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# Management's Discussion and Analysis

February 23, 2017

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**Teck**

## Management's Discussion and Analysis

Our business is exploring for, acquiring, developing and producing natural resources. We are organized into business units focused on steelmaking coal, copper, zinc and energy. These are supported by our corporate offices, which manage our corporate growth initiatives and provide marketing, administrative, technical, financial and other services.

Through our interests in mining and processing operations in Canada, the United States (U.S.), Chile and Peru, we are the world's second-largest seaborne exporter of steelmaking coal, an important producer of copper and one of the world's largest producers of mined zinc. We also produce lead, silver, molybdenum and various specialty and other metals, chemicals and fertilizers. In addition, we own a 20% interest in the Fort Hills oil sands project and interests in other oil sands assets in the Athabasca region of Alberta. We actively explore for copper, zinc and gold.

This Management's Discussion and Analysis of our results of operations is prepared as at February 23, 2017 and should be read in conjunction with our audited consolidated financial statements as at and for the year ended December 31, 2016. Unless the context otherwise dictates, a reference to Teck, Teck Resources, the Company, us, we, or our, refers to Teck Resources Limited and its subsidiaries including Teck Metals Ltd. and Teck Coal Partnership. All dollar amounts are in Canadian dollars, unless otherwise stated, and are based on our consolidated financial statements that are prepared in accordance with International Financial Reporting Standards (IFRS). In addition, we use certain financial measures, which are identified throughout the Management's Discussion and Analysis in this report, that are not measures recognized under IFRS in Canada and do not have a standardized meaning prescribed by IFRS or by Generally Accepted Accounting Principles (GAAP) in the U.S. See "Use of Non-GAAP Financial Measures" on page 45 for an explanation of these financial measures and reconciliation to the most directly comparable financial measures under IFRS.

This Management's Discussion and Analysis contains certain forward-looking information and forward-looking statements. You should review the cautionary statement on forward-looking information under the heading "Cautionary Statement on Forward-Looking Information" on page 49, which forms part of this Management's Discussion and Analysis, as well as the risk factors discussed in our most recent Annual Information Form.

Additional information about us, including our most recent Annual Information Form, is available on our website at [www.teck.com](http://www.teck.com), on the Canadian Securities Administrators website at [www.sedar.com](http://www.sedar.com) (SEDAR), and on the EDGAR section of the United States Securities and Exchange Commission (SEC) website at [www.sec.gov](http://www.sec.gov).

## Business Unit Results

The table below shows a summary of our production of our major commodities for the last five years and estimated production for 2017.

### Five-Year Production Record and Our Estimated Production in 2017

Units in 000's (excluding steelmaking coal and molybdenum)		2012	2013	2014	2015	2016	2017 <sup>(2)</sup> estimate
<b>Principal Products</b>							
Steelmaking coal	million tonnes	24.7	25.6	26.7	25.3	27.6	27.5
Copper <sup>(1)</sup>	tonnes	373	364	333	358	324	282
Zinc							
Contained in concentrate	tonnes	598	623	660	658	662	670
Refined	tonnes	284	290	277	307	312	302
<b>Other Products</b>							
Lead							
Contained in concentrate	tonnes	95	97	123	124	128	112
Refined	tonnes	88	86	82	84	99	95
Molybdenum contained in concentrate	million pounds	12.7	8.3	5.9	4.4	7.7	11.2

Notes:

(1) We include 100% of the production and sales from Quebrada Blanca and Carmen de Andacollo mines in our production and sales volumes, even though we own 76.5% and 90%, respectively, of these operations, because we fully consolidate their results in our financial statements. We include 22.5% of production and sales from Antamina, representing our proportionate interest in Antamina.

(2) Production estimate for 2017 represents the mid-range of our production guidance.

Average commodity prices and exchange rates for the past three years, which are key drivers of our profit, are summarized in the following table.

	US\$					CAD\$				
	2016	% chg	2015	% chg	2014	2016	% chg	2015	% chg	2014
Steelmaking coal (realized — \$/tonne)	<b>115</b>	+24%	93	-19%	115	<b>153</b>	+31%	<b>117</b>	-7%	126
Copper (LME cash — \$/pound)	<b>2.21</b>	-11%	2.49	-20%	3.11	<b>2.94</b>	-8%	<b>3.19</b>	-7%	3.43
Zinc (LME cash — \$/pound)	<b>0.95</b>	+9%	0.87	-11%	0.98	<b>1.26</b>	+14%	<b>1.11</b>	+3%	1.08
Exchange rate (Bank of Canada)										
US\$1 = CAD\$	<b>1.33</b>	+4%	1.28	+16%	1.10					
CAD\$1 = US\$	<b>0.75</b>	-4%	0.78	-14%	0.91					

Our revenues and gross profit before depreciation and amortization, and gross profit, by business unit for the past three years are summarized in the following table.

(\$ in millions)	Revenues			Gross Profit Before Depreciation and Amortization <sup>(1)</sup>			Gross Profit (Loss)		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Steelmaking									
coal	<b>\$ 4,144</b>	\$ 3,049	\$ 3,335	<b>\$ 2,007</b>	\$ 906	\$ 920	<b>\$ 1,379</b>	\$ 200	\$ 208
Copper	<b>2,007</b>	2,422	2,586	<b>788</b>	931	1,177	<b>190</b>	426	678
Zinc	<b>3,147</b>	2,784	2,675	<b>984</b>	805	779	<b>830</b>	655	649
Energy	<b>2</b>	4	3	<b>2</b>	3	3	<b>(3)</b>	(2)	—
Total	<b>\$ 9,300</b>	\$ 8,259	\$ 8,599	<b>\$ 3,781</b>	\$ 2,645	\$ 2,879	<b>\$ 2,396</b>	\$ 1,279	\$ 1,535

Note:

(1) Gross profit before depreciation and amortization is a non-GAAP financial measure. See "Use of Non-GAAP Financial Measures" section for further information.

# Steelmaking Coal

In 2016, our steelmaking coal operations produced 27.6 million tonnes of steelmaking coal, with sales of 27.0 million tonnes. The majority of our sales are to the Asia-Pacific region, with lesser amounts going primarily to Europe and the Americas. Our current production capacity is approximately 28 million tonnes, and we have total proven and probable reserves of 962 million tonnes of steelmaking coal.

During the third quarter of 2016, our Elkview Operations was granted an environmental assessment certificate for the Baldy Ridge Extension project, which is expected to extend the life of the mine by approximately 23 years. Capital spending for this project is currently estimated to be approximately \$60 million over the next five years. First steelmaking coal production from these mining areas is planned for early 2018. In 2015, our Fording River Operations was granted all the necessary permits to begin mining the Swift area of Greenhills Ridge, which will extend the life of the mine by approximately 25 years.

New five-year collective labour agreements were reached in 2016 at Fording River and Elkview operations, and a four-year agreement was ratified at Coal Mountain Operations.

In 2016, our steelmaking coal business unit accounted for 44% of revenue and 53% of gross profit before depreciation and amortization.

(\$ in millions)	2016	2015	2014
Revenues	\$ 4,144	\$ 3,049	\$ 3,335
Gross profit before depreciation and amortization <sup>(1)</sup>	\$ 2,007	\$ 906	\$ 920
Gross profit	\$ 1,379	\$ 200	\$ 208
Production (million tonnes)	27.6	25.3	26.7
Sales (million tonnes)	27.0	26.0	26.2

Note:

(1) Gross profit before depreciation and amortization is a non-GAAP financial measure. See "Use of Non-GAAP Financial Measures" section for further information.

## Operations

Gross profit before depreciation and amortization increased in 2016, primarily due to higher steelmaking coal prices. Our average realized selling price in 2016 increased to US\$115 per tonne, compared with US\$93 per tonne in 2015 and US\$115 per tonne in 2014. The results of our steelmaking coal business unit for 2016 were strongly affected by a dramatic increase in prices in the fourth quarter.

Sales volumes of 27.0 million tonnes in 2016, a new record high, were 1.0 million tonnes higher than in 2015, mainly due to strong market conditions arising from a combination of tightness in supply and robust demand in all market areas.

Our 2016 production of 27.6 million tonnes was up 2.3 million tonnes from 2015, primarily due to strong production performance from the business unit. We set a new production record with annual records at our Elkview and Line Creek operations.

The cost of product sold in 2016, before transportation, depreciation and one-time collective agreement settlement charges, was \$43 per tonne, compared with \$45 per tonne in 2015. This cost reduction was achieved through significantly increased production rates, the impacts of initiatives undertaken to improve

productivity, improved maintenance and supply management, and lower energy prices, partially offset by the strengthening U.S. dollar on some inputs. During the fourth quarter, we incurred one-time labour settlement charges of \$49 million as a result of new collective agreements at Fording River and Elkview operations.

Capital spending in 2016 included \$38 million for sustaining capital, \$33 million for major enhancements to increase productive capacity and \$277 million on stripping activities.

### **Elk Valley Water Management**

We continue to implement the water quality management measures required by the Elk Valley Water Quality Plan (the “Plan”), which was approved in the fourth quarter of 2014 by the B.C. Minister of Environment.

In 2016, we spent approximately \$40 million towards implementation of the Plan and, in 2017, we expect to spend approximately \$100 million.

Our West Line Creek active water treatment facility is operating consistent with design parameters and in compliance with permit limits. We are continuing to investigate an issue regarding selenium compounds in effluent. Work is ongoing to assess the potential implications of this issue and, if associated environmental impacts are identified, modifications to operating parameters or facilities may be required. The cost of modifications may be material. Permitting of future mine expansions may be delayed, and design and construction of additional water treatment facilities will likely be delayed while we determine the significance of the issue and how to address it. We are reviewing the design of the proposed Fording River active water treatment facility, the next facility contemplated by the Plan to ensure that the same selenium compound issue does not arise.

We expect that, in order to maintain water quality, water treatment will need to continue for an indefinite period after mining operations end. The Plan contemplates ongoing monitoring of the regional environment to ensure that the water quality targets set out in the Plan are in fact protective of the environment and human health, and provide for adjustments if warranted by monitoring results. This ongoing monitoring, as well as our continued research into treatment technologies, could reveal unexpected environmental implications or technical issues or advances associated with potential treatment technologies that could increase or decrease both capital and operating costs associated with water quality management.

### **Rail**

Rail transportation of product from our five steelmaking coal mines in southeast B.C. to Vancouver port terminals is provided under a 10-year agreement with Canadian Pacific Railway (CP Rail) that expires March 31, 2021. Most of Teck’s eastbound coal deliveries to North American customers are shipped pursuant to an agreement with CP Rail. The remaining portion of Teck’s eastbound coal deliveries are shipped via the Burlington Northern Santa Fe (BNSF) railway. Our Cardinal River Operations in Alberta is served by Canadian National Railway, which transports our product to ports on the west coast.

### **Ports**

We maintain access to terminal loading capacity in excess of our planned 2017 shipments. Neptune Bulk Terminals, in which we have a 46% ownership interest, received the final permit required for execution of a project to expand steelmaking coal throughput capacity. Work is now underway to update engineering, which was previously suspended in 2013, to increase throughput capacity to approximately 18.5 million tonnes. The potential for greater throughput is being studied. If sanctioned in 2017, the project is scheduled to be completed by early 2020.

In addition, our contract with Westshore Terminals provides us with 19 million tonnes of annual capacity through to March 2021, and we have contracted capacity at Ridley Terminals near Prince Rupert to provide for steelmaking coal shipments from our Cardinal River Operations in Alberta.

## Sales

Our steelmaking coal marketing strategy is focused on maintaining and building relationships with our traditional customers while establishing new customers in markets where we anticipate long-term growth in steel production and demand for seaborne steelmaking coal. In 2016, we continued to focus our marketing in areas with the greatest demand growth, increasing sales to India and Vietnam, as well as increasing sales volume to areas such as Japan, Korea and Taiwan.

## Markets

In late 2016, there was a dramatic increase in steelmaking coal prices due to tightness in supply. This was the result of numerous factors, including: the implementation of production curtailments that began in 2014 that have depleted global production capacity and inventories, a reduction in Chinese domestic production resulting from the implementation of a 276-day operating policy for steelmaking coal mines, production disruptions at key Australian mines, and increased seaborne demand from most market areas.

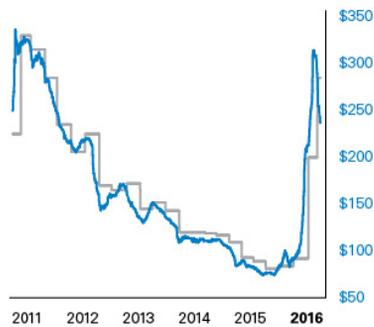
The benchmark price for our highest-quality products increased from US\$81 per tonne in early 2016 to US\$285 per tonne for the first quarter of 2017. Spot price assessments trended up for most of 2016, starting after the Lunar New Year holiday in China. After a short correction in May, price assessments resumed their progression upwards from June and exceeded US\$200 in mid-September, crossing US\$300 in early November and then fell in December. As of mid-February 2017, spot price assessments have dropped below the reported benchmark level by more than 45% at approximately US\$155 per tonne. The proportion of our steelmaking coal sales priced on a spot basis remained stable in 2016 at approximately 60% of total volumes.

Market expectations are that global steel production and demand for steelmaking coal will continue to increase in 2017, but there is uncertainty on where prices will ultimately settle. The high price environment observed from September to November 2016 encouraged increased supply from existing producers and a number of mine restarts. While it is unclear how long the price correction that started in December will last, we are well positioned and prepared to be highly successful in numerous future market scenarios.

The following graphs show key metrics affecting steelmaking coal sales: spot price assessments and quarterly benchmark pricing, hot metal production (each tonne of hot metal, or pig iron, produced requires approximately 650–700 kilograms of steelmaking coal), and China's steelmaking coal imports by source.

### Daily Steelmaking Coal Assessments

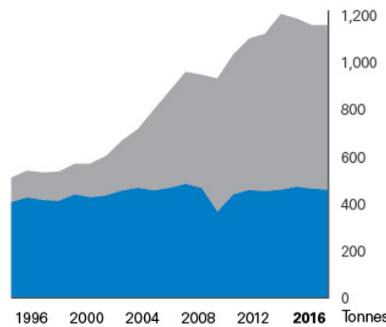
Source: Argus



- Spot price assessments (US\$ per tonne FOB Australia)
- Quarterly benchmark (US\$ per tonne FOB Australia)

### Hot Metal (Pig Iron) Production

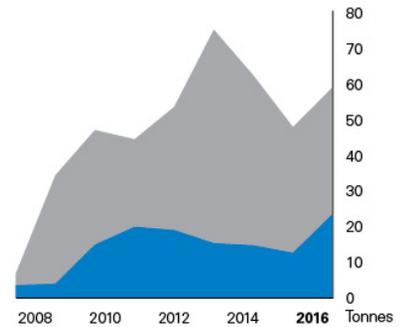
Source: World Steel Association, National Bureau of Statistics of China



- Rest of the world (tonnes in millions)
- China (tonnes in millions)

### China Steelmaking Coal Imports

Source: GTIS, China's Customs



- Mongolia (tonnes in millions)
- Seaborne (tonnes in millions)

## Outlook

Steelmaking coal production in 2017 is expected to be between 27 and 28 million tonnes. As in prior years, annual volumes produced will be adjusted if necessary to reflect market demand for our products. Meeting this production target will require adequate rail and port service. Assuming that current market conditions persist, production from 2018 to 2020 is expected to remain similar to 2017, despite the closure of the Coal Mountain Operations in late 2017 as reserves become depleted in the current mining area.

We are expecting sales volumes in the first quarter of 2017 to be approximately 6.0 million tonnes. As steel mills draw down on inventories built up in the fourth quarter, we are expecting sales to be weighted towards the back of the quarter, with the result that we expect our first quarter realized price to be approximately 75% of the benchmark price. Our sales volumes in the first quarter of each year are typically lower than other quarters in the year due to winter weather-related issues and Lunar New Year holidays in China.

Vessel nominations for quarterly contract shipments are determined by customers and final sales and average prices for the quarter will depend on product mix, market direction for spot priced sales and timely arrival of vessels, as well as the performance of the rail transportation network and port loading facilities. Poor rail performance in the fourth quarter of 2016 and in 2017 to date has reduced port inventories and has required production cutbacks as mine inventories reached critical levels at some sites.

We intend to replace the approximately 2.25 million tonnes of annual steelmaking coal production from Coal Mountain by increasing production at our other Elk Valley mines. We received permits in the latter half of 2016 to commence mining in new areas at the Fording River, Elkview and Greenhills operations, which will extend the lives of these mines and allow us to increase production. This will require some investment in the processing plants and the transfer of mining assets from Coal Mountain in order to develop the recently permitted mining areas at each of the sites. The strip ratios in these new areas will be higher as they are developed and we may require some additional mining capacity to balance coal production targets.

With this additional mining activity, we expect our site costs in 2017 to be in the range of \$46 to \$50 per tonne (US\$35 to US\$39). This range is higher than in 2016, primarily as the result of the efforts described above to maintain total production after the closure of Coal Mountain, which will require use of additional equipment and labour. We also anticipate increased costs for inputs, including diesel. Additionally, as we did in the fourth quarter of 2016, we plan to spend funds as required to maximize production and sales in the



current market environment, while maintaining appropriate cost discipline.

Transportation costs in 2017 are expected to be approximately \$35 to \$37 per tonne (US\$27 to US\$29).

Strip ratios vary as mining progresses, and with the accelerated mining activity as described above, we expect our overall mining costs to increase from 2016 levels and a higher proportion of mining costs are expected to relate to capitalized stripping as we enter into the new mining areas at Fording River, Elkview, Greenhills and Line Creek operations in preparation for the mine life extensions. As a result, we expect an increase in capitalized stripping from \$277 million in 2016 to \$430 million in 2017.

Capital spending planned for 2017 also includes \$140 million for sustaining capital and \$120 million for major enhancement projects, the latter of which largely relates to the initial development costs to enter into the new mining areas mentioned above at our Elk Valley operations.

# Copper

In 2016, we produced 324,200 tonnes of copper from our Highland Valley Copper Operations in B.C., our 22.5% interest in Antamina in Peru, and our Quebrada Blanca and Carmen de Andacollo operations in Chile. Copper production fell 9% from 2015, primarily due to lower grades and recoveries at Highland Valley Copper, partially offset by higher grades and recoveries at Antamina.

In 2016, our copper operations accounted for 22% of our revenue and 21% of our gross profit before depreciation and amortization.

(\$ in millions)	Revenues			Gross Profit (Loss) Before Depreciation and Amortization <sup>(1)</sup>			Gross Profit (Loss)		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Highland Valley Copper	\$ 750	\$ 999	\$ 943	\$ 268	\$ 449	\$ 419	\$ 86	\$ 278	\$ 265
Antamina	627	634	659	409	412	450	305	304	373
Carmen de Andacollo	401	442	504	86	86	164	(211)	(141)	(16)
Quebrada Blanca	229	288	375	24	(19)	118	9	(4)	67
Duck Pond	–	53	96	–	(3)	16	–	(17)	(21)
Other	–	6	9	1	6	10	1	6	10
<b>Total</b>	<b>\$ 2,007</b>	<b>\$ 2,422</b>	<b>\$ 2,586</b>	<b>\$ 788</b>	<b>\$ 931</b>	<b>\$ 1,177</b>	<b>\$ 190</b>	<b>\$ 426</b>	<b>\$ 678</b>

Note:

(1) Gross profit before depreciation and amortization is a non-GAAP financial measure. See "Use of Non-GAAP Financial Measures" section for further information.

(000's tonnes)	Production			Sales		
	2016	2015	2014	2016	2015	2014
Highland Valley Copper	119	152	121	122	150	124
Antamina	97	88	78	95	87	78
Carmen de Andacollo	73	73	72	73	72	74
Quebrada Blanca	35	39	48	35	40	49
Duck Pond	–	6	14	–	8	13
<b>Total</b>	<b>324</b>	<b>358</b>	<b>333</b>	<b>325</b>	<b>357</b>	<b>338</b>

## Operations

### Highland Valley Copper

Highland Valley Copper Operations is located in south-central B.C. We increased our interest in the mine to 100% in the third quarter of 2016 by acquiring the remaining 2.5% minority stake. Gross profit before depreciation and amortization was \$268 million in 2016, compared to \$449 million in 2015 and \$419 million in 2014, resulting from lower metal prices and a decline in sales volumes, despite significant operating cost reductions. Highland Valley Copper's 2016 production was 119,300 tonnes of copper in concentrate, compared to 151,400 tonnes in 2015 and 121,500 tonnes in 2014. The decrease was primarily due to lower copper grades and lower recoveries, partially offset by higher mill throughput. Molybdenum production was 59% higher in 2016 at 5.4 million pounds, compared to 3.4 million pounds in 2015, primarily due to higher grades.

Ore is currently mined from the Valley, Lornex and Highmont pits. The transition to mining more of the lower grade Lornex ores progressed during the final quarter of 2016 as the current high-grade phase of the Valley pit was exhausted.

Our labour agreement at Highland Valley Copper expired at the end of the third quarter of 2016 and negotiations are ongoing.

As anticipated in the mine plan, production at Highland Valley Copper will vary significantly over the next few years due to significant fluctuations in ore grades and hardness in the three active pits. The production plan relies primarily on Lornex ore in 2017, supplemented by the similarly low-grade Highmont pit and lower grade sources in the Valley pit, which is now in a heavier stripping phase over the next three to four years. Copper production in 2017 is anticipated to be between 95,000 and 100,000 tonnes, with lower production in the first half of the year, before gradually recovering in 2018 and 2019. Annual copper production from 2018 to 2020 is expected to be between 115,000 and 135,000 tonnes per year. Copper production is anticipated to return to above life of mine average levels of 140,000 tonnes per year after 2020, through to the end of the current mine plan in 2026. Molybdenum production in 2017 is expected to be approximately 9.0 to 9.5 million pounds contained in concentrate, before declining to approximately 7.0 million pounds contained in concentrate annually from 2018 to 2020.

## **Antamina**

We have a 22.5% share interest in Antamina, a copper-zinc mine in Peru. The other shareholders are BHP Billiton plc (33.75%), Glencore plc (33.75%) and Mitsubishi Corporation (10%). In 2016, our share of gross profit before depreciation and amortization was \$409 million, compared with \$412 million in 2015 and \$450 million in 2014. Gross profit in 2016 remained similar to a year ago as higher production and sales levels were offset by lower copper prices.

Antamina's copper production (100% basis) in 2016 was 431,100 tonnes, compared to 390,600 tonnes in 2015, with the increase primarily as a result of higher grades and recovery. Zinc production decreased by 16% to 198,000 tonnes in 2016, primarily due to a lower portion of copper-zinc ore processed, partially offset by higher zinc grades and recoveries. Molybdenum production totalled 10.3 million pounds, which was 134% higher than in 2015, due to higher grades.

Pursuant to a long-term streaming agreement made in 2015, Teck has agreed to deliver an equivalent to 22.5% of payable silver sold by Compañía Minera Antamina S.A., using a silver payability factor of 90%, to a subsidiary of Franco-Nevada Corporation (FNC). FNC pays a cash price of 5% of the spot price at the time of each delivery. In 2016, approximately 4.4 million ounces of silver were delivered under the agreement. After 86 million ounces of silver have been delivered under the agreement, the stream will be reduced by one-third.

In January 2016, a new labour agreement was ratified that expires in the third quarter of 2018.

Our 22.5% share of Antamina's 2017 production is expected to be in the range of 88,000 to 92,000 tonnes of copper, 75,000 to 80,000 tonnes of zinc and approximately 2.0 million pounds of molybdenum in concentrate. Our share of copper production is expected to be between 90,000 and 100,000 tonnes from 2018 to 2020. Zinc production is expected to remain strong as the mine enters a phase with high zinc grades and a higher proportion of copper-zinc ore processed. Our share of zinc production is anticipated to average 80,000 tonnes per year during the same 2018 to 2020 period; however, annual production will fluctuate due

to feed grades and the amount of copper-zinc ore processed, as anticipated in the mine plan. Our share of annual molybdenum production is expected to be between 2.5 and 3.0 million pounds between 2018 and 2020.

### **Carmen de Andacollo**

We have a 90% interest in the Carmen de Andacollo mine in Chile, which is located in the Coquimbo Region of central Chile. The remaining 10% is owned by Empresa Nacional de Minería (ENAMI), a state-owned Chilean mining company. Gross profit before depreciation and amortization was \$86 million in 2016, the same as in 2015, and \$164 million in 2014. Despite lower copper prices in 2016, gross profit was unchanged as a result of our cost reduction initiatives.

Carmen de Andacollo produced 69,500 tonnes of copper contained in concentrate in 2016, similar to 2015. Copper cathode production was 3,700 tonnes in 2016, compared with 4,700 tonnes in 2015. Gold production, on a 100% basis, of 53,300 ounces was 12% higher than production of 47,600 ounces in 2015, with 100% of the gold produced for the account of RGLD Gold AG (RGLDAG), a wholly owned subsidiary of Royal Gold, Inc., pursuant to an agreement made in 2015. RGLDAG pays a cash price of 15% of the monthly average gold price at the time of each delivery.

Consistent with the mine plan, copper grades are expected to continue to gradually decline in 2017 and in future years, which we expect to largely offset with planned throughput improvements in the mill. Carmen de Andacollo's production in 2017 is expected to be similar to 2016 and in the range of 68,000 to 72,000 tonnes of copper in concentrate and 3,000 to 4,000 tonnes of copper cathode. Copper concentrate production is expected to be in the range of 65,000 to 70,000 tonnes for the subsequent three-year period, with cathode production volumes uncertain past 2017, although there is potential to extend.

### **Quebrada Blanca**

Quebrada Blanca is located in the Tarapacá Region of northern Chile. We own a 76.5% interest in Quebrada Blanca. The other shareholders are Inversiones Mineras S.A. (13.5%) and ENAMI (10%). ENAMI's interest is a carried interest and, as a result, ENAMI is generally not required to contribute further funding to Quebrada Blanca. The operation mines ore from an open pit and leaches the ore to produce copper cathodes via a conventional solvent extraction and electrowinning (SX-EW) process.

Quebrada Blanca's gross profit before depreciation and amortization was \$24 million in 2016, compared with a gross loss before depreciation and amortization of \$19 million in 2015 and a gross profit before depreciation and amortization of \$118 million in 2014. The improvement in 2016 was primarily due to significant reductions in operating costs compared to 2015, partially offset by lower copper prices and declining copper cathode production and sales volumes.

In 2016, Quebrada Blanca produced 34,700 tonnes of copper cathode, compared to 39,100 tonnes in 2015, with the reduction primarily as a result of ore availability and declining ore grades as the supergene deposit is depleted.

During the third quarter of 2016, we received our updated environmental permits for the existing facilities. During the first quarter of 2017, the agglomeration circuit will be halted with all remaining supergene ore sent to the dump leach circuit, further reducing operating costs, although with a longer leaching cycle. Work is continuing on optimizing the mine plan based on the lower operating cost profile and current copper price. Opportunities to recover additional copper from previously processed material continue to be evaluated.

In February 2017, we extended the life of two of the three labour agreements at Quebrada Blanca into the first quarter of 2019, leaving only one labour agreement expiring in 2017 at the end of November.

We expect production of approximately 20,000 to 24,000 tonnes of copper cathode in 2017. Future production plans will depend on copper prices and further cost reduction efforts, although we currently anticipate cathode production to continue until mid-2019 at reduced cathode production rates as the supergene deposit is exhausted.

## **Quebrada Blanca Phase 2**

In early 2017, we completed an updated feasibility study on our Quebrada Blanca Phase 2 project, which incorporates recent project optimization and certain scope changes, including a revised tailings facility located closer to the mine. This project has the potential to be a large-scale, long-life copper asset for Teck in the stable mining jurisdiction of Chile, with a large resource base and the potential to significantly extend the mine life beyond the feasibility case. The project is expected to generate strong economic returns with all-in cash costs very well placed on the cost curve. Sustaining capital is expected to be quite low for this project due to the low strip ratio and shorter initial mine life of 25 years, hence a reduced need for replacement mobile equipment. Annual tailings construction costs are included as operating costs, with minimal sustaining capital requirements. Major process equipment as well as infrastructure, such as the water supply pipeline from the coast, have been designed to last the life of mine without significant capital investment. The project is currently undergoing environmental permitting, with permit approval anticipated in early 2018.

The updated study estimates a capital cost for the development of the project on a 100% basis of US\$4.7 billion (in first quarter of 2016 dollars, not including working capital or interest during construction), of which our funding share would be US\$4.0 billion. This compares to the 2012 feasibility study estimate of US\$5.6 billion (in January 2012 dollars).

The study is based upon an initial mine life of 25 years, consistent with the capacity of the new tailings facility. The mine plan includes 1.259 billion tonnes of proven and probable mineral reserves grading 0.51% copper and 0.019% molybdenum. The project scope includes the construction of a 140,000 tonne-per-day concentrator and related facilities connected to a new port facility and desalination plant by 165 kilometre-long concentrate and desalinated water pipelines.

The project contemplates annual production of 275,000 tonnes of copper and over 7,700 tonnes of molybdenum in concentrate for the first full five years of mine life. On the basis of copper equivalent production of approximately 301,000 tonnes per year over the first full five years of mine life this equates to a capital intensity of less than US\$16,000 per annual tonne.

As part of the regulatory process, we submitted the Social and Environmental Impact Assessment to the Region of Tarapacá Environmental Authority in the third quarter of 2016. A decision to proceed with development would be contingent upon regulatory approvals and market conditions, among other considerations. Given the timeline of the regulatory process, we do not expect to be in a position to consider such a decision before mid-2018. Assuming a mid-2018 full construction start, the project schedule anticipates first ore processed in the latter half of 2021.

## **NuevaUnión (formerly Project Corridor)**

In October 2016, work began on a pre-feasibility study concurrently with early and ongoing engagement with Indigenous Peoples and non-Indigenous communities to gather feedback and help inform project design. In

addition, the first environmental baseline campaign was completed in December 2016. Planned 2017 activities include 16,750 metres of technical drilling on the Relincho and La Fortuna (El Morro) deposits in support of the studies. We expect to complete the pre-feasibility study at the end of the third quarter of 2017.

### **Other Copper Projects**

In 2016, we completed a prefeasibility study at the Zafranal copper-gold project, located in southern Peru. The project is held by Compañía Minera Zafranal S.A.C. In January 2017, we increased our ownership of Compañía Minera Zafranal S.A.C. to 80% through an acquisition of all of the outstanding shares of AQM Copper Inc., not already owned by us. The remaining 20% share is held by Mitsubishi Materials Corporation. Additional drilling and a feasibility study are planned to start in 2017 along with additional community engagement activities, environmental studies and archeological studies, and permitting work necessary to prepare and submit an Environmental Impact Assessment.

### **Markets**

Copper prices on the London Metal Exchange (LME) averaged US\$2.21 per pound in 2016, down US\$0.28 per pound or 11% from the average of 2015. Copper was the worst performer of all the LME metals through the first 10 months of 2016, before rebounding in early November back above US\$2.50 per pound.

Global demand for copper metal grew by 2.0% in 2016 to reach an estimated 22.3 million tonnes. Copper consumption growth was lower than initially projected, but at 2.0% was higher than the 1.3% growth rate in 2015. Stronger than expected construction and automotive growth have partially offset declines in manufacturing. Demand growth in both the U.S. and Europe was above previous forecasts on better automotive sales, while a stronger U.S. dollar has had an impact on U.S. manufacturing exports. The availability of copper scrap remains constrained, with imports of scrap into China down an estimated 8% in 2016.

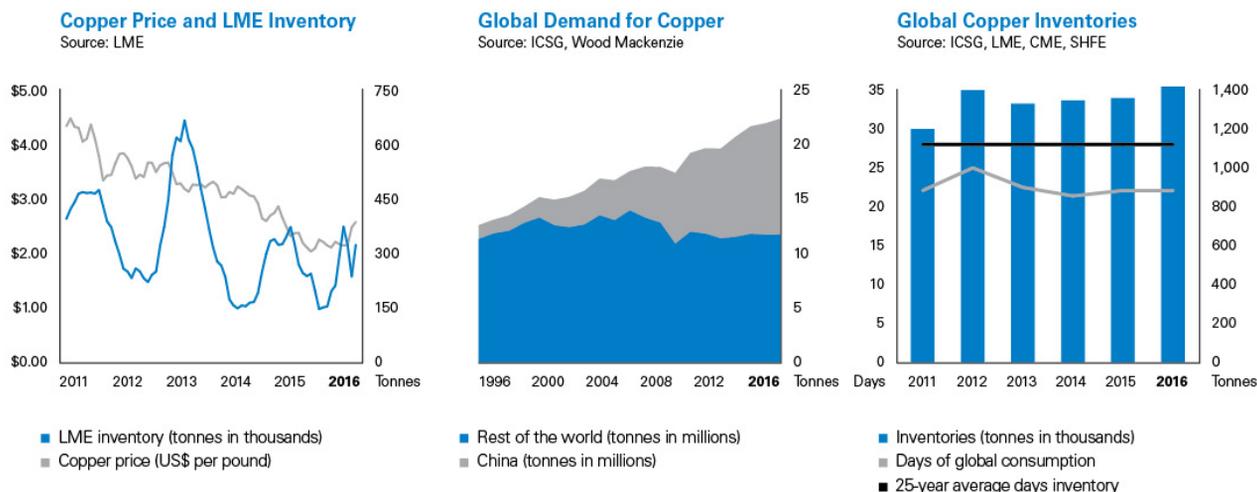
Copper stocks on the LME rose by 36% to 322,000 tonnes in 2016, while Shanghai stocks fell by 18% to 147,000 tonnes and COMEX warehouse stocks increased 18% to 76,000 tonnes. Combined exchange stocks increased 66,850 tonnes during the year and ended the year at 544,200 tonnes. Total reported global stocks — including producer, consumer, merchant and terminal stocks — stood at an estimated 22 days of global consumption versus the 25-year average of 28 days.

In 2016, global copper mine production increased 3.8% to reach 19.9 million tonnes. Operational issues at copper mines had less of an impact on mine production in 2016 than in years past, with estimates of only 2.7% net production lost over initial projections. While the pace of disruptions increased in the second half of 2016, several mines achieved higher than projected output during the year by adjusting mine plans, high-grading, and increasing throughput to keep costs down. Mine production growth is expected to slow in 2017 after two years of above-trend growth. According to *Metal Bulletin*, copper spot treatment charges have fallen from US\$103 per tonne in July 2016 to US\$83 per tonne by the end of the year. Market fundamentals remain positive over the medium to long term, with supply constrained by lower grades, ongoing operational difficulties, and project delays or deferrals due to low prices during most of 2016.

In China, estimated copper mine production in 2016 fell 4.5% compared to 2015 levels, while refined production increased 13.1% over the previous year. This was achieved through a 27% increase in imported concentrates into China in the first 11 months of 2016, setting a new record for concentrate imports of 4.4 million tonnes of copper contained in concentrate.

Wood Mackenzie, a commodity research consultancy, is forecasting a 0.7% decrease in base case global mine production in 2017 to 19.8 million tonnes. Scrap supply is expected to remain constrained through 2017 following a year of weak manufacturing production.

With global copper metal demand projected by Wood Mackenzie to increase by 2.1% in 2017, projected supply is now expected to be slightly below demand, placing the refined market in a small deficit in 2017.



## Outlook

We expect 2017 copper production to be in the range of 275,000 to 290,000 tonnes, a decline of approximately 13% from 2016 production levels. The lower production is primarily due to continued lower grades and recoveries at Highland Valley Copper and further planned production declines at Quebrada Blanca as it nears the end of its life for the supergene deposit.

In 2017, we expect our copper unit costs to be in the range of US\$1.75 to US\$1.85 per pound before margins from by-products and US\$1.40 to US\$1.50 per pound after by-products based on current production plans, by-product prices and exchange rates.

We expect copper production to be in the range of 280,000 to 300,000 tonnes from 2018 to 2020.

# Zinc

We are one of the world's largest producers of mined zinc, primarily from our Red Dog Operations in Alaska, as a co-product from the Antamina copper mine in northern Peru, and from our Pend Oreille mine in Washington state. Our metallurgical complex in Trail, B.C. is one of the world's largest integrated zinc and lead smelting and refining operations. In total, we produced 661,600 tonnes of zinc in concentrate, while our Trail Operations produced a record 311,600 tonnes of refined zinc in 2016.

In 2016, our zinc business unit accounted for 34% of revenue and 26% of gross profit before depreciation and amortization.

(\$ in millions)	Revenues			Gross Profit (Loss) Before Depreciation and Amortization <sup>(1)</sup>			Gross Profit (Loss)		
	2016	2015	2014	2016	2015	2014	2016	2015	2014
Red Dog	\$ 1,444	\$ 1,220	\$ 1,240	\$ 749	\$ 600	\$ 638	\$ 668	\$ 537	\$ 574
Trail Operations	2,049	1,847	1,699	241	205	142	178	124	76
Pend Oreille	77	47	–	–	(9)	–	(10)	(15)	–
Other	7	7	11	(6)	9	(1)	(6)	9	(1)
Inter-segment	(430)	(337)	(275)	–	–	–	–	–	–
<b>Total</b>	<b>\$ 3,147</b>	<b>\$ 2,784</b>	<b>\$ 2,675</b>	<b>\$ 984</b>	<b>\$ 805</b>	<b>\$ 779</b>	<b>\$ 830</b>	<b>\$ 655</b>	<b>\$ 649</b>

Note:

(1) Gross profit before depreciation and amortization is a non-GAAP financial measure. See "Use of Non-GAAP Financial Measures" section for further information.

(000's tonnes)	Production			Sales		
	2016	2015	2014	2016	2015	2014
Refined zinc						
Trail Operations	312	307	277	312	308	277
Contained in concentrate						
Red Dog	583	567	596	600	613	594
Pend Oreille	34	31	–	34	31	–
Copper business unit <sup>(1)</sup>	45	60	64	43	62	63
<b>Total</b>	<b>662</b>	<b>658</b>	<b>660</b>	<b>677</b>	<b>706</b>	<b>657</b>

Note:

(1) Includes zinc production from Antamina and Duck Pond (closed in 2015).

## Operations

### Red Dog

Red Dog Operations, located in northwest Alaska, is one of the world's largest zinc mines. Red Dog's gross profit before depreciation and amortization in 2016 was \$749 million, compared with \$600 million in 2015 and \$638 million in 2014. Gross profit increased from a year ago, primarily due to higher zinc and lead prices.

In 2016, zinc production at Red Dog increased to 583,000 tonnes compared to 567,000 tonnes in 2015, primarily due to increased mill throughput with softer ores processed. Lead production in 2016 rose to 122,300 tonnes, compared to 117,600 tonnes in 2015, primarily due to higher mill throughput.



Planned activities in 2017 will include an US\$18 million exploration drilling program, with associated study work focused on extending the life of Red Dog past 2031. In addition, a feasibility study is in progress that aims to increase the mill throughput rate to help offset future grade declines and harder ores anticipated in the current mine plan.

Red Dog's location exposes the operation to severe weather and winter ice conditions, which can significantly affect production, sales volumes and operating costs. In addition, the mine's bulk supply deliveries and all concentrate shipments occur during a short ocean shipping season that normally runs from early July to late October. This short shipping season means that Red Dog's sales volumes are usually higher in the last six months of the year, resulting in significant variability in its quarterly profit, depending on metal prices.

In accordance with the operating agreement governing the Red Dog mine between Teck and NANA Regional Corporation, Inc. (NANA), we pay a 30% royalty on net proceeds of production to NANA. This royalty increases by 5% every fifth year to a maximum of 50%, with the next adjustment to 35% occurring in October 2017. The NANA royalty charge in 2016 was US\$213 million, compared with US\$137 million in 2015. NANA has advised us that it ultimately shares approximately 64% of the royalty, net of allowable costs, with other Regional Alaska Native corporations pursuant to section 7(i) of the *Alaska Native Claims Settlement Act*.

A payment in lieu of taxes (PILT) agreement between Teck Alaska and the North West Arctic Borough (the last regional municipality) expired December 31, 2015. Prior to the expiry of the PILT agreement, the Borough enacted a new tax ordinance, imposing a severance tax that would have significantly increased local taxes paid by Teck Alaska. Teck Alaska filed a legal complaint challenging the legality of the severance tax and seeking to compel the Borough to engage in good faith negotiations with respect to a new PILT agreement. Early in 2017, Teck Alaska and the Borough agreed on a term sheet, with respect to the terms of a new 10-year PILT agreement. Under the terms contemplated by the term sheet, PILT payments to the Borough, based on the assessed property value of the mine, would increase by approximately 30%. In addition, Teck Alaska would make annual payments based on mine profitability to a separate fund aimed at social investment in villages in the region. This agreement is subject to approvals by the Borough and Teck Alaska and will not be effective until a definitive PILT agreement and related documents are settled.

Red Dog's production of contained metal in 2017 is expected to be in the range of 545,000 to 565,000 tonnes of zinc and 110,000 to 115,000 tonnes of lead. From 2018 to 2020, Red Dog's production of contained metal is expected to be in the range of 500,000 to 525,000 tonnes of zinc and 85,000 to 115,000 tonnes of lead.

### **Pend Oreille**

Pend Oreille, located in Washington state, achieved zinc production of 34,100 tonnes in 2016, compared to 30,700 tonnes in 2015.

The current mine plan sustains the operation through to early 2018, although there is still significant potential to extend the mine life. We identified high-potential areas in the currently producing East Mine area and initiated a major exploration and drilling program during 2016, which will continue in 2017.

We expect 2017 production to be between 35,000 and 40,000 tonnes of zinc in concentrate. Production rates beyond 2017 are uncertain, although the potential exists to extend the mine life at similar rates for several more years.

## Trail Operations

Our Trail Operations in B.C. is one of the world's largest fully integrated zinc and lead smelting and refining complexes. It also produces a variety of precious and specialty metals, chemicals and fertilizer products. Teck also has a two-thirds interest in the Waneta hydroelectric dam as well as 100% ownership of the related transmission system. The Waneta Dam provides low-cost, clean, renewable power to the metallurgical operations.

Trail Operations contributed \$241 million to gross profits before depreciation and amortization in 2016, compared with \$205 million in 2015 and \$142 million in 2014. The increase was primarily due to higher zinc prices and record production in 2016.

Refined zinc production in 2016 was an annual record of 311,600 tonnes, compared with 307,000 tonnes the previous year, primarily due to higher plant availability. Refined lead production also set a new annual record of 99,200 tonnes, up from 83,500 tonnes in 2015. Silver production rose slightly to 24.2 million ounces in 2016 from 23.5 million ounces in 2015.

Our recycling process treated 45,500 tonnes of material during the year, and we plan to treat about 43,000 tonnes in 2017. Our focus remains on treating lead acid batteries and cathode ray tube glass, plus small quantities of zinc alkaline batteries and other post-consumer waste through our recycling program.

In November 2016, we announced that we would invest \$174 million in the installation of a second new acid plant to improve efficiency and environmental performance at Trail Operations. Construction is expected to start in the first quarter of 2017, with the plant becoming operational in the summer of 2019.

In 2017, we expect Trail Operations to produce in the range of 300,000 to 305,000 tonnes of refined zinc, approximately 95,000 tonnes of refined lead and 23 to 25 million ounces of silver. Zinc and lead production from 2018 to 2020 is expected to remain at similar levels, while silver production is dependent on the amount of silver contained in the purchased concentrates.

## Other Zinc Projects

In October 2016, we announced an agreement to increase our interest to 100% in the Teena/Reward zinc project by acquiring the outstanding 49% interest held by Rox Resources Limited. The transaction closed in the first quarter of 2017. Teena is located eight kilometres west of the McArthur River Mine in the Northern Territory of Australia.

## Markets

Zinc prices on the LME averaged US\$0.95 per pound for the year, up US\$0.08 per pound or 8.6% from the 2015 average.

Global mine production fell by 6.7% in 2016 to 12.3 million tonnes of contained zinc, while global smelter production fell by 0.2% to 13.7 million tonnes. As a result, we believe that the global concentrate market recorded a significant deficit in 2016, equivalent to 6.8% of global mine production. According to Wood Mackenzie, zinc spot treatment charges fell from US\$200 per tonne in 2015 to US\$40 per tonne by the end of 2016.

In China, estimated zinc mine production in 2016 remained relatively flat over 2015, with Wood Mackenzie

estimating an increase of 1.7% to 4.2 million tonnes. Chinese smelter production is estimated to have increased 17% in 2016 to just over 6.9 million tonnes. China had been able to import 50% more concentrates in 2015 over 2016, building stockpiles for their new smelter capacity. In 2016, Chinese concentrate imports dropped 41%, forcing Chinese smelters to draw down on the 2015 stocks as the concentrate market tightened.

In 2016, global refined zinc metal demand increased 2.7% over 2015 levels to 14.3 million tonnes. During 2016, trade actions by the U.S. government against subsidized imports of coated steels from several countries, including China, Italy and South Korea, have resulted in a 13% reduction in imports of galvanized steel sheet into the U.S., helping to increase demand for refined zinc in our key North American markets.

LME stocks fell by 36,550 tonnes in 2016, a 7.9% decline from 2015 levels, finishing the year at 427,850 tonnes and then dropping below 400,000 tonnes in January 2017. We estimate that total reported global stocks — which include producer, consumer, merchant and terminal stocks — fell by approximately 87,700 tonnes in 2016 and, at year-end, were 1.1 million tonnes, representing an estimated 29 days of global demand, compared to the 25-year average of 42 days.

Wood Mackenzie estimates that refined zinc production will be limited to a 3% increase over 2016 levels, to 14.1 million tonnes, and that the refined metal market will remain in deficit with global consumption estimated to grow by 2% to 14.6 million tonnes. Global zinc mine production is expected to grow to 13.6 million tonnes, largely attributable to Indian mine production returning to normal levels in 2017, higher zinc production from Antamina, an 8% increase in Chinese mine production, and the potential restart of the Glencore zinc mines in the second half of 2017. Global smelter capacity will increase in 2017; however, refined production of zinc metal will again be limited by a lack of concentrates, despite the increases to mine production noted above.

Wood Mackenzie is also forecasting an increase in global zinc refined metal demand in 2017 of 2.1% to 14.6 million tonnes, keeping the refined market in deficit and further reducing global stockpiles of zinc metal.

**Zinc Price and LME Inventory**

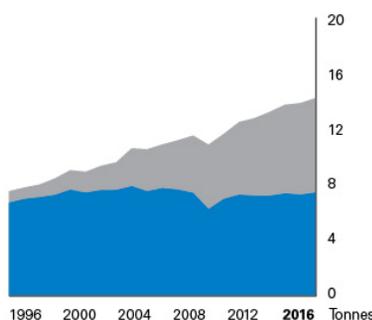
Source: LME



■ LME inventory (tonnes in thousands)  
■ Zinc price (US\$ per pound)

**Global Demand for Zinc**

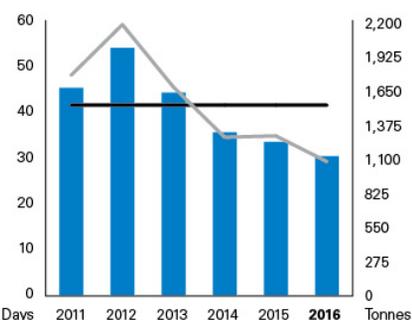
Source: ILZSG, Wood Mackenzie



■ Rest of the world (tonnes in millions)  
■ China (tonnes in millions)

**Global Zinc Inventories**

Source: ILZSG, LME, SHFE



■ Inventories (tonnes in thousands)  
■ Days of global consumption  
■ 25-year average days inventory

## Outlook

We expect zinc in concentrate production in 2017, including co-product zinc production from our copper business unit, to be in the range of 660,000 to 680,000 tonnes.

For the 2018 to 2020 period, we expect total zinc in concentrate production to be in the range of 580,000 to 605,000 tonnes excluding Pend Oreille, which has an uncertain production profile beyond 2017.

# Energy

Located in the Athabasca oil sands region of northeastern Alberta, our energy assets include a 20% interest in the Fort Hills oil sands project, a 100% interest in the Frontier oil sands project and a 50% interest in various other oil sands leases in the exploration phase, including the Lease 421 Area.

Our proved and probable reserves totalled 573 million barrels from Fort Hills, and our best estimate of unrisked contingent bitumen resources totalled 3.2 billion barrels from Frontier at the end of 2016. These valuable long-term assets are located in a politically stable jurisdiction and are expected to be mined using conventional technologies that build on our core skills in large-scale truck and shovel operations.

We recognize that there are concerns over the potential environmental effects of developing oil sands projects. We are researching methods to improve extraction and processing to enhance the sustainability of our projects. We are proud to be one of the founding members of Canada's Oil Sands Innovation Alliance (COSIA) and are encouraged by the progress of the industry towards improving environmental performance, reducing water consumption, improving tailings management, and increasing land reclamation and revegetation.

The disclosure regarding our oil sands assets includes references to reserves and contingent bitumen resource estimates. Further information about these resource estimates, the related risks and uncertainties, and contingencies that prevent the classification of resources as reserves is set out on page 51 under the heading "Contingent Resource Disclosure". For further information about these reserve estimates, see our most recent Annual Information Form, which is available on our website at [www.teck.com](http://www.teck.com), on the Canadian Securities Administrators website at [www.sedar.com](http://www.sedar.com) (SEDAR), and under cover of Form 40-F on the EDGAR section of the Securities Exchange Commission (SEC) website at [www.sec.gov](http://www.sec.gov).

## **Fort Hills Oil Sands Project**

The Fort Hills oil sands project is located in northern Alberta. We hold a 20% interest in the Fort Hills Energy Limited Partnership (Fort Hills Partnership), which owns Fort Hills, with 29.2% held by Total E&P Canada Ltd. (Total) and the remaining 50.8% held by Suncor Energy Inc. (Suncor). An affiliate of Suncor is the operator of the project.

Suncor has provided an update regarding its recently completed review of schedule, project costs and throughput. Suncor advises that the review, at this advanced stage of project development, provides a high degree of confidence on schedule and project costs to completion. A review of the plant throughput conducted in parallel has confirmed the steady state production target and expected ramp up. Suncor has announced an 8% increase in the nameplate capacity to 194,000 barrels per day (100% basis). We anticipate an average production rate of 186,000 barrels per day over the life of the project.

Construction at the end of 2016 has surpassed 76% of completion, with two of the six major project areas (mining and infrastructure) turned over to operations. All major plant equipment and materials are on-site, and all major vessels and process modules have been installed. Shovels, trucks and equipment are mobilizing for operations. As at December 31, 2016, 58% of operations personnel have been hired. Our share of capital expenditures for 2016 was \$987 million.

The project remains on track to produce first oil in late 2017. The majority of project scope areas are progressing in line with the original plan and budget, but effects of the 2016 Fort McMurray wild fire, as well as productivity challenges, have caused an increase in the capital cost estimate for the secondary extraction facility. The revised total project capital forecast is approximately 10% above the project sanction estimate, excluding foreign exchange impacts. Our share of project capital costs through to completion (including foreign exchange) is now expected to be \$805 million, of which approximately \$640 million will be spent in 2017. We recorded an impairment charge of \$222 million in our fourth quarter results that was triggered by an increase in the expected development costs for the project.

Oil production from the first of three secondary extraction units is still expected by the end of 2017. The other two secondary extraction units are scheduled to be completed and commissioned in the first half of 2018, and it is expected that production will reach 90% nameplate capacity by the end of 2018. Suncor is also exploring the opportunity to reduce the ramp-up period.

### **Frontier Project**

We hold a 100% interest in the Frontier project, which is located in northern Alberta. A federal-provincial hearing panel is reviewing the environmental impact assessment for the project and other information filed to date. The regulatory application review process for Frontier is continuing, with a federal-provincial hearing panel reviewing information filed to date. This process is expected to continue through 2017, making 2018 the earliest a federal decision statement is expected. Our expenditures on Frontier are limited to supporting this process. We are evaluating the future project schedule and development options as part of our ongoing capital review and prioritization process.

As of December 31, 2016, our best estimate of unrisks contingent bitumen resources for the Frontier project is approximately 3.2 billion barrels. The project has been designed for a total nominal production of approximately 260,000 barrels per day of bitumen. The Frontier contingent resources have been subcategorized as “development pending” and “economically viable”. There is uncertainty that it will be commercially viable to produce any portion of the resources.

### **Lease 421 Area**

We hold a 50% interest in the Lease 421 Area, which is located east of the Fort Hills project in northern Alberta. To date, a total of 89 core holes have been completed in the Lease 421 Area.

### **Wintering Hills Wind Power Facility**

Wintering Hills Wind Power Facility is located near Drumheller, Alberta. At December 31, 2016, we held a 49% interest in Wintering Hills with TransAlta Corporation, the current project operator, holding the remaining 51%. In January 2017, we announced that we had entered into an agreement to sell our interest in Wintering Hills for \$59 million. TransAlta has also agreed to sell its interest pursuant to the same agreement. The transaction is expected to close in the first quarter of 2017. Following closing, we will retain 265,000 tonnes of CO<sub>2</sub>-equivalent offset credits earned during our ownership of the operation that will be used to reduce emissions from our Cardinal River Operations. During the sale process, we recorded a \$19 million charge (\$26 million pre-tax) to earnings in the third quarter of 2016 to write down our investment in Wintering Hills to the expected net realizable value.

# Exploration

Throughout 2016, we conducted exploration around the world through our eight regional offices. Expenditures of \$51 million in 2016 were focused on copper, zinc and gold.

Exploration plays three critical roles at Teck: discovery of new orebodies through early stage exploration and acquisition; pursuit, evaluation and acquisition of development opportunities; and delivery of geoscience solutions and services to create value at our existing mines and development projects.

Our copper exploration is focused primarily on porphyry copper deposits and, during 2016, we continued to advance porphyry copper projects in Canada, Chile, Peru, the United States and Turkey. Significant exploration work was again focused in and around our existing operations and advanced projects in 2016. In 2017, we plan to drill several early stage copper projects, and we will continue to explore around our existing operations and advanced projects.

Zinc exploration remains focused on four areas: the Red Dog mine district in Alaska, western Canada, northeastern Australia, and Ireland. In Alaska, Australia and Canada, the targets are large, high-grade, sediment-hosted deposits similar to major world-class deposits such as Red Dog in Alaska and Century or McArthur River in Australia. We continued to drill on the Noatak project near our existing Red Dog mine, where we completed 11 kilometres of drilling on high-quality targets with continued good results. Exploration programs will continue in these regions in 2017.

We have ongoing exploration for, and partnerships in, gold opportunities. Our plan is to explore, find and advance gold resources through targeted exploration in select jurisdictions. Once an opportunity has been recognized, the strategy is to optimize that opportunity or asset through further definition drilling and engineering studies, then capture value through periodic divestitures. Our current exploration efforts and drill testing for gold are primarily focused in Turkey, Canada and Peru.

In addition to exploring for copper, zinc and gold, we continue to support our steelmaking coal operations by providing exploration and geoscience services to our existing operations and projects.

# Financial Overview

## Financial Summary

(\$ in millions, except per share data)	2016	2015	2014
<b>Revenues and profit</b>			
Revenues	\$ 9,300	\$ 8,259	\$ 8,599
Gross profit before depreciation and amortization <sup>(1)</sup>	\$ 3,781	\$ 2,645	\$ 2,879
Gross profit	\$ 2,396	\$ 1,279	\$ 1,535
EBITDA <sup>(1)</sup>	\$ 3,350	\$ (1,633)	\$ 2,348
Profit (loss) attributable to shareholders	\$ 1,040	\$ (2,474)	\$ 362
<b>Cash flow</b>			
Cash flow from operations	\$ 3,056	\$ 1,962	\$ 2,278
Property, plant and equipment expenditures	\$ 1,416	\$ 1,581	\$ 1,498
Capitalized production stripping costs	\$ 477	\$ 663	\$ 715
Investments	\$ 114	\$ 82	\$ 44
<b>Balance sheet</b>			
Cash balances	\$ 1,407	\$ 1,887	\$ 2,029
Total assets	\$ 35,629	\$ 34,688	\$ 36,839
Debt, including current portion	\$ 8,343	\$ 9,634	\$ 8,441
<b>Per share amounts</b>			
Profit (loss) attributable to shareholders	\$ 1.80	\$ (4.29)	\$ 0.63
Dividends declared per share	\$ 0.10	\$ 0.20	\$ 0.90

Note:  
 (1) Gross profit before depreciation and amortization and EBITDA are non-GAAP financial measures. See "Use of Non-GAAP Financial Measures" section for further information.

Our revenue and profit depend on the prices for the commodities we produce, sell and use in our production processes. Commodity prices are determined by the supply of and demand for those commodities, which are influenced by global economic conditions. We normally sell the products that we produce at prevailing market prices or, in the case of steelmaking coal, at negotiated prices under term contracts or on a spot basis. Prices for our products can fluctuate significantly and that volatility can have a material effect on our financial results.

Foreign exchange rate movements can also have a significant effect on our results and cash flows, as a substantial portion of our operating costs are incurred in Canadian and other currencies, and most of our revenue and debt are denominated in U.S. dollars. We determine our financial results in local currency and report those results in Canadian dollars and, accordingly, our reported operating results and cash flows are affected by changes in the Canadian dollar exchange rate relative to the U.S. dollar, as well as the Peruvian sol and Chilean peso.

In 2016, our profit attributable to shareholders was \$1.0 billion, or \$1.80 per share. This compares with a loss of \$2.5 billion or \$4.29 per share in 2015, and a profit of \$362 million or \$0.63 per share in 2014. The changes are due mainly to varying commodity prices and sales volumes, partially offset by the effect of the strengthening U.S. dollar and our cost reduction initiatives. The results from 2015 also include \$2.7 billion of after-tax impairment charges.

Our profit over the past three years has included items that we segregate for presentation to investors so that the ongoing profit of the company may be more clearly understood. These are described below and summarized in the table that follows.

In 2016, we recorded an impairment of our investment in the Fort Hills oil sands project as a result of increased development costs. We also recorded asset impairments relating to a project at our Trail Operations and our interest in the Wintering Hills Wind Power Facility. These non-cash charges totalled \$294 million on a pre-tax basis and \$217 million on an after-tax basis.

In 2015, we recorded asset and goodwill impairment charges on a number of our operating assets, including our investment in the Fort Hills project, the Carmen de Andacollo copper mine, the Pend Oreille zinc mine and a number of our steelmaking coal mines, as a result of lowered expectations for commodity prices in both the short and long term. These non-cash charges totalled \$3.6 billion on a pre-tax basis and \$2.7 billion on an after-tax basis. In 2014, the only unusual item was a \$58 million tax charge as a result of a Chilean tax reform bill being signed into law.

The table below shows the effect of these items on our profit.

(\$ in millions, except per share data)	2016	2015	2014
<b>Profit (loss) attributable to shareholders as reported</b>	<b>\$ 1,040</b>	\$ (2,474)	\$ 362
<b>Add (deduct) the after-tax effect of:</b>			
Asset sales and provisions	(53)	(107)	13
Foreign exchange (gains) losses	(45)	80	8
Debt repurchase gains	(44)	–	–
Debt prepayment options gain	(84)	–	–
Collective agreement charges	42	10	–
Impairments	217	2,691	7
Tax items and other items	30	(12)	62
<b>Adjusted profit<sup>(1)</sup></b>	<b>\$ 1,103</b>	\$ 188	\$ 452
<b>Adjusted earnings per share<sup>(1)</sup></b>	<b>\$ 1.91</b>	\$ 0.33	\$ 0.78

Note:

(1) Adjusted profit and adjusted earnings per share are non-GAAP financial measures. See "Use of Non-GAAP Financial Measures" section for further information.

Cash flow from operations in 2016 was \$3.1 billion, compared with \$2.0 billion in 2015 and \$2.3 billion in 2014. The changes in cash flow from operations are mainly due to varying commodity prices and sales volumes, offset to some extent by changes in the currency exchange rates.

At December 31, 2016, our cash balance was \$1.4 billion. Total debt was \$8.3 billion and our net-debt to net-debt-plus-equity ratio was 28% at December 31, 2016, compared with 32% at December 31, 2015 and 25% at the end of 2014.

## Gross Profit

Our gross profit is made up of our revenue less the operating, depreciation and amortization expenses at our producing operations. Income and expenses from our business activities that do not produce commodities for sale are included in our other operating income and expenses or in our non-operating income and expenses. Our principal commodities are steelmaking coal, copper and zinc, which accounted for 44%, 20% and 19% of



revenue respectively in 2016. Silver and lead are significant by-products of our zinc operations, accounting for 7% and 6%, respectively, of our 2016 revenue. We also produce a number of other by-products, including molybdenum, various specialty metals, and chemicals and fertilizers, which in total accounted for 4% of our revenue in 2016.

Our revenue is affected by sales volumes, which are determined by our production levels and by demand for the commodities we produce, commodity prices and currency exchange rates.

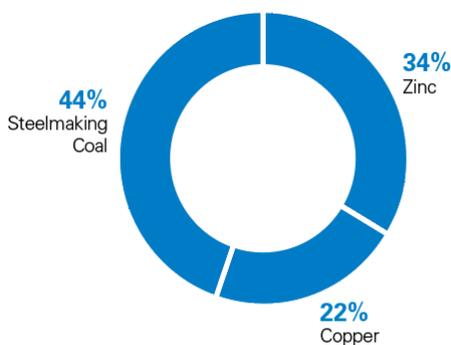
Our revenue was \$9.3 billion in 2016, compared with \$8.3 billion in 2015 and \$8.6 billion in 2014. The increase in 2016 revenue was due mainly to higher steelmaking coal and zinc prices, higher sales volumes of steelmaking coal and zinc, and a stronger U.S. dollar. The reduction in 2015 over 2014 was due mainly to lower commodity prices and marginally lower sales volumes of steelmaking coal, partially offset by a stronger U.S. dollar.

Our cost of sales includes all of the expenses required to produce our products, such as labour, energy, operating supplies, concentrates purchased for our Trail Operations' refining and smelting activities, royalties, and marketing and distribution costs required to sell and transport our products to various delivery points. Our cost of sales also includes depreciation and amortization expense. Due to the geographic locations of many of our operations, we are highly dependent on third parties for the provision of rail, port and other distribution services. In certain circumstances, we negotiate prices and other terms for the provision of these services where we may not have viable alternatives to using specific providers, or may not have access to regulated rate-setting mechanisms or appropriate remedies for service failures. Contractual disputes, demurrage charges, rail and port capacity issues, availability of vessels and railcars, weather problems and other factors can have a material effect on our ability to transport materials from our suppliers and to our customers in accordance with schedules and contractual commitments.

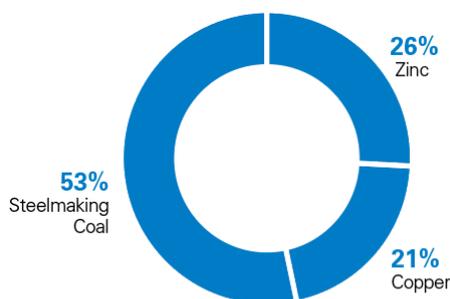
Our costs are dictated mainly by our production volumes, by the costs for labour, operating supplies and concentrate purchases, and by strip ratios, haul distances, ore grades, distribution costs, commodity prices, foreign exchange rates and costs related to non-routine maintenance projects. Production volumes mainly affect our variable operating and our distribution costs. In addition, production affects our sales volumes and, when combined with commodity prices, affects profitability and, ultimately, our royalty expenses.

Our cost of sales was \$6.9 billion in 2016, compared with \$7.0 billion in 2015 and \$7.1 billion in 2014. Despite higher sales volumes, our cost of sales decreased in 2016 from 2015, primarily due to our cost reduction program, partly offset by the stronger U.S. dollar and its effect on costs at our foreign operations. Comparing 2015 with 2014, lower costs were due primarily to our cost reduction program and the staggered three-week shutdowns at our steelmaking coal operations, partly offset by the stronger U.S. dollar.

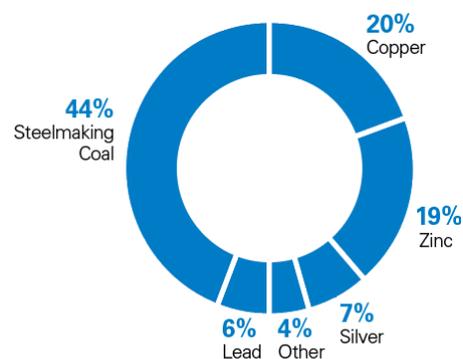
**2016 Revenue by Business Unit**



**2016 Gross Profit by Business Unit**  
(Before depreciation and amortization)



**2016 Revenue by Commodity**



## Other Expenses

(\$ in millions)	2016	2015	2014
General and administration	\$ 99	\$ 108	\$ 119
Exploration	51	76	60
Research and development	30	47	29
Asset impairments	294	3,631	12
Other operating expense (income)	197	335	267
Finance income	(16)	(5)	(4)
Finance expense	354	316	304
Non-operating expense (income)	(239)	89	21
Share of losses (income) of associates	(2)	2	3
	\$ 768	\$ 4,599	\$ 811

Our general and administrative costs were reduced a further \$9 million in 2016, following an \$11 million reduction in 2015. The 17% decrease over the two years is the result of cost reduction measures at our head office.

We must continually replace our reserves as they are depleted in order to maintain production levels over the long term. We try to do this through our exploration and development programs and through acquisition of interests in new properties or in companies that own them. Exploration for minerals and oil is highly speculative and the projects involve many risks. The vast majority of exploration projects are unsuccessful and there are no assurances that current or future exploration programs will find deposits that are ultimately brought into production.

Our research and development expenditures are primarily focused on advancing our proprietary CESL hydrometallurgical technology, the development of internal and external growth opportunities, and the development and implementation of process and environmental technology improvements at operations.

During 2016, we recorded an impairment of our investment in the Fort Hills oil sands project as a result of increased development costs. We also recorded asset impairments relating to a project at our Trail Operations and our interest in the Wintering Hills Wind Power Facility. These charges totalled \$294 million on a pre-tax basis and \$217 million on an after-tax basis and primarily related to Fort Hills. The economic model used in determining the amount of impairment charges to record for Fort Hills used the current price in the initial year and transitioned to a longer-term price in years three to five. The long-term assumption used in the Fort Hills model for Western Canadian Select (WCS) oil price was US\$57 per barrel. A 5.5% real, 7.6% nominal, post-tax discount rate was used to discount the Fort Hills cash flow projections. The discount rate is based on the weighted average cost of capital for an oil sands peer group.

During 2015, we recorded asset and goodwill impairment charges on a number of our operating assets, including our investment in the Fort Hills project, the Carmen de Andacollo copper mine, the Pend Oreille zinc mine and a number of our steelmaking coal mines. These charges totalled \$3.6 billion on a pre-tax basis and \$2.7 billion on an after-tax basis. The write-downs were triggered primarily by lowered expectations for commodity prices in both the short- and long-term. The key inputs used in determining the recoverable amounts of these assets are outlined on pages 36 to 40 in this Management's Discussion and Analysis.

The impairment charges were as follows:

(\$ in millions)	2016	2015	2014
Steelmaking coal operations and goodwill	\$ —	\$ 2,032	\$ —
Copper — Carmen de Andacollo and goodwill	—	506	—
Zinc — Pend Oreille	—	31	—
Energy — Fort Hills	222	1,062	—
Other	72	—	12
	<b>\$ 294</b>	<b>\$ 3,631</b>	<b>\$ 12</b>

Other operating income and expenses include items we consider to be related to the operation of our business, such as final pricing adjustments (which are further described in the next paragraph), share-based compensation, gains or losses on commodity derivatives, gains or losses on the sale of operating or exploration assets, and provisions for various costs at our closed properties. Significant items in 2016 included \$171 million expense for share-based compensation, \$153 million of positive pricing adjustments, \$106 million change in our decommissioning and reclamation provisions, \$48 million charge for take-or-pay contracts and \$38 million of environmental costs. Significant items in 2015 included \$280 million of negative pricing adjustments, \$49 million of environmental costs and \$13 million for share-based compensation. Significant items in 2014 included \$130 million of negative pricing adjustments, \$52 million of environmental costs and \$12 million for share-based compensation.

Sales of metals in concentrate or copper cathodes are recognized in revenue on a provisional pricing basis when the rights, obligations, risks and benefits of ownership pass to the customer, which usually occurs upon shipment. However, final pricing is typically not determined until a subsequent date, often in the following quarter. Revenue in a quarter is based on prices at the date of sale. These pricing adjustments result in gains in a rising price environment and losses in a declining price environment, and are recorded as other operating income or expense. The extent of the pricing adjustments also takes into account the actual price participation terms as provided in certain concentrate sales agreements. It should be noted that these effects arise on the sale of concentrates, as well as on the purchase of concentrates at our Trail Operations.

The following table outlines our outstanding receivable positions, which were provisionally valued at December 31, 2016 and 2015, respectively.

(payable pounds in millions)	Outstanding at December 31, 2016		Outstanding at December 31, 2015	
	Pounds	US\$/lb.	Pounds	US\$/lb.
Copper	114	2.50	257	2.13
Zinc	231	1.17	162	0.73

Our finance expense includes the interest expense on our debt, financing fees and amortization, and the interest components of our pension obligations and accretion on our decommissioning and restoration provisions, less any interest that we capitalize against the cost of our development projects. Debt interest expense increased in 2016 due to the effect of the stronger U.S. dollar, as all of our debt and related interest expense is U.S. dollar denominated. In addition, fees for our letters of credit increased in 2016. These items were partially offset by an increase of our capitalized interest, which totalled \$266 million in 2016, compared with \$222 million in 2015.

Non-operating income (expense) includes items that arise from financial and other matters and includes such items as foreign exchange gains or losses, debt refinancing costs, gains or losses on the revaluation of debt prepayment options, and realized gains or losses on marketable securities. In 2016, other non-operating expenses included \$113 million of gains on debt prepayment options, \$46 million of foreign exchange gains, \$49 million of gains on debt repurchases and \$34 million of gains on sale of investments. In 2015, other non-operating expenses included \$21 million for provisions on marketable securities and \$76 million of foreign exchange losses. In 2014, other non-operating expenses included \$8 million for provisions on marketable securities and \$9 million of foreign exchange losses.

Provision for income and resource taxes was \$587 million, or 36% of pre-tax profits. This rate is higher than the Canadian statutory rate of 26% primarily as a result of resource taxes, higher rates in foreign jurisdictions, inclusive of the newly enacted Peruvian corporate tax increases, and the tax impact of impairments. These were partially reduced by the lower effective tax rate on the gain on debt purchases. Due to available tax pools, we are currently shielded from cash income taxes, but not resource taxes, in Canada. We remain subject to cash taxes in foreign jurisdictions.

Profit attributable to non-controlling interests relates to the ownership interests that are held by third parties in our Quebrada Blanca, Carmen de Andacollo and Elkview operations.

## Financial Position and Liquidity

Our financial position and liquidity have improved from our strong position at the beginning of the year. At December 31, 2016, we had \$1.4 billion of cash and US\$3.0 billion of unused lines of credit, providing us with \$5.4 billion of liquidity.

Our outstanding debt was \$8.3 billion at December 31, 2016, compared with \$9.6 billion at the end of 2015 and \$8.4 billion at the end of 2014. The decrease is due primarily to the US\$759 million of notes that we repurchased and retired in September and October of 2016. A further US\$34 million was repaid in January 2017. In total, in just over 12 months, we have retired approximately US\$1.1 billion of our term notes to take the principal outstanding to US\$6.1 billion.

Our debt positions and credit ratios are summarized in the following table:

	<b>December 31, 2016</b>	December 31, 2015	December 31, 2014
Term notes face value	\$ 6,141	\$ 6,900	\$ 7,200
Unamortized fees and discounts	(50)	(61)	(68)
Other	122	122	144
Total debt (US\$ in millions)	<b>\$ 6,213</b>	<b>\$ 6,961</b>	<b>\$ 7,276</b>
Canadian \$ equivalent <sup>(1)</sup>	\$ 8,343	\$ 9,634	\$ 8,441
Less cash balances	(1,407)	(1,887)	(2,029)
Net debt	<b>\$ 6,936</b>	<b>\$ 7,747</b>	<b>\$ 6,412</b>
Debt to debt-plus-equity ratio <sup>(2)(3)</sup>	<b>32%</b>	37%	31%
Net-debt to net-debt-plus-equity ratio <sup>(2)</sup>	<b>28%</b>	32%	25%
Average interest rate	<b>5.7%</b>	4.8%	4.8%

Notes:

(1) Translated at period end exchange rates.

(2) Non-GAAP financial measure. See "Use of Non-GAAP Financial Measures" section for further information.

(3) Our revolving credit facility requires us to maintain a debt to debt-plus-equity ratio not greater than 50%.

At December 31, 2016, the weighted average maturity of our consolidated indebtedness is approximately 13 years and the weighted average coupon rate is approximately 5.7%.

Our primary sources of liquidity and capital resources are our cash and temporary investments, cash flow provided from operations, and funds available under our committed and uncommitted bank credit facilities, of which approximately US\$3.2 billion is currently available. Further information about our liquidity and associated risks is outlined in Notes 16 and 26 to our 2016 annual consolidated financial statements.

Our cash position decreased from \$1.9 billion at the end of 2015 to \$1.4 billion at December 31, 2016. Significant outflows included \$987 million for our share of the Fort Hills project and amounts associated with the purchase of US\$759 million of notes during 2016.

We maintain various committed and uncommitted credit facilities for liquidity and for the issuance of letters of credit. Our US\$3.0 billion revolving credit facility matures in July 2020 and has a letter of credit sub-limit of US\$1.0 billion. There were no drawings on this facility in 2016 and it remains fully available as at February 23, 2017.

We also have a US\$1.2 billion facility, of which US\$1.14 billion matures in June 2019 and US\$60 million matures in June 2017. As at December 31, 2016, there are US\$981 million of letters of credit issued on this facility.

Borrowing under our primary committed credit facilities is subject to our compliance with the covenants in the agreement and our ability to make certain representations and warranties at the time of the borrowing request.

In addition to our two primary revolving committed credit facilities, we also maintain surety bond capacity and uncommitted bilateral credit facilities with various banks and with Export Development Canada for the issuance of letters of credit, primarily to support our future reclamation obligations. At December 31, 2016, these bilateral credit facilities totalled \$1.4 billion and \$1.1 billion of letters of credit were issued thereunder,

and our surety bond capacity was \$250 million, with \$214 million outstanding.

The cost of funds under certain of our credit facilities depends on our credit ratings. Our current credit ratings from Moody's, S&P, Fitch and DBRS are Ba3, BB, BB (high) and B+, respectively. Moody's rating has a positive outlook, S&P's outlook is stable, and Fitch and DBRS have negative outlooks.

Under the terms of the silver streaming agreement relating to Antamina, if there is an event of default under the agreement or Teck insolvency, Teck Base Metals Ltd., our subsidiary that holds our interest in Antamina, is restricted from paying dividends or making other distributions to Teck to the extent that there are unpaid amounts under the agreement.

On February 21, 2017, we commenced cash tender offers to purchase up to US\$650 million aggregate principal amount of the following series of notes: 3.000% Notes due 2019; 8.000% Notes due 2021; 4.500% Notes due 2021; 4.750% Notes due 2022; and 8.500% Notes due 2024. In conjunction with the tender offers, we are soliciting consents from holders of certain of the notes to amend the indentures governing those notes to shorten the minimum notice period for optional redemption. The tender offers and consent solicitations are scheduled to expire on March 20, 2017, and may expire earlier in certain circumstances. We have reserved the right to amend, extend, terminate and otherwise modify the tender offers and consent solicitations.

## Operating Cash Flow

Cash flow from operations was \$3.1 billion in 2016, compared with \$2.0 billion in 2015 and \$2.3 billion in 2014. The increase in 2016 compared to 2015 was mainly due to varying commodity prices and sales volumes, offset to some extent by changes in currency exchange rates. The decrease in 2015 compared to 2014 was due mainly to lower gross profits at our steelmaking coal and copper operations from lower commodity prices, particularly steelmaking coal.

## Investing Activities

Capital expenditures were \$1.9 billion in 2016, as summarized in the table below:

(\$ in millions)	Sustaining	Major Enhancement	New Mine Development	Subtotal	Capitalized Stripping	Total
Steelmaking coal	\$ 38	\$ 33	\$ —	\$ 71	\$ 277	\$ 348
Copper	106	8	69	183	156	339
Zinc	142	—	4	146	44	190
Energy	5	—	1,005	1,010	—	1,010
Corporate	6	—	—	6	—	6
	\$ 297	\$ 41	\$ 1,078	\$ 1,416	\$ 477	\$ 1,893

The largest components of sustaining capital included \$85 million at Trail Operations, \$61 million for our share of spending at Antamina, \$46 million at Red Dog Operations and \$38 million at our steelmaking coal operations.

Major enhancement expenditures included \$33 million at our steelmaking coal operations to increase production capacity.

New mine development included \$68 million for the Quebrada Blanca Phase 2 project, \$987 million for our share of spending on the Fort Hills oil sands project and \$18 million on the Frontier oil sands project.

Investments in 2016 and 2015 were \$114 million and \$82 million, respectively. Included in 2016 was our \$33 million purchase of the remaining 2.5% minority interest stake in Highland Valley Copper Operations.

Cash proceeds from the sale of assets and investments were \$170 million in 2016, \$1.2 billion in 2015 and \$34 million in 2014. Significant items in 2016 were proceeds of \$122 million from the sale of marketable securities and various royalty interests.

## **Financing Activities**

In June 2016, we made certain amendments to the terms of our US\$1.2 billion credit facility, including a maturity extension from June 2017 to June 2019 for US\$1.0 billion of commitments, with a further extension to 2019 for US\$140 million obtained since then. Both of our committed credit facilities received guarantees from certain subsidiaries. These amendments are described in Note 16 to our annual consolidated financial statements. There were no amendments to the terms of our US\$3.0 billion credit facility, which matures in July 2020.

Immediately following the amendments to the US\$1.2 billion credit facility, we issued US\$650 million of senior unsecured notes due June 2021 with a coupon of 8.00% and US\$600 million of senior unsecured notes due June 2024 with a coupon of 8.50%. These notes are guaranteed on a senior unsecured basis by various wholly owned subsidiaries of Teck and are described in Note 16 to our annual consolidated financial statements.

The net proceeds from these issuances and available cash were used to finance the purchase of US\$1.25 billion aggregate principal amount of our outstanding notes pursuant to cash tender offers. The purchased notes comprise US\$266 million of 3.15% notes due 2017, US\$284 million of 3.85% notes due 2017, US\$478 million of 2.50% notes due 2018, and US\$222 million of 3.00% notes due 2019. The tender offer is described in Note 16 in our annual consolidated financial statements.

In September and early October 2016, we purchased US\$759 million aggregate principal amount of our outstanding notes through private and open market purchases at a total cost of US\$693 million, which was funded from cash on hand. The principal amount of notes purchased was US\$80 million of 3.75% notes due 2023, US\$91 million of 6.125% notes due 2035, US\$159 million of 6.00% notes due 2040, US\$205 million of 6.25% notes due 2041, US\$101 million of 5.20% notes due 2042, and US\$123 million of 5.40% notes due 2043. The purchases are discussed further in Note 16 to our annual consolidated financial statements.

We repurchased 200,000 Class B subordinate voting shares for cancellation pursuant to normal course issuer bids at a cost of \$5 million in 2014. We have not repurchased any shares since 2014 and our last normal course issuer bid expired on July 1, 2015.

## Quarterly Earnings and Cash Flow

(\$ in millions except per share data)	2016				2015			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	\$ 3,557	\$ 2,305	\$ 1,740	\$ 1,698	\$ 2,135	\$ 2,101	\$ 1,999	\$ 2,024
Gross profit	1,577	452	212	155	281	339	311	348
EBITDA	1,561	804	468	517	(269)	(2,506)	596	546
Profit (loss) attributable to shareholders	697	234	15	94	(459)	(2,146)	63	68
Basic earnings (loss) per share	\$ 1.21	\$ 0.41	\$ 0.03	\$ 0.16	\$ (0.80)	\$ (3.73)	\$ 0.11	\$ 0.12
Diluted earnings (loss) per share	\$ 1.19	\$ 0.40	\$ 0.03	\$ 0.16	\$ (0.80)	\$ (3.73)	\$ 0.11	\$ 0.12
Cash flow from operations	1,490	854	339	373	693	560	335	374

Gross profit from our steelmaking coal business unit in the fourth quarter was \$1.2 billion compared with \$29 million a year ago. Gross profit before depreciation and amortization increased by \$1.1 billion in the fourth quarter compared with the same period in 2015 due to significantly higher realized steelmaking coal prices.

Fourth quarter production of 7.3 million tonnes was 14% higher than the same period a year ago and set a second consecutive quarterly production record. Annual production of 27.6 million tonnes also represents an all-time production record. This performance in the quarter and year was the result of record fourth quarter production from four of our six operations and record annual production from Elkview, Greenhills and Line Creek. We also settled five-year collective agreements at Fording River and Elkview during the quarter.

Sales volumes of 6.9 million tonnes in the fourth quarter were 6% higher than the same period in 2015 and represented the third-highest quarterly sales in our history and best ever fourth quarter. Annual sales of 27.0 million tonnes also represents an all-time record high. This strong performance resulted from a combination of tightness in supply and robust demand in all market areas.

Gross profit in the fourth quarter from our copper business unit was \$52 million compared with \$76 million a year ago. Gross profit before depreciation and amortization from our copper business unit increased by \$23 million in the fourth quarter compared with the same period in 2015. This was primarily due to successful cost reduction efforts and higher realized copper and by-product prices, which more than offset significantly lower sales volumes. In addition, due to the improving copper price environment and reduced unit costs, we reversed \$23 million of previously recorded inventory write-downs in the quarter compared with \$20 million of write-downs a year ago. These inventory adjustments were primarily related to Quebrada Blanca Operations.

Fourth quarter copper production decreased by 24% from a year ago primarily due to reduced production at Highland Valley Copper as a result of lower ore grades, as anticipated in the mine plan. Significant cost reduction efforts at our operations substantially reduced the effect of lower copper production on our cash unit costs, after by-product margins, which only increased by 6% to US\$1.45 per pound compared with the same period in 2015.

Gross profit from our zinc business unit in the fourth quarter was \$348 million compared with \$176 million a year ago. Gross profit before depreciation and amortization from our zinc business unit increased by \$181 million compared to the fourth quarter of 2015 primarily due to significantly higher zinc prices.



Zinc in concentrate production in the fourth quarter was 7% higher than the fourth quarter of 2015. A year-end inventory correction recorded in the quarter resulted in reported production being 8% lower than a year ago. Trail Operations set a new annual refined zinc production record, as refined zinc production continued to be strong in the fourth quarter and rose 2% compared to the same quarter in 2015 due to better plant availability and operational improvements.

During the fourth quarter of 2016, we recorded asset impairment charges primarily relating to our investment in the Fort Hills oil sands project. These charges totalled approximately \$268 million on a pre-tax basis (after-tax \$198 million), of which \$222 million related to Fort Hills, but also include the write-off of costs relating to the halted fuming furnace project at Trail Operations.

Our profit attributable to shareholders was \$697 million, or \$1.21 per share, in the fourth quarter compared with a loss of \$459 million, or \$0.80 per share, in the same period a year ago, which included asset impairment charges on our investment in Fort Hills, and on our Coal Mountain and Carmen de Andacollo operations. These charges in 2015 totalled \$736 million on a pre-tax basis and \$536 million on an after-tax basis. The write-downs were triggered by lower market expectations for some future commodity prices and capital market conditions. In addition, profit in the fourth quarter of 2015 was lower due to substantially lower U.S. dollar prices for our primary products, partly offset by reduced operating costs and the positive effect of a stronger U.S. dollar. Declining metal prices resulted in after-tax negative pricing adjustments of approximately \$42 million in the fourth quarter of 2015. We also had after-tax profits of \$91 million derived from royalty sales and a gain on the formation of NuevaUnión (formerly Project Corridor).

Cash flow from operations was \$1.5 billion in the fourth quarter compared with \$693 million a year ago. This performance was a result of significantly higher realized steelmaking coal prices in the quarter and, to a lesser extent, higher zinc prices.

## Outlook

Prices for our key commodities have recently improved and are contributing additional revenue and cash flows. Tight steelmaking coal supply and increased demand from steel mills during the fourth quarter of 2016 drove prices up rapidly. Steelmaking coal inventories are now being reduced, driving the large price correction, which started in December 2016. With increased supply from existing producers and a number of mine restarts, it is unclear how long the price correction will last. In addition, contributing to the volatility in steelmaking coal prices were changes in the Chinese government's working day policy for coal mines, future changes in that policy, or other Chinese government action, may have a significant positive or negative effect on steelmaking coal prices. Commodity markets have historically been volatile and prices can change rapidly, which we have seen recently with the sharp rise and fall in steelmaking coal prices since the third quarter of 2016, and customers can alter shipment plans. This volatility can have a substantial effect on our business. We are also significantly affected by foreign exchange rates. Over the past year, the U.S. dollar average has strengthened by approximately 4% against the Canadian dollar. This has had a positive effect on the profitability of our Canadian operations and translation of profits from our foreign operations. It will, to a lesser extent, put upward pressure on the portion of our operating costs and capital spending that is denominated in U.S. dollars.

Our labour agreement at Highland Valley Copper expired at the end of the third quarter, and negotiations are continuing. Our labour agreements at Trail Operations and at Cardinal River expire in May 2017 and June 2017, respectively. In February 2017, we extended the life of two of the three labour agreements at

Quebrada Blanca into the first quarter of 2019, leaving only one labour agreement expiring in 2017 at the end of November.

## Commodity Prices and 2017 Production

Commodity prices are a key driver of our profit and cash flows. On the supply side, the depleting nature of ore reserves, difficulties in finding new orebodies, the permitting processes, the availability of skilled resources to develop projects, as well as infrastructure constraints, political risk and significant cost inflation may continue to have a moderating effect on the growth in future production for the industry as a whole. We believe that, over the longer term, the industrialization of emerging market economies will continue to be a major positive factor in the future demand for commodities. Therefore, we believe that the long-term price environment for the products that we produce and sell remains favourable.

The sensitivity of our annual profit attributable to shareholders and EBITDA to changes in the Canadian/U.S. dollar exchange rate and commodity prices, before pricing adjustments, based on our current balance sheet, our expected 2017 mid-range production estimates, current commodity prices and a Canadian/U.S. dollar exchange rate of \$1.30, are as follows:

	2017 Mid-Range Production Estimates <sup>(1)</sup>	Change	Estimated Effect of Change On Profit <sup>(2)</sup>	Estimated Effect on EBITDA <sup>(2)</sup>
US\$ exchange		CAD\$0.01	\$ 42 million	\$ 68 million
Steelmaking coal (000's tonnes)	27,500	US\$1/tonne	\$ 21 million	\$ 32 million
Copper (tonnes)	280,000	US\$0.01/lb.	\$ 5 million	\$ 7 million
Zinc (tonnes) <sup>(3)</sup>	972,000	US\$0.01/lb.	\$ 9 million	\$ 14 million

Notes:

(1) All production estimates are subject to change based on market and operating conditions.

(2) The effect on our profit attributable to shareholders and on EBITDA of commodity price and exchange rate movements will vary from quarter to quarter depending on sales volumes. Our estimate of the sensitivity of profit and EBITDA to changes in the U.S. dollar exchange rate is sensitive to commodity price assumptions.

(3) Zinc includes 302,000 tonnes of refined zinc and 670,000 tonnes of zinc contained in concentrate.

The increase in our estimated foreign exchange sensitivity from previous estimates is primarily due to the effect of higher commodity prices, which are all denominated in U.S. dollars.

Our steelmaking coal production in 2017 is expected to be in the range of 27 to 28 million tonnes compared with 27.6 million tonnes produced in 2016. Our actual production will depend primarily on customer demand for deliveries of steelmaking coal. Depending on market conditions and the sales outlook, we may adjust our production plans.

Our copper production for 2017 is expected to decrease and be in the range of 275,000 to 290,000 tonnes compared with 324,200 tonnes produced in 2016. Copper production at Highland Valley Copper is expected to decline as a result of mining lower ore grades. Quebrada Blanca copper cathode production is expected to decline, as the agglomeration circuit will be halted, with all remaining supergene ore mined sent to the dump leach circuit. Our share of production from Antamina is anticipated to decline by approximately 7,000 tonnes due to a decrease in copper-only ore processed in 2017, while copper-zinc ore increases.

Our zinc in concentrate production in 2017 is expected to be in the range of 660,000 to 680,000 tonnes, compared with 661,600 tonnes produced in 2016. Red Dog's production is expected to decrease by approximately 28,000 tonnes primarily due to lower ore grades. Our share of Antamina's zinc production is expected to increase by 33,000 tonnes as a result of processing additional copper-zinc ores. Refined zinc

production in 2017 from our Trail Operations is expected to be in the range of 300,000 to 305,000 tonnes, compared with a record 311,600 tonnes produced in 2016.

## Capital Expenditures

Our forecast approved capital expenditures for 2017, before capitalized stripping costs, are approximately \$1.6 billion and are summarized in the table below. We expect to fund our 2017 capital expenditures from cash on hand and cash flow from operations.

(\$ in millions)	Sustaining	Major Enhancement	New Mine Development	Subtotal	Capitalized Stripping	Total
Steelmaking coal	\$ 140	\$ 120	\$ –	\$ 260	\$ 430	\$ 690
Copper	130	20	200	350	140	490
Zinc	210	15	20	245	50	295
Energy	50	–	675	725	–	725
Corporate	–	–	–	–	–	–
	\$ 530	\$ 155	\$ 895	\$ 1,580	\$ 620	\$ 2,200

New mine development includes \$200 million for Quebrada Blanca Phase 2, \$640 million for Fort Hills and \$26 million for permitting activities on the Frontier oil sands project. In 2017, the planned sustaining capital expenditures for Fort Hills are spread across a number of areas in the project. The costs are associated with activities that will benefit the future development of the operation and technology initiatives, for example: tailings management technology and autonomous hauling. The amount and timing of actual capital expenditures is also dependent upon being able to secure permits, equipment, supplies, materials and labour on a timely basis and at expected costs to enable the projects to be completed as currently anticipated. We may change capital spending plans in 2017, depending on commodity markets, our financial position, results of feasibility studies and other factors.

## Foreign Exchange and Debt Revaluation

The sales of our products are denominated in U.S. dollars, while a significant portion of our expenses are incurred in local currencies, particularly the Canadian dollar and the Chilean peso. Foreign exchange fluctuations can have a significant effect on our operating margins, unless such fluctuations are offset by related changes to commodity prices.

Our U.S. dollar denominated debt is subject to revaluation based on changes in the Canadian/U.S. dollar exchange rate. As at December 31, 2016, \$5.4 billion of our U.S. dollar denominated debt is designated as a hedge against our foreign operations that have a U.S. dollar functional currency. As a result, any foreign exchange gains or losses arising on that amount of our U.S. dollar debt are recorded in other comprehensive income, with the remainder being charged to profit.

## Other Information

### Carbon Taxes

The Province of B.C. imposes a carbon tax on virtually all fossil fuels used in B.C. at a tax rate of \$30 per tonne of CO<sub>2</sub>-emission equivalent. For 2016, our seven B.C.-based operations incurred \$48 million in provincial carbon tax, primarily from our use of coal, diesel fuel and natural gas.

Following the adoption of the Paris Agreement in 2015, both the Provinces of B.C. and Alberta completed reviews of their climate change plans, including a re-examination of their primary carbon price policies, the Carbon Tax (B.C.) and the Specified Gas Emitters Regulation (Alberta). In 2016, the Province of B.C. announced a freeze in the carbon tax at the current rate until other jurisdictions in Canada raise their carbon prices to comparable levels. Additionally, the Province of Alberta announced an economy-wide carbon levy (excluding large industrial facilities) along with a 100 million-tonne GHG emissions cap on oil sands operations and a framework to address emission intensive, trade exposed industries.

Also in 2016, the Government of Canada announced a national pan-Canadian framework that includes a national floor price on carbon. Canadian provinces will be given until 2018 to implement a carbon pricing policy, starting with a minimum price of \$10 per tonne in 2018, increasing \$10 per year to \$50 per tonne by 2022.

We will continue to assess the potential implications of the updated policies on our operations and projects.

### **Financial Instruments and Derivatives**

We hold a number of financial instruments, derivatives and contracts containing embedded derivatives, which are recorded on our balance sheet at fair value with gains and losses in each period included in other comprehensive income and profit for the period as appropriate. The most significant of these instruments are marketable securities, commodity swap contracts, metal-related forward contracts, settlements receivable and payable, embedded debt prepayment options, and gold stream and silver stream embedded derivatives. Some of our gains and losses on metal-related financial instruments are affected by smelter price participation and are taken into account in determining royalties and other expenses. All are subject to varying rates of taxation, depending on their nature and jurisdiction. Further information about our financial instruments, derivatives and contracts containing embedded derivatives and associated risks is outlined in Note 26 to our 2016 annual consolidated financial statements.

### **Critical Accounting Estimates and Judgments**

In preparing consolidated financial statements, management makes estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses across all reportable segments. Management makes estimates and judgments that are believed to be reasonable under the circumstances. Our estimates and judgments are based on historical experience and other factors we consider to be reasonable, including expectations of future events. Critical accounting estimates and judgments are those that could affect the consolidated financial statements materially, are highly uncertain and where changes are reasonably likely to occur from period to period. The judgments and other sources of estimation uncertainty that have a risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next year are outlined below.

#### **Impairment Testing**

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. When impairment testing is required, discounted cash flow models are used to determine the recoverable amount of respective assets. These models are prepared internally 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 plans, operating costs, capital expenditures, discount rates, foreign exchange rates and inflation rates. 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 income statement and the resulting carrying values of assets.

We allocate goodwill arising from business combinations to the cash-generating unit (CGU) or group of CGUs acquired that is expected to receive the benefits from the business combination. When performing annual goodwill impairment tests, we are required to determine the recoverable amount of each CGU or group of CGUs to which goodwill has been allocated. The recoverable amount of each CGU or group of CGUs is determined as the higher of its fair value less costs of disposal (FVLCD) and its value in use.

### ***Year Ended December 31, 2016***

In 2016, we performed our annual goodwill impairment testing at October 31 for our steelmaking coal operations and Quebrada Blanca, as these are the CGUs with goodwill balances. We did not identify any impairment losses for these CGUs in 2016 based on their FVLCD, which was calculated using a discounted cash flow methodology taking into account assumptions likely to be made by market participants.

Our annual goodwill impairment test resulted in the total recoverable amount of our steelmaking coal operations exceeding their carrying value by approximately \$4.9 billion. The recoverable amount is most sensitive to the long-term steelmaking coal price assumption. The recoverable amount is based on a long-term steelmaking coal price of US\$130 per tonne. An 11% decrease in the long-term price assumption would result in the recoverable amount of our steelmaking coal operations equalling their carrying value.

The recoverable amount of Quebrada Blanca exceeded the carrying amount at the date of our annual goodwill impairment test, and significant changes to key inputs would be required to result in the recoverable amount being equal to the carrying value.

During the year ended December 31, 2016, we recorded asset impairments of \$294 million, of which \$222 million related to the Fort Hills oil sands project, \$46 million related to a project at our Trail Operations that will not be completed, and \$26 million related to the Wintering Hills Wind Power Facility.

As a result of the changes in reported reserves and resources at Carmen de Andacollo and increased development costs associated with the Fort Hills oil sands project, we performed a detailed review of the recoverable amounts of these CGUs on a FVLCD basis using a discounted cash flow methodology and taking into account assumptions likely to be made by market participants as at December 31, 2016.

We have determined that the estimated recoverable amount of Carmen de Andacollo exceeded its carrying value as at December 31, 2016 and accordingly, no impairment charge was recorded.

We have estimated a post-tax recoverable amount for Fort Hills of \$2.52 billion, which was lower than the carrying value as at December 31, 2016. Accordingly, we have recorded a pre-tax impairment of \$222 million (after-tax \$164 million) of the Fort Hills project.

The key inputs used to estimate the FVLCD of Carmen de Andacollo and Fort Hills as at December 31, 2016, were determined as follows:

### *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, where possible, market transactions, to ensure they are within the range of values used by market participants.

Our key commodity price assumptions are based on a current price in the initial year and gradually escalated to an assumed real long-term price in 2021. For copper and WCS oil prices, we started with a 2016 current price in the initial year and gradually escalated that over the following three years, reaching real long-term prices in 2021 of US\$3.00 per pound for copper and US\$57 per barrel for oil.

### *Reserves and Resources*

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

### *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 continuously subjected to ongoing optimization and review by management.

### *Discount Rates*

A 6.0% real, 8.1% nominal, post-tax discount rate was used to discount cash flow projections for Carmen de Andacollo as at December 31, 2016, based on a mining weighted average cost of capital.

A 5.5% real, 7.6% nominal, post-tax discount rate was used to discount cash flow projections for the Fort Hills project, based on an oil sands weighted average cost of capital.

### *Foreign Exchange Rates*

Foreign exchange rates are benchmarked with external sources of information based on a range used by market participants. The long-term Canadian-U.S. dollar foreign exchange rate assumption used as at December 31, 2016 was CAD\$1.25 to US\$1.00.

### *Inflation Rates*

Inflation rates are based on average historical inflation for the location of each operation and long-term government bond yields. The inflation rate for all FVLCD calculations as at December 31, 2016 was 2%.

### *Sensitivity Analysis*

We noted impairment indicators at Carmen de Andacollo and Fort Hills and the recoverable amounts of the associated CGUs have been estimated. The recoverable amount of Carmen de Andacollo exceeded its carrying value and we did not record an impairment charge as at December 31, 2016. We have adjusted the carrying value of Fort Hills down to its recoverable amount as at December 31, 2016.

These recoverable amounts are most sensitive to changes in long-term copper and WCS oil prices, the Canadian-U.S. dollar exchange rates (for Fort Hills) and discount rates. 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. In addition, variations in assumptions could potentially cause some assets to be fully written off and not be subject to further impairment. Therefore, once an asset is fully impaired, a further decrease in these assumptions does not necessarily correspond with a proportionate increase in a potential impairment charge and a linear extrapolation of these effects becomes less meaningful as the change in assumption increases.

Fort Hills has been written down to its recoverable amount. Ignoring the above-described interrelationships, in isolation a US\$1 decrease per barrel in the long-term WCS oil price would result in an additional reduction in the recoverable amount of \$120 million. A \$0.01 strengthening of the Canadian dollar against the U.S. dollar would result in an additional reduction in the recoverable amount of \$42 million. A 25 basis point increase in the discount rate would result in an additional reduction in the recoverable amount of approximately \$120 million.

Carmen de Andacollo was written down to its recoverable amount as at December 31, 2015 and the estimated recoverable amount has not changed significantly since that date. Accordingly, the recoverable amount is sensitive to any change in the long-term copper price assumption or discount rate. Ignoring the above-described interrelationships, in isolation a US\$0.01 decrease in the long-term copper price and a 25 basis point increase in the discount rate would result in a reduction in the recoverable amount of approximately \$13 million and \$19 million, respectively.

#### ***Year Ended December 31, 2015***

In light of economics in the third and fourth quarters of 2015, we identified CGUs with carrying values that exceeded their estimated recoverable amounts and recorded impairments. The FVLCD was estimated using a discounted cash flow methodology taking into account assumptions likely to be made by market participants. For the year ended December 31, 2015, we recorded pre-tax impairment adjustments of \$3.6 billion. The details of the impairment adjustments are outlined on page 26 of this Management's Discussion and Analysis.

The key inputs used to estimate the FVLCD of each CGU as at December 31, 2015, where applicable, were derived in the same manner as those noted above for our December 31, 2016 impairment testing and were as follows:

#### ***Commodity Prices***

Our key commodity price assumptions were based on current prices over the first three years escalating to an assumed real long-term price. For steelmaking coal, copper, zinc and Western Canadian Select oil prices, we started with a 2015 current price in the initial year and gradually escalated that over the next three years, reaching real long-term prices in 2020 of US\$130 per tonne for steelmaking coal, US\$3.00 per pound for copper, US\$1.00 per pound for zinc and US\$60 per barrel for oil.

#### ***Discount Rates***

A 6.2% real, 8.3% nominal, post-tax discount rate was used to discount cash flow projections in all of our FVLCD discounted cash flows as at December 31, 2015.

### *Foreign Exchange Rates*

The long-term Canadian-U.S. dollar foreign exchange rate assumption used as at December 31, 2015 was CAD\$1.25 to US\$1.00.

### *Inflation Rates*

The inflation rate for all FVLCD calculations as at December 31, 2015 was 2%.

## **Joint Arrangements**

We are a party to a number of arrangements in 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 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. In such circumstances, we may consider the application of other facts and circumstances to conclude that a joint arrangement is a joint operation. This conclusion requires judgment and is specific to each arrangement. We have applied the use of other facts and circumstances 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 are the provisions for output to the parties of the joint arrangements. 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, combined with other factors, 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 long-term streaming arrangements linked to production at specific operations, judgment is required in assessing the appropriate accounting treatment of 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. This assessment considers what the



counterparty is entitled to, and the associated risks and rewards attributable to them over the life of the operation, including 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.

### **Estimated Recoverable Reserves and Resources**

Mineral reserve and resource estimates are based on various assumptions relating to operating matters as set forth in National Instrument 43-101. These include production costs, mining and processing recoveries, cut-off grades, long-term commodity prices and, in some cases, exchange rates, inflation rates and capital costs. Cost estimates are based on feasibility study estimates or operating history. Estimates are prepared by appropriately qualified persons, but will be affected by forecasted commodity prices, inflation rates, exchange rates, and capital and production costs and recoveries, amongst 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 for forecasting the timing of the payment of decommissioning and restoration costs. Therefore, changes in the assumptions used could change the carrying value of assets, depreciation and impairment charges recorded in the income statement, and the carrying value of the decommissioning and restoration provision.

### **Decommissioning and Restoration Provisions**

The decommissioning and restoration provision is based on future cost estimates using information available at the balance sheet date. The decommissioning and restoration provision 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 discount rate. The decommissioning and restoration provision 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. To the extent the actual costs differ from these estimates, adjustments will be recorded and the income statement may be affected.

### **Current and Deferred 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.

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 the 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. 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. Judgment is also required on the application of income tax legislation. These estimates and 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.

## Adoption of New Accounting Standards and Accounting Developments

### **Accounting Developments**

New IFRS pronouncements that have been issued but are not yet effective are listed below. We plan to apply the new standard or interpretation in the annual period for which it is required.

#### ***Revenue from Contracts with Customers***

In May 2014, the IASB issued IFRS 15, Revenue from Contracts with Customers (IFRS 15) as a result of a joint revenue project with the Financial Accounting Standards Board (FASB).

The new revenue standard introduces a single principles-based five-step model for the recognition of revenue when control of goods is transferred to, or a service is performed, for the customer. The five steps are to: identify the contract(s) with the customer, identify the performance obligations in the contract, determine the transaction price, allocate the transaction price, and recognize revenue when the performance obligation is satisfied. IFRS 15 also requires enhanced disclosures about revenue to help investors better understand the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers, and improves the comparability of revenue from contracts with customers.

The standard initially had an effective date of January 1, 2017 but was subsequently deferred by one year to January 1, 2018. Early application of IFRS 15 is still permitted.

We are currently assessing the effect of this standard on our financial statements.

#### ***Financial Instruments***

IFRS 9, Financial Instruments (IFRS 9), addresses the classification, measurement and recognition of financial assets and financial liabilities. The July 2014 publication of IFRS 9 is the completed version of the standard, replacing earlier versions of IFRS 9 and superseding the guidance relating to the classification and measurement of financial instruments in IAS 39, Financial Instruments: Recognition and Measurement (IAS 39).

IFRS 9 requires financial assets to be classified into three measurement categories on initial recognition: those measured at fair value through profit and loss, those measured at fair value through other comprehensive income and those measured at amortized cost. Investments in equity instruments are required to be measured by default at fair value through profit or loss. However, there is an irrevocable option for each equity instrument to present fair value changes in other comprehensive income. Measurement and classification of financial assets is dependent on the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial asset. For financial liabilities, the standard retains most of the IAS 39 requirements. The main change is that, in cases where the fair value option is taken for financial liabilities, the part of a fair value change relating to an entity's own credit risk is recorded in other comprehensive income rather than the income statement, unless this creates an accounting mismatch.

IFRS 9 introduces a new three-stage expected credit loss model for calculating impairment for financial assets. IFRS 9 no longer requires a triggering event to have occurred before credit losses are recognized. An entity is required to recognize expected credit losses when financial instruments are initially recognized and to update the amount of expected credit losses recognized at each reporting date to reflect changes in the credit risk of the financial instruments. In addition, IFRS 9 requires additional disclosure requirements about expected credit losses and credit risk.

The new hedge accounting model in IFRS 9 aligns hedge accounting with risk management activities undertaken by an entity. Components of both financial and non-financial items will now be eligible for hedge accounting, as long as the risk component can be identified and measured. The hedge accounting model includes eligibility criteria that must be met, but these criteria are based on an economic assessment of the strength of the hedging relationship. New disclosure requirements relating to hedge accounting will be required and are meant to simplify existing disclosures. The IASB currently has a separate project on macro hedging activities; until the project is completed, the IASB has provided a policy choice for entities to either apply the hedge accounting model in IFRS 9 or IAS 39 in full. Additionally, there is a hybrid option to use IAS 39 to account for macro hedges only and to use IFRS 9 for all other hedges.

The completed version of IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. We are currently assessing the effect of this standard and its related amendments on our financial statements.

### **Leases**

In January 2016, the IASB issued IFRS 16, Leases (IFRS 16), which eliminates the classification of leases as either operating or finance leases for a lessee. Under IFRS 16, all leases are considered finance leases and will be recorded on the balance sheet. The only exemptions to this classification will be for leases that are 12 months or less in duration or for leases of low-value assets. The requirement to record all leases as finance leases under IFRS 16 will increase lease assets and financial liabilities on an entity's financial statements. IFRS 16 will also change the nature of expenses relating to leases, as the straight-line lease expense previously recognized for operating leases will be replaced with depreciation expense for lease assets and finance expense for lease liabilities. IFRS 16 includes an overall disclosure objective and requires a company to disclose (a) information about lease assets and expenses and cash flows related to leases; (b) a maturity analysis of lease liabilities; and (c) any additional company-specific information that is relevant to satisfying the disclosure objective. IFRS 16 is effective from January 1, 2019 and can be applied before that date, but only if IFRS 15 is also applied. We are currently assessing the effect of this standard on our financial statements.

## **Outstanding Share Data**

As at February 23, 2017, there were 567,846,944 Class B subordinate voting shares and 9,353,470 Class A common shares outstanding. In addition, there were 22,551,735 employee stock options outstanding, with exercise prices ranging between \$4.15 and \$58.80 per share. More information on these instruments and the terms of their conversion are set out in Note 21 to our 2016 consolidated financial statements.

## Contractual and Other Obligations

(\$ in millions)	Less than 1 Year	2–3 Years	4–5 Years	More than 5 Years	Total
Principal and interest payments on debt	\$ 538	\$ 1,337	\$ 2,423	\$ 10,328	\$ 14,626
Operating leases	56	42	24	6	128
Capital leases	34	26	11	64	135
Road and port lease at Red Dog <sup>(1)</sup>	24	47	47	291	409
Minimum purchase obligations <sup>(2)</sup>					
Concentrate, equipment, supply and other purchases	912	137	29	62	1,140
Shipping and distribution	342	545	506	247	1,640
Energy contracts	124	305	320	1,882	2,631
Pension funding <sup>(3)</sup>	38	–	–	–	38
Other non-pension post-retirement benefits <sup>(4)</sup>	18	39	43	438	538
Decommissioning and restoration provision <sup>(5)</sup>	55	97	75	993	1,220
Other long-term liabilities <sup>(6)</sup>	16	47	8	–	71
Contributions to the Fort Hills oil sands project	127	–	–	–	127
<b>Total</b>	<b>\$ 2,284</b>	<b>\$ 2,622</b>	<b>\$ 3,486</b>	<b>\$ 14,311</b>	<b>\$ 22,703</b>

### Notes:

- (1) We lease road and port facilities from the Alaska Industrial Development and Export Authority, through which it ships metal concentrates produced at the Red Dog mine. Minimum lease payments are US\$18 million for the next 14 years and US\$6 million for the following nine years and are subject to deferral and abatement for *force majeure* events.
- (2) The majority of our minimum purchase obligations are subject to continuing operations and *force majeure* provisions.
- (3) As at December 31, 2016, the company had a net pension asset of \$178 million, based on actuarial estimates prepared on a going concern basis. The amount of minimum funding for 2017 in respect of defined benefit pension plans is \$38 million. The timing and amount of additional funding after 2017 is dependent upon future returns on plan assets, discount rates and other actuarial assumptions.
- (4) We had a discounted, actuarially determined liability of \$538 million in respect of other non-pension post-retirement benefits as at December 31, 2016. Amounts shown are estimated expenditures in the indicated years.
- (5) We accrue environmental and reclamation obligations over the life of our mining operations, and amounts shown are estimated expenditures in the indicated years at fair value, assuming credit-adjusted risk-free discount rates between 6.33% and 7.33% and an inflation factor of 2.00%.
- (6) Other long-term liabilities include amounts for post-closure, environmental costs and other items.

## Disclosure Controls and Internal Control Over Financial Reporting

### Disclosure Controls and Procedures

Disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed in reports filed or submitted by us under U.S. and Canadian securities legislation is recorded, processed, summarized and reported within the time periods specified in those rules, and include controls and procedures designed to ensure that information required to be disclosed in reports filed or submitted by us under U.S. and Canadian securities legislation is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to permit timely decisions regarding required disclosure. Management, including the Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures, as defined in the rules of the U.S. Securities and Exchange Commission and the Canadian Securities Administrators, as at December 31, 2016. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as at December 31, 2016.

### Management's Report on Internal Control Over Financial Reporting

Our 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. Management has used the Committee of Sponsoring Organizations of the Treadway Commission (COSO) 2013 framework to evaluate the effectiveness of our internal control over financial reporting. Based on this assessment, management has concluded that as at December 31, 2016, our internal control over financial reporting was effective.

The effectiveness of our internal controls over financial reporting has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, who have expressed their opinion in their report included with our annual consolidated financial statements.

## Use of Non-GAAP Financial Measures

Our financial results are prepared in accordance with International Financial Reporting Standards (IFRS). This document refers to gross profit before depreciation and amortization, gross profit margins before depreciation, EBITDA, adjusted EBITDA, adjusted profit, adjusted earnings per share, cash unit costs, adjusted cash costs of sales, cash margins for by-products, adjusted revenue, net debt, debt to debt-plus-equity ratio, and the net-debt to net-debt-plus-equity ratio, which are not measures recognized under IFRS in Canada and do not have a standardized meaning prescribed by IFRS or Generally Accepted Accounting Principles (GAAP) in the United States, and therefore may not be comparable to similar measures presented by other issuers.

Gross profit before depreciation and amortization is gross profit with the depreciation and amortization expense added back. EBITDA is profit attributable to shareholders before net finance expense, income and resource taxes, and depreciation and amortization. Adjusted EBITDA is EBITDA before impairment charges. For adjusted profit, we adjust profit attributable to shareholders as reported to remove the effect of certain types of transactions that in our judgment are not indicative of our normal operating activities or do not necessarily occur on a regular basis. This both highlights these items and allows us to analyze the rest of our results more clearly. We believe that disclosing these measures assists readers in understanding the cash-generating potential of our business in order to provide liquidity to fund working capital needs, service outstanding debt, fund future capital expenditures and investment opportunities, and pay dividends.

Gross profit margins before depreciation are gross profit before depreciation and amortization, divided by revenue for each respective business unit.

Cash unit costs are calculated by dividing the cost of sales for the principal product by sales volumes. We include this information, as it is frequently requested by investors and investment analysts who use it to assess our cost structure and margins and compare it to similar information provided by many companies in our industry.

We sell both copper concentrates and refined copper cathodes. The price for concentrates sold to smelters is based on average LME prices over a defined quotational period, from which processing and refining deductions are made. In addition, we are paid for an agreed percentage of the copper contained in concentrates, which constitutes payable pounds. Adjusted revenue excludes the revenue from co-products and by-products, but adds back the processing and refining allowances to arrive at the value of the underlying payable pounds of copper. Readers may compare this on a per unit basis with the price of copper on the LME.

The adjusted cash cost of sales for our steelmaking coal operations is defined as the cost of the product as it leaves the mine excluding depreciation and amortization charges. Adjusted cash cost of sales for our copper operations is defined as the cost of the product delivered to the port of shipment, excluding depreciation and amortization charges. It is common practice in the industry to exclude depreciation and amortization, as these costs are 'non-cash' and discounted cash flow valuation models used in the industry substitute expectations of future capital spending for these amounts. In order to arrive at adjusted cash costs of sales for copper, we also deduct the costs of by-products and co-products. Total cash unit costs include the smelter and refining allowances added back in determining adjusted revenue. This presentation allows a comparison of unit costs, including smelter allowances, to the underlying price of copper in order to assess the margin. Unit costs, after deducting co-product and by-product margins, are also a common industry measure. By deducting the co-product and by-product margin per unit of the principal product, the margin for the mine on a per unit basis may be presented in a single metric for comparison to other operations. Readers should be aware that this metric, by excluding certain items and reclassifying cost and revenue items, distorts our actual production costs as determined under GAAP.

Net debt is total debt less cash and cash equivalents. The debt to debt-plus-equity ratio takes total debt as reported and divides that by the sum of total debt plus total equity. The net-debt to net-debt-plus-equity ratio is net debt divided by the sum of net debt plus total equity, expressed as a percentage. These measures are disclosed as we believe that they provide readers with information that allows them to assess our credit capacity and the ability to meet our short- and long-term financial obligations.

The measures described above do not have standardized meanings under IFRS, may differ from those used by other issuers, and may not be comparable to such measures as reported by others. These measures have been derived from our financial statements and have been applied on a consistent basis as appropriate. We disclose these measures because we believe that they assist readers in understanding the results of our operations and financial position; they are also meant to provide further information about our financial results to investors. These measures should not be considered in isolation or used in substitute for other measures of performance prepared in accordance with IFRS.

## Reconciliation of Gross Profit Before Depreciation and Amortization

(\$ in millions)	2016	2015	2014
Gross profit	\$ 2,396	\$ 1,279	\$ 1,535
Depreciation and amortization	1,385	1,366	1,344
Gross profit before depreciation and amortization	\$ 3,781	\$ 2,645	\$ 2,879
Reported as:			
<b>Steelmaking coal</b>	\$ 2,007	\$ 906	\$ 920
<b>Copper</b>			
Highland Valley Copper	268	449	419
Antamina	409	412	450
Quebrada Blanca	24	(19)	118
Carmen de Andacollo	86	86	164
Duck Pond	–	(3)	16
Other	1	6	10
	\$ 788	\$ 931	\$ 1,177
<b>Zinc</b>			
Trail Operations	241	205	142
Red Dog	749	600	638
Pend Oreille	–	(9)	–
Other	(6)	9	(1)
	\$ 984	\$ 805	\$ 779
<b>Energy</b>	\$ 2	\$ 3	\$ 3
Gross profit before depreciation and amortization	\$ 3,781	\$ 2,645	\$ 2,879

## Quarterly Reconciliation

(\$ in millions)	2016				2015			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Profit (loss) attributable to shareholders	\$ 697	\$ 234	\$ 15	\$ 94	\$ (459)	\$ (2,146)	\$ 63	\$ 68
Finance expense net of finance income	82	86	82	88	79	76	78	78
Provision (recovery of) for income taxes	395	119	47	26	(222)	(767)	90	63
Depreciation and amortization	387	365	324	309	333	331	365	337
EBITDA	\$ 1,561	\$ 804	\$ 468	\$ 517	\$ (269)	\$ (2,506)	\$ 596	\$ 546
Impairments	\$ 268	\$ 26	–	–	\$ 736	\$ 2,895	–	–
Adjusted EBITDA	\$ 1,829	\$ 830	\$ 468	\$ 517	\$ 467	\$ 389	\$ 596	\$ 546



## Cautionary Statement on Forward-Looking Information

This document contains certain forward-looking information and forward-looking statements as defined in applicable securities laws. All statements other than statements of historical fact are forward-looking statements. These forward-looking statements, principally under the heading “Outlook”, but also elsewhere in this document, include estimates, forecasts and statements as to management’s expectations with respect to, among other things, anticipated future production at our business units and individual operations (including our long-term production guidance), cost and spending guidance for our business units and individual operations, our expectation that we will meet our production guidance, sales volume and selling prices for our products (including settlement of coal contracts with customers), forecast capital expenditures, expected prices and demand for our products, expected receipt of regulatory approvals and timing thereof, expected receipt of pre-feasibility studies, feasibility studies and other studies and the timing thereof, plans and expectations for our development projects, including resulting increases in forecast operating costs and costs of product sold, expected production, expected progress, planned activities, costs and outcomes of our various projects and investments, including, but not limited to, those described in the discussions of our operations, the sensitivity of our estimated profit and EBITDA to changes in commodity prices and exchange rates, the effect of currency exchange rates, our strategies and objectives, our expectations for the general market for our commodities, future trends for the company, costs associated with the Elk Valley Water Quality Plan and goals of that plan, anticipated mine life for our operations, expected copper and zinc production rates at Antamina, expectations that the agglomeration circuit at Quebrada Blanca will be halted in 2017 and that this will reduce operating costs, expectations regarding the Quebrada Blanca Phase 2 project, including that the project has the potential to be a large-scale, long-life copper asset, has the potential to significantly extend mine life beyond the feasibility case, expectations that the project is expected to generate strong economic returns with operating cash costs well placed on the long-term copper C1 cost curve, capital cost and mine life and production estimates for the project, expectations regarding regulatory approvals for the Quebrada Blanca Phase 2 project and timing of any development decision in respect thereof and first ore, the potential to expand the Pend Oreille mine life at rates similar to its 2017 anticipated production for several more years, planned exploration activities at NuevaUnión, planned exploration activities and feasibility studies at Red Dog and any aim to increase mine life or mill throughput as a result, any anticipated extension to the Pend Oreille mine life, planned construction of a new acid plant at our Trail Operations and the timing thereof, our ability to continue our cost reduction initiatives and the anticipated results of the initiatives, the expected timing and amount of production at the Fort Hills oil sands project, capital costs and our remaining capital commitment at Fort Hills, Fort Hills anticipated production rate, timing expectations regarding the Frontier review and permitting process as well as anticipated cost to achieve first commercial production, reserve and resources estimates, the availability of our credit facilities, sources of liquidity and capital resources forecast and demand and market outlook for commodities. These forward-looking statements involve numerous assumptions, risks and uncertainties and actual results may vary materially.

These statements are based on a number of assumptions, including, but not limited to, assumptions regarding general business, regulatory and economic conditions, the supply and demand for, deliveries of, and the level and volatility of prices of zinc, copper and steelmaking coal and other primary metals and minerals as well as oil, and related products, the timing of the receipt of regulatory and governmental approvals for our development projects and other operations, our costs of production, and production and productivity levels, as well as those of our competitors, power prices, continuing availability of water and power resources for our operations, market competition, the accuracy of our reserve and resource estimates (including with respect to size, grade and recoverability) and the geological, operational and price

assumptions on which these are based, conditions in financial markets, the future financial performance of the company, our ability to attract and retain skilled staff, our ability to procure equipment and operating supplies, positive results from the studies on our expansion projects, our steelmaking coal and other product inventories, our ability to secure adequate transportation for our products, our ability to obtain permits for our operations and expansions, and our ongoing relations with our employees, business partners and joint venturers. Assumptions regarding capital costs, mine life and other parameters for Quebrada Blanca Phase 2 are based on assumptions in the feasibility study. Statements regarding the availability of our credit facilities are based on assumptions that we will be able to satisfy the conditions for borrowing at the time of a borrowing request and that the credit facilities are not otherwise terminated or accelerated due to an event of default. The sensitivity of our project profit and EBITDA to changes in the Canadian/U.S. dollar exchange rate and commodity prices, before pricing adjustments, is based on our current balance sheet, our expected 2017 mid-range production estimates, current commodity prices and a Canadian/U.S. dollar exchange rate of \$1.30. The foregoing list of assumptions is not exhaustive. Events or circumstances could cause actual results to vary materially.

Factors that may cause actual results to vary materially include, but are not limited to, changes in commodity and power prices, changes in market demand for our products, changes in interest and currency exchange rates, acts of foreign or domestic governments and the outcome of legal proceedings, inaccurate geological and metallurgical assumptions (including with respect to the size, grade and recoverability of mineral reserves and resources), unanticipated operational difficulties (including failure of plant, equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, government action or delays in the receipt of government approvals, changes in tax or royalty rates, industrial disturbances or other job action, adverse weather conditions and unanticipated events related to health, safety and environmental matters), union labour disputes, political risk, social unrest, failure of customers or counterparties to perform their contractual obligations, changes in our credit ratings, unanticipated increases in costs to construct our development projects, difficulty in obtaining permits, inability to address concerns regarding permits or environmental impact assessments, and changes or further deterioration in general economic conditions. The amount and timing of actual capital expenditures is dependent upon, among other matters, being able to secure permits, equipment, supplies, materials and labour on a timely basis and at expected costs to enable the related capital project to be completed as currently anticipated. Our Fort Hills project is not controlled by us and construction and production schedules may be adjusted by our partners.

Statements concerning future production costs or volumes, and the sensitivity of the company's profit to changes in commodity prices and exchange rates, are based on numerous assumptions of management regarding operating matters and on assumptions that demand for products develops as anticipated, that customers and other counterparties perform their contractual obligations, that operating and capital plans will not be disrupted by issues such as mechanical failure, unavailability of parts and supplies, labour disturbances, interruption in transportation or utilities, and adverse weather conditions, and that there are no material unanticipated variations in the cost of energy or supplies.

We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning risks and uncertainties associated with these forward-looking statements and our business can be found in our Annual Information Form for the year ended December 31, 2016, filed under our profile on SEDAR ([www.sedar.com](http://www.sedar.com)) and on EDGAR ([www.sec.gov](http://www.sec.gov)) under cover of Form 40-F.

Quebrada Blanca Phase 2 reserve and grade information was approved by Mr. Rodrigo Alves Marinho, P.Geol., an employee of Teck. Mr. Marinho is a qualified person, as defined under National Instrument (NI) 43-101.

### **Contingent Resource Disclosure**

The contingent bitumen resources at Frontier have been prepared by Sproule Unconventional Limited, a qualified resources evaluator, in accordance with the guidelines set out in the Canadian Oil and Gas Evaluation Handbook. There is uncertainty that any of these resources will be commercially viable to produce any portion of the resources. Contingent bitumen resources are defined for this purpose as those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. The entire contingent bitumen resources for Frontier oil sands mine are sub-classified into the development pending project maturity sub-class as extensive pre-development work has been completed. Contingencies may include factors such as economic, legal, environmental, political and regulatory matters or a lack of markets. Contingent resources do not constitute, and should not be confused with, reserves. There is no certainty that the Frontier project will produce any portion of the volumes currently classified as contingent resources. The primary contingencies that currently prevent the classification of the contingent resources disclosed above for the Frontier project as reserves include project economics due to the uncertainty in oil price and uncertainty in exchange rate; uncertainties around receiving regulatory approval to develop the project; potential issues regarding social licence for oil sands mining generally and climate change policy costs. In addition, there would be a need for approval of a decision to proceed to construction of the project by Teck. The Frontier project is based on a development study. The recovery technology at Frontier is expected to be a paraffinic froth treatment process. The total cost required to achieve first commercial production has been estimated by the resources evaluator at \$16.2 billion.