benefits from the business combination. The carrying amount of the CGU or group of CGUs to which goodwill has been allocated is tested annually for impairment or when there is an indication that the goodwill may be impaired. Any impairment is recognized as an expense immediately. Should there be a recovery in the value of a CGU, any impairment of goodwill previously recorded is not subsequently reversed.

Leases

The following leases accounting policies have been applied as of January 1, 2019 on adoption of IFRS 16. For comparative periods prior to 2019, we applied leases policies in accordance with IAS 17, Leases (IAS 17) and IFRIC 4, Determining Whether an Arrangement Contains a Lease (IFRIC 4). Note 33 outlines the effect of adopting IFRS 16 requirements on January 1, 2019, and Note 20 outlines the effect of leases as at and for the year ended December 31, 2019.

At inception of a contract, we assess 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. We assess whether the contract involves the use of an identified asset, whether we have the right to obtain substantially all of the economic benefits from use of the asset during the term of the arrangement and if we have the right to direct the use of the asset. At inception or on reassessment of a contract that contains a lease component, we allocate the consideration in the contract to each lease component on the basis of their relative standalone prices.

As a lessee, we recognize a right-of-use asset, which is included in property, plant and equipment, and a lease liability at the commencement date of a lease. The right-of-use asset is initially measured at cost, which is comprised of the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any decommissioning and restoration costs, less any lease incentives received.

The right-of-use asset is subsequently depreciated from the commencement date to the earlier of the end of the lease term, or the end of the useful life of the asset. In addition, the right-of-use asset may be reduced due to impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

A lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by the interest rate implicit in the lease, or if that rate cannot be readily determined, our incremental borrowing rate. Lease payments included in the measurement of the lease liability are comprised of:

- fixed payments, including in-substance fixed payments, less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee;
- exercise prices of purchase options if we are reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, or if there is a change in our estimate or assessment of the expected amount payable under a residual value guarantee, purchase, extension or termination option. Variable lease payments not included in the initial measurement of the lease liability are charged directly to profit.

We have elected not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets. The lease payments associated with these leases are charged directly to profit on a straight-line basis over the lease term.

Income Taxes

Taxes, comprising both income taxes and resource taxes, are accounted for as income taxes under IAS 12, Income Taxes and are recognized in the statement of income, except where they relate to items recognized in other comprehensive income (loss) or directly in equity, in which case the related taxes are recognized in other comprehensive income (loss) or equity.

Current taxes receivable or payable are based on estimated taxable income for the current year at the statutory tax rates enacted or substantively enacted less amounts paid or received on account.

Deferred tax assets and liabilities are recognized based on temporary differences (the difference between the tax and accounting values of assets and liabilities) and are calculated using enacted or substantively enacted tax rates for the periods in which the differences are expected to reverse. The effect of changes in tax legislation, including changes in tax rates, is recognized in the period of substantive enactment.

Deferred tax assets are recognized only to the extent that it is probable that future taxable profits of the relevant entity or group of entities in a particular jurisdiction will be available, against which the assets can be utilized.

Deferred tax liabilities are recognized for taxable temporary differences arising on investments in subsidiaries, joint ventures and associates. However, we do not recognize such deferred tax liabilities where the timing of the reversal of the temporary differences can be controlled without affecting our operations or business, and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets and liabilities are not recognized if the temporary differences arise from the initial recognition of goodwill or an asset or liability in a transaction, other than in a business combination, which will affect neither accounting profit nor taxable profit.

We are subject to assessments by various taxation authorities, who may interpret tax legislation differently than we do. The final amount of taxes to be paid depends on a number of factors, including the outcomes of audits, appeals or negotiated settlements. We account for such differences based on our best estimate of the probable outcome of these matters.

3. Summary of Significant Accounting Policies (continued)

Employee Benefits

Defined benefit pension plans

Defined benefit pension plan obligations are based on actuarial determinations. The projected unit credit method, which sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately to build up the final obligation, is used to determine the defined benefit obligations, the related current service costs and, where applicable, the past service costs. Actuarial assumptions used in the determination of defined benefit pension plan assets and liabilities are based upon our best estimates, including discount rates, salary escalation, expected health care costs and retirement dates of employees.

Vested and unvested costs arising from past service following the introduction of changes to a defined benefit plan are recognized immediately as an expense when the changes are made.

Actuarial gains and losses can arise from differences between expected and actual outcomes or changes in actuarial assumptions. Actuarial gains and losses, changes in the effect of asset ceiling and return on plan assets are collectively referred to as remeasurements of retirement benefit plans and are recognized immediately through other comprehensive income (loss) and directly into retained earnings. Measurement of our net defined benefit asset is limited to the lower of the surplus of assets less liabilities in the defined benefit plan and the asset ceiling less liabilities in the defined benefit plan. The asset ceiling is the present value of the expected economic benefit available to us in the form of refunds from the plan or reductions in future contributions to the plan.

We apply one discount rate to the net defined benefit asset or liability for the purposes of determining the interest component of the defined benefit cost. This interest component is recorded as part of finance expense. Depending on the classification of the salary of plan members, current service costs and past service costs are included in either operating expenses or general and administration expenses.

Defined contribution pension plans

The cost of providing benefits through defined contribution plans is charged to profit as the obligation to contribute is incurred.

Non-pension post-retirement plans

We provide health care benefits for certain employees when they retire. Non-pension post-retirement plan obligations are based on actuarial determinations. The cost of these benefits is expensed over the period in which the employees render services. We fund these non-pension post-retirement benefits as they become due.

Termination benefits

We recognize a liability and an expense for termination benefits when we have demonstrably committed to terminate employees. We are demonstrably committed to a termination when, and only when, there is a formal plan for the termination with no realistic possibility of withdrawal. The plan should include, at a minimum, the location, function and approximate number of employees whose services are to be terminated, the termination benefits for each job classification or function, and the time at which the plan will be implemented without significant changes.

Share-Based Payments

The fair value method of accounting is used for share-based payment transactions. Under this method, the cost of share options and other equity-settled share-based payment arrangements is recorded based on the estimated fair value at the grant date, including an estimate of the forfeiture rate, and charged to other operating income (expense) over the vesting period. For employees eligible for normal retirement prior to vesting, the expense is charged to other operating income (expense) over the period from the grant date to the date they are eligible for retirement.

3. Summary of Significant Accounting Policies (continued)

Share-based payment expense relating to cash-settled awards, including deferred, restricted, performance and performance deferred share units, is accrued over the vesting period of the units based on the quoted market value of Class B subordinate voting shares. Performance share units (PSUs) and performance deferred share units (PDSUs) have two additional vesting factors determined by our total shareholder return in comparison to a group of specified companies and by the ratio of the change in our earnings before interest, taxes, depreciation and amortization (EBITDA) over the vesting period of the share unit to the change in a specified weighted commodity price index. As these awards will be settled in cash, the expense and liability are adjusted each reporting period for changes in the underlying share price as well as changes to the above-noted vesting factors, as applicable.

Share Repurchases

Where we repurchase any of our equity share capital, the excess of the consideration paid over book value is deducted from retained earnings.

Provisions

Decommissioning and restoration provisions

Future obligations to retire an asset and to restore a site, including dismantling, remediation and ongoing treatment and monitoring of the site related to normal operations, are initially recognized and recorded as a provision based on estimated future cash flows discounted at a credit-adjusted risk-free rate. This decommissioning and restoration provision is adjusted at each reporting period for changes to factors including the expected amount of cash flows required to discharge the liability, the timing of such cash flows and the discount rate.

The provisions are also accreted to full value over time through periodic charges to profit. This unwinding of the discount is charged to finance expense in the statement of income.

The amount of the decommissioning and restoration provision initially recognized is capitalized as part of the related asset's carrying value. The method of depreciation follows that of the underlying asset. For a closed site or where the asset that generated a decommissioning and restoration provision no longer exists, there is no longer any future benefit related to the costs, and as such, the amounts are expensed through other operating income (expense). For operating sites, a revision in estimates or a new disturbance will result in an adjustment to the provision with an offsetting adjustment to the capitalized asset retirement cost.

During the operating life of an asset, events such as infractions of environmental laws or regulations may occur. These events are not related to the normal operation of the asset. The costs associated with these provisions are accrued and charged to other operating income (expense) in the period in which the event giving rise to the liability occurs. Changes in the estimated liability resulting in an adjustment to the provision are also charged to other operating income (expense) in the period in which the estimate changes.

Other provisions

Provisions are recognized when a present legal or constructive obligation exists as a result of past events, and it is probable that an outflow of resources that can be reliably estimated will be required to settle the obligation. Where the effect is material, the provision is discounted using an appropriate credit-adjusted risk-free rate.

Research and Development

Research costs are expensed as incurred. Development costs are only capitalized when the product or process is clearly defined; the technical feasibility has been established; the future market for the product or process is clearly defined; and we are committed, and have the resources, to complete the project.

Earnings per Share

Earnings per share is calculated based on the weighted average number of shares outstanding during the year. For diluted earnings per share, dilution is calculated based upon the net number of common shares issued should "in-the-money" options and warrants be exercised and the proceeds be used to repurchase common shares at the average market price in the year.

4. Areas of Judgment and Estimation Uncertainty

In preparing our consolidated financial statements, we make judgments in applying our accounting policies. The judgments that have the most significant effect on the amounts recognized in our financial statements are outlined below. In addition, we make assumptions about the future in deriving estimates used in preparing our consolidated financial statements. We have outlined below information about assumptions and other sources of estimation uncertainty as at December 31, 2019 that have a risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next year.

a) Areas of Judgment

Assessment of Impairment Indicators

Judgment is required in assessing whether certain factors would be considered an indicator of impairment or impairment reversal. We consider both internal and external information to determine whether there is an indicator of impairment or impairment reversal present and, accordingly, whether impairment testing is required. The information we consider in assessing whether there is an indicator of impairment or impairment reversal includes, but is not limited to, market transactions for similar assets, commodity prices, interest rates, inflation rates, our market capitalization, reserves and resources, mine plans and operating results.

As at December 31, 2019, as a result of lower market expectations for Western Canadian Select (WCS) heavy oil prices, we reviewed our energy assets for impairment. For our interest in Fort Hills, we determined that the reduction in WCS heavy oil prices was an indicator of impairment under the requirements of IAS 36, Impairment of Assets and accordingly, we performed an impairment test (Note 8(a)).

The remainder of our energy assets are oil sands properties, the most significant of which is our Frontier oil sands project. These assets are considered exploration and evaluation assets and accordingly, our assessment of impairment indicators is performed under the requirements of IFRS 6, Exploration for and Evaluation of Mineral Resources. We determined that our withdrawal of our Frontier oil sands property from the regulatory review process was an indicator of impairment and consequently, we recorded an impairment of Frontier as at December 31, 2019 (Note 8(a)).

Property, Plant and Equipment and Intangible Assets – Determination of Available for Use Date

Judgment is required in determining the date that property, plant and equipment or an intangible asset is available for use. An asset is available for use when it is in the location and condition necessary to operate in the manner intended by management. At that time, we commence depreciation of the asset and cease capitalization of borrowing costs. We consider a number of factors in making the determination of when an asset is available for use including, but not limited to, design capacity of the asset, production levels achieved, capital spending remaining and commissioning status. Fort Hills produced first oil in January 2018 and was considered available for use as at June 1, 2018. When concluding that these assets were available for use at June 1, 2018, we considered whether all three secondary extraction trains were running as expected, whether the production and product quality were consistent with expectations, and the status of asset commissioning. We have included the operating results for Fort Hills in our consolidated statements of income from that date forward.

4. Areas of Judgment and Estimation Uncertainty (continued)

Joint Arrangements

We are a party to a number of arrangements over which we do not have control. Judgment is required in determining whether joint control over these arrangements exists and, if so, which parties have joint control and whether each arrangement is a joint venture or joint operation. In assessing whether we have joint control, we analyze the activities of each arrangement and determine which activities most significantly affect the returns of the arrangement over its life. These activities are determined to be the relevant activities of the arrangement. If unanimous consent is required over the decisions about the relevant activities, the parties whose consent is required would have joint control over the arrangement. The judgments around which activities are considered the relevant activities of the arrangement are subject to analysis by each of the parties to the arrangement and may be interpreted differently. When performing this assessment, we generally consider decisions about activities such as managing the asset while it is being designed, developed and constructed, during its operating life and during the closure period. We may also consider other activities including the approval of budgets, expansion and disposition of assets, financing, significant operating and capital expenditures, appointment of key management personnel, representation on the board of directors and other items. When circumstances or contractual terms change, we reassess the control group and the relevant activities of the arrangement.

If we have joint control over the arrangement, an assessment of whether the arrangement is a joint venture or joint operation is required. This assessment is based on whether we have rights to the assets, and obligations for the liabilities, relating to the arrangement or whether we have rights to the net assets of the arrangement. In making this determination, we review the legal form of the arrangement, the terms of the contractual arrangement and other facts and circumstances. In a situation where the legal form and the terms of the contractual arrangement do not give us rights to the assets and obligations for the liabilities, an assessment of other facts and circumstances is required, including whether the activities of the arrangement are primarily designed for the provision of output to the parties and whether the parties are substantially the only source of cash flows contributing to the arrangement. The consideration of other facts and circumstances may result in the conclusion that a joint arrangement is a joint operation. This conclusion requires judgment and is specific to each arrangement. Other facts and circumstances have led us to conclude that Antamina and Fort Hills are joint operations for the purposes of our consolidated financial statements. The other facts and circumstances considered for both of these arrangements include the provision of output to the parties of the joint arrangements and the funding obligations. For both Antamina and Fort Hills, we will take our share of the output from the assets directly over the life of the arrangement. We have concluded that this gives us direct rights to the assets and obligations for the liabilities of these arrangements proportionate to our ownership interests.

Streaming Transactions

When we enter into a long-term streaming arrangement linked to production at specific operations, judgment is required in assessing the appropriate accounting treatment for the transaction on the closing date and in future periods. We consider the specific terms of each arrangement to determine whether we have disposed of an interest in the reserves and resources of the respective operation or executed some other form of arrangement. This assessment considers what the counterparty is entitled to and the associated risks and rewards attributable to them over the life of the operation. These include the contractual terms related to the total production over the life of the arrangement as compared to the expected production over the life of the mine, the percentage being sold, the percentage of payable metals produced, the commodity price referred to in the ongoing payment and any guarantee relating to the upfront payment if production ceases.

For our silver and gold streaming arrangements at Antamina and Carmen de Andacollo, respectively, there is no guarantee associated with the upfront payment. We have concluded that control of the rights to the silver and gold mineral interests were transferred to the buyers when the contracts came into effect. Therefore, we consider these arrangements a disposition of a mineral interest.

Based on our judgment, control of the interest in the reserves and resources transferred to the buyer when the contracts were executed. At that time, we recognized the amount of the gain related to the disposition of the reserves and resources as we had the right to payment, the customer was entitled to the commodities, the buyer had no recourse in requiring Teck to mine the product, and the buyer had significant risks and rewards of ownership of the reserves and resources.

We recognize the amount of consideration related to refining, mining and delivery services as the work is performed.

4. Areas of Judgment and Estimation Uncertainty (continued)

Deferred Tax Assets and Liabilities

Judgment is required in assessing whether deferred tax assets and certain deferred tax liabilities are recognized on the balance sheet and what tax rate is expected to be applied in the year when the related temporary differences reverse, particularly in regard to the utilization of tax loss carryforwards. We also evaluate the recoverability of deferred tax assets based on an assessment of our ability to use the underlying future tax deductions before they expire against future taxable income. Deferred tax liabilities arising from temporary differences on investments in subsidiaries, joint ventures and associates are recognized unless the reversal of the temporary differences is not expected to occur in the foreseeable future and can be controlled. Judgment is also required on the application of income tax legislation. These judgments are subject to risk and uncertainty and could result in an adjustment to the deferred tax provision and a corresponding credit or charge to profit.

b) Sources of Estimation Uncertainty

Impairment Testing

When impairment testing is required, discounted cash flow models are used to determine the recoverable amount of respective assets. These models are prepared internally or with assistance from third-party advisors when required. When market transactions for comparable assets are available, these are considered in determining the recoverable amount of assets. Significant assumptions used in preparing discounted cash flow models include commodity prices, reserves and resources, mine production, operating costs, capital expenditures, discount rates, foreign exchange rates and inflation rates. Note 8 outlines the significant inputs used when performing goodwill and other asset impairment testing. These inputs are based on management's best estimates of what an independent market participant would consider appropriate. Changes in these inputs may alter the results of impairment testing, the amount of the impairment charges or reversals recorded in the statement of income and the resulting carrying values of assets.

Estimated Recoverable Reserves and Resources

Mineral and oil reserve and resource estimates are based on various assumptions relating to operating matters as set forth in National Instrument 43-101, *Standards of Disclosure for Mineral Projects* and National Instrument 51-101, *Standards of Disclosure for Oil and Gas Activities*. Assumptions used include production costs, mining and processing recoveries, cut-off grades, sales volumes, long-term commodity prices, exchange rates, inflation rates, tax and royalty rates and capital costs. Cost estimates are based on pre-feasibility or feasibility study estimates or operating history. Estimates are prepared by or under the supervision of appropriately qualified persons, or qualified reserves evaluators, but will be affected by forecasted commodity prices, inflation rates, exchange rates, capital and production costs, and recoveries, among other factors. Estimated recoverable reserves and resources are used to determine the depreciation of property, plant and equipment at operating mine sites, in accounting for capitalized production stripping costs, in performing impairment testing, and in forecasting the timing of settlement of decommissioning and restoration costs. Therefore, changes in the assumptions used could affect the carrying value of assets, depreciation and impairment charges recorded in the statement of income and the carrying value of the decommissioning and restoration provision.

Decommissioning and Restoration Provisions

The decommissioning and restoration provision (DRP) is based on future cost estimates using information available at the balance sheet date that are developed by management's experts (Note 23(a)). The DRP represents the present value of estimated costs of future decommissioning and other site restoration activities including costs associated with the management of water and water quality in and around each closed site. The DRP is adjusted at each reporting period for changes to factors such as the expected amount of cash flows required to discharge the liability, the timing of such cash flows and the credit-adjusted discount rate. The DRP requires other significant estimates and assumptions, including the requirements of the relevant legal and regulatory framework and the timing, extent and costs of required decommissioning and restoration activities. Our estimates of the cost associated with the management of water and water quality in and around each closed site includes assumptions with respect to the volume and location of water to be treated, the methods used to treat the water and the related water treatment costs. To the extent the actual costs differ from these estimates, adjustments will be recorded and the income statement may be affected.

4. Areas of Judgment and Estimation Uncertainty (continued)

Provision for Income Taxes

We calculate current and deferred tax provisions for each of the jurisdictions in which we operate. Actual amounts of income tax expense are not final until tax returns are filed and accepted by the relevant authorities. This occurs subsequent to the issuance of our financial statements, and the final determination of actual amounts may not be completed for a number of years. Therefore, profit in subsequent periods will be affected by the amount that estimates differ from the final tax return.

Deferred Tax Assets and Liabilities

Assumptions about the generation of future taxable profits and repatriation of retained earnings depend on management's estimates of future production and sales volumes, commodity prices, reserves and resources, operating costs, decommissioning and restoration costs, capital expenditures, dividends and other capital management transactions. These estimates could result in an adjustment to the deferred tax provision and a corresponding credit or charge to profit.

5. Transactions

a) SMM/SC Subscription

On March 29, 2019, Sumitomo Metal Mining Co., Ltd. and Sumitomo Corporation (together referred to as SMM/SC) subscribed for a 30% indirect interest in QBSA, which owns the Quebrada Blanca Phase 2 (QB2) copper development project located in Northern Chile. Post-transaction, QBSA's effective ownership is 60% Teck, 30% SMM/SC and 10% Empresa Nacional de Minería (ENAMI). ENAMI, a Chilean State agency, holds a preference share interest in QBSA, which does not require ENAMI to make contributions toward QBSA capital spending.

To subscribe for the indirect 30% interest in QBSA, SMM/SC made $900 million (US$673 million) of loan advances, net of financing fees of $7 million (US$6 million), and $797 million (US$600 million) of equity contributions during 2019. Together these loan advances and equity contributions totalled $1.704 billion (US$1.279 billion). This represented US$1.2 billion of contributions agreed to by SMM/SC plus a matching contribution from SMM/SC of 50% of the capital expenditures funded by us from January 1, 2019 to the closing date. SMM/SC made additional contributions of $38 million (US$29 million) for interest on the loan advances during 2019.

SMM/SC have agreed to make a supplemental payment of US$50 million if QB2 mill throughput reaches 154,000 tonnes per day prior to the earlier of the sanctioning of a major expansion or December 31, 2025. We have recorded a financial receivable in the amount of $35 million (US$27 million) for this contingent supplemental payment, which reflects its estimated fair value as at December 31, 2019. SMM/SC have also agreed to make an additional supplemental payment if they elect to participate in the funding of a major expansion project (QB3), if it is sanctioned before December 31, 2031, by contributing an additional amount equal to 8% of the incremental net present value of QB3 at the expansion sanction date in addition to their *pro rata* share of expansion project costs. We will record a financial receivable if and when QB3 is sanctioned and SMM/SC choose to participate.

Based on the provisions of the shareholders agreement, we retain control of QBSA and continue to consolidate its results. This transaction was considered a change in the ownership interest of a subsidiary that we control and accordingly, we accounted for this as an equity transaction. We have correspondingly recorded a non-controlling interest for SMM/SC's interest in QBSA, which was $782 million as at December 31, 2019.

5. Transactions (continued)

In conjunction with the process to bring in an additional funding partner for QB2, we amended the terms of the QBSA shareholders agreement with ENAMI. The revised terms clarified shareholders' rights and responsibilities regarding the development and financing of QB2 and any major project expansion. The revised terms provide ENAMI with a preferential dividend stream, which is partly determined by the amount of interest on subordinated loans provided to QBSA by us and SMM/SC. The preferential dividend stream was recorded as a financial liability within provisions and other liabilities in the amount of $118 million, concurrent with the closing of the SMM/SC transaction described above. The initial recognition of the liability was recorded as a reduction to non-controlling interests as it arises from a transaction between shareholders of QBSA. The financial liability was initially measured at fair value using a discounted cash flow model based on the estimated subordinated financing provided by us and SMM/SC. Significant assumptions used in the valuation include the interest rate on the subordinated loans and copper prices, which affect the timing of when QBSA repays the subordinated loans. The liability is subsequently measured at amortized cost. As at December 31, 2019, the liability is $82 million. The decrease in the financial liability of $36 million in the year was primarily due to changes in estimated interest cash flows from changes in interest rates. This change is recorded in non-operating income (expense) (Note 11).

b) Advances from SMM/SC

In conjunction with the subscription arrangement with SMM/SC, QBSA entered into a subordinated loan facility agreement with SMM/SC to advance QBSA up to US$1.3 billion. The advances are due to be repaid in full at maturity on January 15, 2038. Amounts outstanding under the facility bear interest at LIBOR plus an applicable margin. The carrying value of the advances approximates fair value based on prevailing market interest rates in effect at December 31, 2019. This is considered a Level 2 fair value measurement with significant other observable inputs on the fair value hierarchy (Note 30).

($ in millions)	US$	CAD$ Equivalent
	2019	2019
As at January 1	$ –	$ –
Cash flows		
Advances	708	946
Finance fees paid	(6)	(8)
Non-cash changes		
Changes in foreign exchange rates	–	(26)
As at December 31	**$ 702**	**$ 912**

c) QB2 Project Financing

On November 18, 2019, we closed our US$2.5 billion limited recourse project financing facility to fund the development of the QB2 project. As at December 31, 2019, the facility was undrawn. Amounts drawn under the facility will bear interest at LIBOR plus applicable margins that vary over time and will be repaid in 17 semi-annual instalments starting the earlier of six months after project completion or June 2023. These project finance loans are guaranteed pre-completion on a several basis by Teck, SMM and SC *pro rata* to the respective equity interests in the Series A shares of QBSA. The loans are secured by pledges of Teck's and SMM/SC's interests in QBSA and by security over QBSA's assets, which consist primarily of QB2 project assets.

d) Quebrada Blanca – 2018

In 2018, we acquired an additional 13.5% interest in QBSA through the purchase of Inversiones Mineras S.A. (IMSA), a private Chilean company. This acquisition brought our interest in QBSA from 76.5% to 90%, prior to the SMM/SC subscription in QBSA described in Note 5(a).

The purchase price consisted of US$53 million paid in cash on closing, an additional US$60 million paid in 2018 on the issuance of the major approval of the social and environmental impact assessment for QB2 and a further US$50 million payable within 30 days of the commencement of commercial production at QB2. Additional amounts may become payable to the extent that average copper prices exceed US$3.15 per pound in each of the first three years following commencement of commercial production, up to a cumulative maximum of US$100 million if commencement of commercial production occurs prior to January 21, 2024 or up to a lesser maximum in certain circumstances thereafter.

5. Transactions (continued)

This transaction was considered a change in the ownership interest of a subsidiary that we control and accordingly, we accounted for this as an equity transaction. At the acquisition date, we recorded a cash payment of $67 million and liabilities for the estimated fair value of amounts due in the future, which are recorded in provisions and other liabilities on the balance sheet. The total fair value of $175 million was recorded as a reduction in non-controlling interests and equity attributable to shareholders of $16 million and $159 million, respectively, as at December 31, 2018.

e) Waneta Dam Sale

During 2018, the transaction for the sale of our two-thirds interest in the Waneta Dam and related transmission assets to BC Hydro closed. As part of the sale, we entered into a 20-year arrangement to purchase power for our Trail Operations, with an option to extend the arrangement for a further 10 years on comparable terms. We recognized this transaction as a disposition of the Waneta Dam and related transmission assets and recorded a pre-tax gain, net of transaction costs, of $888 million (after-tax $812 million) based on proceeds of $1.203 billion. The gain was recorded in other operating income (expense) (Note 9). The power supply arrangement is accounted for as an ongoing cost to operate and is recorded in cost of sales.

6. Revenues

a) Total Revenues by Major Product Type and Business Unit

The following table shows our revenue disaggregated by major product type and by business unit. Our business units are reported based on the primary products that they produce and are consistent with our reportable segments (Note 28) that have revenue from contracts with customers. A business unit can have revenue from more than one commodity as it can include an operation that produces more than one product. Intra-segment revenues are accounted for at current market prices as if the sales were made to arm's-length parties and are eliminated on consolidation.

(CAD$ in millions)	2019				
	Steelmaking Coal	**Copper**	**Zinc**	**Energy**	**Total**
Steelmaking coal	$ 5,522	$ –	$ –	$ –	$ 5,522
Copper	–	2,158	–	–	2,158
Zinc	–	163	2,366	–	2,529
Blended bitumen	–	–	–	975	975
Silver	–	24	376	–	400
Lead	–	5	395	–	400
Other	–	119	350	–	469
Intra-segment	–	–	(519)	–	(519)
	$ 5,522	**$ 2,469**	**$ 2,968**	**$ 975**	**$ 11,934**

6. **Revenues** (continued)

(CAD$ in millions)	2018				
	Steelmaking Coal	**Copper**	**Zinc**	**Energy[1]**	**Total**
Steelmaking coal	$ 6,349	$ –	$ –	$ –	$ 6,349
Copper	–	2,242	–	–	2,242
Zinc	–	279	2,701	–	2,980
Blended bitumen	–	–	–	407	407
Silver	–	18	306	–	324
Lead	–	–	419	–	419
Other	–	175	318	–	493
Intra-segment	–	–	(650)	–	(650)
	$ 6,349	**$ 2,714**	**$ 3,094**	**$ 407**	**$ 12,564**

Note:
1) Includes revenue for Fort Hills from June 1, 2018.

b) Total Revenues by Regions

The following table shows our revenue disaggregated by geographical region. Revenues are attributed to regions based on the destination port or delivery location as designated by the customer.

(CAD$ in millions)	**2019**	**2018**
Asia		
China	**$ 1,983**	$ 2,060
Japan	**1,813**	1,880
South Korea	**1,174**	1,515
India	**947**	981
Other	**1,077**	1,207
Americas		
United States	**1,617**	1,609
Canada	**1,376**	932
Latin America	**236**	297
Europe		
Germany	**486**	561
Finland	**263**	242
Netherlands	**176**	240
Other	**786**	1,040
	$ 11,934	$ 12,564

7. Expenses by Nature

(CAD$ in millions)	2019	2018
Employment-related costs:		
Wages and salaries	**$ 1,057**	$ 1,005
Employee benefits and other wage-related costs	**280**	247
Bonus payments	**207**	191
Post-employment benefits and pension costs	**105**	112
	1,649	1,555
Transportation	**1,476**	1,408
Depreciation and amortization	**1,619**	1,483
Raw material purchases	**974**	914
Fuel and energy	**881**	830
Operating supplies consumed	**743**	640
Maintenance and repair supplies	**742**	775
Contractors and consultants	**768**	738
Overhead costs	**277**	365
Royalties	**343**	370
Other operating costs	**45**	15
	9,517	9,093
Adjusted for:		
Capitalized production stripping costs	**(680)**	(707)
Change in inventory	**52**	(197)
Total cost of sales, general and administration, exploration and research and innovation expenses	**$ 8,889**	$ 8,189

Approximately 24% (2018 – 26%) of our costs are incurred at our foreign operations where the functional currency is the U.S. dollar.

8. Asset and Goodwill Impairment Testing

a) Asset Impairments

The following pre-tax asset impairments were recorded in the statement of income:

Asset Impairments

(CAD$ in millions)	2019	2018
Fort Hills CGU	**$ (1,241)**	$ –
Frontier oil sands project	**(1,129)**	–
Steelmaking coal CGU	**(289)**	–
Other	**(31)**	(41)
Total	**$ (2,690)**	$ (41)

Fort Hills CGU

As at December 31, 2019, we recorded a pre-tax impairment of $1.2 billion (after-tax $910 million) related to our interest in Fort Hills. The estimated post-tax recoverable amount of our interest in the Fort Hills CGU of $3.1 billion was lower than our carrying value. This impairment arose as a result of lower market expectations for future Western Canadian Select (WCS) heavy oil prices. The impairment affected the profit (loss) of our energy operating segment (Note 28).

8. Asset and Goodwill Impairment Testing (continued)

Cash flow projections used in the 2019 analysis were based on current life of mine plans at the testing date and cash flows covered a period of 40 years.

Frontier Oil Sands Project

As at December 31, 2019, we recorded a pre-tax impairment of $1.1 billion (after-tax $944 million) related to our Frontier oil sands project. This impairment arose as a result of our decision to withdraw Frontier from the regulatory review process. We have written down the full carrying value of our interest in the Frontier oil sands project. The impairment affected the profit (loss) of our energy operating segment (Note 28).

Steelmaking Coal CGU

As a result of our decision not to proceed with the Mackenzie-Redcap extension and the short remaining mine life, combined with a decrease in short-term steelmaking coal prices, we recorded a pre-tax impairment of $289 million (after-tax $184 million) of our Cardinal River Operations as at December 31, 2019. The impairment affected the profit (loss) of our steelmaking coal operating segment (Note 28). Our Cardinal River Operations has been written down to the residual value of the remaining mobile equipment.

Other

During the year ended December 31, 2019, we recorded an asset impairment of $31 million related to our remaining cathode operations at Quebrada Blanca.

During the year ended December 31, 2018, we recorded asset impairments of $41 million, of which $31 million was related to capitalized exploration expenditures that are not expected to be recovered and $10 million related to Quebrada Blanca assets that will not be recovered through use.

Sensitivity Analysis

The key inputs used in our determination of recoverable amounts interrelate significantly with each other and with our operating plans. For example, a decrease in long-term commodity prices would result in us making amendments to the mine plans that would partially offset the effect of lower prices through lower operating and capital costs. It is difficult to determine how all of these factors would interrelate, but in estimating the effect of changes in these assumptions on fair values, we believe that all of these factors need to be considered together. A linear extrapolation of these effects becomes less meaningful as the change in assumption increases.

The recoverable amount of our Fort Hills CGU is most sensitive to changes in WCS heavy oil prices, the Canadian/U.S. dollar exchange rates and discount rates. Ignoring the above described interrelationships, in isolation a US$1 decrease in the real long-term WCS heavy oil price would result in a reduction in the recoverable amount of approximately $135 million. A $0.01 strengthening of the Canadian dollar against the U.S. dollar would result in a reduction in the recoverable amount of approximately $50 million. A 25 basis point increase in the discount rate would result in a reduction in the recoverable amount of approximately $110 million.

b) Annual Goodwill Impairment Testing

The allocation of goodwill to CGUs or groups of CGUs reflects how goodwill is monitored for internal management purposes. Our Quebrada Blanca CGU and steelmaking coal CGU have goodwill allocated to them (Note 17). The Quebrada Blanca CGU primarily relates to QB2.

We did not identify any goodwill impairment indicators during 2019. We performed our annual goodwill impairment testing at October 31, 2019, calculating the recoverable amount on a FVLCD basis and did not identify any goodwill impairment losses.

Cash flow projections are based on expected mine life. For our steelmaking coal operations, the cash flows cover periods of 1 to 50 years, with a steady state thereafter until reserves and resources are exhausted. For Quebrada Blanca, the cash flow covers 30 years, with our estimate of cash flows thereafter until reserves and resources are exhausted.

8. Asset and Goodwill Impairment Testing (continued)

Given the nature of expected future cash flows used to determine the recoverable amount, a material change could occur over time as the cash flows are significantly affected by the key assumptions described below in Note 8(c).

Sensitivity Analysis

Our annual goodwill impairment test carried out at October 31, 2019 resulted in the recoverable amount of our steelmaking coal CGU exceeding its carrying value by approximately $4.8 billion. The recoverable amount of our steelmaking coal CGU is most sensitive to the long-term Canadian dollar steelmaking coal price assumption. In isolation, a 10% decrease in the long-term Canadian dollar steelmaking coal price would result in the recoverable amount of the steelmaking coal CGU being equal to the carrying value.

The recoverable amount of our Quebrada Blanca CGU exceeded its carrying amount by approximately $798 million at the date of our annual goodwill impairment testing. The recoverable amount of our Quebrada Blanca CGU is most sensitive to the long-term copper price assumption. In isolation, a 5% decrease in the long-term copper price would result in the recoverable amount of the Quebrada Blanca CGU being equal to its carrying value.

c) Key Assumptions

The following are the key assumptions used in our impairment testing calculations during the years ended December 31, 2019 and 2018:

	2019	**2018**
WCS heavy oil prices	**Current price used in initial year, increased to a real long-term price in 2024 of US$50 per barrel**	N/A
Steelmaking coal prices	**Current price used in initial year, increased to a real long-term price in 2024 of US$150 per tonne**	Current price used in initial year, decreased to a real long-term price in 2023 of US$150 per tonne
Copper prices	**Current price used in initial year, increased to a real long-term price in 2024 of US$3.00 per pound**	Current price used in initial year, increased to a real long-term price in 2023 of US$3.00 per pound
Discount rate	**5.4%—6.0%**	6.0%
Long-term foreign exchange rate	**1 U.S. to 1.30 Canadian dollars**	1 U.S. to 1.25 Canadian dollars
Inflation rate	**2%**	2%

Commodity Prices

Commodity price assumptions are based on a number of factors, including forward curves in the near term, and are benchmarked with external sources of information, including information published by our peers and market transactions, where possible, to ensure they are within the range of values used by market participants.

Discount Rates

Discount rates are based on a mining weighted average cost of capital for all mining operations and an oil sands weighted average cost of capital for Fort Hills. For the year ended December 31, 2019, we used a discount rate of 6.0% real, 8.1% nominal post-tax (2018 – 6.0% real, 8.1% nominal post-tax) for mining operations and goodwill. For the year ended December 31, 2019, we used a discount rate of 5.4% real, 7.5% nominal post-tax for oil sands operations.

Foreign Exchange Rates

Foreign exchange rates are benchmarked with external sources of information based on a range used by market participants. Long-term foreign exchange assumptions are from year 2024 onwards for analysis performed in the year ended December 31, 2019 and are from year 2023 onwards for analysis performed in the year ended December 31, 2018.

8. Asset and Goodwill Impairment Testing (continued)

Inflation Rates

Inflation rates are based on average historical inflation for the location of each operation and long-term government targets.

Reserves and Resources

Future mineral and oil production is included in projected cash flows based on mineral and oil reserve and resource estimates and on exploration and evaluation work undertaken by appropriately qualified persons or qualified reserves evaluators.

Operating Costs and Capital Expenditures

Operating costs and capital expenditures are based on life of mine plans and internal management forecasts. Cost estimates incorporate management experience and expertise, current operating costs, the nature and location of each operation, and the risks associated with each operation. Future capital expenditures are based on management's best estimate of expected future capital requirements, which are generally for the extraction and processing of existing reserves and resources. All committed and anticipated capital expenditures based on future cost estimates have been included in the projected cash flows. Operating cost and capital expenditure assumptions are subject to ongoing optimization and review by management.

Recoverable Amount Basis

In the absence of a relevant market transaction, we estimate the recoverable amount of our CGUs on a FVLCD basis using a discounted cash flow methodology, taking into account assumptions likely to be made by market participants unless it is expected that the value-in-use methodology would result in a higher recoverable amount. For the asset impairment and goodwill impairment analyses performed in 2019 and 2018, we have applied the FVLCD basis. These estimates are classified as a Level 3 measurement within the fair value measurement hierarchy (Note 30).

9. Other Operating Income (Expense)

(CAD$ in millions)	**2019**	2018
Settlement pricing adjustments (Note 29(b))	**$ (49)**	$ (117)
Share-based compensation	**(4)**	(59)
Environmental costs	**(197)**	(20)
Care and maintenance costs	**(36)**	(11)
Social responsibility and donations	**(18)**	(18)
Loss on sale of assets	**(20)**	(3)
Commodity derivatives	**17**	(36)
Take or pay contract costs	**(123)**	(106)
Waneta Dam sale (Note 5(e))	**–**	888
Other	**(75)**	(68)
	$ (505)	$ 450

10. Finance Income and Finance Expense

(CAD$ in millions)	2019	2018
Finance income		
Investment income	**$ 48**	$ 33
Total finance income	**$ 48**	$ 33
Finance expense		
Debt interest	**$ 276**	$ 338
Interest on advances from SMM/SC	**41**	–
Interest on lease liabilities (Note 20(c))	**39**	24
Letters of credit and standby fees	**51**	65
Net interest expense on retirement benefit plans	**7**	6
Accretion on decommissioning and restoration provisions (Note 23(a))	**112**	101
Other	**15**	11
	541	545
Less capitalized borrowing costs (Note 16(b))	**(275)**	(293)
Total finance expense	**$ 266**	$ 252

11. Non-Operating Income (Expense)

(CAD$ in millions)	2019	2018
Foreign exchange gains (losses)	**$ (4)**	$ 16
Gain (loss) on debt prepayment option	**105**	(42)
Loss on debt redemption or purchase (Note 19(a))	**(224)**	(26)
Other	**26**	–
	$ (97)	$ (52)

12. Supplemental Cash Flow Information

(CAD$ in millions)	December 31, 2019	December 31, 2018
Cash and cash equivalents		
Cash	**$ 149**	$ 438
Investments with maturities from the date of acquisition of three months or less	**877**	1,296
	$ 1,026	$ 1,734

(CAD$ in millions)	2019	2018
Net change in non-cash working capital items		
Trade and settlements receivables	**$ 97**	$ 282
Prepaids and other current assets	**(69)**	(26)
Inventories	**16**	(338)
Trade accounts payable and other liabilities	**(204)**	53
	$ (160)	$ (29)

13. Inventories

(CAD$ in millions)	December 31, 2019	December 31, 2018
Supplies	**$ 721**	$ 693
Raw materials	**271**	300
Work in process	**491**	595
Finished products	**573**	539
	2,056	2,127
Less long-term portion (Note 14)	**(75)**	(62)
	$ 1,981	$ 2,065

Cost of sales of $8.6 billion (2018 – $7.9 billion) includes $7.9 billion (2018 – $7.3 billion) of inventories recognized as an expense during the year.

Total inventories held at net realizable value amounted to $95 million at December 31, 2019 (December 31, 2018 – $172 million). Total inventory write-downs in 2019 were $60 million (2018 – $82 million) and were included as part of cost of sales.

Long-term inventories consist of ore stockpiles and other in-process materials that are not expected to be processed within one year.

14. Financial and Other Assets

(CAD$ in millions)	December 31, 2019	December 31, 2018
Long-term receivables and deposits	**$ 268**	$ 220
Marketable equity and debt securities carried at fair value	**183**	167
Debt prepayment option	**–**	73
Pension plans in a net asset position (Note 22(a))	**360**	254
Long-term portion of inventories (Note 13)	**75**	62
Intangibles	**162**	80
Other	**61**	51
	$ 1,109	$ 907

15. Investments in Associates and Joint Ventures

(CAD$ in millions)	**NuevaUnión**	**Other**	**Total**
At January 1, 2018	$ 929	$ 14	$ 943
Contributions	48	–	48
Changes in foreign exchange rates	83	–	83
Share of loss	(2)	(1)	(3)
At December 31, 2018	$ 1,058	$ 13	$ 1,071
Contributions	67	1	68
Changes in foreign exchange rates	(52)	–	(52)
Share of loss	(2)	(1)	(3)
Other	–	(5)	(5)
At December 31, 2019	**$ 1,071**	**$ 8**	**$ 1,079**

16. Property, Plant and Equipment

(CAD$ in millions)	Exploration and Evaluation	Mineral Properties	Land, Buildings, Plant and Equipment	Capitalized Production Stripping Costs	Construction In Progress	Total
At December 31, 2017						
Cost	$ 1,774	$ 19,160	$ 12,948	$ 4,561	$ 5,430	$ 43,873
Accumulated depreciation	–	(5,359)	(7,206)	(2,263)	–	(14,828)
Net book value	**$ 1,774**	**$ 13,801**	**$ 5,742**	**$ 2,298**	**$ 5,430**	**$ 29,045**
Year ended December 31, 2018						
Opening net book value	$ 1,774	$ 13,801	$ 5,742	$ 2,298	$ 5,430	$ 29,045
Additions	144	86	710	761	1,135	2,836
Disposals	–	–	(12)	–	–	(12)
Asset impairments (Note 8)	(31)	(6)	(4)	–	–	(41)
Depreciation and amortization	–	(372)	(595)	(543)	–	(1,510)
Transfers between classifications	–	1,050	3,307	–	(4,357)	–
Decommissioning and restoration provision change in estimate	–	(250)	(29)	–	–	(279)
Capitalized borrowing costs (Note 10)	–	108	–	–	185	293
Other	–	(2)	56	–	–	54
Changes in foreign exchange rates	21	290	182	50	121	664
Closing net book value	**$ 1,908**	**$ 14,705**	**$ 9,357**	**$ 2,566**	**$ 2,514**	**$ 31,050**
At December 31, 2018						
Cost	$ 1,908	$ 20,444	$ 17,452	$ 5,435	$ 2,514	$ 47,753
Accumulated depreciation	–	(5,739)	(8,095)	(2,869)	–	(16,703)
Net book value	**$ 1,908**	**$ 14,705**	**$ 9,357**	**$ 2,566**	**$ 2,514**	**$ 31,050**
Year ended December 31, 2019						
Opening net book value	$ 1,908	$ 14,705	$ 9,357	$ 2,566	$ 2,514	$ 31,050
IFRS 16 adoption (Note 20 and Note 33)	–	–	280	–	–	280
Additions	119	–	201	757	3,076	4,153
Disposals	–	(2)	(53)	–	–	(55)
Asset impairments (Note 8)	(1,129)	(485)	(1,008)	(68)	–	(2,690)
Depreciation and amortization	–	(325)	(774)	(592)	–	(1,691)
Transfers between classifications	5	(112)	418	13	(324)	–
Decommissioning and restoration provision change in estimate	–	444	45	–	–	489
Capitalized borrowing costs (Note 10)	–	115	–	–	160	275
Changes in foreign exchange rates	(18)	(158)	(114)	(32)	(134)	(456)
Closing net book value	**$ 885**	**$ 14,182**	**$ 8,352**	**$ 2,644**	**$ 5,292**	**$ 31,355**
At December 31, 2019						
Cost	$ 885	$ 20,155	$ 16,951	$ 6,073	$ 5,292	$ 49,356
Accumulated depreciation	–	(5,973)	(8,599)	(3,429)	–	(18,001)
Net book value	**$ 885**	**$ 14,182**	**$ 8,352**	**$ 2,644**	**$ 5,292**	**$ 31,355**

16. **Property, Plant and Equipment** (continued)

a) Exploration and Evaluation

Significant exploration and evaluation projects in property, plant and equipment include Galore Creek and non-Fort Hills oil sands properties in Alberta.

b) Borrowing Costs

Borrowing costs are capitalized at a rate based on our weighted average cost of borrowing or at the rate on the project-specific debt, as applicable. Capitalized borrowing costs are classified with the asset they relate to within mineral properties, land, buildings, plant and equipment, or construction in progress. Our weighted average borrowing rate used for capitalization of borrowing costs in 2019 was 5.9% (2018 – 5.9%).

17. Goodwill

(CAD$ in millions)	**Steelmaking Coal Operations**	**Quebrada Blanca**	**Total**
January 1, 2018	$ 702	$ 385	$ 1,087
Changes in foreign exchange rates	–	34	34
December 31, 2018	$ 702	$ 419	$ 1,121
Changes in foreign exchange rates	–	(20)	(20)
December 31, 2019	**$ 702**	**$ 399**	**$ 1,101**

The results of our annual goodwill impairment analysis and key assumptions used in the analysis are outlined in Notes 8(b) and 8(c).

18. Trade Accounts Payable and Other Liabilities

(CAD$ in millions)	**December 31, 2019**	**December 31, 2018**
Trade accounts payable and accruals	**$ 1,307**	$ 1,185
Capital project accruals	**432**	201
Payroll-related liabilities	**274**	361
Accrued interest	**96**	102
Commercial and government royalties	**198**	211
Customer deposits	**46**	67
Current portion of provisions (Note 23(a))	**125**	155
Settlement payables (Note 29(b))	**16**	45
Other	**4**	6
	$ 2,498	$ 2,333

19. Debt

($ in millions)	**December 31, 2019**			December 31, 2018		
	Face Value (US$)	**Carrying Value (CAD$)**	**Fair Value (CAD$)**	Face Value (US$)	Carrying Value (CAD$)	Fair Value (CAD$)
4.5% notes due January 2021 (a)	**$ 117**	**$ 152**	**$ 155**	$ 117	$ 159	$ 159
4.75% notes due January 2022 (a)	**202**	**262**	**273**	202	275	275
3.75% notes due February 2023 (a)	**220**	**289**	**298**	220	295	286
8.5% notes due June 2024 (a)	**–**	**–**	**–**	600	819	883
6.125% notes due October 2035	**609**	**779**	**932**	609	818	802
6.0% notes due August 2040	**490**	**634**	**712**	490	666	621
6.25% notes due July 2041	**795**	**1,021**	**1,187**	795	1,072	1,031
5.2% notes due March 2042	**399**	**512**	**537**	399	537	465
5.4% notes due February 2043	**377**	**484**	**520**	377	509	449
	3,209	**4,133**	**4,614**	3,809	5,150	4,971
Antamina term loan due April 2020	**23**	**29**	**29**	23	31	31
	$ 3,232	**$ 4,162**	**$ 4,643**	$ 3,832	$ 5,181	$ 5,002
Less current portion of debt	**(23)**	**(29)**	**(29)**	–	–	–
	$ 3,209	**$ 4,133**	**$ 4,614**	$ 3,832	$ 5,181	$ 5,002

The fair values of debt are determined using market values, if available, and discounted cash flows based on our cost of borrowing where market values are not available. The latter are considered Level 2 fair value measurements with significant other observable inputs on the fair value hierarchy (Note 30).

On November 18, 2019, we closed our US$2.5 billion limited recourse project financing facility to fund the development of the QB2 project (Note 5(c)). As at December 31, 2019, the facility was undrawn.

a) Debt Transactions

During the year ended December 31, 2019, we redeemed all of the US$600 million principal amount of our outstanding 8.5% notes due in June 2024. The total cost of the redemption, which was funded from cash on hand, including the premiums, was US$638 million. We recorded a pre-tax expense of $224 million in non-operating income (expense) (Note 11) in connection with this redemption, of which $174 million was non-cash, relating to the derecognition of the embedded prepayment option derivative.

During the year ended December 31, 2018, we purchased US$1 billion aggregate principal amount of certain of our outstanding notes pursuant to cash tender offers. The principal amount of notes purchased was US$103 million of 4.5% notes due 2021, US$471 million of 4.75% notes due 2022, and US$426 million of 3.75% notes due 2023. The total cost of the purchases, which were funded from cash on hand, including the premiums, was US$1.01 billion. We recorded an expense of $26 million in non-operating income (expense) (Note 11) in connection with these purchases.

b) Optional Redemptions

All of our outstanding notes are redeemable at any time by repaying the greater of the principal amount and the present value of the sum of the remaining scheduled principal and interest amounts discounted at a comparable treasury yield plus a stipulated spread, plus, in each case, accrued interest to, but not including, the date of redemption. In addition, all of our outstanding notes, except for note due October 2035, are callable at 100% (plus accrued interest to, but not including, the date of redemption) within three to six months of maturity.

19. Debt (continued)

c) Revolving Facilities

Effective November 22, 2019, our US$4.0 billion committed revolving credit facility's maturity was extended to November 2024. The facility remains undrawn at December 31, 2019. Any amounts drawn under the facility can be repaid at any time and are due in full at maturity. Amounts outstanding under the facility bear interest at LIBOR plus an applicable margin based on credit ratings. The facility requires that our total net debt-to-capitalization ratio, which was 0.15 to 1.0 at December 31, 2019, not exceed 0.60 to 1.0.

With our return to investment grade credit ratings, letters of credit aggregating to $1.1 billion were cancelled during the year ended December 31, 2019 and our US$600 million committed revolving credit facility maturing November 2021 was terminated. As a result, we recorded an expense of $6 million relating to the derecognition of financing fees in non-operating income (expense) (Note 11) during the year ended December 31, 2019.

We maintain uncommitted bilateral credit facilities primarily for the issuance of letters of credit to support our future reclamation obligations. As at December 31, 2019, we were party to various uncommitted credit facilities providing for a total of $1.9 billion of capacity, and the aggregate outstanding letters of credit issued thereunder were $1.6 billion. In addition to the letters of credit outstanding under these uncommitted credit facilities, we also had stand-alone letters of credit of $453 million outstanding at December 31, 2019, which were not issued under a credit facility. These uncommitted credit facilities and stand-alone letters of credit are typically renewed on an annual basis.

We also have $450 million in surety bonds outstanding at December 31, 2019 to support current and future reclamation obligations.

d) Scheduled Principal Payments

At December 31, 2019, the scheduled principal payments during the next five years and thereafter are as follows:

($ in millions)	**US$**	**CAD$ Equivalent**
2020	$ 23	$ 29
2021	117	152
2022	202	262
2023	220	286
2024	–	–
Thereafter	2,670	3,469
	$ 3,232	$ 4,198

e) Debt Continuity

($ in millions)	**US$**		**CAD$ Equivalent**	
	2019	**2018**	**2019**	**2018**
As at January 1	**$ 3,798**	$ 4,827	**$ 5,181**	$ 6,056
Cash flows				
Scheduled debt repayments	**–**	(22)	**–**	(28)
Debt redemption or purchase	**(638)**	(1,015)	**(835)**	(1,327)
Non-cash changes				
Loss on debt redemption or purchase (a)	**38**	20	**50**	26
Changes in foreign exchange rates	**–**	–	**(244)**	471
Finance fees and discount amortization	**–**	–	**–**	1
Other	**6**	(12)	**10**	(18)
As at December 31	**$ 3,204**	$ 3,798	**$ 4,162**	$ 5,181

20. Leases

Note 33(a) provides disclosure on the effect of the adoption of IFRS 16.

a) Right-of-Use Assets

Our significant lease arrangements include contracts for leasing office premises, mining equipment, rail cars, pipelines and road and port facilities. As at December 31, 2019, $762 million of right-of-use assets are recorded as part of land, buildings, plant and equipment within property, plant and equipment.

(CAD$ in millions)	
Net book value as at December 31, 2018	$ 504
IFRS 16 adoption (Note 33(a))	280
Additions	155
Depreciation	(145)
Changes in foreign exchange rates and other	(32)
Closing net book value as at December 31, 2019	**$ 762**

b) Lease Liabilities

Minimum lease payments in respect of lease liabilities and the effect of discounting are as follows:

(CAD$ in millions)	**December 31, 2019**
Undiscounted minimum lease payments:	
Less than one year	**$ 162**
Two to three years	**193**
Four to five years	**109**
Thereafter	**676**
	1,140
Effect of discounting	**(468)**
Present value of minimum lease payments – total lease liabilities	**672**
Less current portion	**(160)**
Long-term lease liabilities	**$ 512**

Our most significant individual lease arrangements are as follows:

Fort Hills entered into a service agreement in 2017 with TC Energy Corp. for the operation of the Northern Courier Pipeline and associated tanks to transport bitumen between Fort Hills and Fort McMurray, Alberta, for a period of 25 years with an option to renew for four additional five-year periods. We have assumed the extensions will be exercised in our determination of the lease liability. As at December 31, 2019, our share of the related lease liability was $203 million.

TAK leases road and port facilities from the Alaska Industrial Development and Export Authority, through which it ships all concentrates produced at the Red Dog mine. The lease requires TAK to pay a minimum annual user fee of US$18 million for the next two years and US$6 million for the following 19 years. The lease is also subject to variable lease payments based on tonnage shipped and market prices for zinc over the lease term. As at December 31, 2019, the related lease liability was $119 million (US$92 million).

20. Leases (continued)

c) Lease Liability Continuity

(CAD$ in millions)	
As at December 31, 2018	$ 338
IFRS 16 adoption (Note 33(a))	342
Cash flows	
Principal payments	(150)
Interest payments	(39)
Non-cash changes	
Additions	170
Accretion (Note 10)	39
Changes in foreign exchange and other	(28)
As at December 31, 2019	**$ 672**

21. Income Taxes

a) Reconciliation of income taxes calculated at the Canadian statutory income tax rate to the actual provision for income taxes is as follows:

(CAD$ in millions)	**2019**	**2018**
Tax expense (recovery) at the Canadian statutory income tax rate of 26.94% (2018 – 27%)	**$ (126)**	$ 1,217
Tax effect of:		
Resource taxes	**226**	360
Resource and depletion allowances	**(85)**	(80)
Non-deductible expenses (non-taxable income)	**(6)**	(157)
Impact of initial recognition exemption related to the Frontier oil sands project	**117**	–
Tax pools not recognized (recognition of previously unrecognized tax pools)	**(2)**	4
Effect due to tax legislative changes	**(39)**	–
Withholding taxes on foreign earnings	**39**	47
Difference in tax rates in foreign jurisdictions	**(2)**	2
Revisions to prior year estimates	**2**	(21)
Other	**(4)**	(7)
Total income taxes	**$ 120**	$ 1,365
Represented by:		
Current income taxes	**$ 576**	$ 691
Deferred income taxes	**(456)**	674
Total income taxes	**$ 120**	$ 1,365

21. Income Taxes (continued)

b) The continuity related to deferred tax assets and liabilities is as follows:

(CAD$ in millions)	January 1, 2019[1]	Through Profit or Loss	Through OCI	Through Equity	December 31, 2019
Net operating loss carryforwards	$ 139	$ 54	$ (3)	$ –	$ 190
Property, plant and equipment	(130)	(13)	(1)	–	(144)
Decommissioning and restoration provisions	94	29	–	–	123
Other temporary differences	57	20	(26)	(9)	42
Deferred income tax assets	**$ 160**	**$ 90**	**$ (30)**	**$ (9)**	**$ 211**
Net operating loss carryforwards	$ (750)	$ 111	$ 3	$ (6)	$ (642)
Property, plant and equipment	7,402	(232)	(69)	–	7,101
Decommissioning and restoration provisions	(474)	(170)	7	–	(637)
U.S. alternative minimum tax credits	(38)	37	1	–	–
Unrealized foreign exchange	(146)	4	26	–	(116)
Withholding taxes	104	(8)	(5)	–	91
Inventories	97	(5)	(1)	–	91
Other temporary differences	116	(103)	1	–	14
Deferred income tax liabilities	**$ 6,311**	**$ (366)**	**$ (37)**	**$ (6)**	**$ 5,902**

(CAD$ in millions)	January 1, 2018	Through Profit or Loss	Through OCI	Through Equity	December 31, 2018
Net operating loss carryforwards	$ 58	$ 80	$ 1	$ –	$ 139
Property, plant and equipment	(189)	58	1	–	(130)
Decommissioning and restoration provisions	78	16	–	–	94
U.S. alternative minimum tax credits	143	(148)	5	–	–
Other temporary differences	64	(17)	10	–	57
Deferred income tax assets	**$ 154**	**$ (11)**	**$ 17**	**$ –**	**$ 160**
Net operating loss carryforwards	$ (1,065)	$ 312	$ 3	$ –	$ (750)
Property, plant and equipment	7,390	(94)	126	–	7,422
Decommissioning and restoration provisions	(754)	287	(7)	–	(474)
U.S. alternative minimum tax credits	–	(38)	–	–	(38)
Unrealized foreign exchange	(135)	29	(40)	–	(146)
Withholding taxes	79	18	7	–	104
Inventories	65	32	–	–	97
Other temporary differences	(1)	117	–	–	116
Deferred income tax liabilities	**$ 5,579**	**$ 663**	**$ 89**	**$ –**	**$ 6,331**

Note:
1. The January 1, 2019 balance for deferred income tax liabilities related to property, plant and equipment has been adjusted by $20 million for the adoption of IFRS 16 (Note 33).

21. **Income Taxes** (continued)

c) Deferred Tax Assets and Liabilities Not Recognized

We have not recognized $293 million (2018 – $300 million) of deferred tax assets associated with unused tax credits and tax pools in entities and jurisdictions that do not have established sources of taxable income. The majority of these unused tax credits and tax pools do not expire.

Deferred tax liabilities of approximately $759 million (2018 – $745 million) have not been recognized on the unremitted foreign earnings associated with investments in subsidiaries and interests in joint arrangements where we control the timing of the reversal of the temporary differences, and it is probable that such differences will not reverse in the foreseeable future.

d) Loss Carryforwards

At December 31, 2019, we had $2.56 billion of Canadian federal net operating loss carryforwards (2018 – $2.91 billion). These loss carryforwards expire at various dates between 2029 and 2039. The deferred tax benefit of this pool has been recognized.

e) Alberta Tax Rate Reform

During the year ended December 31, 2019, legislation was enacted to reduce the Alberta corporate tax rate from 12% to 8% over the next two and a half years. As a result, we recognized a deferred tax recovery of $39 million in 2019 and our current Canadian statutory income tax rate was reduced from 27% to 26.94%.

f) Scope of Antamina's Peruvian Tax Stability Agreement

In the first quarter of 2019, the Peruvian tax authority, La Superintendencia Nacional de Aduanas y de Administración Tributaria (SUNAT), issued an income tax assessment for the 2013 taxation year to Antamina (our joint operation in which we own a 22.5% share), denying accelerated depreciation claimed by Antamina in respect of a mill expansion and other assets, on the basis that the expansion was not covered by Antamina's tax stability agreement.

Antamina objected to the 2013 assessment, but lost its appeal with SUNAT during the year. In the fourth quarter, SUNAT raised similar assessments for the 2014 year. The issue also affects the 2015 to 2017 taxation years and we expect that it will be raised by SUNAT in those years as well.

Antamina intends to pursue the issue in the Peruvian courts. However, based on opinions of counsel, we have provided for the tax on this issue for all years possibly affected. The denial of accelerated depreciation claimed is a timing issue in our tax provision. Accordingly, we have recorded a current tax expense, offset by a deferred tax recovery that resulted in a net $2 million total tax expense adjustment.

Further, based on opinions of counsel, we believe that Antamina's position that interest and penalties are not owing in relation to this matter will more likely than not prevail for all taxation years in question. As a result, we have not provided for our share of interest and penalties for any years as at December 31, 2019.

22. Retirement Benefit Plans

We have defined contribution pension plans for certain groups of employees. Our share of contributions to these plans is expensed in the year earned by employees.

We have multiple defined benefit pension plans registered in various jurisdictions that provide benefits based principally on employees' years of service and average annual remuneration. These plans are only available to certain qualifying employees, and some are now closed to additional members. The plans are "flat-benefit" or "final-pay" plans and may provide for inflationary increases in accordance with certain plan provisions. All of our registered defined benefit pension plans are governed and administered in accordance with applicable pension legislation in either Canada or the United States. Actuarial valuations are performed at least every three years to determine minimum annual contribution requirements as prescribed by applicable legislation. For the majority of our plans, current service costs are funded based on a percentage of pensionable earnings or as a flat dollar amount per active member depending on the provisions of the pension plans. Actuarial deficits are funded in accordance with minimum funding regulations in each applicable jurisdiction. All of our defined benefit pension plans were actuarially valued within the past three years. While the majority of benefit payments are made from registered held-in-trust funds, there are also several unregistered and unfunded plans where benefit payment obligations are met as they fall due.

We also have several post-retirement benefit plans that provide post-retirement medical, dental and life insurance benefits to certain qualifying employees and surviving spouses. These plans are unfunded, and we meet benefit obligations as they come due.

22. Retirement Benefit Plans (continued)

a) Actuarial Valuation of Plans

(CAD$ in millions)	2019		2018	
	Defined Benefit Pension Plans	**Non-Pension Post-Retirement Benefit Plans**	**Defined Benefit Pension Plans**	**Non-Pension Post-Retirement Benefit Plans**
Defined benefit obligation				
Balance at beginning of year	**$ 2,125**	**$ 392**	$ 2,224	$ 455
Current service cost	**47**	**17**	50	19
Benefits paid	**(137)**	**(19)**	(139)	(19)
Interest expense	**78**	**16**	73	17
Obligation experience adjustments	**5**	**4**	26	(30)
Effect from change in financial assumptions	**220**	**45**	(127)	(35)
Effect from change in demographic assumptions	**5**	**(43)**	4	(20)
Changes in foreign exchange rates	**(6)**	**(8)**	14	5
Balance at end of year	**2,337**	**404**	2,125	392
Fair value of plan assets				
Fair value at beginning of year	**2,423**	**–**	2,510	–
Interest income	**90**	**–**	82	–
Return on plan assets, excluding amounts included in interest income	**265**	**–**	(84)	–
Benefits paid	**(137)**	**(19)**	(139)	(19)
Contributions by the employer	**23**	**19**	42	19
Changes in foreign exchange rates	**(5)**	**–**	12	–
Fair value at end of year	**2,659**	**–**	2,423	–
Funding surplus (deficit)	**322**	**(404)**	298	(392)
Less effect of the asset ceiling				
Balance at beginning of year	**134**	**–**	44	–
Interest on asset ceiling	**5**	**–**	1	–
Change in asset ceiling	**(76)**	**–**	89	–
Balance at end of year	**63**	**–**	134	–
Net accrued retirement benefit asset (liability)	**$ 259**	**$ (404)**	$ 164	$ (392)
Represented by:				
Pension assets (Note 14)	**$ 360**	**$ –**	$ 254	$ –
Accrued retirement benefit liability	**(101)**	**(404)**	(90)	(392)
Net accrued retirement benefit asset (liability)	**$ 259**	**$ (404)**	$ 164	$ (392)

A number of the plans have a surplus totalling $63 million at December 31, 2019 (December 31, 2018 – $134 million), which is not recognized on the basis that future economic benefits are not available to us in the form of a reduction in future contributions or a cash refund.

In 2019, we recorded a $43 million gain (2018 – $19 million) through other comprehensive income (loss) as a result of changes in assumptions related to a reduction in future Medical Services Plan premiums required for post-retirement benefit plan members in the province of British Columbia.

22. Retirement Benefit Plans (continued)

We expect to contribute $24 million to our defined benefit pension plans in 2020 based on minimum funding requirements. The weighted average duration of the defined benefit pension obligation is 14 years and the weighted average duration of the non-pension post-retirement benefit obligation is 15 years.

Defined contribution expense for 2019 was $50 million (2018 – $47 million).

b) Significant Assumptions

The discount rate used to determine the defined benefit obligations and the net interest cost was determined by reference to the market yields on high-quality debt instruments at the measurement date with durations similar to the duration of the expected cash flows of the plans.

Weighted average assumptions used to calculate the defined benefit obligation at the end of each year are as follows:

	2019		**2018**	
	Defined Benefit Pension Plans	**Non-Pension Post-Retirement Benefit Plans**	**Defined Benefit Pension Plans**	**Non-Pension Post-Retirement Benefit Plans**
Discount rate	**3.04%**	**3.10%**	3.78%	3.88%
Rate of increase in future compensation	**3.25%**	**3.25%**	3.25%	3.25%
Medical trend rate	**–**	**5.00%**	–	5.00%

c) Sensitivity of the defined benefit obligation to changes in the weighted average assumptions:

	2019		
	Effect on Defined Benefit Obligation		
	Change in Assumption	Increase in Assumption	Decrease in Assumption
Discount rate	**1.0%**	**Decrease by 12%**	**Increase by 14%**
Rate of increase in future compensation	**1.0%**	**Increase by 1%**	**Decrease by 1%**
Medical cost claim trend rate	**1.0%**	**Increase by 1%**	**Decrease by 1%**

	2018		
	Effect on Defined Benefit Obligation		
	Change in Assumption	Increase in Assumption	Decrease in Assumption
Discount rate	1.0%	Decrease by 12%	Increase by 14%
Rate of increase in future compensation	1.0%	Increase by 1%	Decrease by 1%
Medical cost claim trend rate	1.0%	Increase by 1%	Decrease by 1%

The above sensitivity analyses are based on a change in each actuarial assumption while holding all other assumptions constant. The sensitivity analyses on our defined benefit obligation are calculated using the same methods as those used for calculating the defined benefit obligation recognized on our balance sheet. The methods and types of assumptions used in preparing the sensitivity analyses did not change from the prior period.

22. **Retirement Benefit Plans** (continued)

d) Mortality Assumptions

Assumptions regarding future mortality are set based on management's best estimate in accordance with published mortality tables and expected experience. These assumptions translate into the following average life expectancies for an employee retiring at age 65:

	2019		**2018**	
	Male	**Female**	**Male**	**Female**
Retiring at the end of the reporting period	**85.3 years**	**87.7 years**	85.2 years	87.7 years
Retiring 20 years after the end of the reporting period	**86.3 years**	**88.6 years**	86.3 years	88.6 years

e) Significant Risks

The defined benefit pension plans and post-retirement benefit plans expose us to a number of risks, the most significant of which include asset volatility risk, changes in bond yields, and an increase in life expectancy.

Asset volatility risk

The discount rate used to determine the defined benefit obligations is based on AA-rated corporate bond yields. If our plan assets underperform this yield, the deficit will increase. Our strategic asset allocation includes a significant proportion of equities that increases volatility in the value of our assets, particularly in the short term. We expect equities to outperform corporate bonds in the long term.

Changes in bond yields

A decrease in bond yields increases plan liabilities, which are partially offset by an increase in the value of the plans' bond holdings.

Life expectancy

The majority of the plans' obligations are to provide benefits for the life of the member. Increases in life expectancy will result in an increase in the plans' liabilities.

f) Investment of Plan Assets

The assets of our defined benefit pension plans are managed by external asset managers under the oversight of the Teck Resources Limited Executive Pension Committee.

Our pension plan investment strategies support the objectives of each defined benefit plan and are related to each plan's demographics and timing of expected benefit payments to plan members. The objective for the plan asset portfolios is to achieve annualized portfolio returns over five-year periods in excess of the annualized percentage change in the Consumer Price Index plus a certain premium.

Strategic asset allocation policies have been developed for each defined benefit plan to achieve this objective. The policies also reflect an asset/liability matching framework that seeks to reduce the effect of interest rate changes on each plan's funded status by matching the duration of the bond investments with the duration of the pension liabilities. We do not use derivatives to manage interest risk. Asset allocation is monitored at least quarterly and rebalanced if the allocation to any asset class exceeds its allowable allocation range. Portfolio and investment manager performance is monitored quarterly and the investment guidelines for each plan are reviewed at least annually.

22. Retirement Benefit Plans (continued)

The defined benefit pension plan assets at December 31, 2019 and 2018 are as follows:

(CAD$ in millions)	2019			2018		
	Quoted	**Unquoted**	**Total %**	**Quoted**	**Unquoted**	**Total %**
Equity securities	**$ 957**	**$ –**	**36%**	$ 850	$ –	35%
Debt securities	**$ 1,322**	**$ –**	**50%**	$ 1,225	$ –	51%
Real estate and other	**$ 63**	**$ 317**	**14%**	$ 91	$ 257	14%

23. Provisions and Other Liabilities

(CAD$ in millions)	December 31, 2019	December 31, 2018
Provisions (a)	**$ 2,345**	$ 1,653
Derivative liabilities (net of current portion of $2 (2018 – $6))	**31**	39
ENAMI preferential dividend (Note 5(a))	**82**	–
IMSA payable (Note 5(d))	**58**	58
Other	**20**	42
	$ 2,536	$ 1,792

a) Provisions

The following table summarizes the movements in provisions for the year ended December 31, 2019:

(CAD$ in millions)	Decommissioning and Restoration Provisions	Other	Total
As at January 1, 2019	$ 1,614	$ 194	$ 1,808
Settled during the year	(67)	(45)	(112)
Change in discount rate	527	–	527
Change in amount and timing of cash flows	69	91	160
Accretion	112	2	114
Other	5	–	5
Changes in foreign exchange rates	(26)	(6)	(32)
As at December 31, 2019	2,234	236	2,470
Less current portion of provisions (Note 18)	(90)	(35)	(125)
Long-term provisions	**$ 2,144**	**$ 201**	**$ 2,345**

During the year ended December 31, 2019, we recorded $78 million (2018 – $33 million) of additional study and environmental costs arising from legal obligations through other provisions.

23. Provisions and Other Liabilities (continued)

Decommissioning and Restoration Provisions

The decommissioning and restoration provisions represent the present value of estimated costs for required future decommissioning and other site restoration activities. These activities include removal of site structures and infrastructure, recontouring and revegetation of previously mined areas and the management of water and water quality in and around each closed site. The majority of the decommissioning and site restoration expenditures occur near the end of, or after, the life of the related operation.

After the end of the life of certain operations, water quality management costs may extend for periods in excess of 100 years. Of the total, our provision for these expenditures was $745 million as at December 31, 2019, of which $411 million relates to our steelmaking coal business unit. For our steelmaking coal operations, the current and future requirements for water quality management are established under a regional permit issued by the provincial government of British Columbia.

In 2019, the decommissioning and restoration provision was calculated using nominal discount rates between 5.03% and 6.69%. We also used an inflation rate of 2.00% (2018 – 2.00%) in our cash flow estimates. The total decommissioning and restoration provision includes $396 million (2018 – $249 million) in respect of closed operations.

24. Equity

a) Authorized Share Capital

Our authorized share capital consists of an unlimited number of Class A common shares without par value, an unlimited number of Class B subordinate voting shares without par value and an unlimited number of preferred shares without par value issuable in series.

Class A common shares carry the right to 100 votes per share. Class B subordinate voting shares carry the right to one vote per share. Each Class A common share is convertible, at the option of the holder, into one Class B subordinate voting share. In all other respects, the Class A common shares and Class B subordinate voting shares rank equally.

The attributes of the Class B subordinate voting shares contain so-called “coattail provisions,” which provide that, in the event that an offer (an “Exclusionary Offer”) to purchase Class A common shares, which is required to be made to all or substantially all holders thereof, is not made concurrently with an offer to purchase Class B subordinate voting shares on identical terms, then each Class B subordinate voting share will be convertible into one Class A common share at the option of the holder during a certain period provided that any Class A common shares received upon such conversion are deposited to the Exclusionary Offer. Any Class B subordinate voting shares converted into Class A common shares pursuant to such conversion right will automatically convert back to Class B subordinate voting shares in the event that any such shares are withdrawn from the Exclusionary Offer or not otherwise ultimately taken up and paid for under the Exclusionary Offer.

The Class B subordinate voting shares will not be convertible in the event that holders of a majority of the Class A common shares (excluding those shares held by the offeror making the Exclusionary Offer) certify to Teck that they will not, among other things, tender their Class A common shares to the Exclusionary Offer.

If an offer to purchase Class A common shares does not, under applicable securities legislation or the requirements of any stock exchange having jurisdiction, constitute a “take-over bid” or is otherwise exempt from any requirement that such offer be made to all or substantially all holders of Class A common shares, the coattail provisions will not apply.

24. Equity (continued)

b) Class A Common Shares and Class B Subordinate Voting Shares Issued and Outstanding

Shares (in 000's)	Class A Common Shares	Class B Subordinate Voting Shares
As at January 1, 2018	7,777	565,506
Class A common shares conversion	(9)	9
Options exercised (c)	–	3,710
Acquired and cancelled pursuant to normal course issuer bid (h)	–	(6,300)
As at December 31, 2018	7,768	562,925
Class A common shares conversion	(3)	3
Options exercised (c)	–	1,239
Acquired and cancelled pursuant to normal course issuer bid (h)	–	(24,639)
As at December 31, 2019	**7,765**	**539,528**

c) Share Options

The maximum number of Class B subordinate voting shares issuable to full-time employees pursuant to options granted under our current stock option plan is 28 million. As at December 31, 2019, 1,759,503 share options remain available for grant. The exercise price for each option is the closing price for our Class B subordinate voting shares on the last trading day before the date of grant. Our share options are settled through the issuance of Class B subordinate voting shares.

During the year ended December 31, 2019, we granted 1,940,210 share options to employees. These share options have a weighted average exercise price of $28.62, vest in equal amounts over three years, and have a term of 10 years.

The weighted average fair value of share options granted in the year was estimated at $10.73 per option (2018 – $11.10) at the grant date based on the Black-Scholes option-pricing model using the following assumptions:

	2019	2018
Weighted average exercise price	**$ 28.62**	$ 37.44
Dividend yield	**1.05%**	2.67%
Risk-free interest rate	**1.81%**	2.06%
Expected option life	**5.9 years**	4.2 years
Expected volatility	**41%**	41%
Forfeiture rate	**0.55%**	0.54%

The expected volatility is based on a statistical analysis of historical daily share prices over a period equal to the expected option life.

24. Equity (continued)

Outstanding share options are as follows:

	2019		2018	
	Share Options (in 000's)	**Weighted Average Exercise Price**	**Share Options (in 000's)**	**Weighted Average Exercise Price**
Outstanding at beginning of year	**19,775**	**$ 21.75**	22,068	$ 19.52
Granted	**1,940**	**28.62**	1,575	37.44
Exercised	**(1,239)**	**8.17**	(3,710)	14.58
Forfeited	**(110)**	**32.52**	(107)	32.92
Expired	**(214)**	**38.24**	(51)	37.56
Outstanding at end of year	**20,152**	**$ 23.02**	19,775	$ 21.75
Vested and exercisable at end of year	**16,617**	**$ 21.32**	14,036	$ 22.83

The average share price during the year was $26.58 (2018 – $32.55).

Information relating to share options outstanding at December 31, 2019, is as follows:

Outstanding Share Options (in 000's)	Exercise Price Range	Weighted Average Remaining Life of Outstanding Options (months)
5,400	$ 5.34 — $ 15.35	70
3,471	$ 15.36 — $ 24.97	60
2,155	$ 24.98 — $ 26.79	47
6,123	$ 26.80 — $ 36.85	70
3,003	$ 36.86 — $ 58.80	58
20,152	**$ 5.34 — $ 58.80**	**64**

Total share option compensation expense recognized for the year was $18 million (2018 – $17 million).

d) Deferred Share Units, Restricted Share Units, Performance Share Units and Performance Deferred Share Units

We have issued and outstanding deferred share units (DSUs), restricted share units (RSUs), performance share units (PSUs) and performance deferred share units (PDSUs) (collectively, Units).

As of 2017, DSUs are granted to directors only. RSUs may be granted to both employees and directors. PSUs and PDSUs are granted to certain officers only. DSUs entitle the holder to a cash payment equal to the closing price of one Class B subordinate voting share on the Toronto Stock Exchange on the day prior to redemption. RSUs entitle the holder to a cash payment equal to the weighted average trading price of one Class B subordinate voting share on the Toronto Stock Exchange over 20 consecutive trading days prior to the payout date. PSUs and PDSUs issued in 2017 and later vest in a percentage from 0% to 200% based on both relative total shareholder return as compared to our compensation peer group and a calculation based on the change in EBITDA over the vesting period divided by the change in a weighted commodity price index. Once vested, PSUs and PDSUs entitle the holder to a cash payment equal to the weighted average trading price of one Class B subordinate voting share on the Toronto Stock Exchange over 20 consecutive trading days prior to the payout date. Officers granted PSUs in 2017 and later can elect to receive up to 50% of their Units as PDSUs, which pay out following termination of employment as described below.

RSUs, PSUs, and PDSUs vest on December 20 in the year prior to the third anniversary of the grant date. DSUs granted to directors vest immediately. Units vest on a *pro rata* basis if employees retire or are terminated without cause, and unvested units are forfeited if employees resign or are terminated with cause.

24. Equity (continued)

DSUs and PDSUs may be redeemed on or before December 15 of the first calendar year commencing after the date on which the participant ceases to be a director or employee. RSUs and PSUs pay out on the vesting date.

Additional Units are issued to Unit holders to reflect dividends paid and other adjustments to Class B subordinate voting shares.

In 2019, we recognized compensation recovery of $14 million for Units (2018 – $42 million expense). The total liability and intrinsic value for vested Units as at December 31, 2019 was $71 million (2018 – $103 million).

The outstanding Units are summarized in the following table:

(in 000's)	**2019**		**2018**	
	Outstanding	**Vested**	**Outstanding**	**Vested**
DSUs	**2,463**	**2,463**	2,644	2,644
RSUs	**892**	**–**	821	381
PSUs	**741**	**–**	667	312
PDSUs	**177**	**65**	123	61
	4,273	**2,528**	4,255	3,398

e) Accumulated Other Comprehensive Income

(CAD$ in millions)	**2019**	**2018**
Accumulated other comprehensive income – beginning of year	**$ 584**	$ 244
IFRS 9 transition adjustment on January 1, 2018	**–**	(34)
Currency translation differences:		
Unrealized gains (losses) on translation of foreign subsidiaries	**(449)**	638
Foreign exchange differences on debt designated as a hedge of our investment in foreign subsidiaries (net of taxes of $(26) and $40)	**167**	(255)
	(282)	383
Gain (loss) on marketable equity and debt securities (net of taxes of $(1) and $1)	**7**	(9)
Remeasurements of retirement benefit plans (net of taxes of $(31) and $(2))	**74**	8
Total other comprehensive income (loss)	**(201)**	382
Less remeasurements of retirement benefit plans recorded in retained earnings	**(74)**	(8)
Accumulated other comprehensive income – end of year	**$ 309**	$ 584

24. **Equity** (continued)

f) Earnings (Loss) Per Share

The following table reconciles our basic and diluted earnings (loss) per share:

(CAD$ in millions, except per share data)	**2019**	**2018**
Net basic and diluted profit (loss) attributable to shareholders of the company	**$ (605)**	$ 3,107
Weighted average shares outstanding (000's)	**559,765**	573,905
Dilutive effect of share options	**–**	8,233
Weighted average diluted shares outstanding (000's)	**559,765**	582,138
Basic earnings (loss) per share	**$ (1.08)**	$ 5.41
Diluted earnings (loss) per share	**$ (1.08)**	$ 5.34

At December 31, 2019, there is a net loss attributable to shareholders of the company and, accordingly, all share options would be considered anti-dilutive and have been excluded from the calculation of diluted earnings (loss) per share. At December 31, 2018, 5,458,816 potentially dilutive shares were not included in the diluted earnings per share calculation because their effect was anti-dilutive.

g) Dividends

We declared and paid dividends on our Class A common and Class B subordinate voting shares of $0.05 per share in each quarter of 2019, $0.05 per share in each of the first three quarters of 2018 and $0.15 per share in the fourth quarter of 2018.

h) Normal Course Issuer Bid

On occasion, we purchase and cancel Class B subordinate voting shares pursuant to normal course issuer bids that allow us to purchase up to a specified maximum number of shares over a one-year period.

In 2019, we purchased 24,399,468 (2018 – 6,539,558) Class B subordinate voting shares under our normal course issuer bid for $654 million. During 2019, we cancelled 24,639,468 (2018 – 6,299,558) Class B subordinate voting shares, of which 240,000 were purchased in 2018 for $7 million.

25. **Non-Controlling Interests**

Set out below is information about our subsidiaries with non-controlling interests and the non-controlling interest balances included in equity.

(CAD$ in millions)	**Principal Place of Business**	**Percentage of Ownership Interest and Voting Rights Held by Non-Controlling Interest**	**December 31, 2019**	**December 31, 2018**
Carmen de Andacollo	Region IV, Chile	10%	**$ 29**	$ 32
Quebrada Blanca (a)(b)	Region I, Chile	40%	**634**	10
Elkview Mine Limited Partnership	British Columbia, Canada	5%	**67**	59
Compañía Minera Zafranal S.A.C.	Arequipa Region, Peru	20%	**40**	33
			$ 770	$ 134

a) During the year ended December 31, 2019, SMM/SC subscribed for a 30% indirect interest in QBSA (Note 5(a)). As a result, we recorded a non-controlling interest for SMM/SC's interest in QBSA of $793 million on the date of the transaction.

25. Non-Controlling Interests (continued)

b) Quebrada Blanca

The following is the summarized financial information for Quebrada Blanca before intra-group eliminations. Quebrada Blanca has non-controlling interests that are considered material to our consolidated financial statements.

(CAD$ in millions)	December 31, 2019	December 31, 2018
Summarized balance sheet		
Current assets	**$ 653**	$ 153
Current liabilities	**512**	204
Current net assets	**141**	(51)
Non-current assets	**6,628**	4,952
Non-current liabilities	**3,448**	2,217
Non-current net assets	**3,180**	2,735
Net assets	**$ 3,321**	$ 2,684
Accumulated non-controlling interests	**$ 634**	$ 10
Summarized statement of comprehensive income (loss)		
Revenue	**$ 170**	$ 224
Loss for the period	**(120)**	(97)
Other comprehensive income (loss)	**(138)**	202
Total comprehensive income (loss)	**$ (258)**	$ 105
Loss allocated to non-controlling interests	**$ (24)**	$ (12)
Summarized cash flows		
Cash flows from operating activities	**$ (298)**	$ (33)
Cash flows from investing activities	**(1,255)**	(429)
Cash flows from financing activities	**2,076**	464
Effect of exchange rates on cash and cash equivalents	**(22)**	–
Net increase in cash and cash equivalents	**$ 501**	$ 2

26. Contingencies

We consider provisions for all of our outstanding and pending legal claims to be adequate. The final outcome with respect to actions outstanding or pending as at December 31, 2019, or with respect to future claims, cannot be predicted with certainty. Significant contingencies not disclosed elsewhere in the notes to our financial statements are as follows:

Upper Columbia River Basin

Teck American Inc. (TAI) continues studies under the 2006 settlement agreement with the U.S. Environmental Protection Agency (EPA) to conduct a remedial investigation on the Upper Columbia River in Washington State.

The Lake Roosevelt litigation involving TML in the Federal District Court for the Eastern District of Washington continues. In December 2012 on the basis of stipulated facts agreed between TML and the plaintiffs, the Court found in favour of the plaintiffs in phase one of the case, issuing a declaratory judgment that TML is liable under the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) for response costs, the amount of which will be determined in later phases of the case. TML has exhausted its appeal rights in respect of that decision. As a consequence of a ruling of the Ninth Circuit Court of Appeals, alleged damages associated with air emissions are no longer part of the case.

A hearing with respect to natural resource damages and assessment costs is expected to follow completion of the remedial investigation and feasibility study being undertaken by TAI.

Until the studies contemplated by the EPA settlement agreement and additional damage assessments are completed, it is not possible to estimate the extent and cost, if any, of any additional remediation or restoration that may be required or to assess the extent of our potential liability for damages. The studies may conclude, on the basis of risk, cost, technical feasibility or other grounds, that no remediation other than some residential soil removal should be undertaken. If other remediation is required and damage to resources found, the cost of that remediation may be material.

Elk Valley Water Quality

During the year ended December 31, 2018, Teck Coal Limited (TCL) received notice from Canadian federal prosecutors of potential charges under the Fisheries Act in connection with discharges of selenium and calcite from coal mines in the Elk Valley. Since 2014, compliance limits and site performance objectives for selenium and other constituents, as well as requirements to address calcite, in surface water throughout the Elk Valley and in the Koocanusa Reservoir have been established under a regional permit issued by the provincial government in British Columbia. This permit references the Elk Valley Water Quality Plan, an area-based management plan developed by Teck in accordance with a 2013 Order of the British Columbia Minister of Environment. If federal charges are laid, potential penalties may include fines as well as orders with respect to operational matters. It is not possible at this time to fully assess the viability of TCL’s potential defences to any charges, or to estimate the potential financial impact on TCL of any conviction. Nonetheless, that impact may be material.

27. Commitments

a) Capital Commitments

As at December 31, 2019, we had contracted for $2.86 billion of capital expenditures that have not yet been incurred for the purchase and construction of property, plant and equipment. This amount includes $2.54 billion for QB2, $224 million for our steelmaking coal operations and $93 million for our 22.5% share of Antamina. The amount includes $2.4 billion that is expected to be incurred within one year and $460 million within two to five years.

b) Red Dog Royalty

In accordance with the operating agreement governing the Red Dog mine, TAK pays a royalty to NANA Regional Corporation, Inc. (NANA) on the net proceeds of production. A 25% royalty became payable in the third quarter of 2007 after we had recovered cumulative advance royalties previously paid to NANA. The net proceeds of production royalty rate will increase by 5% every fifth year to a maximum of 50%. The increase to 35% of net proceeds of production occurred in the fourth quarter of 2017. An expense of US$231 million was recorded in 2019 (2018 – US$252 million) in respect of this royalty.

c) Antamina Royalty

Our interest in the Antamina mine is subject to a net profits royalty equivalent to 7.4% of our share of the mine's free cash flow. An expense of $16 million was recorded in 2019 (2018 – $25 million) in respect of this royalty.

d) Purchase Commitments

We have a number of forward purchase commitments for the purchase of concentrates and other process inputs, and for shipping and distribution of products, which are incurred in the normal course of business. The majority of these contracts are subject to *force majeure* provisions.

We have contractual arrangements for the purchase of power for the expansion of our Quebrada Blanca Operations. These contracts contain monthly fixed prices and variable prices per hour and were effective from dates between November 2016 and January 2019. In 2018, we entered into a 20-year contractual arrangement to purchase power for our Trail Operations, with an option to extend for a further 10 years. This arrangement requires a payment of $75 million per year, escalating at 2% per year.

28. Segmented Information

Based on the primary products we produce and our development projects, we have five reportable segments which we report to our Chief Executive Officer — steelmaking coal, copper, zinc, energy and corporate. The corporate segment includes all of our initiatives in other commodities, our corporate growth activities, and groups that provide administrative, technical, financial and other support to all of our business units. Other operating income (expenses) include general and administration, exploration, research and innovation, and other operating income (expense). Sales between segments are carried out on terms that arm's-length parties would use. Total assets does not include intra-group receivables between segments. Deferred tax assets have been allocated amongst segments.

(CAD$ in millions)	December 31, 2019					
	Steelmaking Coal	**Copper**	**Zinc**	**Energy**	**Corporate**	**Total**
Segment revenues	**$ 5,522**	**$ 2,469**	**$ 3,487**	**$ 975**	**$ –**	**$ 12,453**
Less: Intra-segment revenues	**–**	**–**	**(519)**	**–**	**–**	**(519)**
Revenues	**5,522**	**2,469**	**2,968**	**975**	**–**	**11,934**
Cost of sales	**(3,410)**	**(1,852)**	**(2,367)**	**(965)**	**–**	**(8,594)**
Gross profit	**2,112**	**617**	**601**	**10**	**–**	**3,340**
Asset impairments	**(289)**	**(31)**	**–**	**(2,370)**	**–**	**(2,690)**
Other operating expenses	**(136)**	**(183)**	**(63)**	**(26)**	**(392)**	**(800)**
Profit (loss) from operations	**1,687**	**403**	**538**	**(2,386)**	**(392)**	**(150)**
Net finance income (expense)	**(60)**	**(119)**	**(47)**	**(27)**	**35**	**(218)**
Non-operating income (expense)	**(15)**	**50**	**(9)**	**(2)**	**(121)**	**(97)**
Share of loss of associates and joint ventures	**–**	**(2)**	**–**	**–**	**(1)**	**(3)**
Profit (loss) before taxes	**1,612**	**332**	**482**	**(2,415)**	**(479)**	**(468)**
Capital expenditures	**1,197**	**1,757**	**307**	**191**	**16**	**3,468**
Goodwill	**702**	**399**	**–**	**–**	**–**	**1,101**
Total assets	**16,032**	**12,740**	**3,904**	**3,916**	**2,758**	**39,350**

28. Segmented Information (continued)

(CAD$ in millions)	December 31, 2018					
	Steelmaking Coal	**Copper**	**Zinc**	**Energy**	**Corporate**	**Total**
Segment revenues	$ 6,349	$ 2,714	$ 3,744	$ 407	$ –	$ 13,214
Less: Intra-segment revenues	–	–	(650)	–	–	(650)
Revenues	6,349	2,714	3,094	407	–	12,564
Cost of sales	(3,309)	(1,837)	(2,225)	(572)	–	(7,943)
Gross profit (loss)	3,040	877	869	(165)	–	4,621
Asset impairments	–	(10)	(31)	–	–	(41)
Other operating income (expenses)	(79)	(247)	820	1	(291)	204
Profit (loss) from operations	2,961	620	1,658	(164)	(291)	4,784
Net finance expense	(47)	(47)	(37)	(16)	(72)	(219)
Non-operating income (expense)	37	4	11	–	(104)	(52)
Share of loss of associates and joint ventures	–	(2)	–	–	(1)	(3)
Profit (loss) before taxes	2,951	575	1,632	(180)	(468)	4,510
Capital expenditures	969	850	411	375	8	2,613
Goodwill	702	419	–	–	–	1,121
Total assets	15,491	10,400	3,754	6,131	3,850	39,626

The geographical distribution of our non-current assets, excluding deferred income tax assets and financial and other assets, is as follows:

(CAD$ in millions)	**December 31, 2019**	**December 31, 2018**
Canada	**$ 21,685**	$ 23,238
Chile	**8,696**	7,146
United States	**1,511**	1,282
Peru	**1,497**	1,477
Other	**146**	99
	$ 33,535	$ 33,242

29. Financial Instruments and Financial Risk Management

a) Financial Risk Management

Our activities expose us to a variety of financial risks, which include liquidity risk, foreign exchange risk, interest rate risk, commodity price risk, credit risk and other risks associated with capital markets. From time to time, we may use foreign exchange, commodity price and interest rate contracts to manage exposure to fluctuations in these variables. Our use of derivatives is based on established practices and parameters to mitigate risk and is subject to the oversight of our Hedging Committee and our Board of Directors.

29. Financial Instruments and Financial Risk Management (continued)

Foreign Exchange Risk

We operate on an international basis, and therefore, foreign exchange risk exposures arise from transactions denominated in a currency other than the functional currency of the entity. Our foreign exchange risk arises primarily with respect to the U.S. dollar, Chilean peso and Peruvian sol. Our cash flows from Canadian, Chilean and Peruvian operations are exposed to foreign exchange risk, as commodity sales are denominated in U.S. dollars and a substantial portion of operating expenses are denominated in local currencies.

We also have various investments in U.S. dollar foreign operations, whose net assets are exposed to foreign currency translation risk. This currency exposure is managed in part through our U.S. dollar denominated debt as a hedge against net investments in foreign operations.

U.S. dollar financial instruments subject to foreign exchange risk consist of U.S. dollar denominated items held in Canada and are summarized below. This risk is reduced by our policy to apply a hedge against our U.S. dollar net investments using our U.S. dollar debt.

(US$ in millions)	**December 31, 2019**	December 31, 2018
Cash and cash equivalents	**$ 85**	$ 907
Trade and settlement receivables	**505**	640
Trade accounts payable and other liabilities	**(459)**	(421)
Debt	**(3,209)**	(3,809)
	(3,078)	(2,683)
Net investment in foreign operations hedged	**2,969**	2,628
Net U.S. dollar exposure	**$ (109)**	$ (55)

As at December 31, 2019, with other variables unchanged, a $0.10 strengthening of the Canadian dollar against the U.S. dollar would result in a $1 million pre-tax loss (2018 – $8 million) from our financial instruments. There would also be a $464 million pre-tax loss (2018 – $408 million) in other comprehensive income from the translation of our foreign operations. The inverse effect would result if the Canadian dollar weakened by $0.10 against the U.S. dollar.

Liquidity Risk

Liquidity risk arises from our general and capital funding requirements. We have planning, budgeting and forecasting processes to help determine our funding requirements to meet various contractual and other obligations. Note 19(c) details our available credit facilities as at December 31, 2019.

Contractual undiscounted cash flow requirements for financial liabilities as at December 31, 2019 are as follows:

(CAD$ in millions)	Less Than 1 Year	2—3 Years	4—5 Years	More Than 5 Years	Total
Trade accounts payable and other liabilities (Note 18)	$ 2,498	$ –	$ –	$ –	**$ 2,498**
Debt (Note 19(d))	29	414	286	3,469	**4,198**
Lease liabilities (Note 20(b))	162	193	109	676	**1,140**
Estimated interest payments on debt	235	444	410	3,126	**4,215**
Estimated interest payments on lease liabilities	9	11	6	39	**65**

29. Financial Instruments and Financial Risk Management (continued)

Interest Rate Risk

Our interest rate risk arises in respect of our holdings of cash and cash equivalents. Our interest rate management policy is generally to borrow at fixed rates, however we can also borrow at floating rates or use fixed to floating swaps to offset financial risks.

Cash and cash equivalents have short terms to maturity and receive interest based on market interest rates.

A 1% increase in the short-term interest rate at the beginning of the year, with other variables unchanged, would have resulted in a $17 million pre-tax increase in our profit (2018 – $15 million). There would be no effect on other comprehensive income. The inverse effect would result if the short-term interest rate decreased by 1%.

Commodity Price Risk

We are subject to price risk from fluctuations in market prices of the commodities that we produce. From time to time, we may use commodity price contracts to manage our exposure to fluctuations in commodity prices. At the balance sheet date, we had zinc and lead derivative contracts outstanding as described in (b) below.

Our commodity price risk associated with financial instruments primarily relates to changes in fair value caused by final settlement pricing adjustments to receivables and payables, derivative contracts for zinc and lead, embedded derivatives in one of our road and port contracts, and in the ongoing payments under our silver stream and gold stream arrangements.

The following represents the effect on profit attributable to shareholders from a 10% change in commodity prices, based on outstanding receivables and payables subject to final pricing adjustments at December 31, 2019. There is no effect on other comprehensive income.

	Price on December 31,		Change in Profit Attributable to Shareholders	
(CAD$ in millions, except for US$/lb. data)	**2019**	**2018**	**2019**	**2018**
Copper	**US$2.80/lb.**	US$2.70/lb.	**$ 14**	$ 21
Zinc	**US$1.04/lb.**	US$1.12/lb.	**$ 7**	$ 7

A 10% change in the price of zinc, lead, silver and gold, respectively, with other variables unchanged, would change our net liability relating to derivatives and embedded derivatives, excluding receivables and payables subject to final pricing adjustments, and change our pre-tax profit attributable to shareholders by $17 million (2018 – $16 million). There would be no effect on other comprehensive income.

Credit Risk

Credit risk arises from cash, cash equivalents, derivative contracts, debt securities and trade receivables. While we are exposed to credit losses due to the non-performance of our counterparties, there are no significant concentrations of credit risk and we do not consider this to be a material risk.

Our primary counterparties related to our cash, cash equivalents, derivative contracts and debt securities carry investment grade ratings as assessed by external rating agencies, which are monitored on an ongoing basis. All of our commercial customers are assessed for credit quality at least once a year or more frequently if business or customer specific conditions change based on an extensive credit rating scorecard developed internally using key credit metrics and measurements that were adapted from S&P's and Moody's rating methodologies. Sales to customers that do not meet the credit quality criteria are secured either by a parental guarantee, letter of credit or prepayment.

29. Financial Instruments and Financial Risk Management (continued)

For our trade receivables, we apply the simplified approach for determining expected credit losses, which requires us to determine the lifetime expected losses for all our trade receivables. The expected lifetime credit loss provision for our trade receivables is based on historical counterparty default rates and adjusted for relevant forward-looking information, as required. Since the majority of our customers are considered to have low default risk and our historical default rate and frequency of losses are low, the lifetime expected credit loss allowance for trade receivables is nominal as at December 31, 2019.

Our investments in debt securities carried at fair value through other comprehensive income are considered to have low credit risk as our counterparties have investment grade credit ratings. The credit risk of our investments in debt securities has not increased significantly since initial recognition of these investments and accordingly, the loss allowance for investments in debt securities is determined based on the 12-month expected credit losses. The 12-month expected credit loss allowance is based on historical and forward-looking default rates for investment grade entities, which are low and accordingly, the 12-month expected credit loss allowance for our investments in debt securities is nominal as at December 31, 2019.

b) Derivative Financial Instruments and Hedges

Sale and Purchase Contracts

We record adjustments to our settlement receivables and payables for provisionally priced sales and purchases, respectively, in periods up to the date of final pricing based on movements in quoted market prices or published price assessments (for steelmaking coal). These arrangements are based on the market price of the commodity and the value of our settlement receivables and payables will vary as prices for the underlying commodities vary in the metal markets. These final pricing adjustments result in gains (losses from purchases) in a rising price environment and losses (gains from purchases) in a declining price environment and are recorded in other operating income (expense).

The table below outlines our outstanding settlement receivables and payables, which were provisionally valued at December 31, 2019, and December 31, 2018.

	Outstanding at December 31, 2019		**Outstanding at December 31, 2018**	
(Pounds in millions)	Pounds	US$/lb.	Pounds	US$/lb.
Receivable positions				
Copper	**65**	**$ 2.80**	93	$ 2.70
Zinc	**239**	**$ 1.04**	208	$ 1.12
Lead	**74**	**$ 0.87**	24	$ 0.91
Payable positions				
Zinc payable	**79**	**$ 1.04**	77	$ 1.12
Lead payable	**10**	**$ 0.87**	16	$ 0.91

At December 31, 2019, total outstanding settlement receivables were $465 million (2018 – $557 million), and total outstanding settlement payables were $16 million (2018 – $45 million). These amounts are included in trade and settlement receivables and trade accounts payable and other liabilities, respectively, on the consolidated balance sheet.

Zinc and Lead Swaps

Due to ice conditions, the port serving our Red Dog mine is normally only able to ship concentrates from July to October each year. As a result, zinc and lead concentrate sales volumes are generally higher in the third and fourth quarter of each year than in the first and second quarter. During 2019 and 2018, we purchased and sold zinc and lead swaps to match our economic exposure to the average zinc and lead prices over our shipping year, which is from July of one year to June of the following year. We do not apply hedge accounting to the zinc or lead swaps.

29. Financial Instruments and Financial Risk Management (continued)

The fair value of our commodity swaps is calculated using a discounted cash flow method based on forward metal prices. A summary of these derivative contracts and related fair values as at December 31, 2019 is as follows:

Derivatives not designated as hedging instruments	**Quantity**	**Average Price of Purchase Commitments**	**Average Price of Sale Commitments**	**Fair Value Asset (Liability) (CAD$ in millions)**
Zinc swaps	77 million lbs.	US$1.04/lb.	US$1.02/lb.	$ (2)
Lead swaps	50 million lbs.	US$0.89/lb.	US$0.88/lb.	(1)
				$ (3)

All free-standing derivative contracts mature in 2020 and 2021.

Free-standing derivatives, not designated as hedging instruments, are recorded in trade accounts payable and other liabilities in the amount of $3 million on the consolidated balance sheet.

Derivatives Not Designated as Hedging Instruments and Embedded Derivatives

(CAD$ in millions)	**Amount of Gain (Loss) Recognized in Other Operating Income (Expense)** (Note 9)	
	2019	**2018**
Zinc derivatives	**$ (4)**	$ (40)
Lead derivatives	**(2)**	(4)
Settlement receivables and payables	**(49)**	(117)
Contingent zinc escalation payment embedded derivative (c)	**1**	13
Gold stream embedded derivative (c)	**15**	(1)
Silver stream embedded derivative (c)	**7**	(4)
	$ (32)	$ (153)

During the year ended December 31, 2019, we recorded a $105 million gain (2018 – $42 million loss) in non-operating income (expense) (Note 11) related to an increase in the value of the debt prepayment option in our 8.5% notes due in June 2024, up to the date of redemption of the notes during 2019 (Note 19(a)).

Accounting Hedges

Net investment hedge

We manage the foreign currency translation risk of our various investments in U.S. dollar foreign operations in part through the designation of our U.S. dollar denominated debt as a hedge against net investments in foreign operations (Note 29(a)). We designate the spot element of the U.S. dollar debt as the hedging instrument. As only the spot rate element of the debt is designated in the hedging relationship, no ineffectiveness is expected and no ineffectiveness was recognized in profit for the years ended December 31, 2019 and 2018. The hedged foreign currency risk component is the change in the carrying amount of the net assets of the foreign operation arising from spot U.S. dollar to Canadian dollar exchange rate movements. At December 31, 2019, US$3.0 billion of our debt (2018 – US$2.6 billion) and U.S. dollar investment in foreign operations was designated in a net investment hedging relationship. During the year ended December 31, 2019, $193 million (2018 – $295 million) of foreign exchange translation on our U.S. dollar investment in foreign operations was hedged by an offsetting amount of foreign exchange translation on our U.S. dollar denominated debt. Refer to Note 24(e) for the effect of our net investment hedges on other comprehensive income (loss).

29. Financial Instruments and Financial Risk Management (continued)

c) Embedded Derivatives

The TAK road and port contract contains a contingent zinc escalation payment that is considered to be an embedded derivative. The fair value of this embedded derivative was $31 million at December 31, 2019 (2018 – $34 million) and is included in provisions and other liabilities on the consolidated balance sheet.

The gold stream and silver stream agreements entered into in 2015 each contain an embedded derivative in the ongoing future payments due to Teck. The gold stream's 15% ongoing payment contains an embedded derivative relating to the gold price. The fair value of this embedded derivative was $25 million at December 31, 2019 (2018 – $11 million) and is included in financial and other assets on the consolidated balance sheet. The silver stream's 5% ongoing payment contains an embedded derivative relating to the silver price. The fair value of this embedded derivative was $6 million at December 31, 2019 (2018 – $1 million) and is included in financial and other assets (2018 – provisions and other liabilities) on the consolidated balance sheet.

30. Fair Value Measurements

Certain of our financial assets and liabilities are measured at fair value on a recurring basis and classified in their entirety based on the lowest level of input that is significant to the fair value measurement. Certain non-financial assets and liabilities may also be measured at fair value on a non-recurring basis. There are three levels of the fair value hierarchy that prioritize the inputs to valuation techniques used to measure fair value, with Level 1 inputs having the highest priority. The levels and the valuation techniques used to value our financial assets and liabilities are described below:

Level 1 – Quoted Prices in Active Markets for Identical Assets

Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Certain cash equivalents, certain marketable equity securities and certain debt securities are valued using quoted market prices in active markets. Accordingly, these items are included in Level 1 of the fair value hierarchy.

Level 2 – Significant Observable Inputs Other than Quoted Prices

Quoted prices in markets that are not active, quoted prices for similar assets or liabilities in active markets, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability.

Derivative instruments and embedded derivatives are included in Level 2 of the fair value hierarchy as they are valued using pricing models or discounted cash flow models. These models require a variety of inputs, including, but not limited to, market prices, forward price curves, yield curves and credit spreads. These inputs are obtained from or corroborated with the market. Also included in Level 2 are settlement receivables and settlement payables from provisional pricing on concentrate sales and purchases, certain refined metal sales and steelmaking coal sales because they are valued using quoted market prices derived based on forward curves for the respective commodities and published price assessments for steelmaking coal sales.

Level 3 – Significant Unobservable Inputs

Unobservable (supported by little or no market activity) prices.

We include investments in certain debt securities and certain equity securities in non-public companies in Level 3 of the fair value hierarchy because they trade infrequently and have little price transparency.

30. Fair Value Measurements (continued)

The fair values of our financial assets and liabilities measured at fair value on a recurring basis at December 31, 2019 and 2018, are summarized in the following table:

(CAD$ in millions)	2019				2018			
	Level 1	Level 2	Level 3	**Total**	Level 1	Level 2	Level 3	Total
Financial assets								
Cash equivalents	$ 877	$ –	$ –	**$ 877**	$ 1,296	$ –	$ –	$ 1,296
Marketable equity securities	53	–	36	**89**	44	–	36	80
Debt securities	104	–	2	**106**	90	–	3	93
Settlement receivables	–	465	–	**465**	–	557	–	557
Derivative instruments and embedded derivatives	–	29	–	**29**	–	86	–	86
	$ 1,034	$ 494	$ 38	**$ 1,566**	$ 1,430	$ 643	$ 39	$ 2,112
Financial liabilities								
Derivative instruments and embedded derivatives	$ –	$ 33	$ –	**$ 33**	$ –	$ 45	$ –	$ 45
Settlement payables	–	16	–	**16**	–	45	–	45
	$ –	$ 49	$ –	**$ 49**	$ –	$ 90	$ –	$ 90

As at December 31, 2019, we measured certain non-financial assets at their recoverable amounts using a FVLCD basis, which is classified as a Level 3 measurement. Refer to Note 8 for information about these fair value measurements.

Unless disclosed elsewhere in our financial statements, the fair value of the remaining financial assets and financial liabilities approximate their carrying value.

31. Capital Management

The capital we manage is the total of equity and debt on our balance sheet. Our capital management objectives are to maintain access to the capital we require to operate and grow our business while minimizing the cost of such capital and providing for returns to our investors. Our financial policies are to maintain, on average over time, a target debt-to-EBITDA ratio of approximately 2.0x. This ratio is expected to vary from its target level from time to time, reflecting commodity price cycles and corporate activity, including the development of major projects. We may also review and amend such policy targets from time to time. We maintain a US$4.0 billion committed revolving credit facility, which is undrawn at December 31, 2019. The credit facility includes a financial covenant that requires us to maintain a net debt-to-capitalization ratio that does not exceed 0.60 to 1.0 (Note 19(c)).

As at December 31, 2019, our debt-to-EBITDA ratio was 3.6 (2018 – 0.9) and our net debt-to-capitalization ratio was 0.15 to 1.0 (2018 – 0.13 to 1.0). We manage the risk of not meeting our financial targets through the issuance and repayment of debt, our distribution policy, the issuance of equity capital, asset sales as well as through the ongoing management of operations, investments and capital expenditures.

32. Key Management Compensation

The compensation for key management recognized in total comprehensive income in respect of employee services is summarized in the table below. Key management includes our directors, President and Chief Executive Officer, and senior vice presidents.

(CAD$ in millions)	**2019**	**2018**
Salaries, bonuses, director fees and other short-term benefits	**$ 17**	$ 16
Post-employment benefits	**9**	1
Share option compensation expense (Note 24(c))	**7**	6
Compensation expense (recovery) related to Units (Note 24(d))	**(1)**	7
	$ 32	$ 30

33. Adoption of New IFRS Pronouncements

a) Leases

We adopted IFRS 16 as at January 1, 2019 in accordance with the transitional provisions outlined in the standard, using a cumulative catch-up approach where we recorded leases from that date forward and did not restate comparative information. We recorded right-of-use assets of $280 million within property, plant and equipment, measured at either an amount equal to the lease liability or their carrying amount as if IFRS 16 had been applied since the commencement date, discounted using our incremental borrowing rate on January 1, 2019. We recorded lease liabilities of $342 million as at January 1, 2019 and reclassified $338 million of lease liabilities that were previously presented with debt on the balance sheet. The net of tax difference between right-of-use assets and lease liabilities recognized on transition of $43 million was recorded as a retained earnings adjustment on January 1, 2019.

IFRS 16 eliminates the classification of leases as either operating or finance leases for a lessee, and all leases will be recorded on the balance sheet for the lessee.

As part of the initial application of IFRS 16 we elected to apply the following practical expedients:

- the previous determination of whether a contract is, or contains, a lease pursuant to IAS 17 and IFRIC 4 has been maintained for existing contracts;
- not recognize a right-of-use asset or lease liability for leases where the lease term ends within 12 months of the date of initial application, with the exception of a portfolio of equipment leases in our steelmaking coal business unit;
- rely on our assessment of whether leases are onerous contracts as an alternative to an impairment review;
- exclude initial direct costs from the right-of-use asset; and
- use hindsight when assessing the lease term.

Reconciliation of lease liabilities as at January 1, 2019

(CAD$ in millions)	
Future aggregate minimum lease payments under operating leases as at December 31, 2018	$ 439
Recognition exemptions and other	(2)
	$ 437
Effect of discounting at the incremental borrowing rate	(95)
Lease liabilities arising on initial application of IFRS 16	342
Lease liabilities from finance leases previously recorded in debt	338
Total lease liabilities as at January 1, 2019	$ 680

The weighted average incremental borrowing rate for lease liabilities initially recognized as at January 1, 2019 was 4.97%.

33. Adoption of New IFRS Pronouncements (continued)

b) Uncertainty Over Income Tax Treatments

We adopted IFRIC 23 on January 1, 2019 with retrospective application. IFRIC 23 clarifies the recognition and measurement requirements when there is uncertainty over income tax treatments. The effect of uncertain tax treatments are recognized at the most likely amount or expected value. The adoption of IFRIC 23 did not affect our financial results or disclosures.