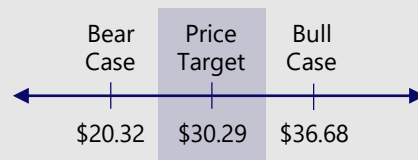




## RESEARCH REPORT

November 4, 2019

Stock Rating	<b>HOLD</b>
Price Target	<b>CAD \$30.29</b>
Current Price	<b>CAD \$21.19</b>



Ticker	TECK.B
Market Cap (MM)	\$11,743
P/CF 2019E	3.2x
P/NAV	0.47x

### 52 Week Performance



### Industrials

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## Teck Resources A Strong Base-s for Investment

Teck Resources is Canada’s largest diversified resource and mining company, producing steelmaking coal, copper, zinc, and energy (primarily bitumen). As with any commodity-driven company, Teck has seen fluctuations in its stock price due to a cyclical downturn in the base and diversified metals industry. Despite this, the M&M team believes that recent underperformance in its share price may offer an attractive buying opportunity.

In this report, the M&M team presents that Teck Resources has several merits for investment including:

- I. Strong growth runway and pipeline of expansion opportunities particularly in copper, enabled by improved financial position
- II. Diversified mining portfolio, allowing for minimized risk during commodity downturns
- III. Company-wide cost cutting program through the RACE21 initiative, offering increased resilience throughout cyclical downturns

However, given the recent changes in management as well as predicted continuous declines in commodity pricing which may offer greater value, the M&M team finds that it may be best to hold off on entering the name. As such, we will conduct further due diligence on Teck Resources and the diversified metals industry and look to add it to our watchlist.

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## Company Overview

Teck Resources Limited (TSE: TECK.B) was founded in 1906 and became Canada's largest diversified resource company when Teck and Cominco merged in 2001 to become Teck Cominco. In October 2008, the company rebranded as Teck. It is headquartered in Vancouver, British Columbia and owns 13 operating mines, a large metallurgical complex, and several major projects in the Americas. The metallurgical complex is used to smelt and refine lead and zinc ore. Teck's production, development, and exploration activities are in relatively low risk jurisdictions. In 2018, Teck's revenue totalled \$12.5B and an EBITDA of \$4.8B. Teck's mining and processing operations span across North and South America and revenue is highly diversified globally (Exhibit II).

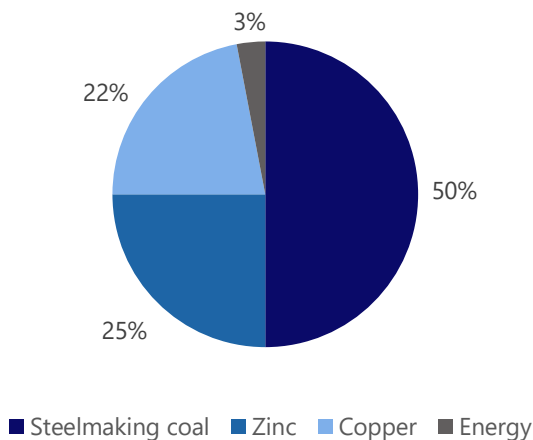
Teck produces steelmaking coal, copper, zinc, and energy (primarily bitumen), as broken down by revenue contribution in Exhibit I. Within the copper sector, Teck has a strong pipeline for growth. This includes projects in construction such as QB2 and HVC

D3, medium-term growth projects such as QB3, Zafranal, HVC Brownfield, NuevaUnion and San Nicolas, and future options including Galore Creek, Schaft Creek and Mesaba. Within the zinc sector, Teck has premier resources with integrated assets and has growth projects in the pipeline for the long-run and short-run.

Teck is making company-wide changes that allow for heavy cost reduction. Race21 is a new technology that Teck is using to reinvent its business operations. It believes that the implementation will result in reduced costs, increased safety, increased productivity, and opportunity for future innovation. In Q2 2019, Teck estimated the project would lead to an EBITDA increase of \$150M by the end of 2019 and reduce \$500M of costs by the end of 2020.

### EXHIBIT I

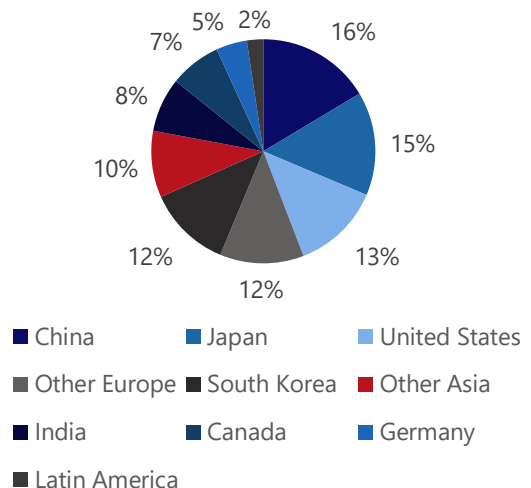
Revenue Segmented by Business Unit, 2018



Source: S&P Capital IQ

### EXHIBIT II

Revenue Segmented by Geography, 2018



Source: S&P Capital IQ

## Industry Overview – Metallurgical Coal

### Intro to Metallurgical Coal

Metallurgical coal, which is also known as coking or steelmaking coal, is used to produce coke, which is the primary carbon source in the deoxidization of iron ore to make steel. This method of steel production is called the blast furnace process and accounts for ~90% of steel production in China but only ~55% of steel production in the rest of the world, where emerging electric arc furnaces that recycle steel scraps are more widely adopted. China is the largest demand source for seaborne metallurgical coal, driven by its scale of manufacturing, cost-inefficiencies of local coal producers, and high proportional usage of blast furnace steel production.

### Outlook

Over the majority of 2019, metallurgical coal faced headwinds impacting price amidst a range of factors including uncertainty regarding China's growth due to the US-China trade war, signs of China's maturing economy heading towards service-based growth, and sufficient export supply. Nevertheless, this price downturn was still well-above the cyclical trough of 2016.

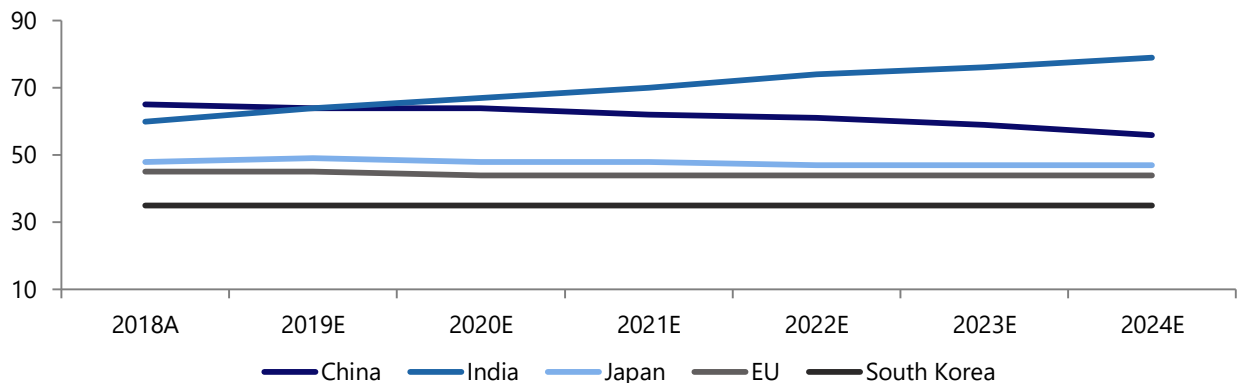
Moving forward, the new capacity that is expected to come online amidst the current short-term oversupply implies that some producers foresee a favourable long-term outlook. However, there is still high uncertainty surrounding demand due to the difficult nature of predicting Chinese demand drivers such as their import policies, economic growth, and pace of adoption of scrap steel usage. Thus our sector holds a conservative view of long-term price outlook for this commodity.

Demand for higher grade metallurgical coal in China rose over the last year as environmental reforms led to the closing of less efficient steel producers which used lower grade coal as an input. As there is a shortage of higher grade domestic production, international producers with high grades are expected to see more stable demand than those with lower grades.

Furthermore, India is expected to exceed China's metallurgical coal import demands by 2020, largely as a result of its comparatively low domestic metallurgical coal supply compared to China.

### EXHIBIT III

5-Year Global Metallurgical Coal Import Forecast (Mt)



Source(s): Australian Government – Office of the Chief Economist

## Industry Overview – Copper and Zinc

### Zinc

About half of the zinc that is produced is used for zinc galvanization, the process of adding thin layers of zinc to either iron or steel to prevent these metals from rusting. Zinc is highly effective for this as it has strong anticorrosive properties and bonds easily with other metals. Aside from galvanization, zinc is commonly used as an alloy with copper to form brass or to produce zinc oxide used in rubber manufacturing.

Since mine closures and production cuts followed the 2016 price crash in commodities, zinc supply has been in a severe deficit to its growing demand. However, the gap is closing, and analyst estimates range widely from an acute deficit expected in the next three to five years to a surplus by 2022.

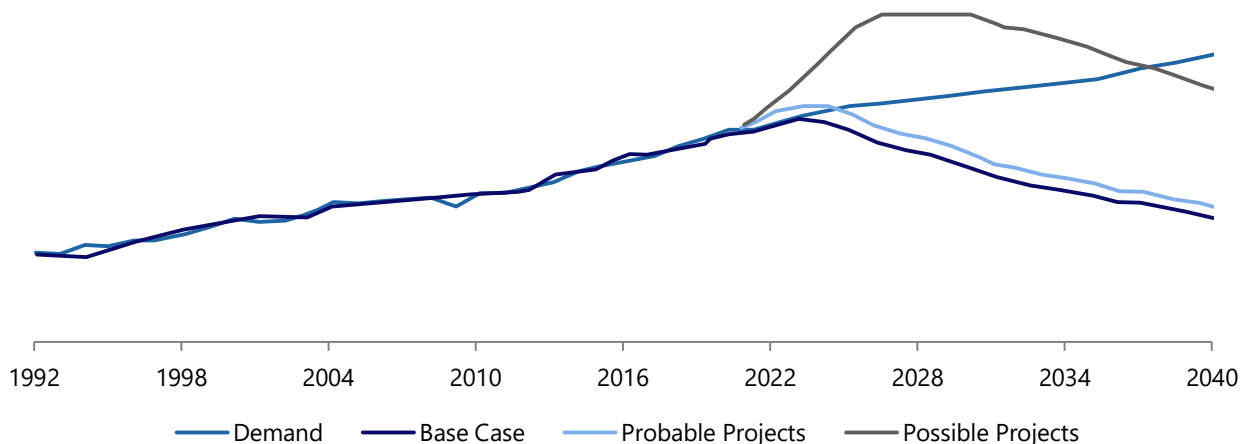
### Copper

Copper has a wide range of uses from construction and industrial applications to its primary use in electrical components and wiring. It is applied in greater quantities in emerging technologies such as renewables and electric cars more heavily than their predecessors. Furthermore, as emerging economies develop, historically they experience substantial increase in copper consumption through electrification. This is has yet to occur in Asia, particularly in China and India. China already accounts for 50% of copper demand before its peak.

While structural challenges such as mine grade declines are expected to hinder supply, analyst forecasts of the future of copper vary widely with many expecting tight supply in the years ahead while few forecast a surplus from speculative new projects that may come online drive prices down.

### EXHIBIT IV

Global Copper Production and Primary Demand Estimates (Mt) as of Q2 2019



Source: Wood Mackenzie

## Assessing Management

### Background on Key Executives

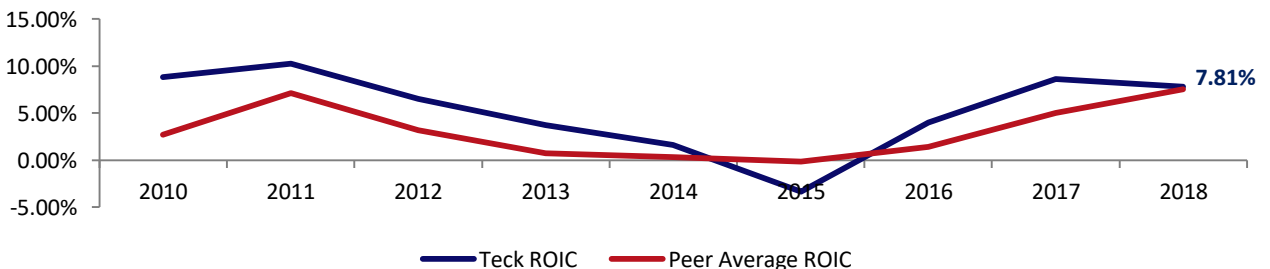
In 2016, Teck Resources underwent broad executive changes, with the retirement of Ian Kilgour, then-VP and CEO, as well as several other SVPs in project development and base metals. Kilgour and his fellow executives have since been succeeded by an experienced, management team with a track record of thoughtful capital allocation towards growth. The company's current CEO, Donald R. Lindsay has worked with Teck in various senior leadership roles for over 15 years, having first joined back in 2005. To his role, Lindsay brings relevant experience -- having worked and studied substantially in mining and investment banking for over 20 years prior to his tenure at Teck. Similarly, Teck's SVP of base metals, Dale Andres has over 20 years of experience with Teck, and has over 25 years of operating, project, and management experience in global base metals and gold mines. Management's most recent undertakings are demonstrative of their intent to prudently allocate capital in the best interest of shareholders; under Lindsay's leadership, Teck has significantly improved its financial position and growth potential by reducing company debt by \$1.9B in FY2017, and \$1.4B in FY2018. Among other initiatives, Teck's management has also reduced the company's required capital commitment in connection with the QB2 mining project through a partnership with Sumitomo Metal Mining and Sumitomo Corporation.

### Management Alignment and Incentive Structure

Generally, Teck's incentive structure creates a stimulus for management to strive for near-term and long-term performance of the company. In addition to a base salary, Teck offers an annual incentive bonus based on an assessment of individual performance, overall corporate performance, and business unit performance— which includes factors such as costs, production and sustainability. Long-term incentives are comprised of a 50% PSU and 50% stock option split, largely based on EBITDA growth and changes in commodity prices. Additionally, share ownership guidelines require the CEO to own shares equivalent to five times their base salary and for other executive officers, double their base salary. This compensation structure makes it such that 84% and 75% of the CEO's and NEO's compensation, respectively, is "at-risk." Although generally conducive to alignment of shareholder and management interests, Teck's compensation structure could be refined from an investment standpoint—ideally, the company would have long-term incentives not only in the form of stock ownership as well as a performance metric based on ROIC or ROCE to ensure thoughtful capital allocation in the long-term.

### EXHIBIT V

Teck's Return on Invested Capital vs. Peers



Source: Capital IQ, Company Filings

## **Thesis I: Strong Growth Runway and Opportunities for Expansion Cont.**

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Over the past few years, Teck has undertaken several broad-spanning initiatives, particularly in the copper sector, to lay the physical infrastructure for future growth as well as improve the financial position of the company to support expansion.

### **Infrastructure Expansion at Neptune Bulk Terminals**

Beginning in 2017, Teck has invested in several initiatives to increase the terminal loading capacity at the Neptune Bulk terminals, thus facilitating future growth and production expansion in its coal mines. As of 2018, the company has deployed approximately \$90M to upgrade the Neptune facility's operating capacity from 12.5M tonnes to over 18.5M tonnes per year. The program includes an additional \$210M to be spent in 2019 and approximately \$170M in 2020, with upgrades expected to be completed in the third quarter of 2020.

### **Broader Exploration: Project Satellite and Global Metals**

In March 2017, Teck launched a major exploration initiative, Project Satellite, with a focus on surfacing value from five substantial base metals assets located in stable jurisdictions in the Americas: Zafranal, San Nicolas, Galore Creek, Schaft Creek, and Mesaba. The current objectives of the project are to complete field programs, including mapping, sampling, drilling, environmental and social baseline studies and to perform focused engineering work at each of these sites. In 2018, spending on such initiatives totalled approximately \$60M and the planned spending for 2019 is anticipated to total approximately \$100M. Project Satellite is anticipated to yield several potential mining sites for the company.

Additionally, throughout the 2017 to 2019 period, Teck conducted global exploration through its seven regional offices with a focus on copper, zinc, and gold. As of 2017, expenditures from these initiatives have totalled approximately \$58M. These include the costs of early discoveries of new orebodies, evaluation, and

acquisition of development opportunities. Copper exploration as part of this initiative has been predominantly focused on drilling several early-stage copper projects and exploring operations for existing porphyry copper projects in Canada, Chile, Peru, U.S., Mexico, Turkey. Zinc exploration remains focused on the Red Dog mine district in Alaska, Western Canada, Northeastern Australia, and Ireland. Through the global initiative, Teck has identified an exploration target for Aktigirug in the range of 80 Mt to 150 Mt of mineralization at a grade of between 16% combined zinc plus lead and 18% combined zinc plus lead (12% zinc + 4% lead and 14% zinc + 4% lead, respectively). If realized, this would make the Aktigirug zinc deposit one of the world's largest undeveloped zinc deposits.

### **Steelmaking Coal**

Teck also recently received permits to commence mining in new areas at the Fording River, Elkview, and Greenhills mines, allowing them to extend the lives of these mines or increase production to compensate for the closure of Coal Mountain. It has been estimated that around \$160M will be invested in major enhancement projects largely relating to the development costs of new mining areas at Elk Valley. Both new processing plants and transferred mining assets from Coal Mountain will be utilized to develop new mining areas at each of these sites.

### **Copper Mine Expansion: Quebrada Blanca Phase 2**

As of 2018, copper has comprised approximately 22% of Teck's revenue, with production rising 2% from 2017 to approximately 293,900 tonnes of copper. Teck has set out guidance for 2019-2021 copper production to reach 290,000 to 310,000 tonnes on an annual basis. Starting in 2021, it is likely that Teck's copper production will increase significantly, given the expansion initiative planned at the Quebrada Blanca Phase 2 (QB2) copper mine as well as Teck's broader exploration initiatives (see Exhibit VII).



## Thesis I: Strong Growth Runway and Opportunities for Expansion

Launched in late 2018 by Teck, alongside local project partners, QB2 is a low-cost, long-life copper project in Chile, comprised of a mine area with a concentrator plant and tailing facility, utilities, and port facilities. Following a construction period of approximately three years, QB2's first copper production is anticipated in the second half of 2021, after which the mine is expected to produce 360,000 tonnes of copper equivalent in annual production for the next five years. In aggregate, the QB2 mine has an expected life of 28 years using only 25% of total reserves and resources, thus presenting a sizeable and growing opportunity for the company's copper segment, which more than doubles its annual copper production capabilities. Notably, the QB2 copper mine's net cash per unit costs (approximately \$1.28/lb at QB2) are lower than that of other copper mines owned by Teck (approximately \$1.31/lb as of Q3 2019), as pictured in Exhibit VI. The low-cost copper from the QB2 mine can thus create resiliency for Teck, as global copper prices have declined over the past few years, trading close to a two-year low in early October.

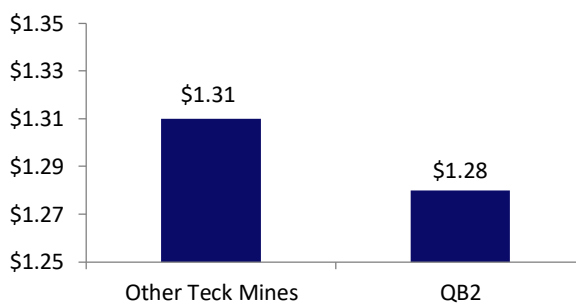
In addition, the ownership structure of QB2 is such that it reduces the upfront capital investment necessitated by Teck. Teck holds an indirect 60% interest in Compañía Minera Teck Quebrada Blanca SA (QBSA) which owns QB2. Sumitomo Metal Mining and Sumitomo Corporation have a collective 30% indirect interest in QBSA. ENAMI, a Chilean state agency, has a 10% non-funding interest in QBSA. Thus, with funding from the project financing and the partnering transaction with Sumitomo Metal Mining and Sumitomo Corporation, Teck's first contributions to the project are not expected until early 2021.

As of Q3 2019, QB2 reached several milestones in its progress (see Exhibit VII) and totalled approximately \$321M in product development expenditures, in line with the updated guidance issued in Q2 2019. Beyond QB2, Teck is currently completing drilling and engineering studies for its QB3 project, with preparations to commence a pre-feasibility study in 2020. While fewer details have been released

regarding this project, the company has stated that the QB3 project will allow Teck to leverage the vast orebody beyond QB2 in upcoming years.

### EXHIBIT VI

Net Cash Unit Costs for Copper (\$USD/lb)



Source(s): Company Filings

### EXHIBIT VII

QB2 Project Update as of Q3 2019



Source(s): Company Filings



## Thesis II: Low-Risk Mining Portfolio

### Operations by Geography

Teck currently owns or holds an interest in 13 operating mines, a metallurgical complex and has several projects in development across North and South America. Within North America, Teck largely operates in Western Canada with additional locations in Alaska, Mexico and Minnesota. In South America, Teck operates various copper mines across Peru and Chile.

### Operating in Historically Low-Risk Geographies

Teck has maintained that a key factor of its long-term strategy is to operate in low-risk jurisdictions in order to minimize the impact of political and social risk on its operations. With a majority of its mines being in North America, Teck has largely stayed true to this strategy. Even within South America, Teck has only invested in Chile and Peru. Chile is the world's largest copper producer and has historically attracted large investment by Teck and its peers. With mining being so important to the Chilean economy, the industry is relatively well protected and is not exposed to

significant political risk. With that said, Chile has recently become somewhat of a concern for the mining community due to current civil unrest, but it is a risk shared by almost all of Teck's competitors and Teck has yet to see any material impact on its operations as a result of the unrest.

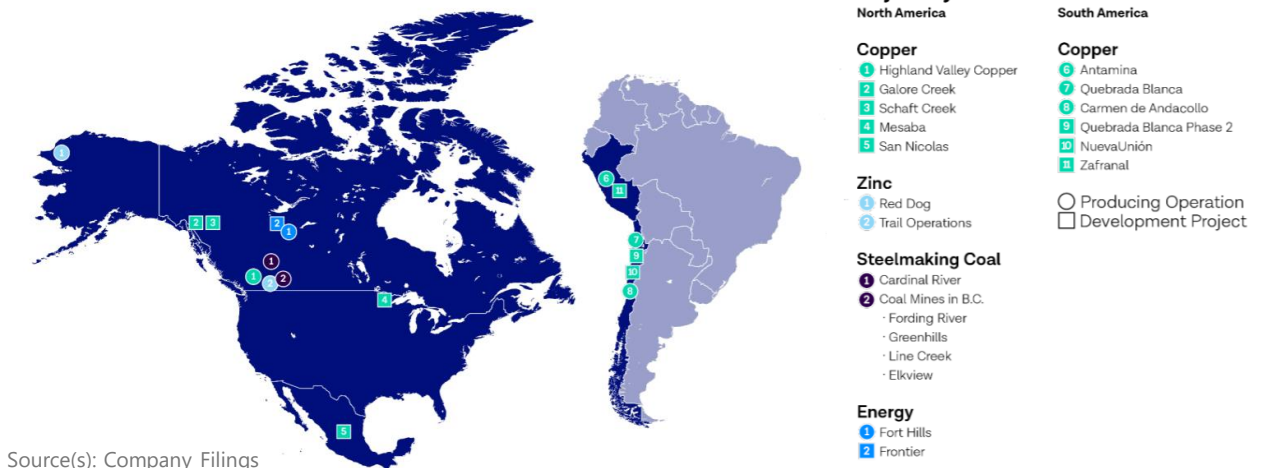
As for Peru, Teck and the broader mining industry do not have a long track record investing in the country. With that said, Teck has maintained a good relationship with the local government and believes Peru offers a strong risk-return portfolio.

### Competitor Mining Locations

Relative to its competition, Teck has one of the more low-risk geographic portfolios. Canada and Chile are a near constant across its peers' portfolios, but certain peers have assets in less traditional locations, exposing them to more risk. For example, Lundin has assets in Brazil and Portugal, Freeport McMoran has an asset in Indonesia, and First Quantum has an extremely high-risk portfolio with mines in Panama, Zambia and Turkey.

## EXHIBIT I

Map of Current and Developing Operations



Source(s): Company Filings

## Thesis II: Low-Risk Mining Portfolio Cont.

### Diversified Portfolio

Teck also minimizes its risk by maintaining a highly diversified resource portfolio. In 2018, steelmaking coal contributed 50% of Teck's revenues with zinc and copper making the next largest contributions at 25% and 22%, respectively. While this current makeup is already relatively unconcentrated, their portfolio diversification will only improve when QB2 begins production.

Launching production QB2 will serve to almost double Teck's copper output, reducing the contribution of coal to roughly 42% and increasing copper's to just above 31%.

### Peers are Significantly More Concentrated

The diversity of Teck's portfolio is clear when compared against its four largest diversified metal competitors. For all of these peers, copper consisted of at least 60% of their 2018 revenues, with 90% of First

Quantum's revenue being concentrated in copper. Not only are Teck's peers extremely weighted to copper, but most of them produce only 2-3 other metals, minimizing any backend diversity to offset the risk of their copper exposure.

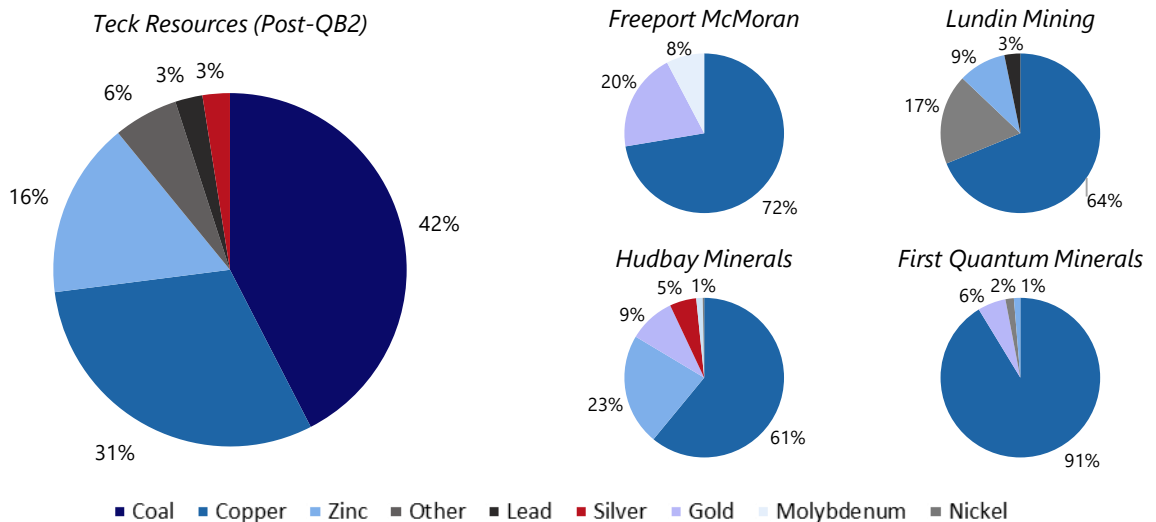
This concentration is not reflected in Teck which, upon the completion of QB2, will have no commodity consisting of more than 42% of their portfolio and will have roughly 28% of revenues weighted to metals outside their top two future contributors of steelmaking coal and copper.

### Minimized Risk During Commodity Downturns

This portfolio diversification provides confidence that Teck will not be excessively impacted by a fall in the price of a singular commodity and effectively provides them with a built-in hedge against commodity downturns.

## EXHIBIT II

Revenue by Commodity for Teck (Post-QB2) and Competitors



Source(s): Company Reports

## Thesis II: Low-Risk Mining Portfolio Cont.

### Low-Cost Producer

Teck is also well positioned on the cost-curve for the various commodities they produce, minimizing the impact and risk of cyclical downturns.

The company has historically remained profitable throughout various commodity cycles. Their strong position on the cost curve is clearly evidenced by the below exhibit, highlighting that their current total cash cost for each of their main three commodities is below any of the respective average commodity prices over the past nine years. What this means is that Teck is able to generate a positive margin on their sales at almost any point in the commodity price cycles.

This fact is critical to investing in a company like Teck, as they operate in a highly cyclical industry and must be able to weather downturns and not be severely impacted by poor pricing environments.

By being cost conscious and prudent investors, Teck has been able to mine at significantly lower total cash costs than some of their diversified metals peers.

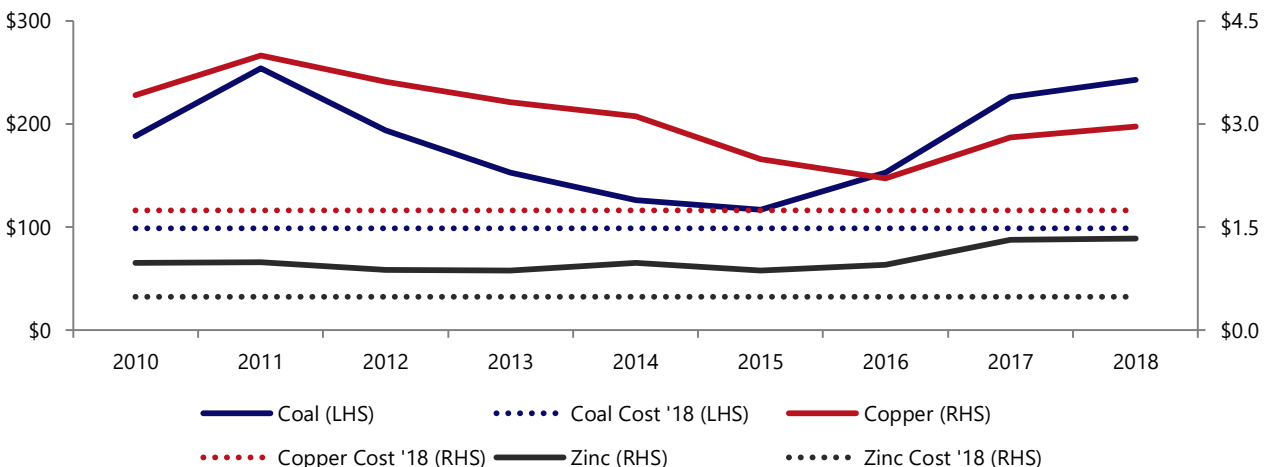
For example, in 2018 Teck mined copper at a total cash cost of \$1.74 USD/lb. This is significantly lower than competitors like Freeport McMoran, First Quantum Lundin Mining and Turquoise Hill all of which have a total cash cost for copper of more than \$2.00 USD/pound, operating at \$2.04, \$2.11, \$2.14 and \$2.33, respectively. This gives further confidence that relative to its peers, Teck is in a better position to handle any impending economic uncertainty that may further push down commodity prices.

Furthermore, cognisant of the fact that roughly half their revenue comes from their steelmaking coal segment, Teck has implemented significant cost saving initiatives largely targeted at the coal segment in order to better position themselves for downturns in the future.

### Cost Position Relative to Peers

#### EXHIBIT IV

Historical Average Realized Commodity Price vs. Current Cash Cost



Source(s): Company Filings

## Thesis III: Company Wide Cost Cutting Program

### RACE21 Overview

A significant area of focus for Teck right now is a company-wide cost cutting program, undertaken in light of global economic uncertainty. A core component of this focus revolves around Teck's attempt to transform the business with a system called RACE21. This system was announced to shareholders in April 2019 and is expected to constitute a one time implementation cost of \$45M over the course of 2019.

The idea behind RACE21 is to use cutting edge technology to reduce costs, increase efficiency and generate value for shareholders. The RACE21 plan consists of four key pillars – to renew, automate, connect and empower.

The renew portion of the plan seeks to establish a new technological foundation to lay the bedrock for the rest of the firm's innovation strategies. This will largely be done by building out wireless site infrastructure,

allowing for increased automation, communication, integration and access to more advanced analytics.

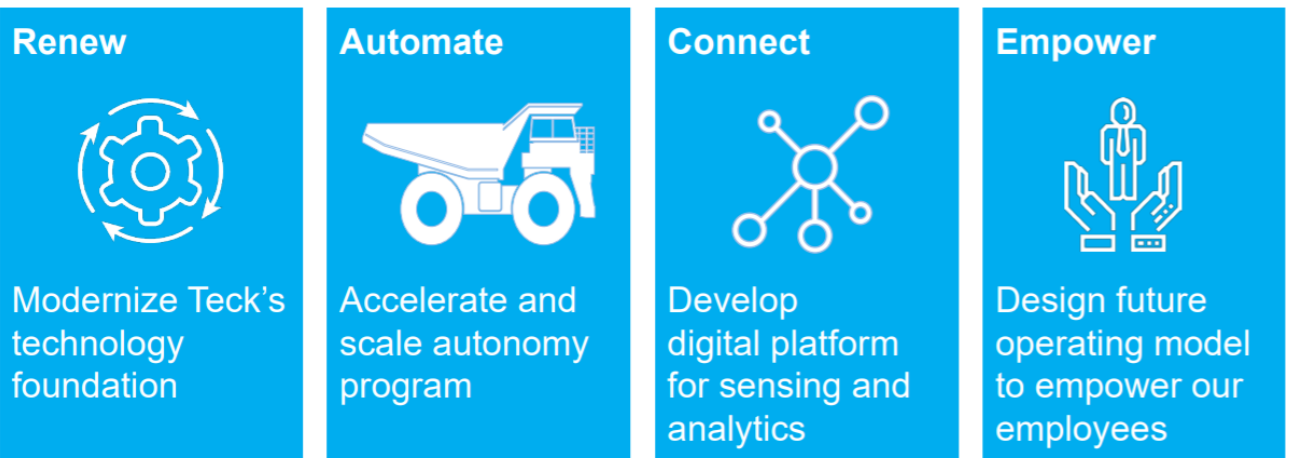
The second and most critical pillar to the project is their attempt to automate significant portions of their operations. This is with the goal of reducing mining costs across their operations and reducing the need for labour, further reducing costs and increasing safety.

The third goal under RACE21 is to connect disparate systems into a collaborative digital platform to create dynamic and predictive models to improve output and reduce variability.

Finally, Teck sees this innovation as a fundamental transformation of their operating model allowing them to better empower employees and take on future innovations in order to maintain a leadership status in their industry.

### EXHIBIT V

#### Overview of RACE21



Source(s): Company Filings

## Thesis III: Company Wide Cost Cutting Program Cont.

### Estimated Impact of RACE21 and Cost Cuts

The estimated savings of Teck's cost cutting program are reductions in previously planned spending of \$500M through 2020.

\$170M of these savings are expected to occur in 2019 with the remaining \$330M taking place in 2020. Half of these reductions are RACE21 related decreases in operating expenses. The remaining \$250M is the result of management deciding to reduce growth capex, in light of trade tensions and a risky near-term outlook for commodity pricing.

These savings and operational benefits will serve to increase Teck's 2019 EBITDA by \$125M and will likely increase 2020 and 2021 EBITDA by various multiples of that figure, as the program takes full effect by 2021.

A significant portion of this cost-reduction is 500 full-time equivalent positions that are being eliminated due to Teck's increasing focus on automation. Furthermore, fundamental improvements across Teck's operations will allow Teck to shift towards a manufacturing model designed to reduce variability and improve cycle times.

For example, a key goal behind RACE21 is to enable Teck to leverage predictive maintenance. By using machine learning to assess millions of data points regarding the health of their haul trucks they will be able to predict component failure. This will give Teck enough lead time to replace the components, significantly reducing unplanned downtime. A small adjustment like this is expected to increase annualized EBITDA by \$20M in their steelmaking coal segment at the cost of just a \$3M investment.

Another example with regards to reducing variability is utilizing analytics to better target low performing trucks and consequently increase average speed across their operations. This alone will contribute to a \$13M increase in annualized EBITDA based on a \$3M investment.

The benefits of RACE21 also expand beyond just increases in profitability. By increasing automation and reducing the need for humans to operate in high risk environments, they are making significant strides in safety, reducing any potential associated liability.

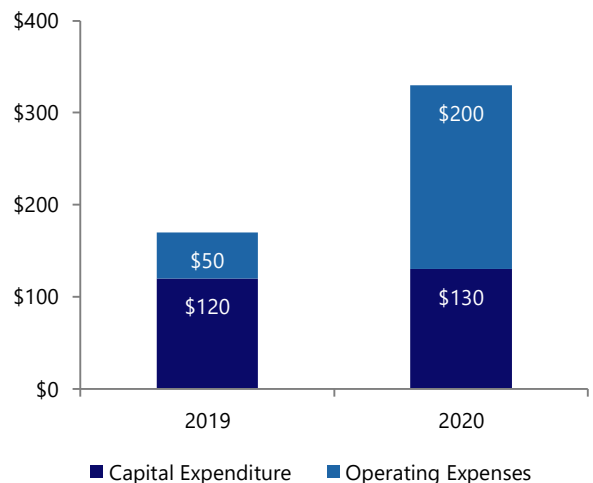
It will also serve to create a base for future innovation to consistently increase productivity in the long-term, representing a significant operational advantage over their peers.

### Expected Success of RACE21

With the majority of RACE21's benefits coming in 2020 and thereafter for which Teck has yet to release guidance, the specific long-term impact of this program remains relatively uncertain. With that said, analysts do not seem particularly bearish on the numbers that Teck has currently projected and appear to have overall conviction in Teck's ability to reach most of their targets.

### EXHIBIT VI

Estimated Cost Savings in \$M (2019E and 2020E)



Source(s): Company Filings

## Valuation: NAV Model

The first method we used to value Teck Resources was the creation of a Net Asset Value ("NAV") model. A NAV model values a company through discounting the future value of the company's resource production and the resultant cash flows. It values each of the company's major projects separately and is similar to a traditional DCF, with the primary difference being the definite life of the mining assets within the company.

We built the NAV based on reserves, production guidance and costs provided by the company with our assumptions also informed by equity research to have a more objective view on certain inputs. The assumptions that have the greatest impact in a NAV are regarding forecasted prices of the resources being

extracted. We based our resource price assumptions (see Exhibit XIII) on consensus estimates for the years 2019-2023. For 2024 and beyond, we based our assumptions on 10-year historical averages for each resource. In our bear case, we attempted to simulate a worst-case scenario for resource pricing, assuming prices near the 10-year low for each resource.

It is generally industry standard to assume an 8-10% discount rate for mining projects. We assumed an 8% discount rate for projects that were already fully operational and in geographically stable regions, and a 10% discount rate for projects with higher political and geographic risk.

### EXHIBIT XIII

#### NAV Summary and Key Assumptions

Asset	Primary Resource	Status	Modelled Life of Mine	Avg LOM	Discount Rate	NPV
				Production Attributable to Teck		
			Years	CuEq (ktpa)	CDN\$	
Andacollo	Copper	Operating	18	51	10%	\$306
Antamina	Copper, Zinc	Operating	16	129	10%	\$1,191
Highland Valley	Copper	Operating	18	130	8%	\$1,024
Quebrada Blanca & QB2	Copper	Operating / Dev.	27	146	10%	\$896
Red Dog	Zinc, Lead	Operating	15	513 <sup>(1)</sup>	8%	\$2,066
Coal Assets	Met Coal	Operating	35	25 <sup>(2)</sup>	8%	\$15,374
Energy Assets	Oil	Operating	50	37 <sup>(3)</sup>	10%	\$2,599
<b>Total NPV</b>						<b>\$23,456</b>

(1) Zinc Eq ktpa

(2) Coal Mt

(3) thousand bbl/day

Base Case Resource Pricing Assumptions							
Year	2019E	2020E	2021E	2022E	2023E	2024E + Beyond	
Copper Price (CAD\$/lb)	\$3.59	\$3.88	\$3.82	\$3.75	\$3.88	\$4.04	
Zinc Price (CAD\$/lb)	\$1.51	\$1.38	\$1.38	\$1.45	\$1.45	\$1.45	
Realized Coking Coal Price (CAD\$/t)	\$217.11	\$191.31	\$185.51	\$179.71	\$173.92	\$200.83	

Source(s): BMO Capital Markets, Capital IQ, Company Filings, TD Securities

## Comparable Companies Valuation

### NAV Model Cont.

Under our base case assumptions, Teck Resources has a NAV of \$44.81/share. Taking into account a median P/NAV multiple of 0.7x among Teck's peers, this implies a share price of \$31.36, an upside of 48.0%. In our break case, which we view as highly unlikely and an absolute worst-case scenario, Teck would have a NAV of \$28.46/share. At the median 0.7x P/NAV multiple this implies a share price of \$19.92, a 6.0% downside to the current share price. The fact that even under an extremely adverse pricing scenario, Teck has a NAV/share above its current share price is evidence of the downturn resilience offered by the company's cost profile.

### Comparables Analysis

Compared to other similar diversified mining companies, Teck Resources is significantly undervalued based on multiples of both cash flows and EBITDA. Teck trades at severely depressed EV/EBITDA and P/CF multiples relative to other companies in the diversified mining universe.

Comparing Teck's current P/CF of 3.2x with the peer

median of 5.5x implies a share price of \$36.42 for Teck, a 71.9% upside to the current \$21.19 share price. Teck looks especially undervalued based on cash flows when one compares it to the most similar companies in its peer set from a risk-return standpoint. The median P/CF multiple is dragged down by First Quantum and Hudbay's 4.0x and 3.0x multiples respectively. Neither company gives an accurate analog for Teck's risk profile, with First Quantum carrying a worrying debt load and Hudbay being at an earlier stage than Teck, inherently increasing risk. When compared to the P/CF multiples of Freeport-McMoRan and Lundin Mining, both quite similar in risk profile and lifecycle stage, Teck's multiple looks even more out of place, with all this giving us relative comfort in the loft valuation implied by Teck's P/CF multiple.

Teck also trades at a considerably lower EV/EBITDA multiple than its peers, with a 3.5x 2019E multiple, compared to a median of 7.6x. A 2019E EV/EBITDA multiple of 7.6x implies a share price of \$55.02, representing a 159.6% upside to the current share price.

## EXHIBIT XIV

### Comparable Companies – Senior & Intermediate Diversified Miners

Diversified Metals - Senior & Intermediate	Market	Enterprise	EV / EBITDA			P/CF	Dividend	Price / Earnings		Net Debt/EBITDA		
	Cap (\$MM)	Value (\$MM)	LTM	2019E	2020E	2019E	Yield	P/NAV	2019E	2020E	2019E	2020E
Freeport-McMoRan Inc.	\$20,072	\$40,837	13.8x	12.7x	8.6x	7.0x	1.9%	0.7x	27.3x	11.9x	2.4x	1.9x
First Quantum Minerals Ltd.	\$8,038	\$21,290	9.9x	9.3x	6.2x	4.0x	0.1%	0.7x	29.0x	18.9x	4.2x	2.9x
Lundin Mining Corp.	\$5,071	\$5,997	7.4x	6.8x	4.4x	7.8x	1.9%	1.1x	23.8x	10.8x	0.5x	0.3x
Turquoise Hill Resources Ltd.	\$1,127	\$2,954	4.8x	7.6x	6.3x	nmf	-	0.1x	5.1x	4.1x	8.8x	5.5x
Hudbay Minerals Inc.	\$1,312	\$2,056	3.3x	4.2x	3.8x	3.0x	0.4%	0.8x	20.4x	13.0x	1.9x	1.8x
<b>Mean</b>	<b>\$7,124</b>	<b>\$14,627</b>	<b>7.8x</b>	<b>8.1x</b>	<b>5.9x</b>	<b>5.5x</b>	<b>1.1%</b>	<b>0.7x</b>	<b>21.1x</b>	<b>11.7x</b>	<b>3.6x</b>	<b>2.5x</b>
<b>Median</b>	<b>\$5,071</b>	<b>\$5,997</b>	<b>7.4x</b>	<b>7.6x</b>	<b>6.2x</b>	<b>5.5x</b>	<b>1.2%</b>	<b>0.7x</b>	<b>23.8x</b>	<b>11.9x</b>	<b>2.4x</b>	<b>1.9x</b>
Maximum	\$20,072	\$40,837	13.8x	12.7x	8.6x	7.8x	1.9%	1.1x	29.0x	18.9x	8.8x	5.5x
75th Percentile	\$14,055	\$31,063	11.9x	11.0x	7.5x	7.6x	1.9%	1.0x	28.1x	16.0x	6.5x	4.2x
<b>Median</b>	<b>\$5,071</b>	<b>\$5,997</b>	<b>7.4x</b>	<b>7.6x</b>	<b>6.2x</b>	<b>5.5x</b>	<b>1.2%</b>	<b>0.7x</b>	<b>23.8x</b>	<b>11.9x</b>	<b>2.4x</b>	<b>1.9x</b>
25th Percentile	\$1,219	\$2,505	4.1x	5.5x	4.1x	3.3x	0.2%	0.4x	12.8x	7.5x	1.2x	1.1x
Minimum	\$1,127	\$2,056	3.3x	4.2x	3.8x	3.0x	0.1%	0.1x	5.1x	4.1x	0.5x	0.3x
<b>Teck Resources Ltd.</b>	<b>\$11,743</b>	<b>\$16,772</b>	<b>3.5x</b>	<b>3.5x</b>	<b>3.6x</b>	<b>3.2x</b>	<b>1.1%</b>	<b>0.4x</b>	<b>6.9x</b>	<b>7.1x</b>	<b>1.0x</b>	<b>1.4x</b>

Source(s): Bloomberg, BMO Capital Markets, Capital IQ, CIBC Capital Markets, Company Filings



## Valuation Conclusions

### Comparables Analysis Cont.

EV/EBITDA is a non-ideal way of valuing a mining company, however it is a measure that is still widely used by market investors. Thus, we have placed no weighting on EV/EBITDA in our determination of a target price for Teck.

### Valuation Conclusions

We arrived at a base case target share price of \$30.29 for Teck through a 75% weighting on our P/NAV valuation and 25% on P/CF. We believe that P/NAV offers the best measure of the true intrinsic value of a company in the long-term and thus gave it the highest weighting. Cash flow is a better measure of the actual performance of a mining business when compared to EBITDA, leading us to weight P/CF much more heavily than EV/EBITDA.

We also determined a break-case share price through our downside case NAV and using 25<sup>th</sup> percentile multiples for P/CF. Under this scenario we see minor downside for Teck, with a target share price of \$20.32.

On the whole, we see Teck's current valuation as being extremely favourable, both from an intrinsic and relative perspective. We believe there is significant upside in the share price under normal resource pricing scenarios. Additionally, even under an extreme downside case, Teck can protect shareholder value through its low-cost production, leading us to see very little downside in the current share price. Overall, Teck's current valuation offers a unique opportunity to purchase a business at a value well-below what we believe would be a reasonable valuation under historically normal resource pricing scenarios.

## EXHIBIT XV

### Summary of Implied Share Price Calculations

P/CF Share Price Calculation	
Median 2019E P/CF	5.5x
Teck Resources 2019E CF	\$3,670
Implied Equity Value	\$20,183
Shares Outstanding	554.1
<b>Implied Share Price</b>	<b>\$36.42</b>
Current Share Price	\$21.19
Implied Upside	71.9%

Base Case P/NAV Share Price Calculation	
Median P/NAV	0.7x
Teck Resources NAV	\$22,335
Implied Equity Value	\$15,634
Shares Outstanding	554.1
<b>Implied Share Price</b>	<b>\$28.22</b>
Current Share Price	\$21.19
Implied Upside	33.2%

Break Case P/NAV Share Price Calculation	
Median P/NAV	0.7x
Teck Resources NAV	\$15,772
Implied Equity Value	\$11,040
Shares Outstanding	554.1
<b>Implied Share Price</b>	<b>\$19.92</b>
Current Share Price	\$21.19
Implied Upside	-6.0%

EV/EBITDA Share Price Calculation	
Median 2019E EV/EBITDA	7.6x
Teck Resources 2019E EBITDA	\$4,554
Implied Enterprise Value	\$34,610
(+) Cash & Equivalents	\$1,619
(-) Total Debt	(\$4,929)
(-) Minority Interest	(\$814)
Implied Equity Value	\$30,486
Shares Outstanding	554.1
<b>Implied Share Price</b>	<b>\$55.02</b>
Current Share Price	\$21.19
Implied Upside	159.6%

Target Share Price Calculation		
Measure	Weighting	Value
P/NAV Comparables	75%	\$28.24
P/CF Comparables	25%	\$36.42
EV/EBITDA Comparables	0%	\$55.02
<b>Implied Target Price</b>		<b>\$30.29</b>
Current Share Price		\$21.19
Implied Upside		42.9%

Break-Case Share Price Calculation		
Measure	Weighting	Value
P/NAV Comparables	75%	\$19.92
P/CF Comparables	25%	\$21.52
EV/EBITDA Comparables	0%	\$37.76
<b>Implied Target Price</b>		<b>\$20.32</b>
Current Share Price		\$21.19
Implied Upside		-4.1%

Source(s): Bloomberg, BMO Capital Markets, Capital IQ, CIBC Capital Markets, Company Filings

## Risks and Conclusions

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### Risks

The greatest risk impacting our outlook on Teck remains the base metals commodity pricing environment. As aforementioned, analysts have widely varying outlooks for the commodities that Teck produces given the uncertainty and diversity in demand drivers and variable future supply capacity. We believe negative market sentiment and the current low price environment and uncertain outlook for the commodities with which Teck operates, in addition to negative sentiment around environmental impacts of coal, are driving the market to currently underprice Teck.

### Conclusions

Amidst increasing uncertainty and recent headwinds in the diversified metals sector including commodities such as metallurgic coal, copper, and zinc, the M&M team finds that Teck Resources presents an enticing opportunity with several merits for investment.

In recent years, Teck Resources has focused on paving a strong growth runway by increasing its investments in physical infrastructure and exploration, particularly with the introduction of the QB2 copper mine initiative and Project Satellite. Simultaneously, the company seems to remain committed to shareholder interests through deploying capital prudently. For example, the QB2 project has been structured in a way so as to reduce necessary upfront investment and the company has significantly paid down debt in recent years to strengthen the company's balance sheet ahead of major expansions at several mining projects. Additionally, Teck has made the strategic, long-term decision to diversify its mining portfolio, while continuing to operate in low-risk jurisdictions. Resultantly, ranked against peers, Teck's has operations in less-politically risky jurisdictions and a less concentrated portfolio to minimize risk during commodity downturns. Consistent among its mines is the favourable positioning on the cost curve. Finally, through its Race21 company-wide cost cutting

program, Teck has focused efforts on renewing, automating, connecting and empowering the company to reduce costs and increase efficiency. The predicted benefit of such undertakings is cumulative savings of \$500M through to 2020.

In addition to being a qualitatively strong business, Teck offers a very attractive return profile from a valuation perspective. We see significant upside in the share price from both an intrinsic and relative valuation perspective. At the same time, we believe that there is little downside in Teck's share price even in a continued poor commodity pricing environment, providing a very attractive risk-return profile. Additionally, given currently depressed resource pricing, Teck offers an opportunity to buy a company that could offer considerably higher earnings if commodity prices return to historically normal levels.

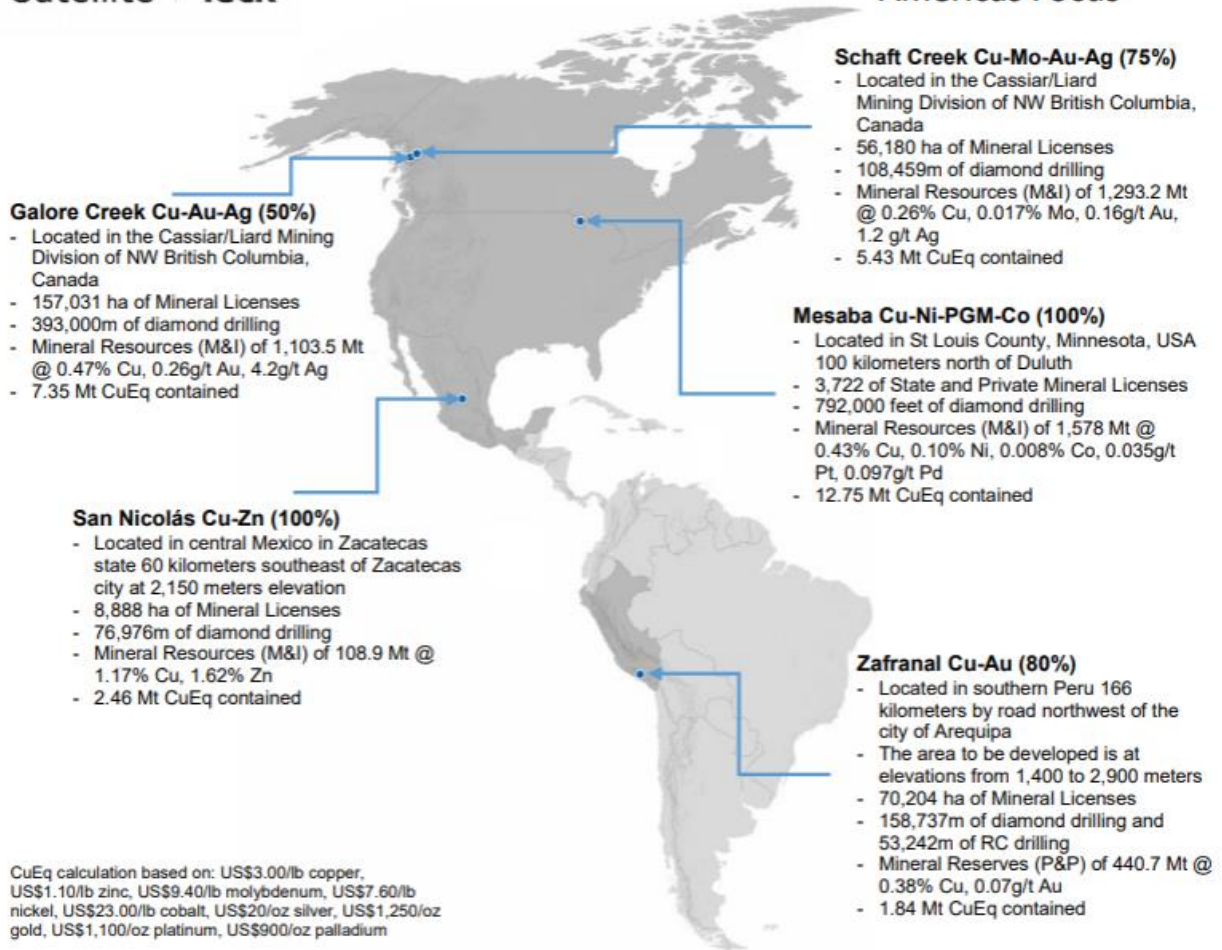
The findings in our analysis suggest that Teck is a generally favourable company into which the M&M team should conduct further due diligence. Given fairly recent changes in management, we would like to conduct further research and due diligence on the management team. We also plan to discuss both Teck's management team and the base metals pricing environment with our sector mentor in the near future. Additionally, Teck fits very well with the M&M portfolio from a portfolio management perspective. The QUIC M&M portfolio is currently very overweight precious metals, with no holdings in base metals. Teck would allow the team to diversify our holdings and return to being closer to market-weight in all subsectors.

Appendix I

Project Satellite Overview

Satellite | Teck

Americas Focus



Source(s): QUIC Standards

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