



Management Discussion and Analysis

For the period ended March 31, 2021

This Management Discussion and Analysis (“MD&A”) of E3 Metals Corp. (the “Company” or “E3 Metals”) provides a summary of the activities, results of operations and financial condition of the Company as at and for the period ended March 31, 2021 and 2020. The MD&A has been prepared by management as of May 25, 2021, and should be read together with the audited consolidated financial statements for the years ended December 31, 2020 and related notes thereto, which are prepared in accordance with International Financial Reporting Standards (“IFRS”). All amounts are stated in Canadian Dollars unless otherwise indicated.

E3 Metals is a resource company with mineral properties in Alberta that is currently focused on technology development for lithium extraction from Alberta brines contained in its mineral properties. The Company’s shares trade on the TSX Venture Exchange (the “Exchange”) under the trading symbol “ETMC”.

### **Alberta Lithium Project**

The Alberta Lithium Project is a lithium brine project being developed on the backbone of the oil and gas industry in Alberta, Canada. Development and eventual construction aimed for this project differs very little in practice from the oil and gas industry as it involves much of the same types of infrastructure and know-how already well established locally. The social licence is therefore well established, and E3 Metals anticipates being permitted under the same governing body.

Utilizing its proprietary Direct Lithium Extraction (“DLE”) Ion-Exchange Technology, the Company is developing a new source of lithium that can be extracted from brine water reservoirs underlying oil and gas fields in Alberta. E3 Metals’ goal is to develop a process for the commercial production of high purity lithium products fed directly into lithium-ion batteries for the growing electrification revolution, thus capitalizing on the projected significant increases in demand for these products.

### **Inferred Mineral Resource Estimates**

In 2017, the Company completed two National Instrument 43-101 inferred mineral resource estimates of a combined 2.83 million tonnes of LCE. This includes the Central Clearwater Resource Area: 4,617,079,087 cubic metres (4.6 cubic kilometres) of brine formation water at an average grade of 77.4 milligrams per litre for 1.9Mt of lithium carbonate equivalent (“LCE”). In the North Rocky Resource Area: 3,312,431,608 cubic meters (3.3 cubic kilometers) of brine formation water at an average grade of 52.9 milligrams per litre for 0.93Mt of LCE. Elemental lithium is converted to lithium carbonate by multiplying by 5.323, typically referred to as lithium carbonate equivalent (“LCE”). As part of the PEA, outlined below, the Central Clearwater Resource was expanded to 2.2Mt LCE.

In May 2018, the Company completed a third National Instrument 43-101 inferred mineral resource estimate of 3.9 million tonnes (“Mt”) LCE in the Exshaw West resource area. The magnitude of this new resource area, in addition to the North Rocky and Central Clearwater resource areas, demonstrates the project’s significant lithium production potential.

E3 Metals total combined inferred lithium mineral resources (over covering the Rocky Property, Clearwater Property and Exshaw West Property) is 6.7 Mt LCE and includes covers only approximately 34% of E3 Metals total Alberta Petro-Lithium Project Area.

The Company plans to evaluate the potential to upgrade portions of its inferred resource to measured and indicated in 2021. The Company’s NI 43-101 technical reports for the Central Clearwater, North Rocky and Exshaw West project areas are filed on the Company’s SEDAR profile ([www.sedar.com](http://www.sedar.com)) as well as on the Company’s website ([www.e3metalscorp.com](http://www.e3metalscorp.com)).

### **Preliminary Economic Assessment**

On November 16, 2020, the Company released the Preliminary Economic Assessment (“PEA”) of its 100% owned Clearwater Lithium Project. The PEA outlines the estimated production of 20,000 tonnes per year of battery-quality lithium hydroxide monohydrate (“lithium hydroxide” or “LHM”) over a 20-year period.

The PEA was prepared by Scovan Engineering, NORAM Engineering and Constructors, GLJ Ltd. and Fluid Domains, each being specialists in their field of practice specific to the development of this project. More detail on the contractors is available at the end of this news release. All values reported are in USD unless otherwise noted.

#### **Highlights:**

- Pre-tax USD 1.1 Billion NPV at 8% discount rate and IRR of 32%, after-tax USD 820M NPV at 8% and IRR of 27%;
- Total initial CAPEX estimate of USD \$602.0 Million inclusive of both direct and indirect capital costs and \$79.8 Million in contingency;
- 20-year project-life producing 20,000 tonnes per year of battery-quality LHM. Over the project-life, a total of 400,000 tonnes of LHM is contemplated being produced from the Clearwater Resource, leaving room for expansion across the Clearwater Resource Area and in E3 Metals’ adjacent Exshaw and Rocky Resource Areas; and
- All-in operating costs of USD \$3,656 per tonne LHM, USD \$73.2 Million annually, including all direct and indirect costs.

### **Preliminary Economic Assessment Results**

	<b>Units</b>	<b>Values</b>
Production	tonnes/year LHM	20,000
Project Life	Years	20
Total Capital Cost (CAPEX)	M USD	\$710.7
Total Initial Capital	M USD	\$602.0
Average Annual Operating Costs (OPEX)	M USD/year	\$73.2
Average Selling Price (LHM)	USD/tonne LHM	\$14,079
Average Annual EBITDA	M USD	\$208.6
Pre-Tax Net Present Value (“NPV”) (8% discount)	M USD	\$1,123.1
After-Tax Net Present Value (“NPV”) (8% discount)	M USD	\$819.9
Cash Operating Costs	USD/tonne LHM	\$3,656
Pre-Tax Internal Rate of Return (“IRR”)	%	32%
After-Tax Internal Rate of Return (“IRR”)	%	27%
Payback Period (After-Tax)	years	3.4

The PEA is preliminary cost estimate and includes inferred mineral resources that are considered too geologically speculative to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty the Clearwater Project outlined by the PEA will be realized. The economic analysis of the PEA is based on the following main assumptions: a) forecast LHM price of USD \$14,079 averaged over the life of the project, b) annual production of 20,000 tonnes per year LHM, c) commerciality of E3’s DLE technology and, d) estimated operating and capital costs for the project based on the most current data available.

## Project Development

The Clearwater Project consists of over 250,000 acres located in south-central Alberta, Canada. The development plan prepared for the PEA includes three main process steps designed to deliver 20,000 tonnes of battery-quality lithium hydroxide monohydrate per year.

- Brine Production & Pre-Treatment:** Based on the large amount of geological data available from oil and gas operations in the Clearwater Resource Area, it is expected that lithium grade is consistent throughout the Clearwater Resource Area and that a series of wells, drilled specifically for the production of brine, would be capable of delivering 3,300 m<sup>3</sup>/day per well. At an average grade of 74.6 mg/L lithium, the project will move just over 128,000 m<sup>3</sup>/day of brine, with additional well production capacity in excess of this. As Direct Lithium Extraction (DLE) processing does not evaporate the water contained within the brine, the lithium void brine is returned to the aquifer through a series of injection wells. This re-injection of lithium depleted brine will serve to maintain pressures and brine production rates in the aquifer. The brine production process step also includes pre-treatment for removal of H<sub>2</sub>S from the brine prior for delivery to the Direct Lithium Extraction (DLE) process.
- Direct Lithium Extraction:** E3 Metals' proprietary Direct Lithium Extraction (DLE) process deploys an ion-exchange process that is highly selective for lithium over competing cations in the brine. Results of this technology have been outlined by E3 Metals in previous announcements. This process produces a highly concentrated lithium solution ("Li-IX solution") with a low level of impurities for delivery to the lithium production process.
- Lithium Production:** There are several stages included in this process step designed to deliver battery-quality lithium hydroxide. The first step includes further concentration of the Li-IX solution, followed by polishing steps to remove the remaining impurities. The solution is then fed into electrolyzers where a highly pure lithium hydroxide solution is formed. From there, the lithium hydroxide solution is crystallized into lithium hydroxide salts. The crystallized lithium hydroxide is then packaged and transported to a nearby rail network where it can be transported to eastern and western shipping ports for international distribution, or south for sale directly into the American market.

## Capital Costs

<b>Capital Costs</b>	<b>Description</b>	<b>Costs (M USD)</b>
Brine Production	Wells, pumps and pipelines	\$192.8
Brine Pre-Treatment	H <sub>2</sub> S Removal	\$117.8
DLE Process (Li-IX)	Primary extraction of lithium from the brine	\$15.6
Lithium Production	Concentration, Polishing, Electrolysis and Crystallization	\$160.9
Power, Site, Transport and Labour Costs	Misc. Site and labour costs	\$35.1
Contingency (25%)	Applied to direct capital costs	\$79.8
<b>Total</b>		<b>\$602.0</b>
Sustaining Capital	Pump replacement, etc	\$108.7

The total initial capital cost of the Project for 20,000 tonnes per year production of LHM is estimated at USD \$602.0 Million, inclusive of direct and indirect costs and contingency. In addition, USD \$108.7 Million of sustaining capital is also estimated, with the majority of this cost associated with the replacement of brine production pumps.

### Operating Costs

Description	Description	Total Annual Costs (M USD)	Cost Per Tonne LHM (USD)
Brine Production	Well, pumps and pipeline	\$19.1	\$954
Brine Pre-Treatment	H <sub>2</sub> S Removal	\$19.9	\$993
DLE Process (Li-IX)	Primary extraction of lithium from the brine	\$8.3	\$414
Lithium Production	Concentration, Polishing, Electrolysis and Crystallization	\$11.3	\$564
Site, Labour and G&A	Power, Site, Transport, Labour and G&A Costs	\$14.6	\$732
<b>Total</b>		<b>\$73.2</b>	<b>\$3,656</b>

A total operating cost of USD \$73.2 Million per year, or USD \$3,656 per tonne LHM, are broken out by each major project step and are inclusive of direct and indirect costs. The majority of the operating costs are associated with reagents required within the system and power consumption.

### Sensitivity Analysis

LHM Price (USD/Tonne)	After-Tax NPV (USD Million)	After-Tax IRR
\$12,000	\$561.8	21%
\$13,000	\$686.2	24%
\$14,079	\$819.9	27%
\$15,000	\$934.0	29%
\$16,000	\$1,058.1	32%

### Mineral Resource Estimation

The inferred mineral resource estimate for the Clearwater Resource Area has been updated to 410,000 tonnes of elemental lithium, an increase of 14%. Using a conversion factor of 5.323, this equates to 2,200,000 tonnes of lithium carbonate equivalent (LCE). Several factors contributed to the updated estimate, including: 1) an expansion of the resource area by 85 km<sup>2</sup> based on additional permits E3 Metals acquired since the initial resource estimate in 2017; 2) new and repeated sampling within the resource area has resulted in an updated average concentration of 74.6 mg/L Li; and 3) updated well network modeling has outlined the ability for the reservoir to produce a larger amount of lithium from brine than was originally envisioned, increasing the production factor from 50% to 80% in some areas.

The resource is classified as inferred because geological evidence is sufficient to imply but not verify geological, grade or quality continuity. It is reasonably expected that the majority of the Inferred Mineral Resource Estimate could be upgraded to Indicated Mineral Reserves with continued exploration.

**Lithium Pricing and Production**

A detailed future pricing study for lithium chemicals was not completed for this PEA. The average price used for future sales of battery-quality lithium monohydrate hydroxide was developed by reviewing pricing data generated from reliable sources as reported in publicly disclosed data collected from peer companies. The future average selling price of USD \$14,079/tonne lithium hydroxide is consistent with that used for publicly released economic assessments of other lithium projects in the previous 4 months. Future selling prices ranging between USD \$12,910/tonne to USD \$17,238/tonne were modelled as part of a sensitivity analysis exercise.

The total production of 20,000 tonnes/year lithium hydroxide is based on recovery of lithium from the enriched brines of the Leduc Aquifer in Alberta. It does not take into account the ability for E3 Metals to increase production of brine and subsequent expansion of production facilities to increase total lithium production. Nor does it contemplate the possibility of including brine streams from oil and gas operators in the area (i.e. oilfield produced water), which could potentially be added to the feed brine stream at a small incremental cost to the company.

**Development of Lithium Extraction Technology**

With a large potential source of lithium secured in 2017, management's focus into 2018 shifted to further developing the DLE technological process required for the primary extraction of lithium from the Alberta brines. E3 Metals' process of delivering high grade lithium hydroxide or carbonate to the market is being developed as three major steps. The first step involves pumping the brine to surface using new or existing infrastructure, or a combination of both. This process is well understood in Alberta through oil and gas production which has demonstrated that large volumes of brine can be cycled to surface and back into the reservoir. The use of existing infrastructure has the potential to reduce the Company's development costs. The second step uses E3 Metals' proprietary DLE technology employing ion-exchange to extract lithium. The process both concentrates the brine and removes the majority of the impurities in one step (see E3 Metals news releases on May 29, 2018, December 4, 2018, March 4, 2019), producing E3's proprietary Li-IX solution. This technology development is the key link between the existing brine production and industry standard lithium production processes. The third step is the production of a high purity lithium salt and involves refining E3's Li-IX solution by further removing the last of the impurities and producing a high-grade lithium product for direct sale into the battery market. The Company believes that field piloting of its DLE technology is the key next development step to scaling the technology and project overall towards commercial operations.

### **Livent Joint Development Departure**

On January 25, 2021 Livent withdrew from the joint operation with E3 Metals citing capital allocation considerations. The exit from the joint operation followed the Unanimous Shareholder Agreement with the following predetermined terms:

- E3 exercised the right to purchase the property and equipment in Devco
- All Devco Intellectual Property and developments were transferred by Devco to E3 for USD \$1.00
- After the completion of the sale and distributions, E3 purchased and Livent sold all of its common shares of Devco to E3 for USD \$1.00 free and clear of all encumbrances
- Any remaining funds from Livent's Contribution of Capital held in Devco shall be for the sole benefit of Devco.

E3 has accounted for the acquisition of the assets from Devco as an asset acquisition. The fair value of the assets were based on the cost approach as prescribed in IFRS 13 (Cash \$221,922, GST Receivable \$29,423, and Intangible assets \$738,279). The difference between the consideration paid and assets were recorded as an offset to contributed capital.

### **Alberta Lithium Project Costs**

The following table summarizes the Company's E&E asset expenditures in its Alberta Petro-Lithium Project as at March 31, 2021:

<b>Acquisition Costs:</b>	
Balance December 31, 2020	\$1,672,759
<b>Balance, March 31, 2021</b>	<b>\$ 1,672,759</b>
<b>Exploration Costs:</b>	
Balance, December 31, 2020	\$ 1,203,829
Additions	62,557
<b>Balance, March 31, 2021</b>	<b>\$ 1,266,386</b>
Total, December 31, 2020	\$ 2,876,588
<b>Total, March 31, 2021</b>	<b>\$ 2,939,145</b>

**Intangible Assets – Intellectual Property**

For the three months ended, E3 spent \$0.9 million on the continuing development of the Intellectual Property.

	<b>March 31, 2021</b>	December 31, 2020
Opening balance	\$ 886,687	\$ 236,945
Consultants	232,012	-
Other expenditures	217,001	-
IP development expenditures	743,240	649,742
Grants	(93,172)	-
	<b>1,985,768</b>	886,687
<b>Balance, end of year</b>	<b>\$ 1,985,768</b>	<b>\$ 886,687</b>

**Impairment Analysis**

There were no indicators of impairment at during the three months ended March 31, 2021. The Company does not consider its exploration and evaluation assets or intangible assets to be impaired as a result of the COVID pandemic. The Company's ability to realize on the value of these assets is dependent on the successful completion of an economically feasible pilot plant, followed by the construction of commercial lithium production facilities. Based on the current development status of its proprietary direct lithium extraction technology, the Company does not believe that these assets are impaired. Further, the Company's research indicates that the demand for and commodity price of battery-grade lithium has not been negatively impacted by the COVID pandemic.

**Selected Financial Information**

March 31	2021	2020	2019
Net loss	(1,587,384)	\$ (393,210)	\$ (413,494)
Loss per share	(0.03)	\$ (0.01)	\$ (0.02)
Total assets	20,348,201	\$ 4,975,064	\$ 3,145,931
Total long term liabilities	-	\$ 130,976	\$ 61,391

During the three months ended March 31, 2021, the Company reported a net loss of \$1.6 million or \$0.03 per share compared to \$0.4 million or \$0.01 per share in the comparable period. During the quarter the Company successfully completed an \$8.1 million equity financing providing significant funding to further advance its Alberta lithium Project towards commercial operations.



**Discussion of Interim Statement of Comprehensive Loss**

- Share based compensation increased to \$965,361, (2020 - \$8,753) primarily due to the issuance of 1.3 million options and 6.8 million warrants with the associated financings in the first quarter;
- Business development and marketing increased to \$218,214, (2020 - \$94,365) primarily due to increased financing activity and growing investor relationships;
- Professional fees increased to \$128,336, (2020 – \$12,751 credit) primarily due to increased legal costs and advisory fees;
- Wages and benefits decreased to \$61,076, (2020 – \$137,268) as directly attributable staff costs were capitalized to specific projects; and
- Regulatory and transfer agent fees increased to \$45,581, (\$9,096) primarily due to increased activated associated with the financing in the first quarter.

**Summary of Quarterly Results**

The following is a summary of certain financial information concerning the Company for each of the last eight reported quarters:

<b>Quarter ended</b>	<b>Net loss</b>	<b>Loss per share</b>
March 31, 2021	(1,587,384)	(0.03)
December 31, 2020	(951,293)	(0.04)
September 30, 2020	(369,791)	(0.01)
June 30, 2020	(380,793)	(0.01)
March 31, 2020	(393,210)	(0.01)
December 31, 2019	(520,408)	(0.02)
September 30, 2019	(760,561)	(0.04)
June 30, 2019	(677,315)	(0.03)

**Liquidity and Capital Resources**

The Company generally relies on equity issuances to fund its capital requirements and provide liquidity. The Company accesses capital markets to meet its development expenditures. Future liquidity depends primarily on the ability to access debt and equity markets. At March 31, 2021, the Company had \$14.8 million of working capital. The Company believes that the available working capital is sufficient to satisfy the Company's budgeted expenditures for the remainder of the year.

**Risks and Uncertainties**

The Company has not had a history of operations or earnings and the overall success of the Company will be affected by its current or future business activities.

The Company is exposed in varying degrees to a variety of financial instrument related risks, including liquidity risk and market risks with respect to its ability to raise capital through equity markets under acceptable terms and conditions. Management monitors its activities and various factors that could impact the risks in order to manage risks and make timely decisions.

*Credit risk*

Credit risk is the risk that one party to a financial instrument will fail to discharge an obligation and cause the other party to incur a financial loss. The Company is exposed to credit risk with respect to its cash and receivables. The Company minimizes its exposure to credit risk by placing its cash with Canadian Schedule 1 Chartered banks. While there is concentration of risk by holding all funds with these institutions, management assesses credit risk of cash as low due to the high credit quality rating the institutions have with the rating agencies.

The Company's secondary exposure to credit risk is on its receivable balance. This risk is minimal as receivables consist of refundable government sales taxes of \$0.1 million (December 31, 2020 - \$0.1 million).

*Currency risk*

The Company's current direct operations are not exposed to significant foreign currency risk.

*Interest rate risk*

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in the market interest rates. The fair value of the Company's financial instruments is relatively unaffected by changes in interest rates. The Company is exposed to interest rate risk on its bank deposit, which earns interest at a variable rate. Based on the cash balance at December 31, 2020, the effect of a 10% fluctuation in interest rates would not be material.

*Liquidity risk*

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's objective in managing liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. The Company tries to achieve this by maintaining sufficient cash to cover current liabilities as they mature.

Funding risk is the risk that market conditions will impact the Company's ability to raise capital through equity markets under acceptable terms and conditions. While the Company has been successful in raising capital in the past, there is no guarantee it will be able to do so in the future.

**Off-Balance Sheet Arrangements**

The Company does not utilize off-balance sheet arrangements.

**Subsequent Events**

On April 8, 2021, E3 Metals was awarded a government grant totaling \$1,800,000 from Alberta Innovates in support of E3 Metals' direct lithium extraction technology. The grant will be used for pilot plant development and continued technology development.

**Critical Accounting Estimates**

Information provided in this report, including the condensed consolidated interim financial statements, is the responsibility of management. In the preparation of these statements, estimates are sometimes necessary to make a determination of future value for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the accompanying financial statements. Management maintains a system of internal controls to provide reasonable assurances that the Company's assets are safeguarded and to facilitate the preparation of relevant and timely information.

**Going concern**

As at March 31, 2021, the Company in the development stages of its operations and has an accumulated deficit of \$23.5 million including a net loss of \$1.6 million (2019 – \$0.4 million) incurred during the three months ended March 31, 2021. These events and conditions indicate a material uncertainty that may cast significant doubt on the Company's ability to continue as a going concern. The Company may continue to have capital requirements in excess of its currently available resources. The Company does not anticipate requiring financing to continue its business plan through 2021, but there may be a requirement to raise additional capital in 2022 to fund operations.

**Financial Instruments**

The Company's financial instruments include cash, receivables, trade payables and accrued liabilities, short-term loan, notes payable, and due to related parties. Trade payables and accrued liabilities and due to related parties are classified as other financial liabilities. The carrying value of these financial instruments approximates their fair value due to their short-term maturity.

**Other Requirements**

Summary of outstanding shares, warrants and stock options as at March 31, 2021:

Authorized - Unlimited common shares without par value  
Issued and outstanding common shares: 52,509,731  
Share purchase warrants outstanding: 11,259,481  
Stock options outstanding: 3,039,750

Additional disclosures pertaining to the Company's management information circulars, material change reports, press releases and other information are available on the SEDAR website at [www.sedar.com](http://www.sedar.com).

**Forward-looking statements**

These forward-looking statements are based on current expectations and various estimates, factors and assumptions, and involve known and unknown risks, uncertainties and other factors. All statements, other than statements of historical fact, included herein, including without limitation, statements about the Company's ability to effectively implement its planned exploration programs; unexpected events and delays in the course of its exploration and drilling programs; the ability of the Company to raise the capital necessary to conduct its planned exploration programs and to continue exploration on its properties; the failure to discover any significant amounts of lithium or other minerals on any of the Company's properties; the fact that the Company's properties are in the exploration stage and exploration and development of mineral properties involves a high degree of risk and few properties which are explored are ultimately developed into producing mineral properties; the fact that the mineral industry is highly competitive and E3 Metals will be competing against competitors that may be larger and better capitalized, have access to more efficient technology, and have access to reserves of minerals that are cheaper to extract and process; the fluctuations in the price of minerals and the future prices of minerals; the fact that if the price of minerals decreases significantly, any minerals discovered on any of the Company's properties may become uneconomical to extract; the continued demand for minerals and lithium; the fact that resource figures for minerals are estimates only and no assurances can be given that any estimated levels of minerals will actually be produced; governmental regulation of mining activities and oil and gas in Alberta and elsewhere, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals and environmental protection; environmental regulation, which mandate, among other things, the maintenance of air and water quality standards and land reclamation, limitations on the general, transportation, storage and disposal of solid and hazardous waste; environmental hazards which may exist on the properties which are unknown to E3 Metals at present and which have been caused by previous or existing owners or operators of the properties; reclamation costs which are uncertain; the fact that commercial quantities of minerals may not be discovered on current properties or other future properties and even if commercial quantities of minerals are discovered, that such properties can be brought to a stage where such mineral resources can profitably be produced there from; the failure of plant or equipment processes to operate as anticipated; the inability to obtain the necessary approvals for the further exploration and development of all or any of the Company's properties; risks inherent in the mineral exploration and development business; the uncertainty of the requirements demanded by environmental agencies; the Company's ability to hire and retain qualified employees and consultants necessary for the exploration and development of any of E3 Metals' properties and for the operation of its business; and other risks related to mining activities that are beyond the Company's control.

Forward-looking statements contained herein are made as of the date of this MD&A, and the Company disclaims any obligation to update any forward-looking statements, except as required by law, whether as a result of new information, future events or results or otherwise. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.