

# **Battery Metals Sector**

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# We Raise our Lithium and Cobalt Price Forecasts on Sharply Rising Spot Pricing and EV Demand

We increase our cobalt and lithium price forecasts given the recent sharp uptick in spot pricing, rising EV sales and battery demand, and continued tightening of available supply that Benchmark Minerals Intelligence (BMI) suggests will lead to shortages emerging this year for cobalt and next year for lithium - shortages that may widen as new battery plants continue to outpace new mines.

**Increased cobalt price forecasts.** We increase our LT (from 2024 onward) cobalt metal price forecast to \$40/lb (from \$20/lb) based on recent sharp upticks in BMI's monthly metal pricing (to \$22/lb Co in February, up 23% MoM) and in LME spot pricing (to \$24/lb last week, up 65% YTD), rising EV sales and materials uptake, and further tightening of available supply forecasted by BMI to occur in the coming weeks, which is ultimately expected to lead to a global supply shortage of 1 kt emerging this year (vs. a 1.1kt surplus last year). We also increase our in-situ resource multiple that we apply to unmodelled resource to \$2/lb (from \$1-1.25/lb) based on rising peer multiples. Recall, we had lowered our LT cobalt price to \$20/lb from \$40/lb in late 2019 when cobalt was oversupplied and out of favour. Cobalt metals pricing last peaked at over \$43/lb in April 2018.

**Cobalt company target price adjustments.** We cover two cobalt stocks to which we apply our new price assumptions:

First Cobalt (FCC-V)	BUY	C\$0.65 TP increased from C\$0.60
Jervois Mining (JRV-V)	BUY	C\$1.00 TP increased from C\$0.45

**Increased lithium price forecasts.** We increase our LT (from 2024 onward) price forecasts to \$13,000/t Li carbonate (from \$9,700/t) and to \$14,000/t Li hydroxide (from \$12,000/t). The increase is based largely on recent sharp upticks in BMI's monthly wt. avg. global pricing, which in February rose to \$9,109/t Li carb (up 11% MoM and up 60% from November 2020 lows) and to \$9,590/t Li hydroxide (up 5% MoM), and also on rising EV sales and materials uptake, and the continued emergence of the LFP cathode in China that is ultimately expected to lead to a global supply shortage of roughly 50 kt emerging next year. We also increase our in-situ resource multiple that we apply to unmodelled resources to \$10/t LCE (from \$5/t LCE) based on rising peer multiples. Recall, we had lowered our LT price forecasts to \$9,700/t Li carb (from \$11,500/t) and to \$12,000/t Li hydroxide (from \$13,500/t) in late 2019 when lithium was oversupplied and out of favour. Lithium carbonate pricing last peaked at over \$17,500/t Li carb in March 2018.

Lithium company target price adjustments. We cover a single lithium stock to which we apply our new price assumptions:

Neo Lithium (NLC-V) BUY

C\$4.10 TP increased from C\$2.10

#### **Target Price Methodologies**

FCC-V: Our target price of C\$0.65/sh (was C\$0.60) is based on a 0.8x multiple applied to our 8% DCF for the Ontario refinery, combined with an in-situ valuation of \$2/lb CoEq (was \$1.25/lb) applied to unmodelled resources.

JRV-V: Our target price of C\$1.00 (was C\$0.45) is based on a 0.8x multiple applied to our 8% DCF for Idaho Cobalt Operations and the SMP Refinery, combined with an in-situ valuation applied to unmodelled resources.

NLC-V: Our target price of C\$4.10 (was C\$2.10) is based on a 0.8x multiple applied to our 10% DCF for the 3Q project, combined with an in-situ valuation of \$10/t LCE (was \$5/t) applied to unmodelled resources.

#### **Battery Metals Sector**

**EV sales are expected to spike 50% this year** to 4.7 MM before soaring to 14.3 MM by 2025, according to Rho Motion. The EV supply chains rebounded quickly from COVID and was largely unaffected by it, with China EV production bouncing back from late Q2/20 and just missing original targets while laying foundation for future growth, according to BMI. And importantly, Europe is now playing a bigger role, where EV sales and demand for raw materials are growing strongly.

**Number of battery plants is set to nearly double by 2030.** BMI reported that 64 major battery plants came online in 2020, up 28% YoY, bringing the global total to 180 major battery plants. And another 174 plants are already forecasted by BMI to come online over the next 10 years, bringing the global capacity to 3,152.7 GWh by 2030 (up from 2029 outlook of 2,971.9 GWh forecasted in Nov. 2020). Rising battery plant consumption of raw materials has resulted in price rallies across the suite of battery metals, a trend that may continue as new battery plants come online faster than new production (it typically takes longer to build a mining project than a battery or car plant).

**Cobalt availability is set to further tighten in coming weeks, putting further upward pressure on pricing,** according to BMI. Cobalt prices are up 65% this year and rising as EV sales rise, China stockpiles metal, and due to logistical issues in South Africa (which transits material from DRC). The LME Co metal price rose to \$24/lb Co last week. The price rally started late last year when China announced its plans to stockpile cobalt due to a boom in EV sales in China and Europe, according to media reports. BMI's February cobalt metal pricing rose 23% MoM to \$22/lb Co (still 45% lower than April 2018 price peak of over \$43/lb Co), as refiners in China scaled back metal production in favour of cobalt chemicals for batteries due to strong downstream demand from the battery industry and higher premiums for cobalt sulphate in February (sulphate pricing recently exceeded \$30/lb Co). Payability for cobalt hydroxide feedstock for EVs is up to around 93-94%, from about 63-64% one year ago. This price rally is reported by BMI to be driven primarily by real demand caused largely by an increase in EV sales. Benchmark expects demand for cobalt to jump 18% this year (by about 23kt) to 127 kt, resulting in a deficit of about 1kt this year from a surplus of 1.1kt last year.

Lithium prices are seeing first sustained rise in 3 years. Global wt. avg. lithium carbonate prices rose 11% MoM to \$9,109/t in February, according to BMI, after rising 60% from a November 2020 low of \$5,700/t, and which is still 48% lower than the March 2018 high of \$17,513/t Li carb (price spike began in late 2015). Lithium hydroxide pricing rose 5% to \$9,590/t, as the premium for hydroxide narrowed. The rise in lithium prices is largely driven by strong growth in the lithium iron phosphate (LFP) cathodes in Chinese passenger EVs and buses, according to BMI. While subsidies in China have been maintained, there is less incentive for Chinese EV makers to shift to higher-nickel chemistries. Also, improvements to the LFP cell and pack design allow it to now compete better with the mid-nickel NCM variations. BMI forecasts a lithium supply shortage of roughly 50 kt LCE to emerge in 2022, which may widen as new battery plants outpace new mines. BMI is forecasting a step change in lithium's CAGR in 2021 and beyond, to the 20-25% range, from the 10% range experienced from 2015 to 2020.

The North American EV supply chain is beginning to take shape. The US has bipartisan support for EV jobs, including for BMI's forecasted 383 GWh of US battery capacity by 2030 (12.1% of global output, vs. Europe's 17.6%) which is roughly 70% Telsa. Canada's Natural Resources Minister recently announced the release of a Canadian critical minerals list intended to help point investors towards 31 critical minerals, including cobalt, that will be Canada's focus in the global race to shore up supply of key minerals for the transition towards a low-carbon future. Canada and the US have also developed an integrated North American supply chain under the Joint Action Plan on Critical Minerals Collaboration that was finalized early last year. Both Canada and the US governments appear willing to support the EV supply chain, which includes extraction, chemical processing, cathode/anode production, cell manufacturing, and EV application. BMI suggests that constraints across the upstream stages (extraction, chemical processing, and cathode/anode production) are standing in the way of tackling North American supply chain challenges, and we think investment to these upstream, constrained stages offers scarcity value. We expect these upstream supply bottlenecks within the supply chain to persist given the long lead-time required to build a mining project, which should continue to push raw materials prices higher and may attract more support from governments towards the upstream stages of the North American supply chain.

Eight Capital's top cobalt picks for exposure to a strong EV sector, rising cobalt prices, tightening supply, and also the emerging North American EV supply chain are:

• First Cobalt (FCC-V, BUY, C\$0.65 TP) aims to be North America's only refiner of cobalt. The company is focused on pre-construction activities and has recently added experienced technical and commercial support to its team for the recommissioning and expansion of its cobalt refinery in Ontario where it aims to produce cobalt sulphate for the North American and European EV markets (5,000 tpa Co in sulphate). While FCC may earn higher premiums for its refined cobalt sulphate at higher ends of the cobalt pricing spectrum based on trends during the previous cycle peaking in 2018, we currently maintain our assumed refinery margin of \$7/lb Co in our DCF (hydroxide payability can rise with sulphate pricing, which can partially offset the rising sulphate premium). We estimate the average margin between sulphate and hydroxide in recent years to range from \$3-14/lb (currently closer to the top end of this spectrum). Financing discussions are ongoing, and refinery commissioning is targeted for H2/22. The company is also evaluating battery recycling, which could supplement its existing cobalt hydroxide refinery

feed stock arrangement with Glencore (GLEN-L, Not Rated) and CMOC (3993-HK, Not Rated), and which we think also helps bolster the company's strong ESG profile. On 23-FEB-21, FCC announced that it identified highchargeability zones from a geophysical survey that could more than double the strike length of Iron Creek in Idaho to 2km. We don't think Iron Creek received much value in the market over the past two years while prices were largely lower and exploration work was paused, but this could change now given cobalt prices are rising and drilling is being planned. Recall, Iron Creek already hosts a rare primary cobalt, high-grade Co-Cu resource of 25 MM lbs Co with 69 MM lbs Cu, which FCC could potentially mine to provide supplemental feedstock for its refinery, possibly at a lower comparative cost than purchasing the feed, which could improve economics of the refinery. The combination of the refinery in Ontario and the Iron Creek resource in Idaho offer investors exposure to not only rising cobalt prices, but also to the two most-upstream stages of the North American EV supply chain (extraction and chemical processing). These are two of the most constrained stages (constraints include geology, capital, access to supply chain) compared to the battery and EV plants at the opposite end of the supply chain. We think these constraints increasingly offer scarcity value as new battery plant capacity continues to outpace new extraction and chemical processing capacity. The C\$10 MM government investment and stamp of approval announced in December 2020 helped double the share price to the 30 cent range, and the stock has since largely traded between 30 and 40 cents, which appears to be creating an interesting cup-and-handle technical trend that we think creates an attractive buying opportunity for the stock. FCC should increasingly appeal to the growing masses of clean energy investors seeking exposure to cobalt and the NA EV supply chain due largely to scarcity of other options. Catalysts include announcements on refinery financing (for remaining part of \$60 MM capex) expected this quarter, and reception of permit amendments expected next quarter. On 23-Feb-21, the company announced it will add roughly C\$2MM to treasury from accelerated warrants, and that it established an ATM equity program that can allow it to raise C\$10MM to help fund ongoing pre-construction activities at the cobalt refinery project in Ontario. Prior to these potential additions, working capital was C\$15MM on 22-JAN-21. FCC trades at a P/NAV of 0.45x vs. more advanced nickel-cobalt extraction and processing peer Sherritt (S-T, Not Rated) that trades at a P/NAV of 1.03x, based on recent Factset consensus estimates.

Jervois Mining (JRV-V, BUY, C\$1.00 TP) is on track to become a vertically integrated cobalt producer, and has a top team in place (that includes experienced ex-Glencore team members) with the right customer relationships to sell the refined products. We like JRV especially for its high-torque on rising cobalt price from its near-term production (4.5 MM lbs pa Co) of primary cobalt, with copper and gold credits at its partially built Idaho Cobalt Operations, combined with the payability-boosting SMP refinery in Brazil. Our 8% DCF is based on the feasibility study mine plan, adjusted to incorporate the refinery, and makes up 74% of our NAV (excludes exploration, G&A, cash, and unmodelled resources at ICO and at secondary Nico-Young Ni-Cu project in Australia). The Ni-Co refinery is capable of not only producing Co battery chemicals from Co feed from ICO, but it could also take on Ni feed from other sources, and possibly Cu feed, to potentially sweeten economics. We await the results of studies to determine preferred modifications to the refinery. JRV announced on 4-MAR-21 that it engaged an engineering firm to prepare detailed plant and equipment refurbishment costs and schedules for the restart of the refinery, and management is now in the final stages of selecting a lead engineer for the bankable feasibility study for the refinery restart. Until more details are released on capex at the refinery, we maintain our capex assumptions of \$13-27 MM for any modifications/conversion (depending on the desired path), in addition to \$17.5 MM for roaster, \$74.8MM for mine/plant, \$4MM max lease payments, and \$24MM for refinery acquisition (closes by end of year), for a total capex of \$133-147MM. Some capex funds were already approved within the \$4.7MM recently earmarked to support engineering and ordering of long-lead items through the end of March 2021, including the SAG which was ordered in January. All long-lead items are scheduled to be on site by Q4/21, with construction re-starting by Q3/21, and production starting by H2/21. Other near-term catalysts include announcements on financing and off-takes are expected by the end of the quarter. The combination of the ICO mine in Idaho and the refinery in Brazil offer investors exposure to not only rising cobalt prices, but also to the two most-upstream stages of the EV supply chain (extraction and chemical processing). These are two of the most constrained stages (constraints include geology, capital, access to supply chain) compared to the battery and EV plants at the opposite end of the supply chain, which offers scarcity value. JRV reported cash of A\$42.3 MM on 15-JAN-21. JRV trades at a P/NAV of 0.41x at our LT Co metal price of \$40/lb. If a lower LT price of \$30/lb Co was applied, JRV would trade at 0.57x (and TP would be C\$0.72). More advanced nickel-cobalt extraction and processing peer Sherritt (S-T) trades at a P/NAV of 1.03x, based on recent Factset consensus estimates.

Eight Capital's top lithium pick for exposure to a strong EV sector, rising lithium prices, tightening supply, and the emerging LFP cathode in China is:

Neo Lithium (NLC-V, BUY, C\$4.10 TP). We like this stock for its best-in-class 3Q Li brine project in Argentina, with the lowest capital intensity among brine development projects, its top management team that delivered Cauchari, and for its strategic partnership with CATL (300750-SHEN, Not Rated) which has plans to supply Tesla (TSLA-US, Not Rated) with LFP cathodes for its Chinese version of its Model 3. NLC is slated to be one of the next major lithium producers globally (20 ktpa LCE), and is currently preparing its feasibility study that is being guided by its strategic partner CATL to help ensure desired lithium carbonate specifications are met. We think it's quite possible that CATL off-takes the entire project's production given the large quantity it may need to supply Tesla. And we think the recently rising lithium prices and NLC share price (+39% YTD and +386% over the past 12 months) may even entice CATL to reach an agreement sooner rather than later in order to shore up its lithium supply before LT supply tightens further. In addition to potential announcements on funding arrangements to cover the project's capex of \$319MM, other catalysts/milestones include the feasibility study due for completion in Q3/21, and obtaining the EIA for the final construction permit. We maintain our assumed 2022 construction and ramp up to 20 ktpa LCE by 2024. NLC trades at \$37/t LCE vs. brine peers at roughly \$55/t, and at a P/NAV of 0.56x based on our LT price of \$13,000/t (from 2024). If a lower LT price of \$11,500/t LCE was applied, NLC would trade at 0.69x (and TP would be C\$3.32). More advanced brine peers such as Orocobre (ORL-T. Not Rated) and Lithium Americas (LAC-T. Not Rated) have recently traded at P/NAVs well above 1.0x based on Factset consensus estimates. as we believe clean energy investors flocked to these nearer-term, major Li development projects in relatively scarce field of options. We expect NLC to ultimately receive a similar premium as it advances closer towards production.

## Table 1: Cobalt peer table

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March 16, 2021			Last Price			Target	Return	Shares O/S	Mkt Cap	Cash	Debt	EV		Pe	erforman	ce		Eight (	Capital	FactSet C	onsensu
	Ticker	Currency	\$/sh	Analyst	Rating	Price	to TP	MM	(\$MM)	(\$MM)	(\$MM)	(\$MM)	1 wk	1 mo	3 mo	6 mo	1 yr	NAVPS	P/NAV	NAVPS	P/NAV
Cobalt																					
First Cobalt	FCC-V	CAD	C\$ 0.36	M.Vanderydt	BUY	C\$ 0.65	81%	404	145	5	7	148	6%	(8%)	67%	140%	260%	C\$ 0.73	0.49x	n/a	n/a
Jervois Mining	JRV-V	CAD	C\$ 0.44	M.Vanderydt	BUY	C\$ 1.00	127%	802	353	41	0	312	(4%)	(4%)	28%	40%	226%	C\$ 1.07	0.41x	n/a	n/a
Sherritt International	S-TSX	CAD	C\$ 0.58	n/a	1	NOT RATE	)	397	230	173	457	515	7%	(9%)	38%	205%	544%	n/a	n/a	C\$ 0.56	1.03x
Clean TeQ	CLQ-ASX	AUD	A\$ 0.27	n/a		NOT RATE		886	239	44	1	196	8%	(5%)	6%	(14%)	135%	n/a	n/a	n/a	n/a
Panoramic Resources Ltd.	PAN-ASX	AUD	A\$ 0.14	n/a		NOT RATE	2	2,051	287	30	7	265	8%	(10%)	4%	47%	24%	n/a	n/a	A\$ 0.16	0.88x
Aeon Metals Ltd	AML-ASX	AUD	A\$ 0.10	n/a		NOT RATE		678	68	3	19	84	(5%)	(13%)	(5%)	(31%)	41%	n/a	n/a	n/a	n/a
Australian Mines	AUZ-ASX	AUD	A\$ 0.02	n/a		NOT RATE		3,961	79	8	1	72	0%	(17%)	25%	25%	150%	n/a	n/a	n/a	n/a
Platina Resources	PGM-ASX	AUD	A\$ 0.97	n/a		NOT RATE		1,397	1,356	92	4	1267	22%	36%	190%	646%	1306%	n/a	n/a	n/a	n/a
GME Resources	GME-ASX	AUD	A\$ 0.07	n/a		NOT RATE		557	37	1	0	37	3%	2%	22%	56%	26%	n/a	n/a	n/a	n/a
Canada Cobalt Works	CCW-TSX	CAD	C\$ 0.42	n/a		NOT RATE	-	121	51	6	0	45	(5%)	(28%)	(25%)	(26%)	35%	n/a	n/a	n/a	n/a
Fortune Minerals	FT-TSX	CAD	C\$ 0.12	n/a		NOT RATE		362	42	1	6	47	(4%)	(21%)	77%	44%	130%	n/a	n/a	n/a	n/a
Cobalt BlockChain	COBC-TSX		C\$ 0.13	n/a		NOT RATE	-	215	28	<u> </u>	0	27	13%	(10%)	86%	117%	271%	n/a	n/a	n/a	n/a
Cobalt Blue	COB-ASX	AUD	A\$ 0.38	n/a		NOT RATE		248	94	7	3	91	0%	13%	230%	304%	347%	n/a	n/a	n/a	n/a
Brixton Metals.	BBB-TSX	CAD	C\$ 0.24	n/a		NOT RATE	-	198	47	9	0	39	4%	(8%)	(14%)	(38%)	129%	n/a	n/a	n/a	n/a
Blackstone Minerals Ltd.	BSX-ASX	AUD	A\$ 0.45	n/a		NOT RATE		327	145	7	0	139	(4%)	(9%)	14%	1%	411%	n/a	n/a	n/a	n/a
Metallica Minerals Ltd.	MLM-ASX	AUD	A\$ 0.04	n/a		NOT RATE	-	324	13	2	0	10.6	5%	(2%)	25%	74%	400%	n/a	n/a	n/a	n/a
Edison Cobalt	EDDY-TSX	CAD	C\$ 0.20	n/a		NOT RATE	)	71	14	1	0	13.4	0%	(2%)	567%	471%	233%	n/a	n/a	n/a	n/a
Cobalt Average													3%	(6%)	78%	121%	275%		0.45x		0.95x
Cobalt Major Producers																					
China Molybdenum	3993-HK	HK	HK\$ 5.26	n/a	1	NOT RATE	)	3,933	146,424	26,139	50,580	170,865	4%	(7%)	32%	75%	140%	n/a	n/a	n/a	n/a
Glencore International	GLEN-LON	GBP	GBP\$ 2.85	n/a	1	NOT RATE	2	13,324	37,988	1,096	27,418	64,310	0%	6%	17%	54%	138%	n/a	n/a	n/a	n/a
GME Resources	GME-ASX	AUD	A\$ 0.07	n/a		NOT RATE	)	557	37	0.1	0.1	37	3%	2%	22%	56%	26%	n/a	n/a	n/a	n/a
Cobalt Major Producer A	verage												2%	0%	24%	62%	102%		n/a		n/a

Source: Company reports, Factset, Eight Capital estimates

### Table 2: Lithium peer table

VIII CAPITAL																			mvan	lerydt@viiio		fshafigullin@	
CAPITAL								р	EER TAE	1 F - 1 M	ним									(	416) 849 7887		(647) 574 503
March 15, 2021			Last Price		Target	Return	Shares O/S	Mkt Cao	Cash	Debt	EV	Avg Grade	Inventory	EV/T			Performanc	8		Eight (	Capital	FactSet (	Consensus
	Ticker	Currency	\$/sh	Anelyst	Rating Price	to TP	MM	(\$M\$)	(\$M0)	(MM2)	(\$M4)	%Li20 or mg/L LDE	MHE LEE	US\$/t	1 w k	1 mp	3 mo	6 mo	1 yr	NAVPS	P/NAV	NAVPS	P/NAV
Hardrock																							
Pied mont Lithium	PLL-ASX	AUD	A\$ 0.97	n/a	NOT RAT	FD	1,397	1,356	27	4 [	1,332	1.11%	0.76	1,348	30%	36%	190%	708%	1306%	n/a	n/a	n/a	n/a
Galaxy Resources	GXY-ASX	AUD	A\$ 2.50	n/a	NOT RAT		505	1.263	275	27	1.015	1.37%	6.78	116	12%	(1%)	26%	73%	184%	n/a	n/a	A\$ 3.60	0.69x
Pilbara Minerals	PLS-ASX	AUD	A\$ 1.08	n/a	NOT RAT	ΈD	2.897	3,129	86	176	3.219	1.27%	7.10	351	16%	12%	32%	218%		n/a	n/a	n/a	n/a
Lithium Australia NL	LIT-ASX	AUD	A\$ 0.13	n/a	NOT RAT	ΈD	898	112	4	1	109	0.45%	0.28	303	0%	(14%)	74%	140%	238%	n/a	n/a	n/a	n/a
Critical Elements	CRE-TSX	CAD	C\$ 1.25	n/a	NOT RAT	ΈD	169	211	4	5	212	0.90%	1.36	125	(7%)	(14%)	67%	291%		n/a	n/a	C\$ 2.37	0.53x
Avalon Advanced Materials	AVL-TSX	CAD	C\$ 0.25	n/a	NOT RAT	ΈD	349	85	1	1	85	1.40%	0.35	193	20%	29%	158%	277%	717%	n/a	n/a	n/a	n/a
Plateau Energy Metals	PLU-TSX	CAD	C\$ 0.76	n/a	NOT RAT	ΈD	105	80	0	ò	80	n/a	n/a	n/a	19%	(15%)	149%	15.8%	334%	n/a	n/a	n/a	n/a
Vision Lithium	VLI-TSX	CAD	C\$ 0.30	n/a	NOT RAT	ΈD	181	54	ĩ	ō	54	n/a	n/a	n/a	22%	(49%)	900%	900%		n/a	n/a	n/a	n/a
Power Metals	PWM-TSX	CAD	C\$ 0.30	n/a	NOT RAT	ΈD	106	31	0	0	31	n/a	n/a	n/a	(9%)	(22%)	13%	(16%)	157%	n/a	n/a	n/a	n/a
Neometals Ltd	NMT-ASX	AUD	A\$ 0.41	n/a	NOT RAT	ΈD	545	221	78	ī	144	n/a	n/a	n/a	13%	8%	76%	125%	163%	n/a	n/a	n/a	n/a
Infinite Lithium	ILI-TSX	CAD	C\$ 0.11	n/a	NOT RAT	ΈD	131	14	1	ò	14	n/a	n/a	n/a	10%	(8%)	69%	120%	108%	n/a	n/a	n/a	n/a
Hardrock Average		-		,								1.08%	2.77	406	11%	(4%)	159%	272%	460%		n/a		0.61
Brine																							
Neo Lithium	NLC-V	CAD	C\$ 2.72	M. Vandervdt	BUY C\$ 4.1	) 51%	128	348	31	0	317	601	6.92	37	13%	(17%)	84%	249%	511%	C\$ 4.88	0.56x	n/a	n/a
Orocobre	ORL-T	CAD	C\$ 4.88	n/a	NOT RAT		344	1.679	234	342	1.788	704	17.10	84	21%	1%	19%	82%	177%	n/a	n/a	C\$ 2.54	1.92x
Lithium Americas	LAC-T	CAD	C\$ 21.67	n/a	NOT RAT		119	2.588	108	108	2.587	607	23.71	87	18%	(24%)	76%	81%	599%	n/a	n/a	n/a	n/a
Lithium Power International	LPI-ASX	AUD	A\$ 0.27	n/a	NOT RAT		300	81	7	0	74	1163	1.10	52	15%	(13%)	6%	64%	93%	n/a	n/a	n/a	n/a
NRG Metals Inc.	NGZ-TSX	CAD	C\$ 0.14	n/a	NOT RAT		127	17	í	ŏ	16	792	0.57	23	4%	(7%)	(4%)	(16%)	69%	n/a	n/a	n/a	n/a
Bearing Resources	BRZ-TSX	CAD	C\$ 0.20	n/a	NOT RAT		79	16	ò	ŏ	16	1160	0.39	33	8%	(23%)	25%	74%	90%	n/a	n/a	n/a	n/a
Millenial Lithium	ML-TSX	CAD	C\$ 2.95	n/a	NOT RAT		89	263	22	ŏ	242	452	3.01	64	9%	(25%)	5%	119%	315%	n/a	n/a	n/a	n/a
Pure Energy Minerals	PE-TSX	CAD	C\$ 1.30	n/a	NOT RAT		32	42	0	ŏ	42	123	0.82	41	24%	(26%)	83%	106%	519%	n/a	n/a	n/a	n/a
E3 Metals	ETMC-TSX	CAD	C\$ 3.28	n/a	NOT RAT		37	120	ĩ	ŏ	119	73	6.70	14	21%	2%	260%		1239%	n/a	n/a	n/a	n/a
Galaxy Resources	GXY-ASX	AUD	A\$ 2.50	n/a	NOT RAT		505	1.263	275	27	1.015	7	6.78	116	12%	(1%)	26%	73%	184%	n/a	n/a	A\$ 3.60	0.69x
Standard Lithium	SLL-TSX	CAD	C\$ 3.31	n/a	NOT RAT		130	431	4	5	432	n/a	n/a	n/a	4%	(19%)	23%	101%	549%	n/a	n/a	n/a	n/a
Brine Average	JEE IJA	САВ	CJ J.J1	iiy a			150	451	-	, I	452	568	6.71	55		(14%)			395%	Πγα	0.56x	11/4	1.31
												500	0.71	,,	14/0	(1470)	33/0	102/0	33370		0.304		1.51
Major Producers:																							
Ganfeng Lithium	1772-HKG		CNY 99.50		NOT RAT		1,340	133,326			136,181	n/a	n/a	n/a	20%	(22%)	33%	148%	320%	n/a	n/a	n/a	n/a
Sichuan Tianqui Lithium	002466 (S		CNY 39.77		NOT RAT		1,477	58,744			64,644	n/a	n/a	n/a	2%	(23%)	35%	78%	71%	n/a	n/a	n/a	n/a
Livent	LTHM-NYS		US 18.69	n/a	NOT RAT		147	2,740	12	253	2,981	n/a	n/a	n/a	16%	(17%)	12%	108%	278%	n/a	n/a	n/a	n/a
FMC (historic)	FMC-NYSE		US 112.28		NOT RAT		129	14,524			17,399	n/a	n/a	n/a	9%	4%	(2%)	1%	72%	n/a	n/a	n/a	n/a
Albemarle	ALB-NYSE	USD	US 158.83		NOT RAT		117	18,525			22,227	n/a	n/a	n/a	13%	(4%)	15%	62%	197%	n/a	n/a	n/a	n/a
SQM	SQM-NYSE	USD	US 57.11	n/a	NOT RAT	ED	120	6,875	1,071	2,497	8,301	n/a	n/a	n/a	15%	1%	22%	68%	256%	n/a	n/a	n/a	n/a
Maior Producer Average														n/a	12%	(10%)	19%	78%	199%		n/a		n/a

Source:	Company	reports.	Factset.	Eiaht	Cavital	estimates

## Figure 1: Cobalt prices



Source: Benchmark Minerals

#### Figure 2: Lithium prices



Source: Benchmark Minerals

#### Figure 3: First Cobalt refinery

- Hydrometallurgical facility that operated from 1996 to 2015
- The only cobalt refinery in North America producing cobalt sulfate for EV market (H2 2022)
- US\$60M capex and 18 months to commissioning
- · Strong interest from OEMs, metal traders and cobalt miners



Source: First Cobalt company reports

#### Figure 4: Jervois strategic positioning



Source: Jervois company reports

# Figure 5: Neo Lithium 3Q project capex peer comparison

- With \$16,000/t of installed capacity, 3Q is the lowest capital-intensive lithium brine project in development
- 3Q has a very long mine life with reserves for 35 years taking into account only 1/3 of the known resource



Source: Neo Lithium company reports

# A rapid Covid rebound

- The EV supply chain was one of the few industries almost unaffected by covid
- H1 concerns and slowdowns were followed by a swift rebound from late-Q2 onwards
- China led the way, not quite meeting initial 2020 targets but laying foundations for future growth
- More importantly we see the first signs of demand diversification, with European demand growing strongly



Source: China Ministry of Industry and Information Technology

# China NEV production

Figure 6: A rapid COVID rebound for EVs





Source: Benchmark Minerals



# Figure 8: Industry backed by post-COVID stimulus efforts

Source: Benchmark Minerals

#### Figure 9: Emerging battery metals supply gap



Source: Benchmark Minerals

# Figure 10: Cobalt market balance



Source: Benchmark Minerals

Figure 11: There is no geological shortage of nickel, lithium, cobalt or manganese, and no shortage of customers, but there is a shortage of financing



Source: Benchmark Minerals

#### Figure 12: Lithium demand outlook



Source: Benchmark Minerals



#### Figure 13: NCM expected to gain market share on rising personal use EV production and sales

Source: Benchmark Minerals



#### Figure 14: Upstream constraints stand in the way of tackling supply chain challenges

Source: Benchmark Minerals

#### Figure 15: Global EV sales and market penetration



Source: Albemarle company reports, Marketline, IHS Markit

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