I think life is getting back toward normal. This Sohn conference marks part of that. I feel lucky and honored to be part of it. Next year, I hope it will be in person. I’d say more, but we are keeping things moving this year, and I have just 8 minutes. I like the idea of limiting everyone to 8 minutes, of course, except me. But, I’m a rule follower, so let’s go.
Here is the disclaimer. It’s a great way to chew up that time. I’d like to remind everyone that the ideas I’m about to present are existing positions in our portfolio. We may change our positions at any time.
In a Gold Rush, the surest way to make money isn’t to look for gold. It is to sell equipment to the miners. And we have a gold rush coming in...
Electric vehicles. We don’t know which brand will win, but we do know they are coming.
But that’s just the pure plays. Actually, every traditional auto brand is also launching EV models.
And to power those electric vehicles we need electricity.
We need wind-power and solar power...
We need EV chargers and we need electric storage...
We need electricity generation and transmission...
In fact, Elon Musk, the leading industry expert had this to say on Tesla’s latest conference call.
“These are rough numbers, but you roughly need twice as much electricity if all transport goes electric, and then you need 3 times as much electricity if all heating goes electric.”

Elon Musk, Tesla CEO
April 26, 2021

Now, betting on an electric future is a popular thing to do. While we don’t know the winners or the losers, the market loves all these stocks, which trade at multiples that seem ambitious to people like me, who try to tie a value to boring things like future cash flows.
You don’t have to be a real genius like Thomas Edison to know that whether you are building electric vehicles, chargers, storage, solar, wind, power generation and transmission, to grow the electric grid, we need lots of...
Copper.
Copper in EVs

An electric vehicle has 4 times more copper than an Internal Combustion Engine vehicle. Batteries and electric motors require lots of copper. Chargers require several pounds of copper.

Source: Goldman Sachs Commodities Research, Green Metals: Copper is the New Oil, April 13, 2021, page 8.
Wind and Solar power installations need tons of copper due to its excellent attributes including electric and thermal conductivity, and corrosion resistance.

And, if you think the traditional use of copper will be replaced by...
This new fangled implementation of money, it’s good to consider that...

Source: iStockPhoto.com.
Bitcoin mining uses a ton of electricity, too.
Last month, Goldman put out a 31 page report titled “Copper is the new oil”, which outlined the current supply and demand outlook for copper.

Green Electrification is projected to require an additional 5 million metric tonnes of copper by 2029, which would be 16% of global demand.

While investors have bought FANG, materials stocks have done terribly for the last decade. Capital has grown scarce, which has reduced new project development. The pipeline of potential new capacity is down more than 60% compared to 2008.

Source: The foregoing slide was obtained from “A Green Revolution: What Could It Mean for Mining?”, April 2021, a product of Wood Mackenzie.
Getting mines on line quickly is hard. The cartoon says, “What? They’re already digging the mine?...  "Nope – Burying the EPA comments that oppose it”

Source: “Mining near protected Wilderness”; LOCAL TOON by Steve Sack, The Minneapolis Star-Tribune, MN.
It takes about three years to expand an existing mine and eight years to start a new one. The result is that supply, without much higher prices to incentivize investment, is likely to fall well below demand after 2024.

Source: Goldman Sachs Commodities Research, *Green Metals: Copper is the New Oil*, April 13, 2021, Exhibit 5.
Goldman forecasts a long-term supply gap starting in a few years.

Source: Goldman Sachs Commodities Research, *Green Metals: Copper is the New Oil*, April 13, 2021, Exhibit 32.
Which will lead to higher copper prices. Goldman forecasts a record $15,000 per metric tonne or about $6.80 a pound in 2025.

Source: Goldman Sachs Commodities Research, *Green Metals: Copper is the New Oil*, April 13, 2021, Exhibit 35.
And copper prices have already taken off, more than doubling from last year’s low to over $10,000 a tonne and it’s up already 30% this year.

Source: Bloomberg LP, retrieved May 7, 2021. Copper price reflects the London Metal Exchange Copper 3 Month Rolling Forward (LMCADS03 LME Comdty).
Higher prices, of course, can force other solutions. There will likely be more scrap copper. And, if the price gets high enough, Aluminum can be substituted in some applications.
However, as we focus on decarbonization, aluminum is an inferior choice, and would be hurt much more by a potential carbon tax.

Source: The foregoing slide was obtained from “A Green Revolution: What Could It Mean for Mining?”, April 2021, a product of Wood Mackenzie.
And, aluminum has also gone up 22% this year, so substitution might be more of a down-the-road thing, rather than a right-now thing.

In fact, almost all commodities are up this year. The CRB index is up over 20%.

So, it’s hard to know how much of the copper rise is due to the copper future.
And, how much is due to the our money printing fiscal and monetary policies.

Source: David Parkins, 2020.
The obvious way to play this is through copper mining companies. Freeport-McMoRan, is the leading copper miner. It is up 45% this year. It trades at a still reasonable 16x estimated 2021 earnings.

Freeport is essentially a pure play on the copper price. However, in 2025 Freeport is projected to have 10% less attributable production than it had in 2021 and about a quarter less than it had in 2016.

Mining has been a tough industry for the last decade and the largest players have been reluctant to add capacity – which, of course, adds to the intermediate term bull case.

“The price of copper could double overnight… and we couldn’t add new production of significance for a number of years.”

Richard Adkerson, Freepor-McMoRan CEO
April 22, 2021

Last month Freeport’s CEO said, “The price of copper could double overnight… and we couldn’t add new production of significance for a number of years.”

What I’m recommending today is a more overlooked company, a Canadian-based miner called Teck Resources.

Teck’s Class B shares are dually listed in the Toronto Stock Exchange and the NYSE. The company reports its financials in Canadian Dollars, so all of the numbers in the rest of the presentation will be in Canadian Dollars unless we explicitly disclose US dollars.

Teck trades at two-thirds of Freeport’s P/E multiple and has much better growth prospects.

And, while Teck shares have done well this year, they have underperformed FCX.

Teck is more of a diversified miner. Its three main products are Metallurgical Coal, Zinc and Copper.

But, unlike FCX, Teck is undergoing a major copper mine expansion project in Chile called QB2. Teck owns 60% of the $5.7 billion project, which will come online in the second half of 2022. It will roughly double Teck’s mix of Copper.

The project was underwritten by TECK to a $3.00 a pound copper price. The forward curve today is around $4.50, so the returns are better. We analyzed go-forward cash generation and at an 8% discount rate – consistent with what TECK used in its underwriting – there is significant value. If one buys into the Goldman bull case of copper at $6.80 a pound...

Cha-Ching! The QB2 expansion by itself would be worth Teck’s current market cap, even though it won’t contribute anything to results until 2023.
The QB2 project will reshape Teck’s business mix by 2023 toward copper.

And here is where Teck is on the global cost curve. It sits just on the edge of the first quintile.

Source: Goldman Sachs Equity Research, *The Global Hunt for Copper Highlights Focus on Quality and Growth; Buy FCX (on CL), FM.TO, GLEN, LUN.TO, BHP, AAL*, April 13, 2021, Exhibit 11 (green highlights are Greenlight).
Beyond QB2, Teck has 5 other copper projects it refers to as “Project Satellite”. The company’s strategy is to either sell these projects, or in some cases to partner with someone else who wants to put in the capital to develop them, with Teck contributing the resource and maintaining a percentage interest without putting in capital.

Management estimated the value of these projects to be $3 billion in 2017 when copper was at $2.70 per pound. We will use that in our NAV as a conservative value.

Finally, after QB2, there is QB3, which is in the pre-feasibility stage and could come online around 2030.

It could double QB2’s production capacity, making it a top-5 copper mine globally. We won’t count it in our valuation.

Teck’s larger operation today is in Metallurgical Coal, sometimes also referred to as Coking Coal.
Met Coal is combined with Iron Ore to make steel.
Supply roughly equals demand and analysts expect the market to remain balanced, though we believe it may fall into deficit in the near term.

Met Coal is different from Thermal Coal, which is used to make electricity and is under siege for its carbon emissions.
With Met Coal, there is no substitute. If we want steel, we have to burn metallurgical coal.
The met coal market is wonky due to geopolitical tensions, which would be discussed in the 20 minute version of this presentation. More concisely, we can see that like most commodities, met coal has also gone up this year.

We assume $175 per metric tonne of met coal for 2022 and 2023, while many analysts assume $150 per metric tonne. The entire steel complex has already moved up well above pre-COVID levels, and met coal is likely to follow as we see a global economic recovery and infrastructure investment while supply struggles to keep up.

Source: Argus Media. Metallurgical coal price reflects the metallurgical coal premium hard low-vol cfr N. China Singapore close.
Metallurgical coal cash costs

Teck is in the middle of the global cost curve.

Sometimes it rains in Queensland

Premium met coal has gone through supply driven shortages in the past. In late 2010, La Niña driven flooding in Queensland, Australia drove high quality met coal prices well above $300 per metric tonne. Teck has significant leverage to met coal pricing. If met coal prices went to $300, Teck would generate over $1 billion Canadian dollars of incremental EBITDA each quarter vs. analyst estimates.

Source: Greenlight calculations.
Zinc today is about 30% of the revenue. All I have time for is to say that zinc is another commodity used in galvanizing steel.

So, let’s get to the valuation...
Teck earned C$0.61 in the first quarter. For the year, we expect it to earn $3.23 Canadian dollars at the current copper curve and met coal at $150 per metric tonne, so it trades at 9.6x times 2021 earnings. They should beat consensus, which hasn’t adjusted to recent commodity price increases.

But, of course this is before QB2 comes on line. There is potential earnings surprise further to the upside if met coal prices rally.

Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
Valuation sensitivity to copper

Here is what earnings might look like in 2023, the first year with QB2 online. At the current forward curve of around $4.50 copper, earnings almost double.

Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
Free cash flow sensitivity to copper

<table>
<thead>
<tr>
<th>Copper ($/lb)</th>
<th>Greenlight 2023E FCFps (C $)</th>
<th>P/FCFps</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00</td>
<td>4.72</td>
<td>6.6x</td>
</tr>
<tr>
<td>3.50</td>
<td>5.42</td>
<td>5.7x</td>
</tr>
<tr>
<td>4.00</td>
<td>6.12</td>
<td>5.1x</td>
</tr>
<tr>
<td>4.50</td>
<td>6.82</td>
<td>4.6x</td>
</tr>
<tr>
<td>5.00</td>
<td>7.52</td>
<td>4.1x</td>
</tr>
<tr>
<td>5.50</td>
<td>8.22</td>
<td>3.8x</td>
</tr>
<tr>
<td>6.00</td>
<td>8.92</td>
<td>3.5x</td>
</tr>
<tr>
<td>6.50</td>
<td>9.62</td>
<td>3.2x</td>
</tr>
<tr>
<td>6.80</td>
<td>10.04</td>
<td>3.1x</td>
</tr>
</tbody>
</table>

Note: Met coal constant at $175/Mt

With the capital spending behind them, starting in 2023, depreciation will exceed capital spending, leading to even higher Free Cash Flow per share. So, it may be at 4.6x cash flow at $4.50 copper.

Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
Teck doesn’t have any debt coming due until 2030. Management says that once QB2 comes online, the free cash flow will be returned to shareholders.

We built a discounted cash flow analysis extending to the current mine lives until approximately 2060.

With $3.00 copper, about the price it was before the recent commodity run, the shares are worth about $40 Canadian dollars.

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Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
With $4.50 copper, about what the current forward curve implies, the shares are worth $59 Canadian dollars, or almost double.

---

Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
DCF based on $6.80/lb copper

<table>
<thead>
<tr>
<th></th>
<th>Value (M)</th>
<th>Per Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper Assets - Proportionate Value</td>
<td>36,301</td>
<td>67.42</td>
</tr>
<tr>
<td>Metallurgical Coal Assets</td>
<td>13,532</td>
<td>25.13</td>
</tr>
<tr>
<td>Other Assets and Corporate</td>
<td>1,460</td>
<td>2.71</td>
</tr>
<tr>
<td>Gross Asset Value</td>
<td>51,293</td>
<td>95.27</td>
</tr>
<tr>
<td>(-) Net Debt</td>
<td>(7,016)</td>
<td>(13.03)</td>
</tr>
<tr>
<td>(+) Equity Investments and NCI</td>
<td>411</td>
<td>0.76</td>
</tr>
<tr>
<td>(+) Est. Project Satellite Monetization</td>
<td>3,000</td>
<td>5.57</td>
</tr>
<tr>
<td>Net Asset Value</td>
<td>47,688</td>
<td><strong>88.57</strong></td>
</tr>
<tr>
<td>Current Share Price</td>
<td></td>
<td>31.09</td>
</tr>
<tr>
<td>% Appreciation</td>
<td></td>
<td>185%</td>
</tr>
</tbody>
</table>

And, the $6.80 Goldman bull case puts the stock nearly 3 times higher or almost $90 Canadian dollars a share.

Source: Bloomberg LP, retrieved May 7, 2021; Greenlight calculations.
I don’t know if we really need the full Goldman bull case of $6.80 copper... but, sometimes dreams come true.
Thank you for having me at this year’s Sohn Conference. Next year, I expect we can do it live...