LITCHFIELD HILLS RESEARCH

E3 Metals Corp. ETMC-CA; EEMMF-US-$12 PT

Action Summary – 31 March 2022

Analyst Theodore R. O'Neill ***is initiating coverage of E3 Metals Corp. with a rating and a $12 price target***

- **We are initiating coverage of E3 Metals with a rating and a $12 price target.** ETMC stands to benefit from the significant global demand for lithium.
- **The market is enormous and growing**. According to Grand View Research, the market for lithium used in batteries for all markets was $35.483B in 2020 and has a CAGR of 14.3% through 2028. This growth is driven primarily for the electric vehicle markets and secondarily by non-mobile energy storage markets.
- **Favorable regulatory changes are supportive**. Alberta, where ETMC is based, recently "proclaimed into force" Bill 82: *Mineral Resource Development Act* approved by the Government, has a strategy and action plan to regulate Alberta's mineral sector under the existing Alberta Energy Regulator (AER). It is also benefiting from regulatory changes to reduce carbon footprints.
- **Lab proven technology.** ETMC has developed proprietary and patented process to directly extract lithium (DLE) from brine with a minimal environmental footprint
- **Attractive Valuation** that includes:
  - prospects for incremental growth from existing resource, potential for licensing opportunities with DLE technology de-risked from proven pilot plant
  - comparison to peers
  - discounted future earnings
  - NPV of the Clearwater Project and compared to peers
- **Talented management team with a track record of success.**
- **Shares appear to be priced significantly below absolute and comparative metrics**:

3./30 Closing price: $1.81 USD	**Market cap: $107 million**	**Multiple of book: NMF**	**EV/2023 Sales: NMF**
Shares outstanding: 65 million	**Insider ownership: 3%**	**3-mo avg. trading volume: 110,000**	**Dividend/Yield: NA/NA**

GAAP estimates (EPS in CAD – Revenue in CAD millions)

Period	EPS	Revenue	Op Margin
1Q21A	($0.03)	$0.00	
2Q21A	($0.02)	$0.00	
3Q21A	($0.02)	$0.00	
4Q21A	($0.02)	$0.00	
FY20A	($0.08)	$0.00	NMF
1Q22E	($0.02)	$0.00	
2Q22E	($0.02)	$0.00	
3Q22E	($0.02)	$0.00	
4Q22E	($0.02)	$0.00	
FY22E	($0.07)	$0.00	NMF
1Q23E	($0.02)	$0.00	
2Q23E	($0.02)	$0.00	
3Q23E	($0.02)	$0.00	
4Q23E	($0.02)	$0.00	
FY23E	($0.08)	$0.00	NMF

Note: Numbers may not add due to rounding. See our full model in the back of this report.

Cash balance (in CAD millions)

• 2020A	• $6,718
• 2021A	• $17,841
• 2022E	• $3,963
• 2023E	• $1,949

Debt (in millions)

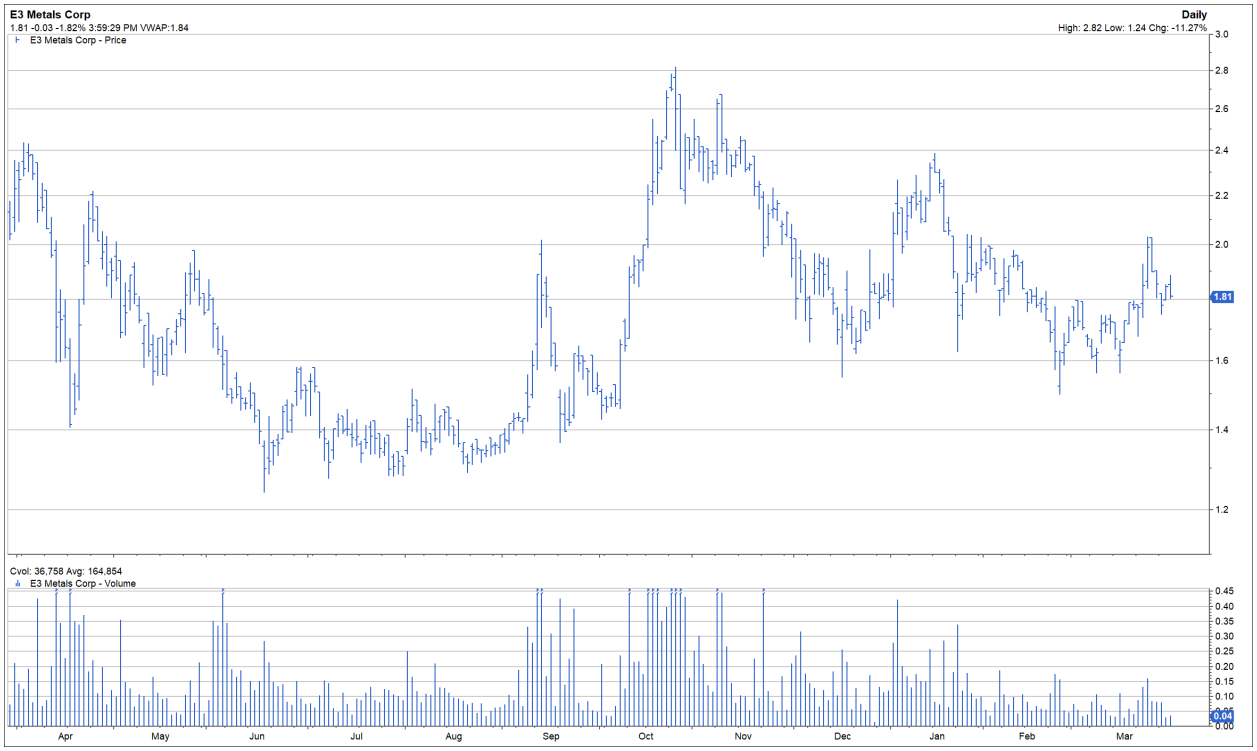
• 2020A	• $0.00
• 2021A	• $0.00
• 2022E	• $0.00
• 2023E	• $2,000

Risks/Valuation

- Risks include: lack of earnings, commercial development and marketing
- Our $12 price target is derived using a discounted future earnings model

Company description: E3 Metals is a lithium development Company with 7.0 million tonnes of lithium carbonate equivalent (LCE) Inferred mineral resources in Alberta. Through the successful scale up its Direct Lithium Extraction technology towards commercialization, E3 Metals' goal is to produce high purity, battery grade, lithium products.

Figure 1 – E3 Metals Corp. – One-Year Trading snapshot



Source: FactSet

Investment Thesis

1) **The market is enormous and growing**. According to Grand View Research, the market for lithium used in batteries for all markets was $35.483B in 2020 and has a CAGR of 14.3% through 2028. Lithium-based battery storage systems are becoming increasingly important for commercial markets, including electric vehicles, stationary grid-storage systems, and aviation, as well as national defense markets.
2) **Favorable regulatory changes are supportive**. Alberta, where ETMC is based, recently "proclaimed into force" Bill 82: *Mineral Resource Development Act* approved by the Government, has a strategy and action plan to regulate Alberta's mineral sector under the existing Alberta Energy Regulator (AER). It is also benefiting from regulatory changes to reduce carbon footprints.
3) **Proven technology.** ETMC has developed proprietary and patented Ion-Exchange technology to directly extract lithium (DLE) in a modular scalable design from brine with a minimal environmental footprint
4) **Attractive Valuation** that includes:
    a. prospects for incremental growth from existing resource, potential for licensing opportunities with DLE technology de-risked from proven pilot plant
    b. comparison to peers
    c. discounted future earnings
    d. NPV of the Clearwater Project and compared to peers

Valuation and Price Target

We used three methods to determine a valuation for ETMC's shares and they all came in substantially higher than where the shares currently trade. For the purposes of our price target, we are using discounted future earnings.

1) Multiple of sales using peer metrics (USD $11.06)
2) Discounted future earnings (USD $11.79)
3) NPV of the Clearwater Project (USD $19.36)

All three of these methods rely on some or all of the estimates contained in the Preliminary Economic Assessment (PEA) for the **Clearwater Project** (Figure 2)**,** but they do not include estimates from any of the other permitted areas the company has already identified. So, while it may seem somewhat risky to rely on the Clearwater Project PEA, it is only one of several and it is not the largest in terms of potential lithium extraction by volume. The Clearwater project would produce 400,000 tonnes of LHM over the life of the project and is a fraction of the 7,000,000 tonnes of LHM available from the inferred resource. This provides ample growth opportunities for additional projects as demand increases.

For all three methods, we assume that the company is able to extract and sell lithium that match the parameters set in Clearwater Project (PEA) which was included in its regulatory filings, NI 43-101 as Table 1-3. The National Instrument 43-101 (the "**NI 43-101**" or the "**NI**") is a national instrument for the *Standards of Disclosure for Mineral Projects* within Canada. The Instrument is a codified set of rules and guidelines for reporting and displaying information related to mineral properties owned by, or explored by, companies which report these results on stock exchanges within Canada.

Figure 2 – E3 Metals Corp – Clearwater Project PEA

Description	Units	CAD	USD
Production	tonnes/year LHM	20,000	20,000
Project Life	Years	20	20
Total Capital Cost (CAPEX)	M $	959.5	710.7
Total Initial Capital	M $	812.7	602.0
Average Annual Operating Costs (OPEX)	M $/year	98.8	73.2
Average Selling Price (LHM)	$/tonne LHM	19,007	14,079
Cash Operating Costs	$/tonne LHM	4936	3,656
Average Annual EBITDA	$	281.6	208.6
Pre-Tax Net Present Value ("NPV") (8% discount)	$	1,516.2	1,123.1

Source: Company NI 43-101

Multiple of Sales Valuation

Using the metrics in Figure 2, the annual sales from the Clearwater project would be $281.58MM USD. The average sales multiple for its peers for 2023 is 3.86 (see Figure 3). Applying that metric to the implied revenue gives a market cap of $1.09B USD or $16.56 USD/Share. There is no comparable metric for revenue that would start in 2025-2026, but if we cut that by a third, it implies a share price today of $11.06

Figure 3 – E3 Metals Corp. – Comparables

					2023 Consensus Multiples (Except book multiple)		
FactSet Ticker	Company Name	Closing Price	Market Cap $MM	EV $MM	Market Cap / Sales	EV /Sales	Price to Book
ALB-US	Albemarle	$222.48	26,055	28,221	5.02	5.44	4.86
MIN-AU	Mineral Resources Ltd.	$37.51	7,084	7,512	2.16	2.30	3.16
X-CA	TMX Group Ltd	$102.05	5,706	6,219	6.63	7.23	1.93
AKE-AU	Allkem Limited (AU Listing)	$8.49	5,410	4,659	4.40	3.07	2.51
LTHM-US	Livent Corp.	$25.15	4,069	4,769	6.01	7.03	4.96
ERA-FR	Eramet SA	$162.21	4,664	6,104	1.00	1.31	
CMP-US	Compass Minerals International, Inc.	$62.77	2,138	3,124	1.80		5.54
SLI-CA	Standard Lithium Ltd.	$7.51	1,214	1,026			10.04
VUL-AU	Vulcan Energy Resources Ltd.	$7.41	976	609	NMF	NMF	6.47
LKE-AU	Lake Resources N.L.	$1.45	1,844	1,547			7.28
IBAT-CA	International Battery Metals Ltd	$5.59	740	707			10.65
CYP-CA	Cypress Development Corp.	$1.29	172	144			12.90
LPI-AU	Lithium Power International Ltd.	$0.50	173	154			1.42
1MC-AU	Morella Corporation Limited	$0.03	140	136			
ALLI-CA	Alpha Lithium Corporation	$0.83	129	81			2.95
WML-CA	Wealth Minerals Ltd.	$0.30	77	66			0.51
HAM-CA	Highwood Asset Management Ltd	$8.99	54	54			4.19
LIS-CA	Lithium South Development Corporation	$0.62	60	34			3.34
PE-CA	Pure Energy Minerals Ltd.	$0.87	29	28			1.24
ACME-CA	Acme Lithium Inc	$0.93	40	32			11.31
SPMT-CA	Spearmint Resources Inc.	$0.10	25	23			7.90
LTUM-US	Lithium Corporation	$0.25	26	24			127.75
BRZ-CA	Bearing Lithium Corp	$0.23	25	19			0.93
CRUZ-CA	Cruz Battery Metals Corp	$0.22	24	23			2.79
	AVERAGE				3.86	4.40	10.66

Source: FactSet and Litchfield Hills Research

Discounted Future Earnings – Basis for our Price Target

Our 12-month price target of $12.00 is based on a discounted future earnings model. We looked at the discounted value of all future earnings. Using the metrics in Figure 2, the annual sales from the Clearwater project would be $281.58MM USD and the operating expense would be $73.2MM leaving a "profit" of $206.8MM. Assuming that profit has to fund the annual operations of the whole company, let's cut it in half and tax it at 20%. That yields a net income of $82.7MM divided by 65.5MM shares gives an EPS of $1.26 USD. If you have an earnings stream of $1.26 beginning in 2026 that doesn't grow for five years before growing only 3%/year and you discount that by 10%, the implied share

price is $11.81 (see Figure 4) which we round up to $12.00. Note, this earnings projection does not include any of the other already identified and permitted ETMC resources.

Figure 4 – E3 Metals Corp. – Discounted Future Earnings

Discounted Earnings: USD		**$11.81**
Year	EPS	Discounted EPS
2022	(0.06)	(0.06)
2023	(0.07)	(0.06)
2024	(0.10)	(0.08)
2025	(0.05)	(0.04)
2026	1.26	0.86
2027	1.26	0.78
2028	1.26	0.71
2029	1.26	0.65
2030	1.26	0.59
	Terminal Value:	7.91

Source: Litchfield Hills Research

NPV of the Clearwater PEA and Comparison to Peers

On a per share basis, the NPV of the Clearwater PEA is well above where the stock trades today. The implied value is $20.41/share and a 91% discount to the current share price. Significantly when compared on similar metrics to its peers: Lake Resources N.L. (LKE-AU, NR); Standard Lithium Ltd. (SLI-CA, NR) and: Vulcan Energy Resources Ltd. (VUL-AU, NR), ETMC trades at a greater discount (see Figure 5).

Figure 5 – E3 Metals Corp. – Pre-Tax Project NPV compared to Peers

Company	ETMC-CA	VUL-AU	LKE-AU	SLI-CA
Project	Clearwater	Upper Rhine Valley	Kachi	SW Arkansas
Pre-tax NPV	$1,123MM	$3,166MM	$1,050MM	$1,305MM
Fully Diluted Shares	58MM	131.65MM	1,182MM	179.95MM
Implied Value/Share	$19.36	$24.05	$0.89	$7.25
Current Share Price	$1.79	$6.29	$0.60	$5.92
Discount to Implied Value	91%	74%	33%	18%

Sources: PEA from ETMC Clearwater Project; PFS of the Kachi Lithium Brine Project from Lake Resources; SW Arkansas Lithium Project PEA from Standard Lithium; PFS of the Zero Carbon Lithium Project – Full Project with no Phasing from Vulcan Energy; Litchfield Hills Research and; FactSet. Euro conversion: $1.13/Euro.

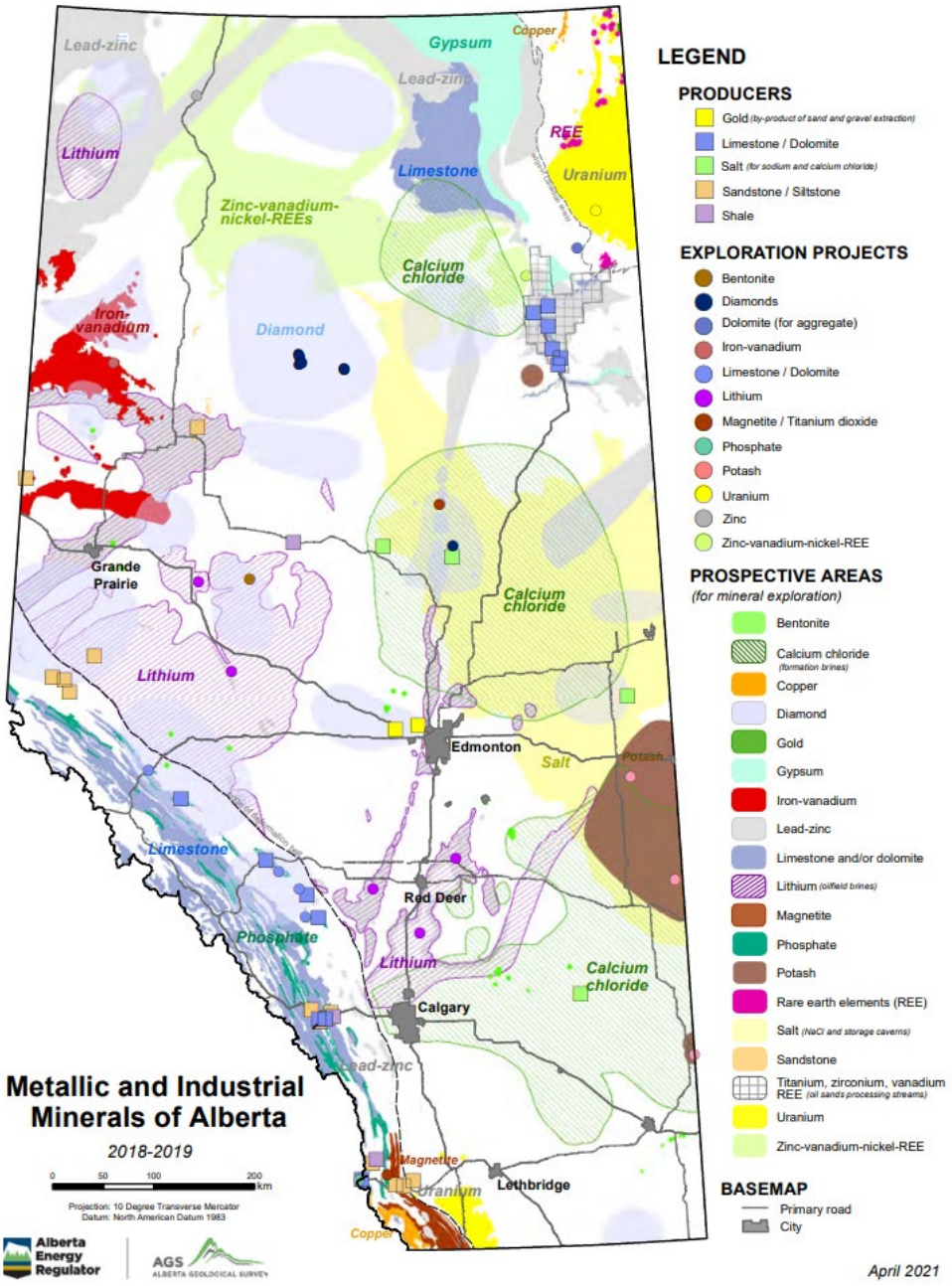
The market is enormous and growing

Lithium-based battery storage systems are becoming increasingly important for commercial markets, including electric vehicles, stationary grid-storage systems, and aviation, as well as national defense markets. According to the U.S. Federal Consortium for Advanced Batteries, the worldwide battery market is expected to grow by a factor of 5 to 10 over the next decade and there is a race to capture the market. According to Grand View Research, the market for lithium used in batteries for all markets was $35.483B in 2020 and has a CAGR of 14.3% through 2028.

Favorable regulatory environment

Alberta is widely recognized as a global leader in crude oil, natural gas, and oil sands production. The province has in place a plan to capitalize on its vast mineral resource potential and the rising global demand for minerals – including critical and strategic minerals such as lithium. By ensuring a modern minerals strategy that encourages responsible and sustainable exploration, development, manufacturing, and recycling of such minerals and mineral products. This strategy is intended to establish an attractive climate for investment and innovation to grow Alberta's minerals sector. The plan is called *Renewing Alberta's mineral future A strategy to re-energize Alberta's minerals sector.* The plan was developed by the Ministry of Energy, Government of Alberta and published November 2021 and it clearly lays out the vast opportunity for ETMC as well as others (see Figure 6). In addition, Alberta recently "proclaimed into force" Bill 82: *Mineral Resource Development Act* and has a strategy and action plan to re-energize Alberta's mineral sector. This sends the permitting and process through the Alberta Energy Regulator (AER) which will facilitate much faster permitting turnaround.

Figure 6 – E3 Metals Corp. – Metallic and Industrial Minerals of Alberta



Source: Alberta Geological Survey 2021

Canada is also working with the United States to finalize the Canada-U.S. Joint Action Plan on Critical Minerals Collaboration, to advance their mutual interest in securing supply chains for the critical minerals needed for important manufacturing sectors, including communication technology, aerospace and defense, and clean technology. This presents opportunities for Alberta and other Canadian jurisdictions to work together to enhance the competitiveness of their respective minerals industries. Alberta has been part of the federal, provincial, and territorial efforts in pursuing Canada's approach targeting the critical minerals and battery value chains.

The impetus for this is that the North America is almost entirely dependent on sourcing all battery raw materials from China (see Figure 7).

Figure 7 – E3 Metals Corp. – North America is playing catch-up on world markets

Country	Cathodes Manufacturing (3 M tons)	Anode Manufacturing (1.2 M tons)	Electrolyte Solution Manufacturing (339,000 tons)	Separator Manufacturing (1,987 M sq. m)
United States	—	10%	2%	6%
China	42%	65%	65%	43%
Japan	33%	19%	12%	21%
Korea	15%	6%	4%	28%
Rest of World	10%	—	17%	2%

Source: BloombergNEF, Battery Components Manufacturing Asset Map 2019, Accessed March 15, 2021.

Ion-Exchange Technology

E3 has developed a proprietary technology to produce lithium in a faster, more environmentally friendly way.

There are two commercial methods currently in production to produce lithium for the battery market:

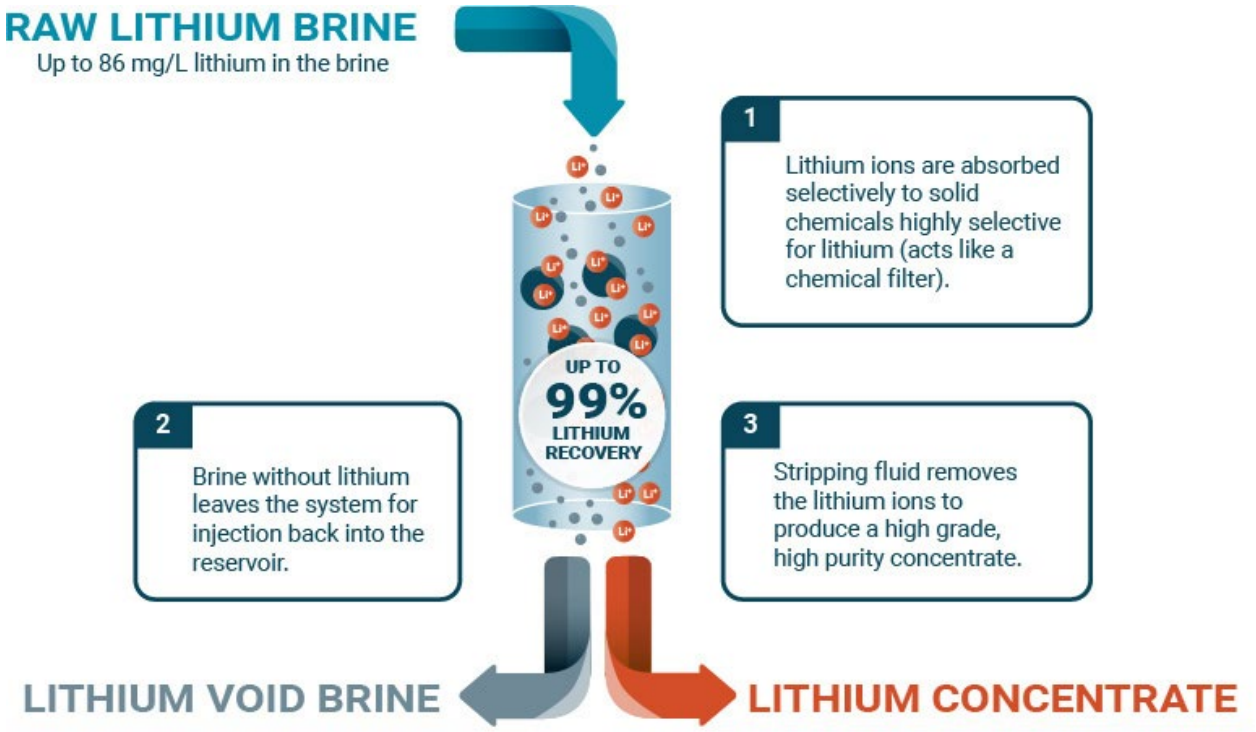
1. Evaporative ponds (because most of these evaporative ponds are in Spanish speaking regions of the world, they are called 'salars', which means "to salt"): this production method relies on solar evaporation in ponds to slowly concentrate lithium in ponds. This process occurs over many months, requiring large amounts of water and significant surface impact in managing and developing these "ponds."
2. Lithium mines: this process removes waste rock (overburden) to uncover the lithium host rock, and dispose of the overburden in waste dumps. Lithium-bearing rock is mined, crushed, milled and processed to produce a lithium concentrate and a tailings stream. This tailings stream must be stored in a tailing impoundment. These mines are energy intensive and cause significant land disturbance for waste dumps, open pits, and tailings ponds.

E3's proprietary, low-energy DLE process has several advantages over these producers.

- The process is fast – it recovers lithium in minutes, not months.
- The process has a much smaller land disturbance footprint – In E3's process, saline formation water is re-injected back into the formation. It doesn't require evaporative ponds, mining waste dumps, open pit mines, or tailings ponds.

- The process requires minimal fresh water – E3's process only uses saline formation water from formations far below the groundwater table and returns the saline formation water back to the same formation. It does not require large volumes of fresh water.
- E3's DLE technology uses ion exchange, which is commonly used in hydrometallurgy, petrochemical, water treatment and even the food industries (see Figure 8).

Figure 8 – E3 Metals Corp. – Lithium Brine Extraction Schematic



Source: Company presentation

Direct lithium extraction from brine using ETMC's ion-exchange technology has shown continuous improvement from lab to prototype with the most recent results published on 11 January 2022. The company has reported consistent peak recoveries of 97% running up to 120/L/hour of brine. ETMC plans to use a modular approach to scaling to production level, linking as many modules as needed to reach commercial levels.

Milestones

Drilling First Three Wells

On January 27, 2022, the company announced its drilling program to complete up to three lithium evaluation wells in Alberta. These will be the first wells drilled for the specific purpose of evaluating lithium in the province. The wells will be located within the Clearwater Project Area (the "Clearwater") to determine the optimal location for commercial

operations and to upgrade the resource to *Measured and Indicated*, as defined by the standard NI 43-101 Technical Report.

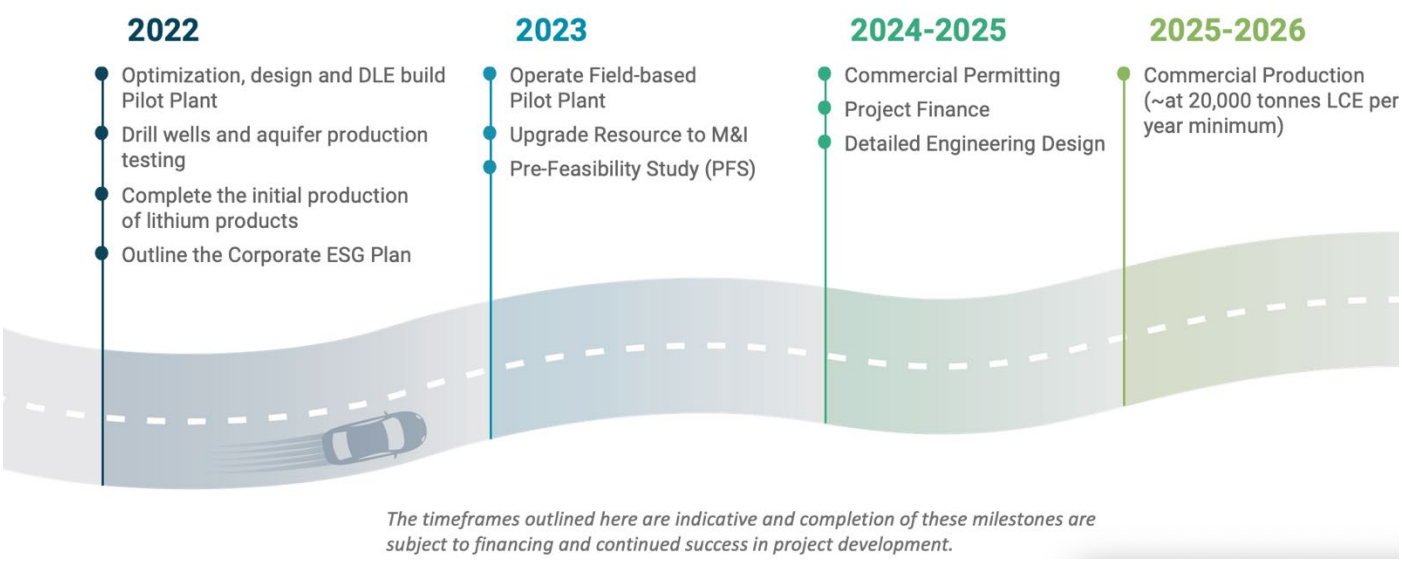
The evaluation wells will confirm water chemistry, lithium concentrations, and reservoir characteristics. The results from the evaluation wells will be used to determine how ETMC will develop the brine production across the Clearwater. They will also assist in the upgrade of the Company's Clearwater resource to *Measured and Indicated*. This will provide the company with a clear and defined area for its first commercial lithium production zone within the Clearwater. The resource upgrade will be the basis for producing a prefeasibility study and booking western Canada's first lithium reserve.

ETMC is working with the Alberta Energy Regulator AER on these permits. It is in the process of applying for the necessary well licenses required for the drill program. Unlike mine permits which take a long time, we expect well licenses will take a matter of weeks.

Construction of Field Pilot Plant

The Lab-Based Prototype was completed at the end of 2021, and the next scale up is the Field-Based Pilot plant. The Field-Based Pilot will be built to demonstrate the company's DLE technology at a near commercial scale. The advantage of the Field-Based Pilot is that it will be modular in design and in a commercial operation, modules would be added as incremental brine is produced. The key takeaway from this is that by making it modular, it lowers the risk that would otherwise be associated with having to scale the entire extraction technology. Milestones are shown in Figure 9.

Figure 9 – E3 Metals Corp. - Milestones



Source: Company presentation

Background Summary

ETMC differentiates itself from other lithium metal extraction investments in several ways

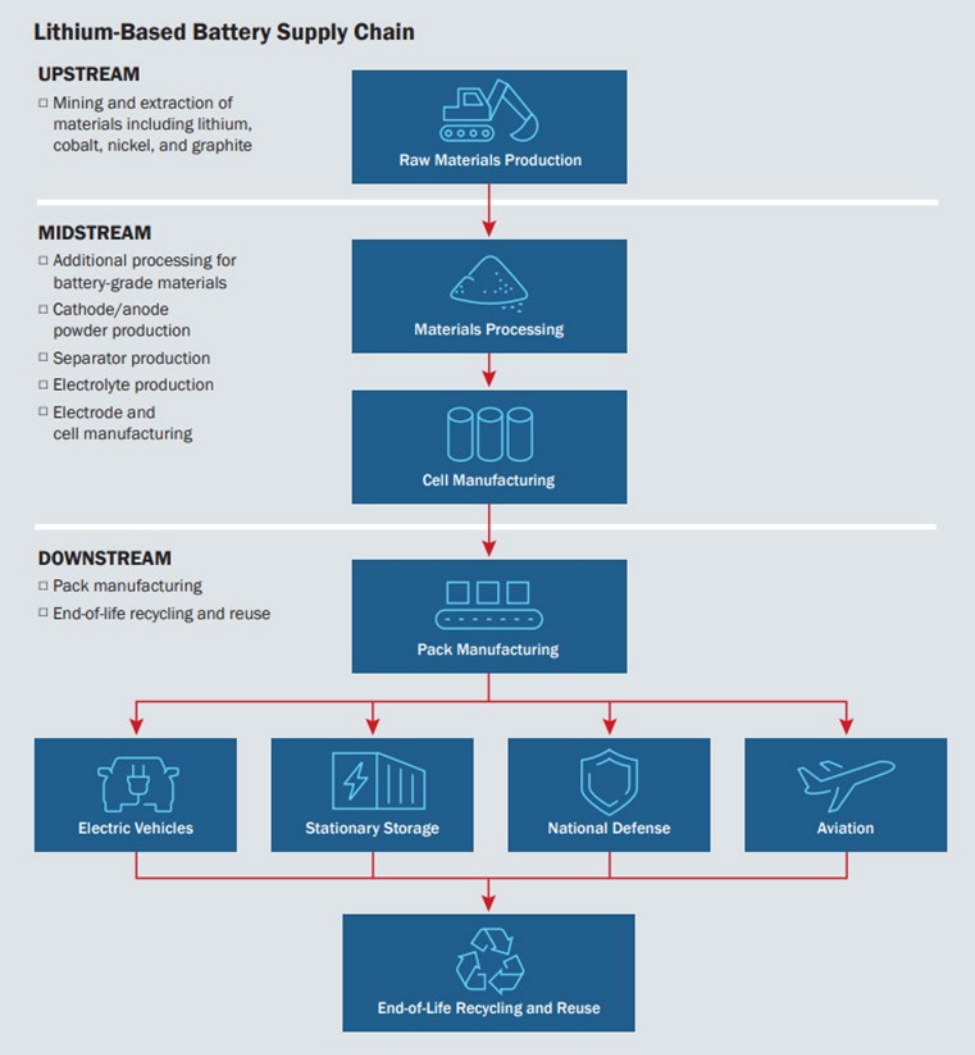
1) It has identified and preliminarily qualified the resources: an underground acquirer containing lithium rich brine
2) It has the land permits and extraction rights for where it plans to drill wells needed to access the lithium brine
3) It has proprietary technology to directly extract lithium from the brine
4) Alberta, where the Company is based, has been a prolific producer of oil and gas for decades, this means that the geology and pertaining information is well understood and readily available at low costs and;
5) It has a workforce that is that trained to work in process industries and a provincial government that is similarly comfortable with process industries. Alberta is the fourth most populous of the 10 Canadian provinces

ETMC Background

Lithium Production

Lithium production and processing terms very closely align with natural resources development such as oil and gas. Mineral exploration and development require skill sets similar to coal and oil sands mining and oil and gas development. With Alberta's vast experience and expertise in the oil, gas and coal sectors, the Province benefits from an existing labor force with pertinent skills in the extractive industries. Alberta aims to support the development of a skilled workforce in the minerals sector by growing public awareness of employment and entrepreneurial opportunities in the sector. ETMC is primarily involved in the Upstream and early Midstream (see Figure 10).

Figure 10 – E3 Metals Corp. – Lithium Based Battery Supply Chain

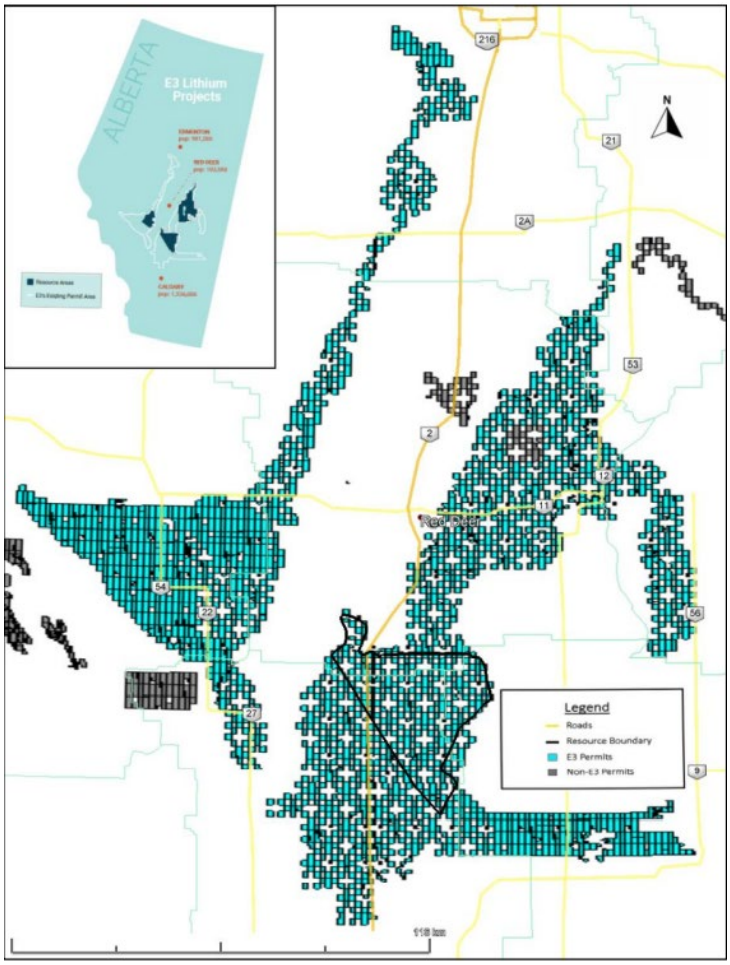


Source: U.S. Federal Consortium for Advanced Batteries

ETMC has both the resource (access to the lithium rich brine) and the technology to extract it. Its peers generally have either the resource and must license the technology to extract the lithium or they have a technology but must find a resource. ETMC has both. The Alberta Lithium Project consists of 80 Metallic and Industrial Mineral Permits that overlie the Leduc Aquifer in Southern Alberta. All permits are held 100% by 1975293 Alberta Ltd (Alberta Co), a wholly owned subsidiary of E3 Metals Corp. The property in its entirety contains 600,333 hectares (Ha)

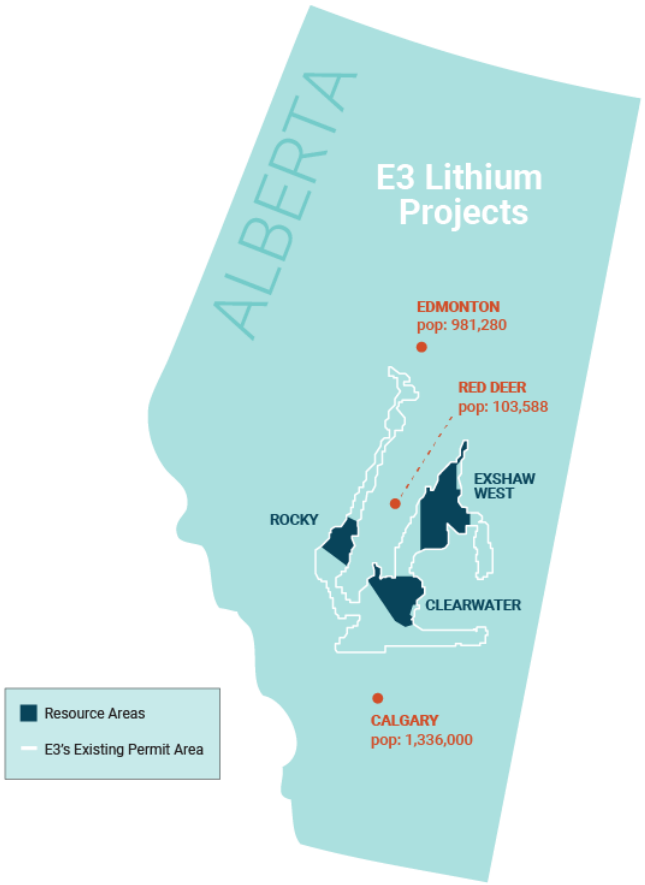
Within the Alberta Lithium Project permit area (see Figure 11), E3's land permits are shown in teal. E3 has outlined three areas for near-term development as shown in the inset on Figure 11 and in Figure 12 where they are referenced as Resource Areas.

Figure 11 - E3 Metals Corp. – Permits



Source: E3 Metals Corp. NI 43-101 Technical Report

Figure 12 – E3 Metals Corp. – Three Main Resource Areas



Source: E3 Metals Corp. NI 43-101 Technical Report

The potential in these three Resource Areas represents potentially one of the largest lithium resources currently under development in North America with 7.0 million metric tonnes (Mt) of Lithium Carbonate Equivalent (LCE) (see Figure 13). These three Sub-Project areas covers only a third of the Company's permit area all of which overlay the Leduc Aquifer.

Figure 13 – E3 Metals Corp. – First Three Project Areas

E3's Resource Area	Percentage of E3's Permit Area	Brine Volume (L)	Average Lithium Grade (mg/L)	Total LCE (Million Tonnes)
Clearwater	12%	5.5×10^9	74.6	2.2
Rocky	5%	3.3×10^9	52.9	0.9
Exshaw	17%	9.8×10^9	75	3.9
Total	34%	28.3×10^9	72	7.0

Source: E3 Metals Corp. NI 43-101 Technical Report and Litchfield Hills Research LLC

The Leduc Formation is an extensively dolomitized ancient reef complex that spans 100's of square kilometers in area, is over 200 meters thick and sits at a depth of between 2,400-2,600 meters. The Leduc's large extent provides the company an opportunity to continually expand development into the future. Historically, the Leduc has demonstrated exceptional flow rates and deliverability due to favorable rock properties and pressure. The aquifer is extremely well understood due to decades of historical oil and gas development in the area.

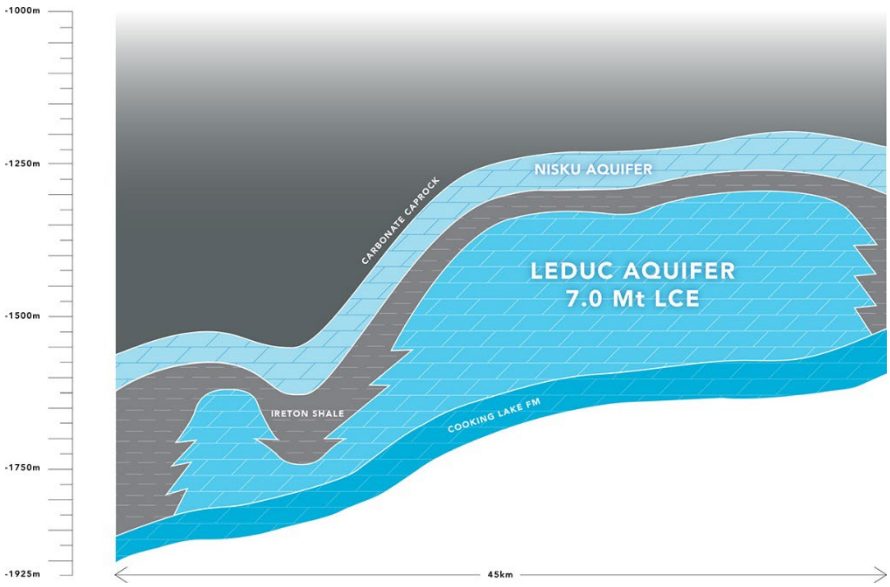
Clearwater Project – The first area of development

The Central Clearwater Resource Area (CCRA) is located in the south-central portion of E3's Permit area. In 2017, E3 Metals delineated an initial inferred lithium resource at Clearwater of 1.9 million Metric Tonnes LCE. In its NI 43-101 Technical Report Preliminary Economic Assessment (PEA), it found the resource was likely to contain 2.2 million Tonnes LCE within the Leduc Aquifer at an average lithium concentration of 74 mg/L.

Geology and Brine Production

The Leduc Aquifer is an expansive ancient reef complex with well understood rock properties, occurring over 2km in the subsurface in the Clearwater area. Over 7,000 wells have been drilled in E3's broader project area over a 70-year oil and gas development period. Historical data from these wells, supported by E3's recent sampling campaigns, were used to characterize and model the geology within the resource boundary, as shown in the following schematic Figure 14.

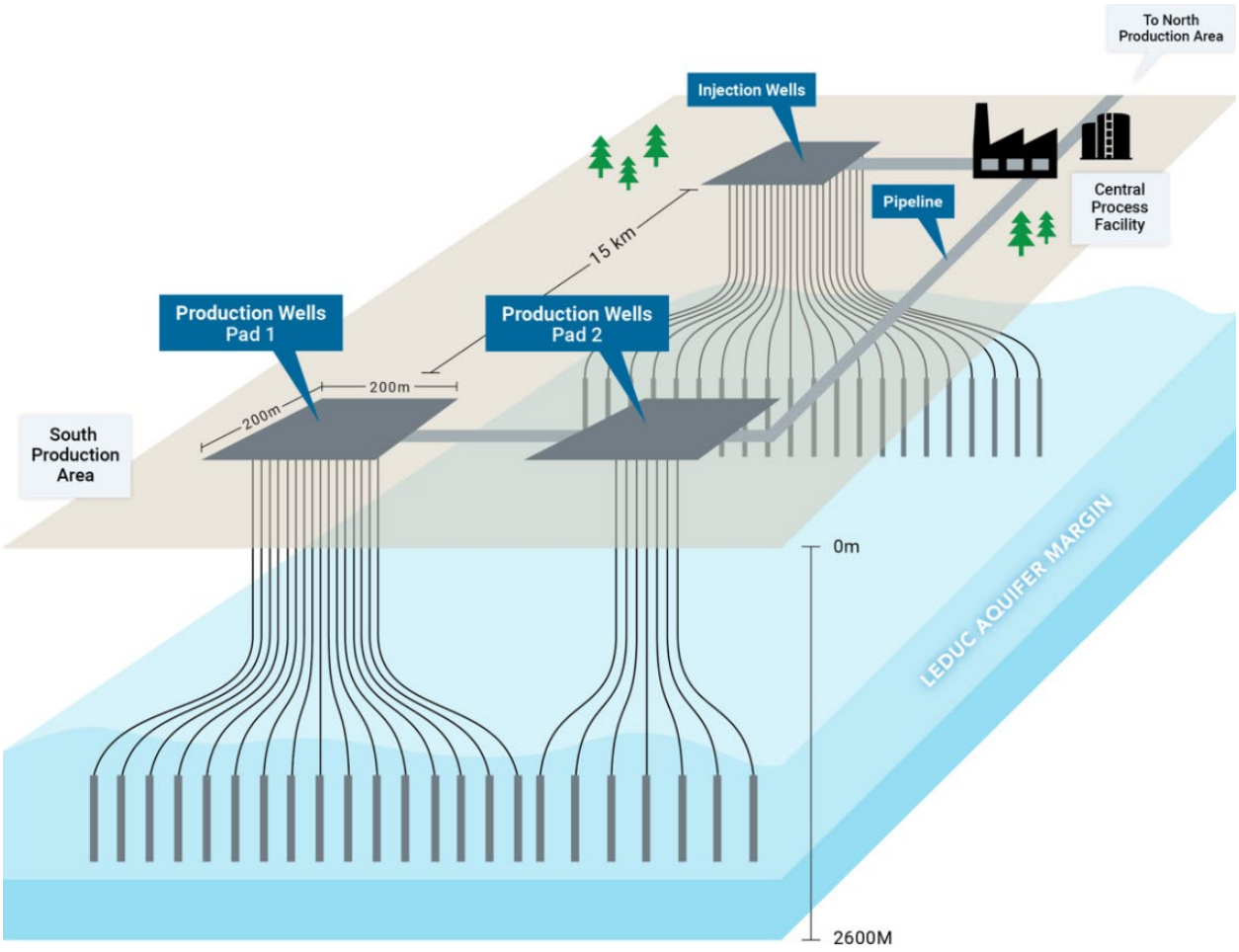
Figure 14 – E3 Metals Corp. - Schematic representation of the CCRA (to scale with vertical exaggeration) highlighting the current relationships of the geology, structure, and hydrocarbon pools



Source: E3 Metals Corp. NI 43-101 Technical Report

Based on this data, a preliminary well network design was developed. Using a pair of well pads, lithium-enriched saline formation water will be pumped to a Central Process Facility (CPF). Lithium will be extracted and purified at the CPF, and lithium-barren saline formation water will be reinjected into the aquifer at an injector well pad, as shown schematically below (see Figure 15). Production pads in front and reinjections wells in back.

Figure 15 – E3 Metals Corp. – Brine Extraction and reinjection



Source: Company Presentation

In production, E3 Metals proposes to develop five surface well pads for brine production. This includes two well pads in the north comprising of 21 wells, and two well pads in the south containing 21 wells. Brine from these well pads will be pumped from the well pads via individual wellhead Electric Submersible Pumps (ESP's). These ESP's will provide enough pressure to convey the brine from the well pads, through a fiberglass pipeline, to the CPF. At the CPF the brine will undergo a pre-treatment process to remove H_2S from the brine prior to entering the lithium extraction process. Once through the lithium extraction process the lithium void brine will be comingled with the H_2S removed in the pre-treatment process and pumped through two pipelines to a nearby injection well pad. There would be 21 injection wells at this pad. The expected power consumption required for the two north production pads is 21 mw. The same power requirement is expected for the two south production pads. Power generation will be installed to provide the primary source of power to the pads. Included at each production pad is the capital equipment and costs to connect to the local service provider's distribution grid as a backup source. Highway access is good for both the north and south production pads. Bulk chemical tank trucks will have no issues accessing either site during summer or winter conditions. A short high grade gravel road will be required to connect the well pads to nearby secondary highways.

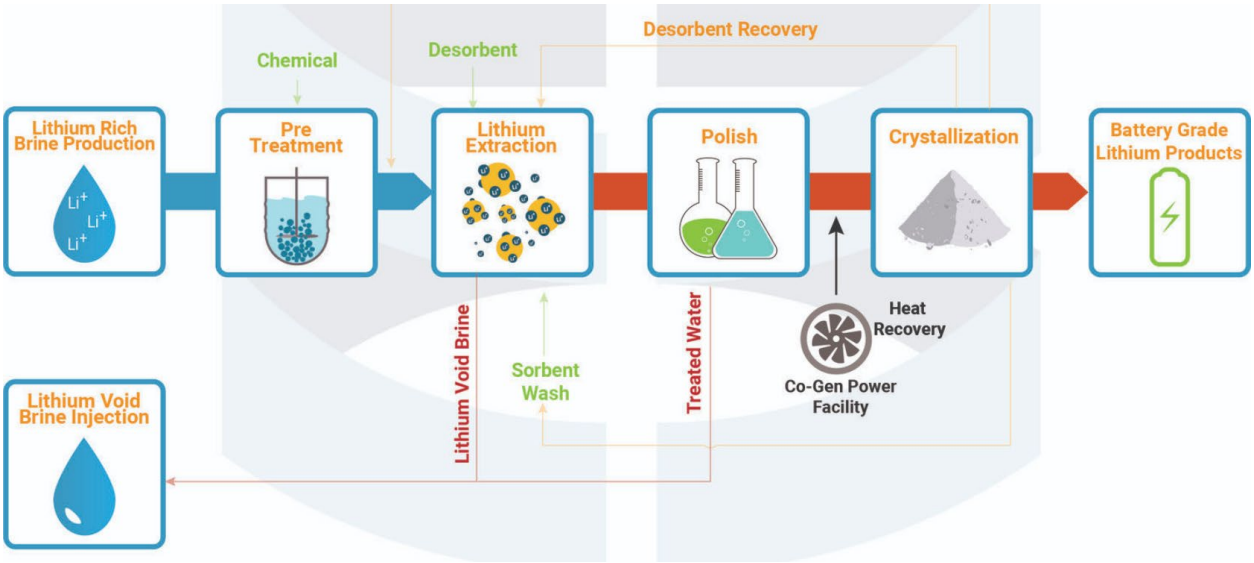
Clearwater Lithium Production Flowsheet

Saline formation water from the well network will be processed through two steps to produce high purity lithium products. The first step will utilize E3's proprietary technology. The second step will use existing commercial equipment:

1. Direct Lithium Extraction (DLE): the E3 DLE process uses an ion exchange process that efficiently extracts lithium from saline formation water and produces a clean lithium concentrate stream with low levels of unwanted ions.
2. Lithium Processing: Using existing commercial technology, the lithium-rich concentrate can be further purified to produce high-grade lithium products through electrolysis and crystallization.

Schematically, the process is presented in Figure 16.

Figure 16 – E3 Metals Corp. – Process Schematic



Source: Company presentation

E3's DLE ion-exchange technology utilizes a proprietary sorbent designed to be highly selective towards lithium ions. It quickly and efficiently reduces large volumes of low-grade brine into a high-grade lithium concentrate in one step, simultaneously removing nearly all impurities. This produces a very clean product for the development of high purity lithium compounds used in Li-ion batteries. Batteries for electric vehicles are the fastest growing market for lithium products and therefore high purity lithium products for direct sale to this market will be E3's focus initially.

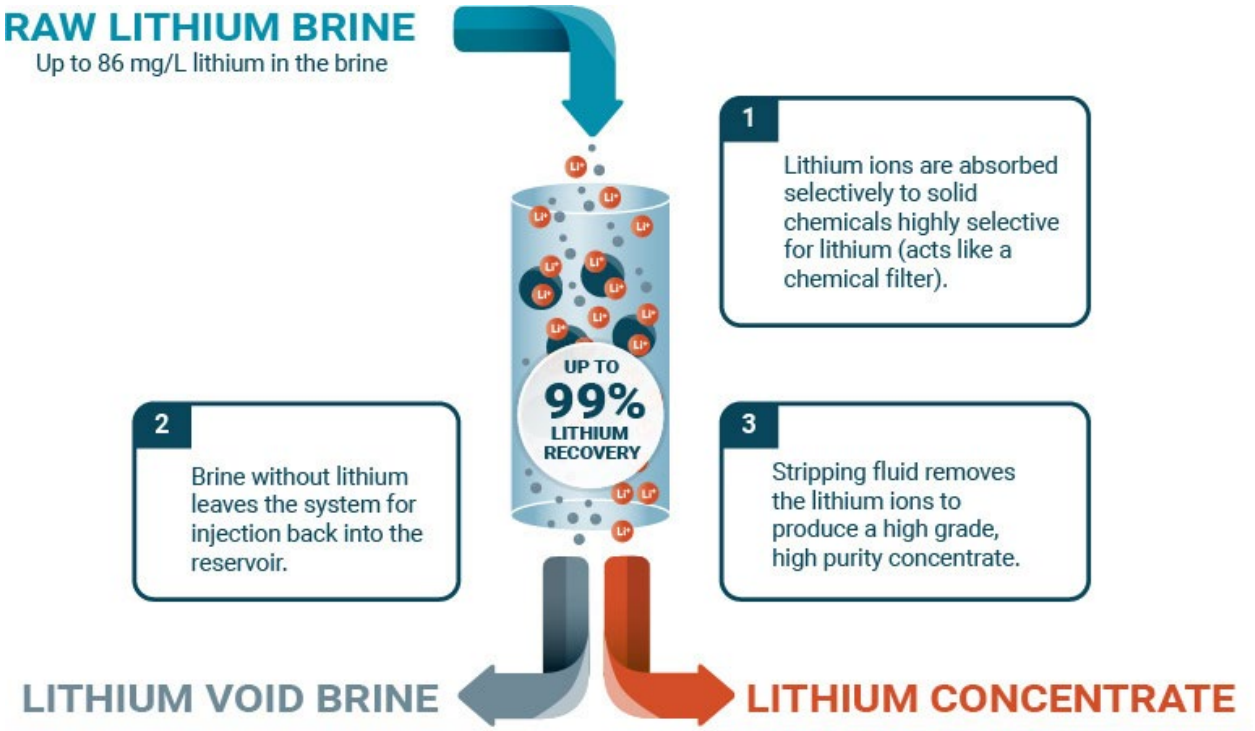
Details of E3's Proprietary Technology

Saline formation water in E3's Clearwater Project area contains lithium, as well as high levels of dissolved solids. To effectively extract and concentrate lithium from the saline formation water, special sorbents are required that have a high affinity for lithium, while simultaneously rejecting unwanted ions and metals.

Over the past 5 years, working in partnership with the University of Alberta, private labs, and now at its development facility in Calgary, E3 has developed and optimized a highly lithium selective sorbent perfect for the extraction of lithium from saline brines. These sorbents selectively extract lithium from saline formation water and produce a clean lithium product stream with low levels of unwanted ions.

The process has been proven in the lab at levels scaled to manage brine flow rates of 120 liters/hour. The process is shown in schematic form in Figure 17.

Figure 17 – E3 Metals Corp. – Lithium Brine Extraction



Source: Company presentation

Financial Projections and Guidance

The company does not provide guidance. We assume there will be no revenue before 2025 and modest losses through that time. We have assumed that ~$10MM of warrants will be exercised in 2022. We have assumed it will incur capex spending on wells and the Field Pilot plant on 2022 and additional capex in 2023. Our financial model is shown in Figures 19-21.

Management

Chris Doornbos, President, CEO, Director | P. GEO, BSC(HONS)

Chris is an expert in developing major projects both in Canada and across the globe. He has a strong technical background and has managed projects through the development stages to production. Chris has a long history of developing companies, both privately and in the public capital markets. This includes developing and negotiating large corporate transactions, the sale and acquisition of mineral properties and strategic capital raising. Chris focuses on risk management, developing and managing an exceptional technical team and well-strategized project generation, with a clear focus on developing and capturing value for shareholders. Chris founded E3 Metals in 2016 and brings this experience to company as the CEO and a director. He was formerly the CEO/Director of Revere Development Corp. and Vice-President of Exploration for MinQuest Ltd.

Raymond Chow, CFO, CPA, CA

Raymond has more than 18 years of finance and accounting experience in high growth companies and corporate financial services. He served at ATB Financial in the project finance group and previously held progressively senior roles within the energy industry including serving as interim CFO for a private equity backed, intermediate private oil and gas producer. His experience includes go-public initiatives, M&A transactions totaling over a billion dollars in value and expertise in the financial reporting functions for public companies. Raymond is a Chartered Professional Accountant (CPA, CA) and articled at PricewaterhouseCoopers.

Jonathan Nielsen, Director of Technology | BS METE

Jonathan brings over 30 years of experience and technical expertise in process development and optimization specific to base metals and lithium processing technology development from lab to commercial commissioning. Jonathan has held senior roles with several internationally recognized companies including FLSmidth & Co. A/S where Jonathan was Director of their Global Hydromet (hydrometallurgy) Process Line, managing several significant roles including base metal and lithium brine business development, process design, testing, and project costing. Prior to his time with FLSmidth, Jonathan spent 11 years with Engitec Technologies SPA (USA Division) where he held progressively senior roles including Site Technology Manager where he worked internationally managing the scale-up of proprietary hydrometallurgical technologies and plant commissioning, and ultimately holding the position of Managing Director where he oversaw all activities and development under the USA operations.

Chris Ward, Director of Project Development | P. ENG, BSC METALLURGY (HONS)

Chris has over 25 years of project management experience in both design and operation of mining assets across North and South America. Chris has completed several +$1B mining and mineral processing projects in his career, which spans multiple commodities including mineable oil sands, copper, molybdenum, lead, zinc, silica, and gold. Chris has a solid background in process design, as well as a comprehensive knowledge of project design and project management. Chris most recently worked on tailings and infrastructure projects for Imperial Oil and Syncrude.

Peter Ratzlaff, Director of Project Development | P.ENG

Peter has over 25 years of diversified engineering and production/operations experience. His experience includes management of the overall production strategy, field operations, and capital programs in the Oil and Gas industry. Prior to joining E3 Metals in 2021, Mr. Ratzlaff was Manager Operations at Huron Resources Corp. from 2016 to 2020. From 2010 to 2016, Peter held the role of Production Manager at Cequence Energy Ltd. Prior to Cequence, he held progressively senior roles with public companies including Canadian Hunter Exploration, Burlington Resources and ConocoPhillips. Peter has a Bachelor of Science in Chemical Engineering from the University of Calgary and is an APEGA Registered Professional Engineer.

Leigh Clarke, Director of Corporate Strategy and Sustainability | LLB

Leigh has over 30 years of wide-ranging experience and a deeply strategic mindset. Originally trained as a lawyer, he has had a diverse career ranging from corporate communications, investor relations and indigenous engagement, most recently serving as the General Counsel and Corporate Secretary for the Balancing Pool of Alberta. He has also spent over a decade enhancing value at AltaLink, as a Senior VP, enabling billions in value creation by identifying and mitigating a broad cross-section of legal, compliance and engagement risks. He has demonstrated strong skills in building relationships in private and publicly-traded company settings.

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Figure 18 – E3 Metals Corp. – Comp Table

					2023 Consensus Multiples (Except book multiple)		
FactSet Ticker	Company Name	Closing Price	Market Cap $MM	EV $MM	Market Cap / Sales	EV /Sales	Price to Book
ALB-US	Albemarle	$222.48	26,055	28,221	5.02	5.44	4.86
MIN-AU	Mineral Resources Ltd.	$37.51	7,084	7,512	2.16	2.30	3.16
X-CA	TMX Group Ltd	$102.05	5,706	6,219	6.63	7.23	1.93
AKE-AU	Allkem Limited (AU Listing)	$8.49	5,410	4,659	4.40	3.07	2.51
LTHM-US	Livent Corp.	$25.15	4,069	4,769	6.01	7.03	4.96
ERA-FR	Eramet SA	$162.21	4,664	6,104	1.00	1.31	
CMP-US	Compass Minerals International, Inc.	$62.77	2,138	3,124	1.80		5.54
SLI-CA	Standard Lithium Ltd.	$7.51	1,214	1,026			10.04
VUL-AU	Vulcan Energy Resources Ltd.	$7.41	976	609	NMF	NMF	6.47
LKE-AU	Lake Resources N.L.	$1.45	1,844	1,547			7.28
IBAT-CA	International Battery Metals Ltd	$5.59	740	707			10.65
CYP-CA	Cypress Development Corp.	$1.29	172	144			12.90
LPI-AU	Lithium Power International Ltd.	$0.50	173	154			1.42
1MC-AU	Morella Corporation Limited	$0.03	140	136			
ALLI-CA	Alpha Lithium Corporation	$0.83	129	81			2.95
WML-CA	Wealth Minerals Ltd.	$0.30	77	66			0.51
HAM-CA	Highwood Asset Management Ltd	$8.99	54	54			4.19
LIS-CA	Lithium South Development Corporation	$0.62	60	34			3.34
PE-CA	Pure Energy Minerals Ltd.	$0.87	29	28			1.24
ACME-CA	Acme Lithium Inc	$0.93	40	32			11.31
SPMT-CA	Spearmint Resources Inc.	$0.10	25	23			7.90
LTUM-US	Lithium Corporation	$0.25	26	24			127.75
BRZ-CA	Bearing Lithium Corp	$0.23	25	19			0.93
CRUZ-CA	Cruz Battery Metals Corp	$0.22	24	23			2.79
	AVERAGE				3.86	4.40	10.66

Source: FactSet and Litchfield Hills Research LLC

Figure 19 – E3 Metals Corp. – Income Statement CAD

December ending year	2019A Year	2020A Year	2021A Year	2022E Q1E	2022E Q2E	2022E Q3E	2022E Q4E	2022E Year	2023E Q1E	2023E Q2E	2023E Q3E	2023E Q4E	2023E Year
Total Revenue	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total cost of revenue	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Gross Profit	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating expenses:													
Business development and marketi	297	786	874	225	225	225	225	900	245	245	245	245	980
Share-based compensation	284	375	1,761	325	325	325	325	1,300	325	325	325	325	1,300
Consulting fees	599	365	537	50	50	50	50	200	100	100	100	100	400
Wages and benefits	481	357	624	150	150	150	150	600	200	200	200	200	800
General and administrative	163	141	337	130	140	140	140	550	150	150	150	150	600
Professional fees	357	121	423	125	125	125	125	500	125	125	125	125	500
Amortization	34	49	129	40	40	40	40	160	40	40	40	40	160
Regulatory and transfer agent fees	70	42	93	20	20	20	20	80	20	20	20	20	80
Travel expenses	63	14	14	3	3	3	3	12	3	3	3	3	12
Interest on lease liability	6	2	14	3	3	3	3	12	3	3	3	3	12
Realized loss/(gain) on FX	25	(16)	11	0	0	0	0	0	0	0	0	0	0
Wages and benefit subsidy	0	(112)	0	0	0	0	0	0	0	0	0	0	0
Total Operating Expenses	2,377	2,124	4,817	1,071	1,081	1,081	1,081	4,314	1,211	1,211	1,211	1,211	4,844
Operating Income	(2,377)	(2,124)	(4,817)	(1,071)	(1,081)	(1,081)	(1,081)	(4,314)	(1,211)	(1,211)	(1,211)	(1,211)	(4,844)
Other income/(expense)	5	29	37	0	0	0	0	0	0	0	0	0	0
Pre-tax income	(2,372)	(2,095)	(4,780)	(1,071)	(1,081)	(1,081)	(1,081)	(4,314)	(1,211)	(1,211)	(1,211)	(1,211)	(4,844)
Tax expense/(benefit)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net income	($2,372)	($2,095)	($4,780)	($1,071)	($1,081)	($1,081)	($1,081)	($4,314)	($1,211)	($1,211)	($1,211)	($1,211)	($4,844)
EPS	**($0.10)**	**($0.07)**	**($0.10)**	**($0.02)**	**($0.02)**	**($0.02)**	**($0.02)**	**($0.07)**	**($0.02)**	**($0.02)**	**($0.02)**	**($0.02)**	**($0.08)**
Diluted Shares Outstanding	24,112	31,028	50,235	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000	58,000

Source: Company reports and Litchfield Hills Research LLC

Figure 20 – E3 Metals Corp. – Balance Sheet CAD

December ending year	2023E	2022E	2021A	2020
Balance sheet				
Current Assets				
Cash and S.T.I.	$1,948	$3,962	$17,840	$6,718
Accounts receivable	200	150	107	53
Inventories	0	0	0	0
Other assets	300	140	381	86
Total Current Assets	**2,448**	**4,252**	**18,328**	**6,857**
Net PP&E	13,000	10,000	60	5
Exploration and evaluation assets	5,000	5,000	4,823	2,877
Other non-current	2,700	2,700	2,779	902
Total Assets	**$23,148**	**$21,952**	**$25,990**	**$10,641**
Current Liabilities				
Accounts payable and accrued exp.	2,000	1,000	724	310
Current loans and borrowings	180	140	109	84
Other current liabilities	0	0	0	0
Total current liabilities	**2,180**	**1,140**	**833**	**394**
Long-term lease	0	0	157	150
Non-current borrowings	2,000	0	0	0
Total Liabilities	**4,180**	**1,140**	**990**	**544**
Stockholders' Equity				
Preferred stock	0	0	0	0
Common stock	0	0	0	0
Additional paid-in-capital	55,000	52,000	51,874	32,190
Retained earnings	(35,956)	(31,112)	(26,798)	(22,018)
Cum. trans. adj. and treasury stock	(75)	(75)	(75)	(75)
Total stockholders' equity	18,968	20,812	25,000	10,097
Total Liabilities and equity	**$23,148**	**$21,952**	**$25,990**	**$10,641**

Source: Company reports and Litchfield Hills Research LLC

Figure 21 – E3 Metals Corp. – Cash Flow CAD

	2023E	2022E	2021A	2020A
Net Income	($4,844)	($4,314)	($4,780)	($2,095)
Receivables	($50)	($43)	($54)	($11)
Inventories	$0	$0	$0	$0
Other assets	($160)	$241	($295)	$146
Net PP&E	($3,000)	($9,940)	($55)	$8
Exploration and evaluation assets	$0	($177)	($1,946)	($155)
Other non-current	$0	$79	($1,877)	($654)
Accounts payable and accrued exp.	$1,000	$276	$414	($118)
Current loans and borrowings	$0	$0	($66)	$51
Lease obligations	$40	$31	$91	$6
Other current liabilities	$0	$0	$0	$0
Long-term lease	$0	($157)	$7	$150
Non-current borrowings	$2,000	$0	$0	$0
Preferred stock	$0	$0	$0	$0
Common stock	$0	$0	$0	$0
Additional paid-in-capital	$3,000	$126	$19,684	$8,168
Foreign currency reserve	$0	$0	$0	$0
Other				$0
Total Cash Flow	($2,014)	($13,878)	$11,123	$5,495

Source: Litchfield Hills Research LLC

Disclosures:

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