

*Building the pre-eminent vertically integrated **Lithium** business in Ontario, Canada*

# STRATEGIC UPDATE – BUILDING A VERTICALLY INTEGRATED SUPPLY CHAIN IN WESTERN ONTARIO

## HIGHLIGHTS

- **Advancing integrated strategy to become the first lithium concentrates and chemical producer in Ontario**
- **Delivering Vertically Integrated Scoping Study in Q4 2023** incorporating a staged development of multiple mine and process hubs feeding a central lithium conversion facility for
  - **Stage 1: Spodumene Concentrate production 2025:** Eastern Hub Seymour mine and Concentrator
  - **Stage 2: Lithium Hydroxide Production 2028:** Conversion Facility, Thunder Bay
  - **Stage 3: Expansion 2029:** Western Hub mine and Concentrator, Root Bay
- **Indigenous engagement remains a priority as we progress towards development of our key projects**
- **Funding discussions progressing with Canadian Government**
  - Strategic Innovation Funding application lodged undergoing Canadian Federal Government assessment
  - \$1.5B allocated to critical minerals projects
- **Strategic partnering**
  - Discussions ongoing for evaluation of strategic partners on conversion
  - Interest received from groups on consolidated strategy for funding and operational involvement
- **Integrated Preliminary Economic Assessment to include:**
  - Seymour, Root and Converter Projects, collectively the Integrated Project
  - Combined project layout, flowsheet, design and development timelines
  - Competitive project economics – capital and operating costs
  - Favourable infrastructure, logistics and future growth opportunities
  - Showcasing a complete Lithium supply chain, mine to chemical production for multiple decades
- **Stage 1: Eastern Hub – Seymour Lithium Project progressing towards a financial investment decision in 2024 to commence development at Seymour**
  - Proceeding directly to a Definitive Feasibility Study for the Seymour Mine and Concentrator delivered in Q2, 2024.
  - Aiming to reach a final investment decision (FID) in Q3, 2024
  - Permitting and baseline studies remain on-schedule
- **Stage 2: Downstream Strategy advanced and strategically positioned industrial land undergoing full due-diligence for potential conversion facility**

- Bench scale conversion test work commenced using Seymour concentrates and testing an Alkali Leach flowsheet
- Bulk sample completed (99 tonne from Seymour) – Pilot concentration work from this material to produce approximately 10 tonne of concentrate, which will be utilised for pilot test work programs with existing and new potential strategic partners.
- Preliminary permitting and environmental assessments and initial emissions studies underway
- Preliminary site services assessment – power, gas, water, emissions and municipal waste
- PFS to be commenced immediately post PEA and to be delivered H2, 2024
- **Stage 3: Second Concentrator to be constructed at the Western Hub (Root)** – PFS to be released in Q4, 2024
  - A further mineral resource upgrade incorporating an additional ~20,000m of drilling at Root Bay is scheduled to be released Q4 2023 forming the basis of the PFS
  - Environmental baseline studies commenced
- **In parallel to development activities, GT1 will continue to invest in exploration and high-impact drilling campaigns to grow the resource base and extend the mine life across both hubs**

Green Technology Metals Limited (ASX: GT1) (**GT1** or the **Company**), a Canadian-focused multi-asset lithium business, is pleased to provide an update on the advancement of the Company's integration strategy to become the first lithium producer in Ontario, Canada.

***"We're on a path to become Ontario's first lithium concentrates and chemical producer with our integrated strategy that involves a strategic staged development plan positioning us to achieve crucial milestones and prepare for initial production by 2025.***

***Our team has undertaken an extensive amount of work over the past 12 months to evaluate to advance GT1's integrated supply chain strategy ready for the eagerly anticipated Integrated Preliminary Economic Assessment (PEA) set for release this quarter. The PEA will offer insights into project specifics and timelines, emphasising cost-effectiveness, infrastructure advantages, and growth opportunities, that we are confident will enhance shareholder and stakeholder value.***

***Progress at the Seymour Lithium Project is steadily advancing and we are working towards a financial investment decision in 2024 to initiate development at Seymour in alignment with our integrated strategy. As we move forward, we are evaluating various financing options, including Government Funding, and have submitted an application for Strategic Innovation Fund (SIF) where \$1.5 billion is allocated to critical minerals projects.***

***Throughout this journey, we remain focused in our commitment to investing in exploration and development, all while engaging closely with Indigenous communities, an essential aspect of our progress forward."***

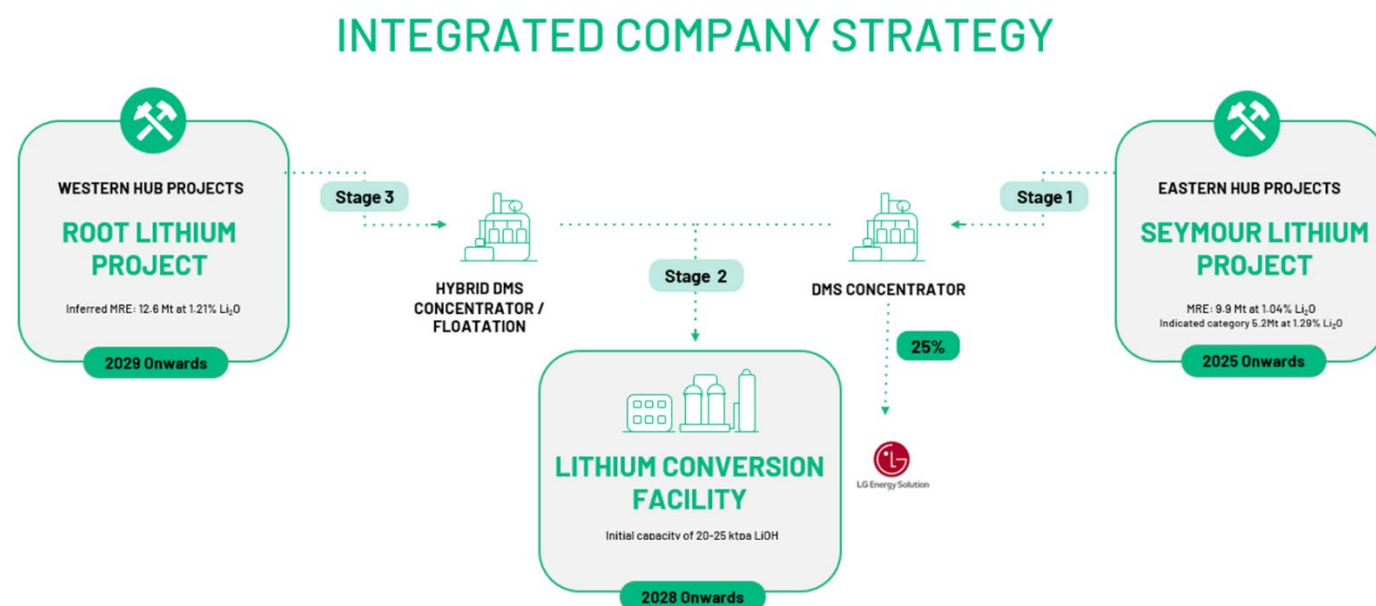
- GT1 Chief Executive Officer, Luke Cox

## COMPANY STRATEGY UPDATE

GT1 is presenting this strategic update in anticipation of the release of its first comprehensive technical and economic evaluation of the complete mine-to-chemical strategy in Western Ontario. GT1 holds a substantial portfolio of lithium assets strategically located to supply the North American market. The Company is highly focused on expediting the development of this portfolio to lead the market in Ontario and build a competitive vertically integrated lithium business.

GT1 remain one of the most advanced explorers in the Ontario region, having recently executed the first ever Lithium Offtake agreement in Ontario with LG Energy Solution (LGES), solidifying a new strategic partnership which further enhances the strength and capabilities of GT1 by bringing additional global scale and expertise in battery manufacturing alongside AMCI group, Lithium Americas Corp and Primero Group.

Over the past 20 months, a significant amount of work has been completed to investigate, assess, and advance GT1's integrated supply chain strategy. This strategy envisions multiple mine and process hubs supplying a central lithium conversion facility in Thunder Bay, Ontario. The Company's confidence in this strategic direction has been greatly reinforced through the extensive work conducted and the progress made in discussions with various stakeholders.



**Figure 1: Integrated strategy process flow**

GT1 has actively engaged in discussions with a broad spectrum of stakeholders, including Indigenous First Nation partners, suppliers, government relations, strategic groups, and contributors to the broader downstream supply chain. The culmination of this engagement and the progress made in the strategy development reaffirm GT1's confidence that this integrated approach will yield significant value for shareholders. This strategy aligns seamlessly with the current strategic trajectory of the Company, further emphasising GT1's commitment to driving forward development to deliver value to all stakeholders involved.

GT1 has received enquiries from offtake and trading companies seeking to secure potential near-term lithium supply highlighting the growing interest and confidence in GT1's projects. Additionally, the Company has been actively engaged in discussions from parties across the lithium-ion supply chain, including Canadian and foreign government agencies, as we explore funding options that offer favorable terms for the development of GT1's concentrators and chemical conversion facility aligning with Canada's provincial & federal governments strategic initiatives to establish a lithium supply chain in Ontario.

Following the release of the integrated PEA, the Company will be able to refine and optimise its approach to studying different strategy components as separate streams. These streams will now be developed at differing speeds in

alignment with timelines and priorities and within responsible budgeted development costings with the objective of commencing maiden spodumene concentrate production in 2025 and Lithium Hydroxide production in 2028.

Proceeding on a staged plan with gated decisions enables GT1 to progress to the next levels of advanced assessment in collaboration with strategic partners and in line with their requirements for investment. The release of the study represents a crucial milestone for the Company and maturation in its journey towards becoming a producer, and the first in Ontario.

## INDICATIVE TIMELINE TO PRODUCTION

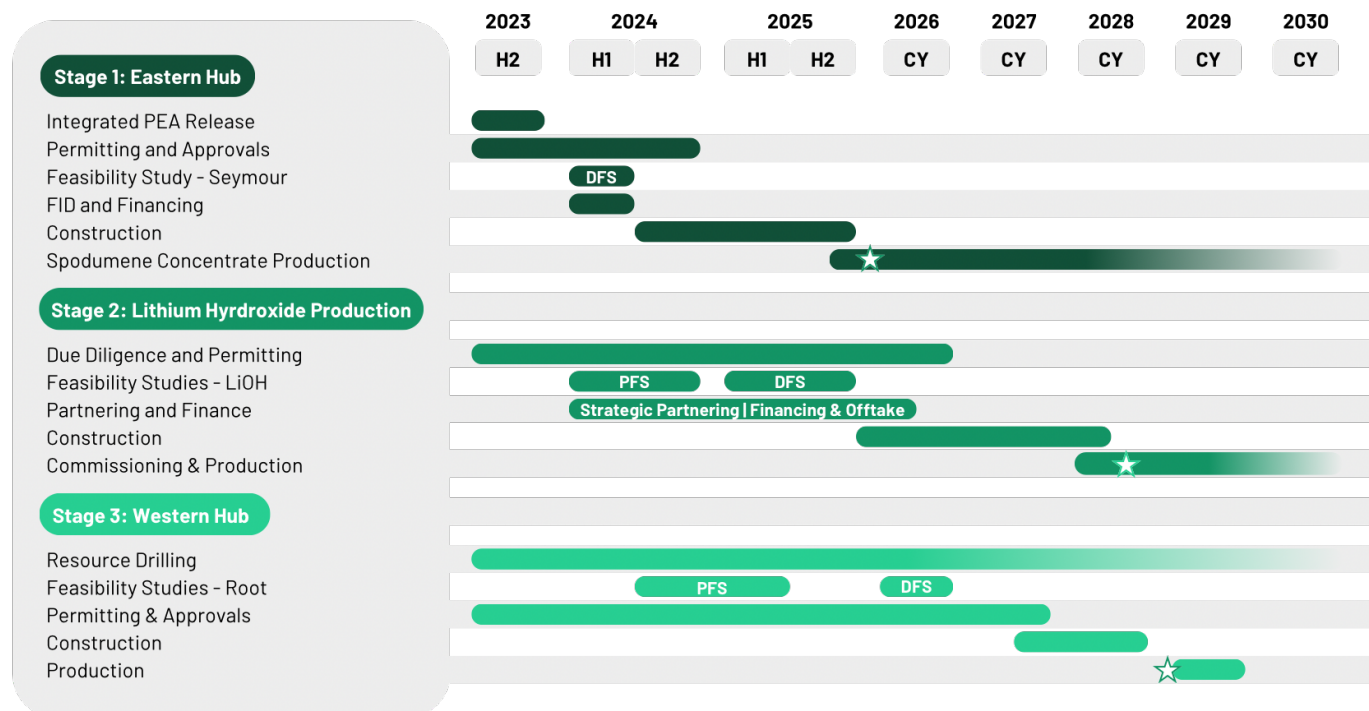
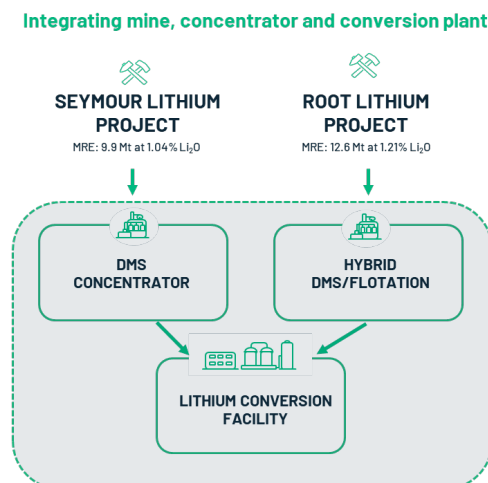


Figure 2: Indicative timeline to production<sup>1</sup>

<sup>1</sup> The timetable is indicative only and is subject to change

## PRELIMINARY ECONOMIC STUDY

The Company will be releasing a Vertical Integrated Preliminary Economic Assessment (Scoping Study or PEA) in Q4 2023 incorporating a staged east-west mine and concentrator development strategy that will feed into a conversion facility strategically positioned in the port and industrial town of Thunder Bay, Western Ontario. This facility has been designed with scalable conversion capacity, highlighting the advantages of vertical integration and the complete Lithium mine to chemical supply chain strategy that GT1 has developed from inception. The conversion facility for the purposes of this economic assessment will produce battery grade Lithium Hydroxide.



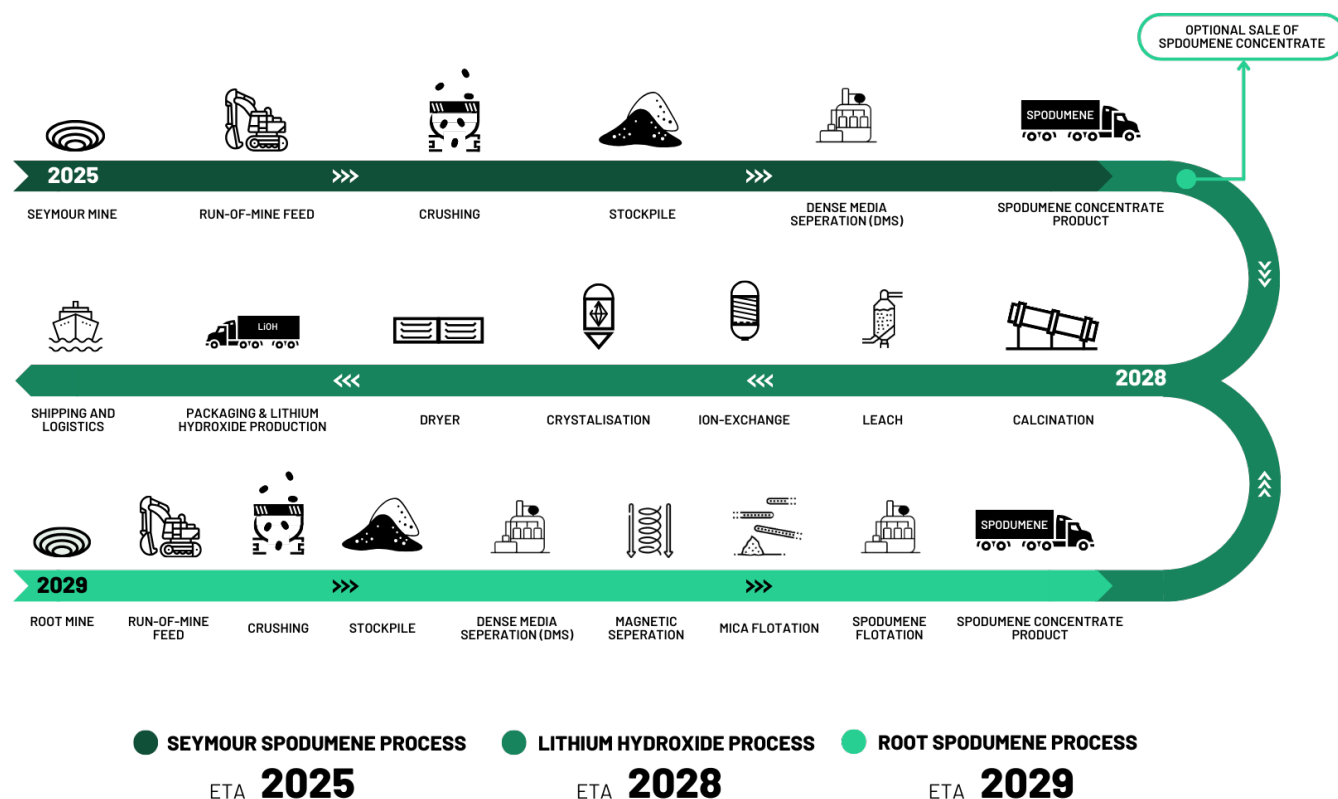
**Figure 3: Integrated Preliminary Economic assessment showing mine, concentrators and Lithium Conversion facility**

The PEA will comprehensively cover all three stages of the strategy with the most advanced of the areas, the Seymour development focusing on detailed development preparation and a financial investment decision targeted for Q3 2024. The Seymour project has made significant progress, with design and engineering reaching a mature stage enabling the continuation of the permitting process and the finalisation of selections related to process, locations and ground disturbance areas.

In summary, the PEA will encompass the following key aspects:

- ✓ Geological assessments and contained Mineral Resource Estimates
- ✓ Mine development planning and supporting infrastructure requirements
- ✓ Conversion facility and Concentrator layout, flowsheet and design
- ✓ Construction and development timelines
- ✓ An integrated economic analysis covering capital and operating costs Identification of favourable infrastructure and logistics pathways
- ✓ Future upside and growth opportunities
- ✓ A base case investment thesis to enable assessment by strategy and government partners

The capital cost and operating estimates have been meticulously compiled by integrating current pricing obtained from contractors for the Seymour development and logistics. Additionally, we have leveraged factored estimates from current database projects provided by our consultants. Consequently, the Seymour development benefits from limits of accuracy reflecting the level of detail and accuracy achieved in these estimates.



**Figure 4: Integrated Project Process flow**

Following the completion of the vertically Integrated Scoping Study, the Company will initiate three separate studies, each aligned with a specific project stand and individual workstream to enable differing development timelines as required by the overall strategy. At a corporate level the 3 projects will transition into separate business lines, enabling individual investment into to each of the businesses separately.

**Stage 1 - Definitive Feasibility Study: Seymour Mine and Concentrator - Q2 2024**

**Stage 2 - Preliminary Feasibility Study: Lithium Conversion Facility - Q4 2024**

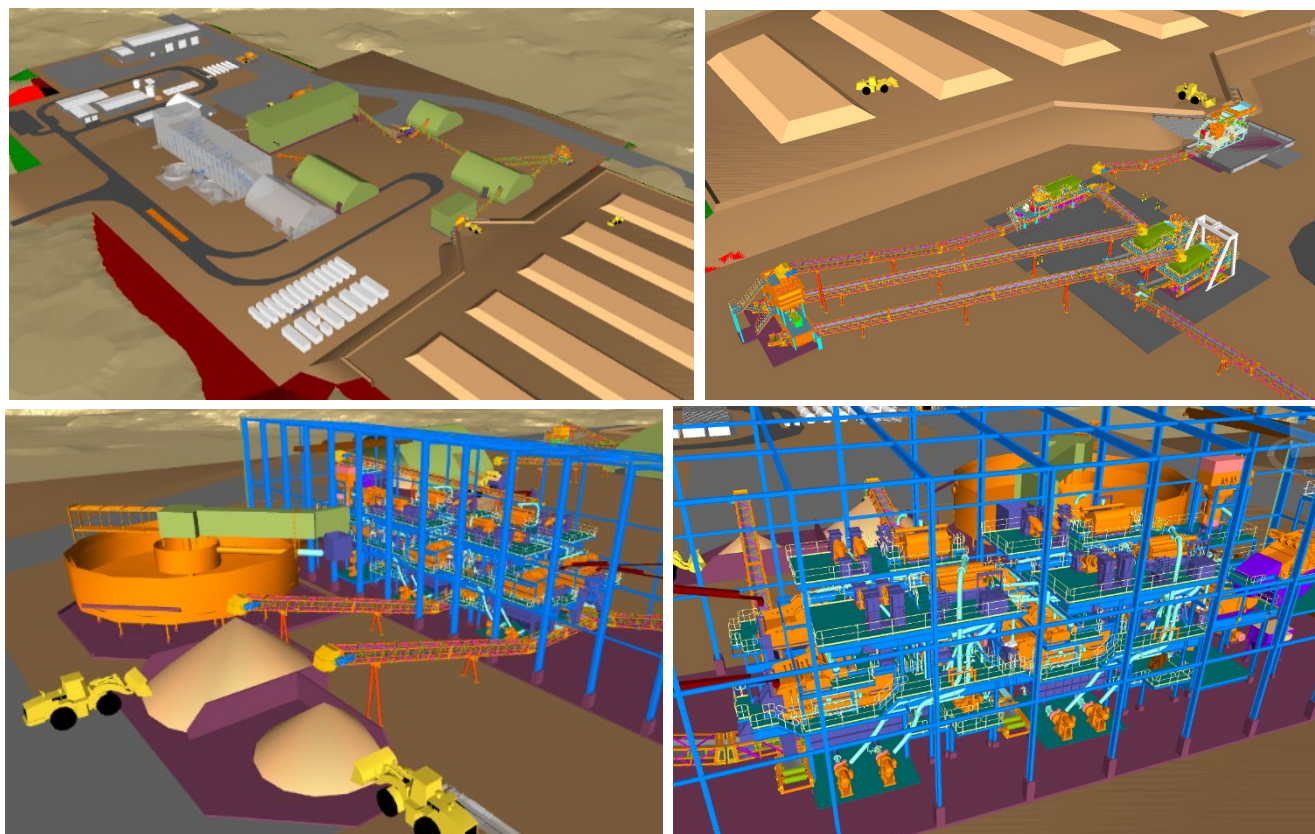
**Stage 3 - Preliminary Feasibility Study: Root Mine and Concentrator - Q2 2025**



## STAGE 1: EASTERN HUB MINE AND CONCENTRATOR

The Eastern Hub remains on-schedule, with plans to commence site preparation works in early 2024 and commencement of construction in the latter half 2024, pending necessary approvals. In parallel to the PEA the Company is advancing the project through to DFS level with a final investment decision to be delivered Q3 2024.

Engineering evaluations at Seymour were initiated in 2021, used to support the site layout for the mine. Additionally, a 99-tonne bulk sample of LCT pegmatite was extracted from Seymour late last year, specifically for metallurgical pilot test work aimed at optimising the lithium conversion process. Further variability testing is scheduled for the second half of 2023 to support the definitive feasibility study.



**Figure 5: Seymour preliminary site layout**

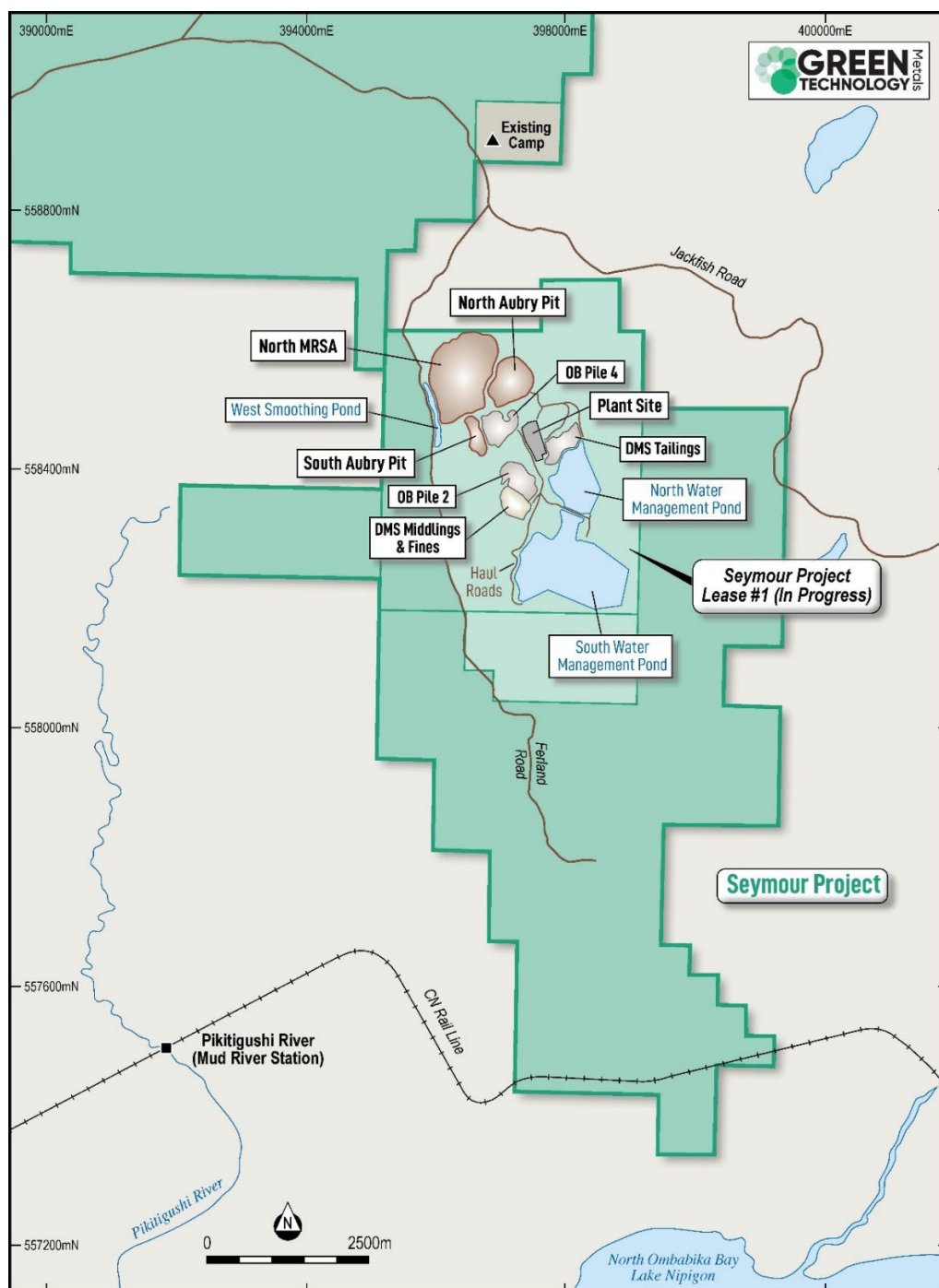


Figure 6: Seymour preliminary site layout



## Project Permitting

The permitting process remains on schedule and in November 2022 the Project Definition with Notice of Project Status was officially submitted to the Ministry of Mines. GT1 has assembled an experienced permitting team that has allowed the Company to proactively prepare for the formal permitting process. Moreover, the Company is in its third year of conducting baseline studies to assess environmental risk levels, both for permitting and mining lease requirements.



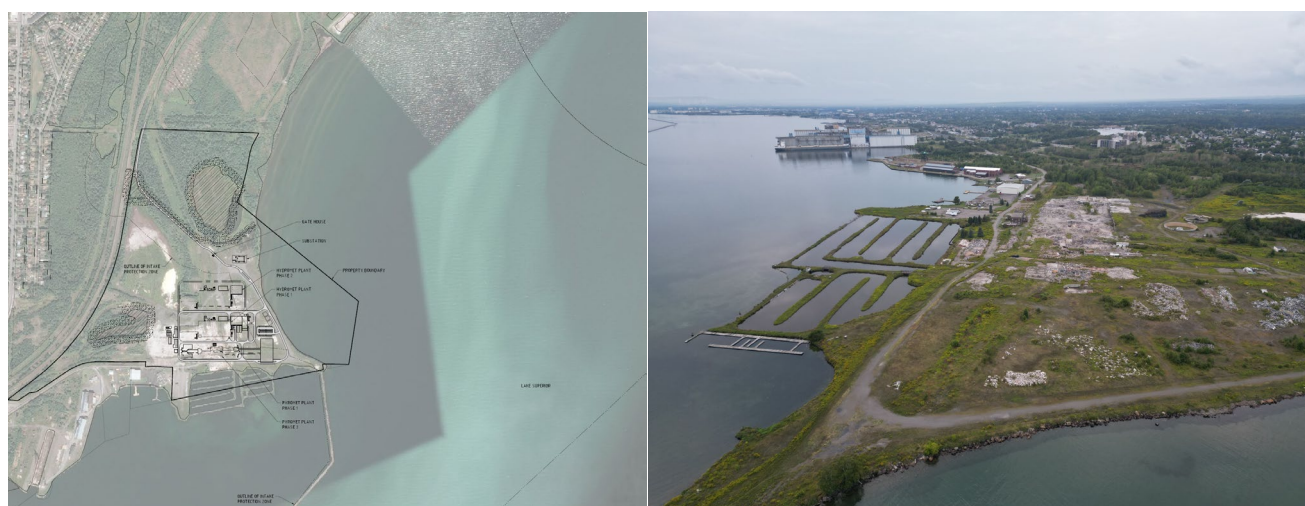
**Figure 7: Indicative permitting schedule**

## Stage 2: Lithium Hydroxide Conversion Facility

GT1 has taken significant steps in its integration strategy within the North American lithium supply chain. The Company has diligently conducted a thorough regional assessment to identify prospective sites for a conversion facility, evaluating more than 56 potential sites in Northwest Ontario, with a strong focus on brownfields located in heavy industrial zoned areas.

In November 2022, GT1 successfully secured a Letter of Intent for a strategically located 25-hectare industrial port site situated at 550 Shipyard Drive in Thunder Bay, Ontario. This location is a contender for the potential Lithium Hydroxide facility, along with a select few additional sites, pending the completion of due diligence to thoroughly evaluate the suitability for environmental, permitting and community acceptance.

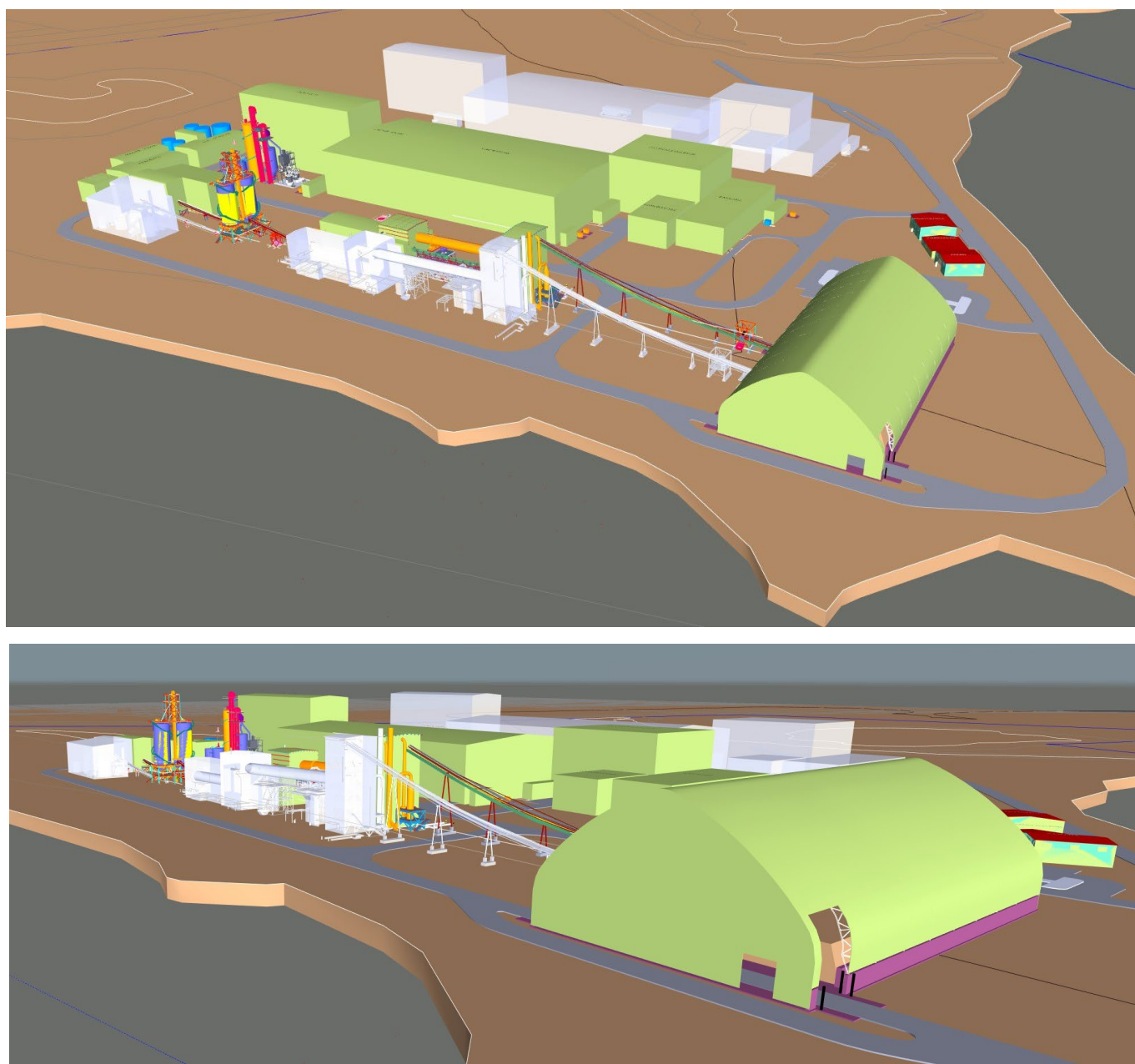
GT1 is diligently working to complete the initial site due diligence assessments on this site and based on the outcomes of these assessments, the Company intends to make an informed decision on whether to proceed with site location or proceed with other preferred locations.



**Figure 8: Conversion Facility preliminary site layout**

## Funding

The Company maintains regular communication with the government for funding and permitting opportunities, with \$1.5 billion from the federal government available for downstream processing of battery minerals. This allocation of federal funding is under the governments Strategic Innovation Funding initiative (SIF). GT1 made application as one of the first Lithium focused proponents in the province to apply. The application was submitted initially in November 2022 with further amendments and additional information added as requested from the SIF team. The application was submitted with full support from GT1's strategic partners including LGES, who have a strong relationship with and have been a recipient of a large package of funding assistance from both federal and provincial governments. This application is currently under ongoing assessment by the government.



**Figure 9: Conversion Facility preliminary site layout model**

## Metallurgical Test work

The Company is making progress in conversion test work, including the completion and shipment of a Concentrate sample to FLSmidth in Utah, USA. Recently the Company completed the Calciner - Muffle Furnace test work to determine the optimal conditions for calcination with results expected in the coming weeks.

Further programs with estimated completion in December 2023 include:

- Lock cycle program for end-to-end process:
- Grinding to determine optimal requirement for soda leach
- Soda Leach
- Ion Exchange
- Evaporation/Crystallization

GT1 also plans to leverage its Collaborative Agreement with Lithium Americas Corp by potentially utilising its Reno Technical testing facility for pilot plant conversion test work. This effort aims to support the Preliminary Feasibility Study, set to be delivered in Q4 2024.

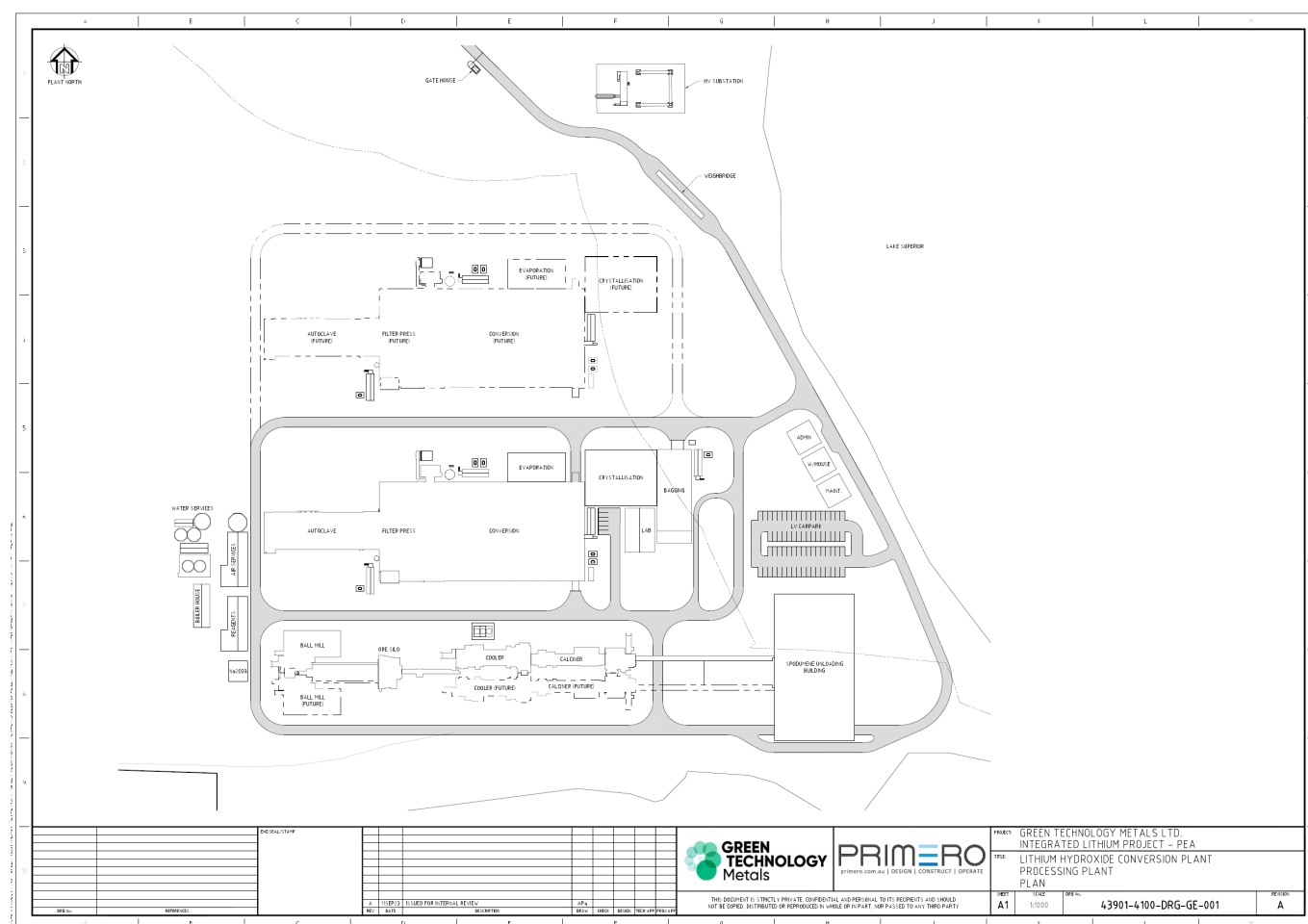
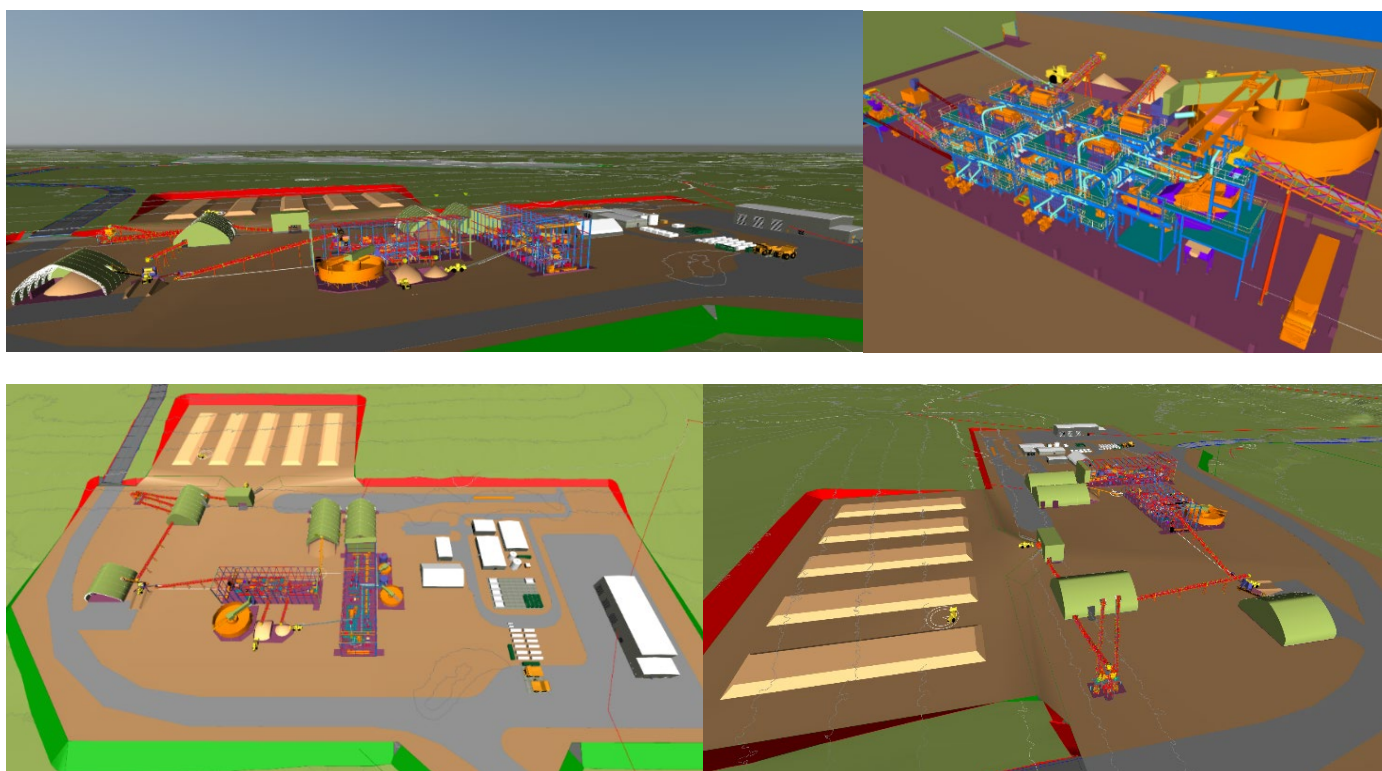


Figure 10: Conversion Facility preliminary site layout

## Stage 3: Western Hub mine and Concentrator

The Western Hub, slated for operation in 2029, will serve as additional feed for the Lithium Hydroxide Facility. The Company has initiated preparatory work for permitting the Western Hub mine and concentrator. This includes conducting baseline and technical Studies, engaging in Indigenous Consultation, undertaking engineering tasks, defining the project, refining resource definition and engaging in Pre-Submission Consultation with Government Agencies. Consulting partners Primero, Nordmin, and Englobe are actively developing conceptual site layouts to facilitate a geotechnical testing program in support of the PEA (Preliminary Economic Assessment) and PFS (Preliminary Feasibility Study) for the Western Hub Concentrator.

Furthermore, an upcoming mineral resource upgrade, incorporating data from approximately 20,000 meters of drilling at Root Bay is scheduled for release in Q4 2023. This upgrade will form the basis for the PEA and PFS for the Western Hub, contributing to the Company's comprehensive development strategy.



**Figure 11: Root Bay mine and Converter preliminary layout**

### Community Engagement

GT1 and our drilling partner G4 Drilling have been working on an indigenous JV drilling initiative for the past year with Lac Seul community. The formation of a new Company "First Nation's Drilling" represents an incredible opportunity to create jobs and revenue and ensuring the benefits of drilling on Lac Seul traditional territory flow through to the Lac Seul community as they are currently drilling at the Root Bay project.

#### **Lac Seul Chief Clifford Bull commented at a recent ceremony:**

*"These co-operative arrangements with the Lac Seul community are incredibly important and we know they are going to find lots of Lithium up there."*

GT1 would like to congratulate Lac Seul member and career driller Leslie Quedent on his majority 51% stake and G4 for the ongoing support and vision in this ground-breaking initiative.

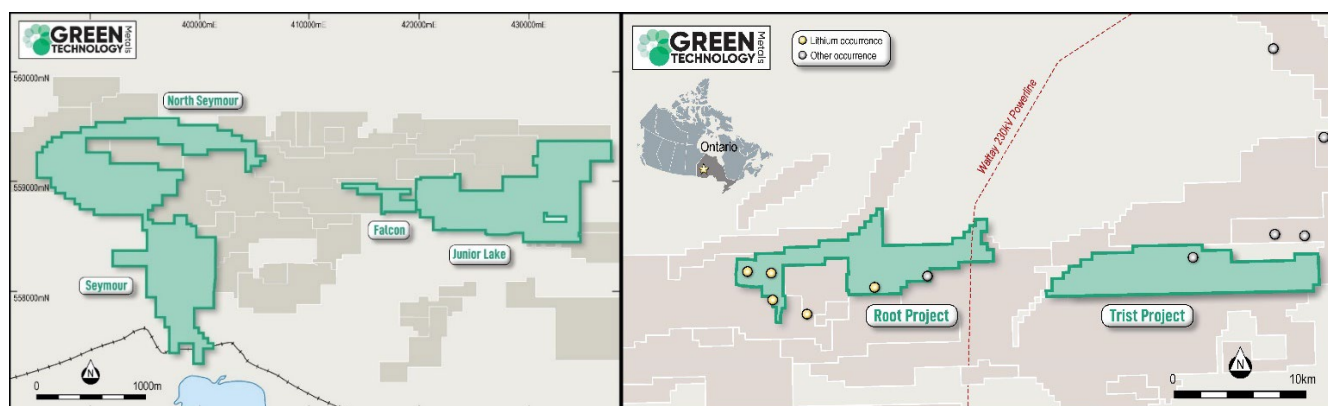




**Figure 12: LAC Seul (Chief Clifford Bull) our COO, Matt Herbert and Leslie Quedent at G4 drill JV signing ceremony**

## Growth Opportunities

GT1 maintains a dominate position is Ontario's lithium rich greenstone belt encompassing an expansive 56,000 hectares (560 square kilometres). The Company remains dedicated to significantly expanding its resource base through exploration across its existing projects and by actively exploring opportunities in close proximity to both the Eastern and Western Hubs for additional feed for our processing facilities.

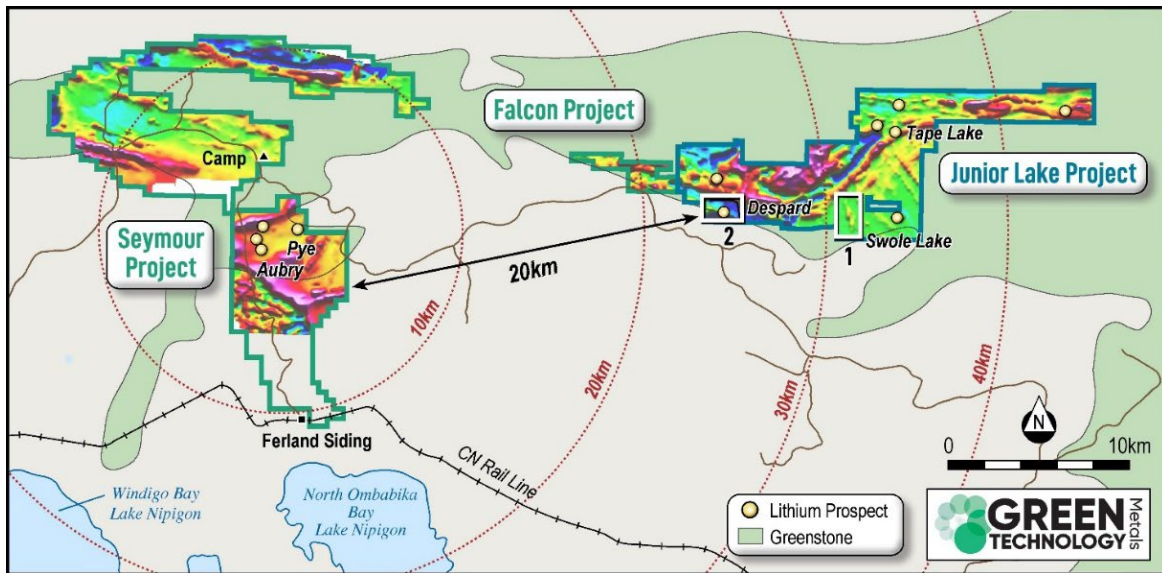


**Figure 13: Dominate tenement positions, Eastern and Western Hubs**

An extensive regional field exploration program, nearing completion after five months, was initiated to identify new drill targets within our highly prospective projects, which have seen limited historical exploration. The exploration team will assess and prioritise these projects for drilling or further exploration over the upcoming years to align with the development activities at our two primary projects, Root and Seymour to ensure a strategic and systematic expansion of our resources.

The Company's immediate priority is securing additional feed for the Eastern Hub. GT1 has recently acquired Junior Lake, given its strategic proximity to Seymour in the Eastern Hub. Junior hosts several LCT pegmatites within three established target areas—Despard, Swole Lake, and Tape Lake—all presenting drill-ready targets and exhibit geological similarities to other advanced GT1 projects, based on the lithium exploration undertaken to date.

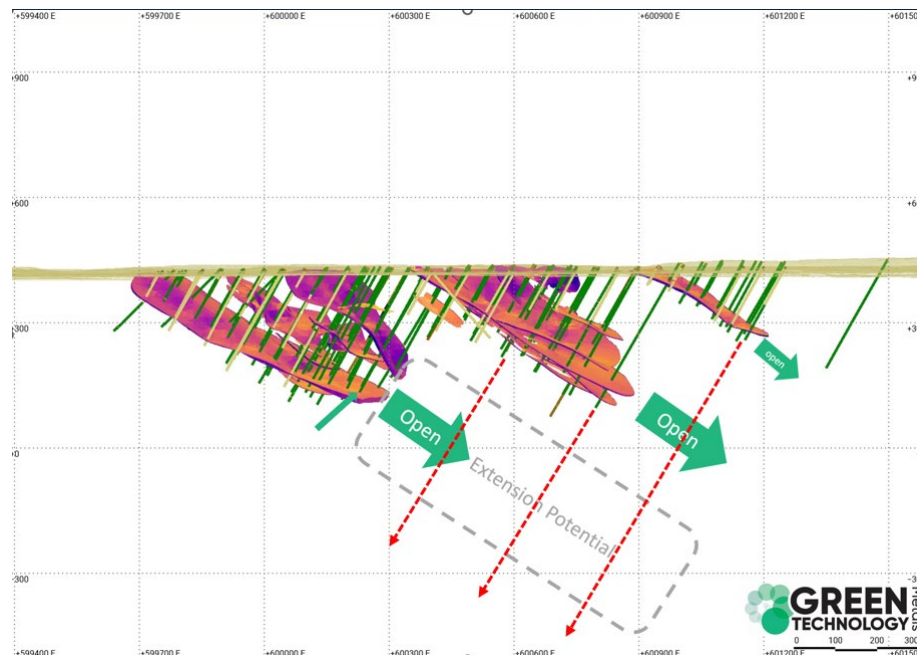




**Figure 14: Eastern Hub Projects, Seymour, Falcon and Junior**

In the Western Hub, the primary focus is to increase the current resource base of 12.6 million tonnes through targeted exploration activities centred around the Root Bay deposit. This strategy involves extending holes from previous drilling and concentrating on down-dip resource extensions, with the aim of significantly increasing the tonnage while remaining within the economic constraints of the Open Pit.

Additionally, geologists have been diligently logging and sampling various occurrences along the Root Bay ridge, successfully identifying multiple follow up drill targets, which will now undergo testing in the latest step-out drilling campaign, specifically targeting the eastern and western extensions of the Root Bay deposit with anticipation that this exploration effort will substantially enhance the existing resource base, underscoring the project's substantial growth potential.



**Figure 15: Stacked LCT pegmatites at Root Bay with mineralised defined from surface to 300m depth, and open**

This ASX release has been approved for release by the Board.

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## Green Technology Metals (ASX:GT1)

GT1 is a North American-focused lithium exploration and development business with a current global Mineral Resource estimate of 22.5Mt at 1.14%  $\text{Li}_2\text{O}$ . The Company's main 100% owned Ontario lithium projects comprise high-grade, hard rock spodumene assets (Seymour, Root and Wisa) and lithium exploration claims (Allison, Falcon, Gathering, Junior, Pennock and Superb) located on highly prospective Archean Greenstone tenure in north-west Ontario, Canada.

All sites are proximate to excellent existing infrastructure (including clean hydro power generation and transmission facilities), readily accessible by road, and with nearby rail delivering transport optionality.

The Seymour Project has an existing Mineral Resource estimate of 9.9Mt @ 1.04%  $\text{Li}_2\text{O}$  (comprised of 5.2Mt at 1.29%  $\text{Li}_2\text{O}$  Indicated Mineral Resource and 4.7 Mt at 0.76%  $\text{Li}_2\text{O}$  Inferred Mineral Resource),<sup>1</sup> and the Root Project has an Inferred Mineral Resource estimate of 12.6Mt @ 1.21%  $\text{Li}_2\text{O}$ . Accelerated, targeted exploration across all three projects has strong potential to grow resources rapidly and substantially.



<sup>1</sup> For full details of the Seymour Mineral Resource estimate, see GT1 ASX release dated 23 June 2022, *Interim Seymour Mineral Resource Doubles to 9.9Mt*. For full details of the Root Maiden Mineral Resource estimate, see GT1 ASX release dated 19 April 2023, *GT1 Mineral Resources Increased to 14.4MT and Transformational 22.5MT Mineral Resource Base reached across Ontario Lithium Projects 7 June 2023*. The Company confirms that it is not aware of any new information or data that materially affects the information in that release and that the material assumptions and technical parameters underpinning this estimate continue to apply and have not materially changed.

## **APPENDIX A: IMPORTANT NOTICES**

### **No new information**

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

The information in this report relating to the Mineral Resource estimate for the Seymour Project is extracted from the Company's ASX announcement dated 23 June 2022. GT1 confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply.

The information in this report relating to the Mineral Resource estimate for the Root Project is extracted from the Company's ASX announcements dated 19 April 2023 and 7 June 2023. GT1 confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply.

### **Forward Looking Statements**

Certain information in this document refers to the intentions of Green Technology Metals Limited (ASX: GT1), however these are not intended to be forecasts, forward looking statements or statements about the future matters for the purposes of the Corporations Act or any other applicable law. Statements regarding plans with respect to GT1's projects are forward looking statements and can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. There can be no assurance that the GT1's plans for its projects will proceed as expected and there can be no assurance of future events which are subject to risk, uncertainties and other actions that may cause GT1's actual results, performance or achievements to differ from those referred to in this document. While the information contained in this document has been prepared in good faith, there can be given no assurance or guarantee that the occurrence of these events referred to in the document will occur as contemplated. Accordingly, to the maximum extent permitted by law, GT1 and any of its affiliates and their directors, officers, employees, agents and advisors disclaim any liability whether direct or indirect, express or limited, contractual, tortious, statutory or otherwise, in respect of, the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence