# Teck

### **Base Metals Markets**

April 3, 2019 Andrew Stonkus, Senior Vice President, Marketing and Logistics



# Caution Regarding Forward-Looking Statements

Both these slides and the accompanying oral presentations contain certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of the Securities Act (Ontario) and comparable legislation in other provinces (collectively referred to herein as forward-looking statements). Forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variation of such words and phrases or state that certain actions, events or results "may", "could", "should", "would", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Teck to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward-looking statements include statements relating to expectations regarding copper and zinc supply and demand; forecast global copper production; expectations with respect to new mine production and scrap availability; Chinese copper demand expectations and smelter capacity; global trends enhancing copper demand; expectations relating to future global zinc mine production and inventories.

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 and economic conditions, interest rates, the supply and demand for, inventories and deliveries of, and the level and volatility of prices of our base metals, the timing of the receipt of regulatory and governmental approvals for our development projects and other operations, acts of foreign or domestic governments, our production and productivity levels, as well as those of our competitors, the timing of development of our competitors' projects, market competition, conditions in financial markets, the future financial performance of the company, and our ongoing relations with our employees and business partners and joint venturers. Assumptions are also included in the footnotes to various slides. The foregoing list of assumptions is not exhaustive.

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 domestic or foreign governments and the outcome of legal proceedings, changes in the financial market in general, unanticipated increases in costs to construct our or our competitors' development projects, changes in tax benefits or tax rates, and changes or deterioration in general economic conditions. We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning assumptions, risks and uncertainties associated with these forward-looking statements and our business can be found in our most recent Annual Information Form, as well as our management's discussion and analysis of quarterly results and other subsequent filings, all filed under our profile on SEDAR (www.sedar.com) and on EDGAR (www.sec.gov).

Scientific and technical information regarding our material mining projects in this presentation was approved by Mr. Rodrigo Alves Marinho, P.Geo., an employee of Teck. Mr. Marinho is a qualified person, as defined under National Instrument (NI) 43-101.

# **Copper Market Highlights**

- Reported copper cathode stocks have fallen to historically low levels
- Despite recent announced mine supply increases, medium-to-long-term market still in structural deficit
- Environmental restrictions on global scrap flows are impacting copper unit availability, increasing demand for concentrates & cathodes
- Even at low demand growth rates, market still in deficit to 2025
- Global trends positive for long term copper demand



# **Copper Supply**

Mine production rising and scrap availability falling

## Sanctioned Projects Since 2017<sup>1</sup> (Thousand tonnes)



New mines commissioned will add 2.3 million tonnes from 2017-2025.

China Copper Scrap Imports Decline<sup>2</sup> (Copper content, kt)



### Chinese Imports Shift to Concentrates<sup>3</sup> (Copper content, kt)



Tecl

# **Copper Metal Stocks**

#### Better than expected demand; smelter disruptions

Daily Copper Prices & Stocks<sup>1.2</sup> (US\$/mt)



- Production cuts at Asian smelters combined with lower scrap availability has contributed to a drawdown in cathode
- Exchange stocks have fallen 425,000 tonnes since March 2018, equivalent to just over 1 week's global consumption.
- In mid-March stocks reached lowest level since late 2014. Including bonded stocks, lowest since 2009
- Stocks are building in China, however in Q2 2019, several large planned smelter maintenance shutdowns will occur



6

#### Teck

# Zinc Market Highlights

- Large drawdowns of refined zinc exchange stocks, bringing exchange inventory to critical levels
- Global concentrate market moved to surplus due to decreased refined production in China and rest of world
- Environmental policy and poor profit margins limited buying by Chinese smelters in 2018
- Zinc market is currently estimated to be moving into a smelter bottleneck in 2019, with concentrate surpluses and continued refined deficits
- Reduced mine guidance, flooding in Queensland, and environmental restrictions on small mines in China is putting the concentrate surplus at risk
- Additional mine and smelter production needed to satisfy
  the zinc market or risk demand destruction



### Zinc Supply Mine Production Missed forecast in 2018

#### Zinc Mine Production<sup>1</sup> (Thousand tonnes contained)



- Teck originally forecast global mine production would grow 7.9% or over 800,000 tonnes in 2018
  - Due to start up of large mines, Dugald River, Gamsberg, New Century and restarts by Glencore
- Global mine production in 2018 missed Teck's forecast by almost 600,000 tonnes
  - Slow or delayed start-ups at New Century, Gamsberg, and several smaller mines
  - China originally expected to increase 250,000 tonnes contained in 2018, but now estimated to be down 150,000 tonnes contained in 2018
- Today, Teck forecasts an 8.1% increase in mine production in 2019, but significant risks continue
  - Mine guidance has already decreased around 120 thousand tonnes in Q1 2019
  - Queensland flooding has put several large operations there at risk of meeting 2019 guidance
  - Chinese environmental inspections continue at domestic mines and may restrict production into H2 2019

### Chinese Zinc Mine Projects Delayed Impacted by inspections and low zinc ore grades

Estimated Chinese Zinc Mine Growth Rarely Achieved<sup>1</sup> (Thousand tonnes contained)



Chinese Mine Growth 2019-2021 Heavily Dependent On Single Project<sup>2</sup> (Thousand tonnes contained)

**BASE METALS** 



600

# Zinc Metal Stocks

#### Consecutive deficits decreasing zinc inventories

Daily Zinc Prices & Stocks<sup>1.2</sup> (US\$/Ib)



- Deficits in past 5 years have driven down stocks
- LME refined zinc stocks have decreased 70,000 tonnes year-to-date in 2019
- Less than 60,000 tonnes of refined zinc remaining on LME
- SHFE stocks have increased 95,000 tonnes year-to-date in 2019
- Decreased Chinese refined production is increasing demand for refined imports into China
- Smelter cuts announced in Q1 2019:
  - Elektrozinc Russia (80,000 tonnes): permanently closed due to safety infractions following a fire at the smelter
  - Skorpion: closing for 5 weeks, strike at mine reduces oxide stockpiles
  - Queensland Townsville zinc smelter: at risk due to flooded rail lines

Tec

### Zinc Supply/Demand Balance Zinc mine production peaks in 2021



Low Demand (1.2%): 1.0 million tonne gap





### Notes: Base Metals Markets

#### Slide 4: Copper Supply

- 1. Source: Wood Mackenzie, Teck, Company Reports. Announced Project Sanctioning Decisions since January 2018, Based on Corporate Guidance and/or Wood Mac forecasts to Q4 2018.
- 2. Source: Wood Mackenzie, GTIS, SMM.
- 3. Source: Wood Mackenzie, GTIS, NBS, SMM.

#### Slide 5: Copper Metal Stocks

1. Source: LME, Comex, SHFE, SMM

#### Slide 6: Copper Supply / Demand Balance

- 1. Source: Wood Mackenzie, CRU, ICA, Yale, Teck. Low Demand based on Wood Mackenzie forecast demand outlook. Base Case Demand based on Teck copper demand model. High Demand based on combination of ICA study done for long term Copper Demand and a Yale University study done based on IEA forecasts for 2DS on Climate reduction goals.
- 2. Source: Wood Mackenzie, CRU, ICA, Yale, Teck. Forecasts based on projects from Wood Mackenzie Probable list of projects from Q4 2018 flexed at their historic rates of probable projects entering production (70% of Probable Brownfields, 50% of Probable Greenfield projects and an allowance for unidentified mine extensions based on historic precedent that 20% of capacity projected to close will stay open through such extensions).

#### Slide 8: Zinc Supply

1. Source: Teck, Wood Mackenzie, company reports.

#### Slide 9: Chinese Zinc Mine Projects Delayed

- 1. Source: Antaike, BGRIMM, Teck. Early Year Estimates from consolidation of several Analyst views in the year preceding.
- 2. Source: Antaike, BGRIMM, Teck.
- 3. Source: CNIA, NBS.

#### Slide 10: Zinc Metal Stocks

- 1. Source: LME, SHFE, SMM, CRU.
- 2. Source: LME, Fastmarkets, Argus, Acuity, company reports.

#### Slide 11: Zinc Supply / Demand

- 1. Source: Wood Mackenzie, CRU, Teck. Low Demand based on CRU, Base Case Demand based on Teck Zinc demand model. High Demand based long term historical averages and view on improved Trade Outlook flexed into Base Demand Model.
- Source: Wood Mackenzie, CRU, Teck. Forecasts based on projects from Wood Mackenzie Probable list of projects from Q4 2018 flexed at their historic rates of probable projects entering production (only 50% 60% of probable zinc projects and zinc mine life extensions historically are brought to market).

# Teck

### **Steelmaking Coal Markets**

April 3, 2019 Réal Foley, Vice President, Marketing, Coal and Base Metals



# Caution Regarding Forward-Looking Statements

Both these slides and the accompanying oral presentations contain certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of the Securities Act (Ontario) and comparable legislation in other provinces (collectively referred to herein as forward-looking statements). Forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not anticipate", or "believes", or variation of such words and phrases or state that certain actions, events or results "may", "could", "should", "would", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Teck to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward-looking statements include statements relating to management's expectations with respect to production, demand and outlook regarding steelmaking coal for Teck and global markets generally, Teck's strong financial position, the long life and value of our projects and operations, operating cost expectations, steelmaking coal pricing, benefits of our marketing and logistics strategy and associated opportunities, all guidance, including but not limited to production guidance, sales and unit cost guidance, commodity price leverage, timing expectations regarding the benefits of our innovation strategy and initiatives, our steelmaking coal operating strategy and the benefits of staturated rock fills, our expectation that will be able to produce approximately 27 Mt per year or more for decades, the expectation that our steelmaking coal projects.

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 and economic conditions, interest rates, the supply and demand for, inventories and deliveries of, and the level and volatility of prices of steelmaking coal, as well as steel, oil, natural gas and petroleum 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 these of our competitors, power prices, continuing availability of water and power resources for our operations, market competition, the accuracy of our mineral 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 coal and other product inventories, our ability to secure adequate transportation for our products, our ability to obtain permits for our operations and expansions, our ongoing relations with our employees and business partners and joint venturers. Mineral reserve and resource life estimates assume the mine life of longest lived resource in the relevant commodity is achieved, assumes production at planned rates and in some cases development of as yet undeveloped projects. Assumptions are also included in the footnotes to various slides.

Management's expectations of mine life are based on the current planned production rates and assume that all mineral reserves and resources described in this presentation are developed. Certain forward-looking statements are based on assumptions disclosed in footnotes to the relevant slides. Statements regarding future production are based on the assumption of project sanctions and mine production. Payment of dividends is in the discretion of the board of directors. Our Elk Valley Water Quality Plan statements are based on assumptions regarding the effectiveness of current technology, and that it will perform as expected. The foregoing list of assumptions is not exhaustive.

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 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, 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 counterparies (including but not limited to rail, port and other logistics providers) to perform their contractual obligations, changes in our credit ratings or the financial market in general, unanticipated increases in costs to construct our development projects, difficulty in obtaining permits or disputes, and changes or deterioration in general economic conditions. We will not achieve the maximum mine lives of our projects, or be able to mine all mineral reserves at our projects, if we do not obtain relevant permits for our operations. Unanticipated technology or environmental interactions could affect the effectiveness of our Elk Valley Water Quality Plan strategy. Statements concerning future production costs or volumes 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 d

Statements concerning future production costs or volumes 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, adverse weather conditions, and that there are no material unanticipated variations in the cost of energy or supplies. Statements regarding anticipated steelmaking coal sales volumes and average steelmaking coal prices depend on timely arrival of vessels and performance of our steelmaking coal-loading facilities, as well as the level of spot pricing sales.

We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning assumptions, risks and uncertainties associated with these forward-looking statements and our business can be found in our most recent Annual Information Form, as well as our management's discussion and analysis of quarterly results and other subsequent filings, all filed under our profile on SEDAR (www.sedar.com) and on EDGAR (www.sec.gov).

### Strong Fundamentals in Steelmaking Coal Market

#### Slower but more sustainable global growth

- Allows economies to grow for longer
- Supports steel demand and pricing

#### Steel: Healthy industry and growing production

- India: Secular demand supported by brownfield and greenfield projects
- Ex. India: Southeast Asia drives growth

#### Steelmaking coal: Limited supply growth

- Seaborne: Supply disruptions continue, investment remains modest, permitting is challenging
- China: Safety checks restrict domestic production





# Demand Growth Forecast

Growth drivers: Western Europe, India and Southeast Asia



Includes:

- Western Europe: Growth mostly from Italy, France, Turkey, Germany
- Southeast Asia: Growth mostly from Vietnam
- India: Analyst views ranging from +2 Mt to +4 Mt<sup>2</sup>
- Eastern Europe: Analyst views on Ukraine and Poland ranging from -3 Mt to +1 Mt<sup>3</sup>
- China: Analyst views ranging from -1 Mt to -2 Mt<sup>3</sup>

STEELMAKING COAL

### Supply Growth Forecast Most growth comes from Australia

Tecl



Includes:

- Australia: Growth from existing mines (Caval Ridge/Peak Downs, Grosvenor, Appin, Byerwen) and mine restarts (Burton, Russel Vale)
- Mozambique: Vale Moatize ramp up

- Canada: Restarted mines ramp up
- Indonesia: Analyst views ranging from +0.5 Mt to +2 Mt<sup>2</sup>
- USA: Analyst views ranging from -8 Mt to flat<sup>3</sup>

# Demand / Supply Balance

Coal gap is developing unless projects progress



STEELMAKING COAL

#### 2<sup>nd</sup> Largest Seaborne Steelmaking Coal Supplier Competitively positioned to supply steel producers worldwide

**Sales Distribution** China 2013: ~30% Europe North America 2013: ~15% 2017: ~15% ~5% India 2017: ~20% 2018: ~10% 2013: ~5% 2018: ~15% 2017: ~10% 2018: ~15% Asia excl. China & India Latin America 2013: ~40% ~5% 2017: ~45% 2018: ~50%

Sales to India exceeded China from 2018

STEELMAKING COAL

### Coal Price Supported by Strong Fundamentals Volatility has declined

Coal Price Assessments<sup>1</sup> (US\$/tonne)<sup>1</sup> BOD - Condition of US\$182/tonne, or US\$197/tonne on an inflation-adjusted bas



STEELMAKING COAL

Tec

Coal pricing stabilizing due to:

- Strong demand / supply fundamentals
- Permitting and financing challenges (impact supply response)
- Better price transparency (reduces uncertainty)





# Notes: Steelmaking Coal Markets

#### Slide 4: Demand Growth Forecast

- 1. Source: Wood Mackenzie.
- 2. Source: Wood Mackenzie, AME.
- 3. Source: Wood Mackenzie, CRU.

#### Slide 5: Supply Growth Forecast

- 1. Source: Wood Mackenzie's Q4 forecast and actual exports over the period 2015 to 2017.
- 2. Source: Wood Mackenzie, CRU.
- 3. Source: Wood Mackenzie, Seaport Global Securities LLC.

#### Slide 6: Demand / Supply Balance

- 1. Source: Wood Mackenzie, AME. High case demand is based on AME for India's imports and Wood Mackenzie for imports by other countries. Exports include disruption allowance that is based on the difference between Wood Mackenzie's Q4 forecast and actual exports over the period 2015 to 2017.
- 2. Source: Wood Mackenzie, Seaport Global Securities LLC.

#### Slide 8: Steelmaking Coal Price Exceeding Expectations

1. Long-term steelmaking coal prices are calculated from January 1, 2008. Inflation-adjusted prices are based on Statistics Canada's Consumer Price Index. Source: Argus, FIS, Teck. Plotted to March 25, 2019.

# Teck

## **Energy Marketing**

April 3, 2019 Glenn Burchnall, Director, Energy Marketing and Logistics Kieron McFadyen, Senior Vice President, Energy



# Caution Regarding Forward-Looking Statements

Both these slides and the accompanying oral presentations contain certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of the Securities Act (Ontario) and comparable legislation in other provinces (collectively referred to herein as forward-looking statements). Forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variation of such words and phrases or state that certain actions, events or results "may", "could", "should", "would", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Teck to be materially different from any future results, performance or achievements include statements for our product; expectations regarding infrastructure development, including pipelines; sales contracts and expectations; production rates and capacity; and expectations regarding the Western Canadian Select differential.

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 and economic conditions; market prices of blended bitumen, as well as diluent and related products; the accuracy of our mineral and oil and gas reserve and resource estimates (including with respect to size, grade and recoverability) and the geological, operational and price assumptions on which these are based; the impact of changes in Canadian-U.S. dollar and other foreign exchange rates on our costs and results; acts of foreign or domestic governments; the timing of the receipt of regulatory and governmental approvals for our development projects and operations; our costs of production and productivity levels, as well as those of our competitors; our ability to secure adequate transportation and pipeline services for our products; changes in conditions in financial markets generally; our ability to procure equipment and operating supplies in sufficient quantities and no a timely basis; our ability to attract and retain skilled staff; interest rates; our ability to procure equipment and operating supplies; and our ongoing relations with our employees and business partners. Management's expectations of mine life are based on the current planned production rates and assume that all reserves and resources described in this presentation are developed. Assumptions are also included in the footnotes to various slides. The foregoing list of assumptions is not exhaustive.

Factors that may cause actual results to vary materially include, but are not limited to: changes in commodity prices; changes in market demand for our products; changes in interest and currency exchange rates; acts of governments; inaccurate geological and metallurgical assumptions (including with respect to the size, grade and recoverability of mineral reserves and resources); changes in our relationships with our partners; 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, industrial disturbances or other job action, adverse weather conditions and unanticipated events related to health, safety and environmental matters); union labour disputes; social unrest; failure of customers or counterparties (including but not limited to rail, pipeline and other logistics providers) to perform their contractual obligations; changes in our credit ratings or the financial market in general; unanticipated increases in costs to construct our development projects; difficulty in obtaining permits or securing transportation for our products; changes or disputes; and changes or deterioration in general economic conditions. Our Fort Hills project is not controlled by us and construction and production schedules may be adjusted by our partners.

We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning assumptions, risks and uncertainties associated with these forward-looking statements and our business can be found in our most recent Annual Information Form, as well as our management's discussion and analysis of quarterly results and other subsequent filings, all filed under our profile on SEDAR (www.sedar.com) and on EDGAR (www.sec.gov).

Scientific and technical information regarding our material mining projects in this presentation was approved by Mr. Rodrigo Alves Marinho, P.Geo., an employee of Teck. Mr. Marinho is a qualified person, as defined under National Instrument (NI) 43-101.

# Market Fundamentals in Transition

#### Crude oil demand supported by global economic growth

- Demand growth drivers in transition
- Positive for heavy sour crudes

#### 2019-2021: Canadian heavy pricing volatility

- Limited pipeline export capacity, crude by rail increasing
- Government mandated production curtailments
- IMO bunker fuel sulphur specification change

#### 2021+: Growing market for Canadian heavy blends

Market access critical for Canadian heavy price upside





### Export Capacity Needed To Meet Global Demand

#### Near term (2019-2021):

- Canadian export capacity lagging
- Reliant on rail (400-500 Kbpd)

#### Pipeline development progressing:

- Enbridge: 370 Kbpd (2020-2021)
- Keystone XL: 800 Kbpd (2021-2022)
- TMX: 600 Kbpd (2022)

#### Longer term:

- Global heavy refining capacity increase
- US, India and China largest markets





Existing pipeline/rail sufficient to meet takeaway capacity through 2023

## Fort Hills Blend Widely Accepted In Market

We produce a high quality refinery feedstock

Low GHG intensity: <50% of US crude supply

• Including in-situ and upgraded synthetic

Our sales mix provides diverse market access<sup>1</sup>

- 80% pipeline connected, 20% rail loading
- 10 Kbpd to US Gulf Coast, 39.5 Kbpd at Hardisty

Superior connectivity to export infrastructure



We are well-positioned for future opportunities

### **Diverse Portfolio of Sales**





#### **Revenue Calculation (US \$/bbl)** Western Canadian Location Nymex WTI Select Differential Basis US Gulf Coast Calendar average Monthly contracted spot (Pipeline) monthly WTI differential at US Gulf Coast Calendar average Weighted average Hardisty: Pipeline & Rail monthly WTI WTI/WCS indexed Transfers differential at Hardisty

Fort Hills blend sales subject to crude quality differential vs Western Canadian Select:

• Estimated at minus US\$2-\$3/bbl for 2019





# Notes: Energy Marketing

Slide 4: Export Capacity Needed To Meet Global Demand

1. Sources: IHSMarkit, Lee & Doma, Teck Energy.

# Teck

## **Commodity Outlook**

April 3, 2019 Andrew Stonkus, Senior Vice President, Marketing and Logistics Réal Foley, Vice President, Marketing, Coal and Base Metals Glenn Burchnall, Director, Energy Marketing

