

Brazil's Next Major Lithium Producer

Near-term production of high-quality, low-cost, lithium concentrate in Minas Gerais' Lithium Valley, strategically positioned to support the global EV and battery supply chains.

Lithium hydroxide

TSX.V: LTH

OTCQX: LTHCF

FSE: H3N

Corporate Presentation - April 2025

CAUTIONARY NOTES

The NI 43-101 technical report associated with the Bandeira Lithium Project Feasibility Study (FS) will be available on SEDAR+ at www.sedarplus.ca under the Company's issuer profile, as well as the Company's website at <u>www.lithiumionic.com</u> within 45 calendar days from the May 29, 2024, press release.

Feasibility Study Consultants

The FS is prepared by independent representatives of AtkinsRéalis, GE21, Planminas and L&M each of whom are Qualified Person as defined by NI 43-101 Standards of Disclosure for Mineral Projects. Each of the QPs are independent of Lithium Ionic and have reviewed and confirmed that the content of the FS news release fairly and accurately reflects, in the form and context in which it appears, the information contained in the respective sections of the Bandeira FS for which they are responsible.

Qualified Persons

Mineral Resource Estimate: Carlos José Evangelista, Geologist from GE21; Underground mine studies: Engineer, Rubens Mendonça from Planminas; The mineral processing studies were consolidated and defined by Tony Lipiec, Process Engineer and Vice President Global, Minerals & Metals Processing at AtkinsRéalis; Environmental studies: Branca Horta from GE21; Tailings Disposal systems: Porfírio Cabaleiro from GE21; The economic and financial model was certified and validated by João Augusto Hilario de Souza from L&M Advisory, as the qualified professional.

This presentation contains, or incorporates by reference, "forward looking information" within the meaning of applicable Canadian securities legislation. Forward looking information may include, but is not limited to, statements with respect to the future performance of Lithium lonic Corp. ("Lithium lonic" or the "Company"), Lithium lonic mineral properties, the future price of lithium and other metals, the mineralization of the Company's properties, results of exploration activities and studies, the realization of mineral resource and mineral reserve estimates, exploration activities, costs and timing of the development of new deposits, the results of future exploration and drilling, the results of environmental studies, management's skill and knowledge with respect to the exploration and development of mining properties in Brazil, the Company's ability to raise adequate financing; the Company's ability to obtain the requisite permits and approvals, the economic viability of its mining projects, government regulation of mining operations and exploration operations, timing and receipt of approvals and licenses under mineral legislation, the Company's local partners, and environmental risks and title disputes. In certain cases, forward looking statements can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "believes", or variations (including negative variations) of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Lithium Ionic to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks associated with the Company's dependence on the Bandeira property; general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; risks associated with dependence on key members of management; currency fluctuations (particularly in respect of the Canadian dollar, the United States dollar, the Brazilian reais

and the rate at which each may be exchanged for the others); uncertainty in the estimation of mineral resources and mineral reserves, exploration and development risks; infrastructure risks; inflation risks; defects and adverse claims in the title to the projects; accidents, political instability, insurrection or war; labour and employment risks; changes in government regulations and policies, including laws governing development, production, taxes, royalty payments, labour standards and occupational health, safety, toxic substances, resource exploitation and other matters; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; insufficient insurance coverage; the risk that dividends may never be declared; and liquidity and financing risks related to the global economic crisis. Although Lithium lonic has attempted to identify important factors that could cause actual actions, events or results to differ materially from those anticipated, estimated or intended. Forward looking statements contained herein are made as of the date of this presentation. 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 due to the inherent uncertainty therein.

Information in this presentation relating to other companies are from their sources believed to be reliable but that have not been independently verified by the Company.

Unless otherwise indicated, the scientific and technical information in this presentation has been reviewed and approved by Carlos Costa, Vice President of Exploration for Lithium Ionic, who is a Qualified Person as defined by National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").

Outro Lado Mineral Resource Estimate was prepared by Maxime Dupere, P.Geo., M.Sc., and Faisal Sayeed, P.Geo of SGS, each a Qualified Person as defined by NI 43-101, with an effective date of June 24, 2023. The supporting Technical Report can be found on SEDAR+ under the Company's issuer profile and on the Company's website (www.lithiumionic.com).

DISCLOSURE FOR U.S. INVESTORS: The securities described herein have not been and will not be registered under the U.S. Securities Act 1933, as amended (the "U.S. Securities Act") or any U.S. state securities laws. Accordingly, the securities described herein will not be offered or sold in the United States except in reliance on exemptions from registration provided under the U.S. Securities Act and the rules thereunder. Securities may not be offered or sold in the United States absent registration with the Securities and Exchange Commission or an exemption from such registration. Under no circumstances is this presentation or the information contained herein to be construed as a prospectus, offering memorandum or advertisement, and neither any part of this written or oral presentation nor any information or statement contained herein or therein shall form the basis of or be relied upon in connection with any contract or commitment whatsoever. This presentation should not be construed as legal, financial or tax advice to any investor, as each investor's circumstances are different. Readers should consult with their own professional advisors regarding their particular circumstances. There are certain risks inherent in an investment in the securities of the Company that prospective investors should carefully consider before investing in the securities of the Company.

Near-term production of high-quality lithium concentrate to support the global EV and battery supply chains.



WHY LITHIUM IONIC?





WHY BRAZIL?

A REGION THAT HAS RECENTLY EMERGED AS A GLOBALLY SIGNIFICANT HARD-ROCK LITHIUM-PRODUCING DISTRICT

• **Minas Gerais ("General Mining"):** A traditional mining jurisdiction with a highly efficient and expeditious permitting process

SIGNIFICANT EFFORT BY GOVERNMENT TO REDUCE BUREAUCRACY IN THE MINING SECTOR

- **Unrestricted Trade:** In July 2022, Brazil issued a presidential decree allowing unrestricted trade of any products containing lithium
- Launch of "Lithium Valley Brazil" in May 2023: Initiative launched by the state government of Minas Gerais and other municipal government agencies aimed at streamlining and facilitating lithium development and production to position it as a key global player in the lithium supply chain.



www.lithiumvalleybrazil.com.br

PERMITTING TIMELINES

BRAZIL'S LITHIUM VALLEY VS. OTHER MAJOR LITHIUM HUBS



~17,000 HECTARES IN THE LITHIUM VALLEY

Favourable mining and transport infrastructure, hydroelectric power, water and easy access to foreign markets via nearby port access.



HYDROELECTRIC POWER & Z NEARBY POWERLINES





PAVED DRIVE TO

PORT VITÓRIA







RAPID MINERAL GROWTH

Excellent understanding of the regional geological setting





*See Appendix for details related to the MRE. Bandeira MRE: see press release dated April 12, 2024; Salinas MRE: See press release dated April 4, 2024; Outro Lado MRE: See press release dated June 27, 202

Bandeira Outro Lado Salinas

= HIGH DISCOVERY RATE

MINERAL RESOURCES

BANDEIRA

M&I: 23.68Mt grading 1.34% Li₂O Inferred: 18.25Mt grading 1.37% Li₂O

Jnderground; 0.5% Li2O cut-off

64.7Mt 2.4Mt LCE GLOBAL MINERAL RESOURCES

BAIXA GRANDE

M&I: 6.52Mt grading 1.11% Li₂O Inferred: 12.90Mt grading 0.96% Li₂O

OP + UG; 0.5% Li20 cut-off

OUTRO LADO

M&I: 2.97Mt grading 1.46% Li₂O Inferred: 0.42Mt grading 1.48% Li₂O









and a state the

EXAMPLE 1 CONTENT BANDEIRA Drilling Site

HARD ROCK LITHIUM PEER BENCHMARKING

LTH STRONG RE-RATING POTENTIAL WITH SIGMA AS PRIMARY COMPARABLE LOCATED WITHIN SAME LITHIUM BASIN IN BRAZIL

	Explorers			Developers						Emerging Producers						
									Lithium lo	onic Re-	Rating Po	otential				\$736
EV / Resource (C\$/t LCE)			¢76				.		¢01	\$328			\$134	\$310	¢qz	
	N/A	\$10	\$70	\$14	\$52	N/A	\$44	N/A	\$9 4		N/A	N/A			493	
									Lithium I	onic Re	-Rating P	otential		\$1,368		\$1,778
Market Cap C\$M	\$127	\$64	\$413	\$47	\$153	N/A	\$119	N/A	\$118	\$114	\$247	\$239	\$120		\$168	
Company	Atlas	Winsome	Patriot	Global Lithium	Lithium Ionic	Leo	Frontier	Latin Resources	Atlantic	Rock Tech	Piedmont	Sayona	Critical	Liontown	Core	Sigma*
Project Name	Minas Gerais	Adina	CV5	Marble, Manna	Bandeira	Goulamina	PAK	Salinas	Ewoyaa	Georgia, Guben	Carolina	NAL	Rose	Kathleen	Finniss	GDC
Enterprise Value (C\$M)	\$112	\$23	\$370	\$24	\$125	Acquired	\$95	Acquired	\$106	\$110	Merger	Merger	\$99	\$1,672	\$92	\$1,946
Location	Brazil	Quebec	Quebec	Australia	Brazil	Mali	Ontario	Brazil	Ghana	Ontario, Germany	USA	Quebec	Quebec	Australia	Australia	Brazil
Next Development Stage	Pre-MRE	PEA	PFS/FS	Feasibility	Development	Acquired	Feasibility	Acquired	Development	Feasibility	Development	Producing	Development	Producing	Producing	Producing
Туре	SC	SC	SC	SC	SC	SC	SC, Int.	SC	SC	SC, Conv.	SC, Int.	SC	SC	SC	SC	SC
Resource + Reserve (LCE Kt)	NA	2,215	4,877	1,721	2,400	9,119	2,179	2,347	1,125	335	1,175	2,443	740	5,401	992	2,644
Grade (Li2O %)	NA	1.15%	1.39%	1.00%	1.28%	1.38%	1.51%	1.22%	1.25%	0.90%	1.08%	1.12	0.91%	1.40%	1.31%	1.39%
Annual LCE Production (Ktpa)	NA	38	108	30	24	108	18	64	52	15	36	31	29	24	8.4	34
Per Annum Opex (US\$/t LCE)	NA	NA	2,696	5,059	3,265	3,375	7,433	2,979	2,772	4,509	1,577	4,525	4,167	4,311	7,828	3,230
Capex Intensity (US\$/t LCE)	NA	6,842	4,667	10,073	10,991	2,362	25,466	3,941	3,564	12,813	27,514	9,806	16,241	26,325	23,952	7,876
Post-Tax NPV8% (US\$M)	NA	740	2,200	1,932	1,310	2,900	1,739	2,520	1,300	146	2,040	190	2,195	2,023	111	734
Post-Tax IRR (%)	NA	43%	34%	103%	40%	83%	24%	132%	94%	36%	27%	2,545%	66%	57%	47%	1,273%

Source: Company disclosures, S&P Capital IQ, market data as of February 19, 2025

Notes: Project economics for non-producing assets are based on most recently published technical studies. Producing assets use modelled 2024 figures to calculate Per Annum Opex, LCE production, and Capex Intensity. Capex intensity based on development/expansion figures as per latest S&P report. For producing mines, post-tax NPV8% based on S&P CapIO. Global Lithium based on Manna Scoping Study, Piedmont based on Carolina Lithium FS, Sayona based on Authier and NAL FS, Sigma includes technical report on resource expansion dated Jan 19, 2023. Opex includes mining, processing & G&A and excludes royalties & transport costs. LTH Resource current as of May 2024 feasibility study. Sigma Lithium figures represent all 3 phases of their project. Sigma is currently producing 374tpa of LCE with phase 1 operating. Phase 3 till pending.



I LITHIUM IONIC **SALINAS PROJECT** SALINAS AIRPORT **JANUARY 2025 MINERAL RESOURCE ESTIMATE** M&I: 6.52Mt @ 1.11% Li2O (180kt LCE) Inferred: CLATLAS 12.90Mt @ 0.96% Li₂O (306kt LCE) IRAPÉ *OP* + *UG*; *0.5% Li2O cut-off* HYDROELECTRIC PLANT ARAÇUAI **AIRPORT & SUBSTATION** Lithium Ionic CBL Atlas Lithium Sigma Lithium Resources Latin Resources

Transmission Line Powerlines Roadways

> 20 _____ km

BRAZIL

SIGM

SALINAS PROJECT



REGIONAL POTENTIAL



AFRODITE 140000 **PHOENIX**

Significant regional soil anomalies have yet to be drilled near the Bandeira Project

BANDEIRA FEASIBILITY STUDY



BANDEIRA FEASIBILITY STUDY: KEY RESULTS

Small footprint underground mine producing high-quality, low-cost lithium concentrate



BANDEIRA PRODUCTION

ORE MINED

17.2Mt





LOM AVERAGE ANNUAL PRODUCTION

AVERAGE PLANT THROUGHPUT

1.23 Mtpa

RECOVERY

68.9%

Spodumene Concentrate Grading 5.5% Li₂O

178,000 tpa (24.2 ktpa LCE)

PROJECT ECONOMICS & SENSITIVITY

With the anticipated rise in lithium demand, the project is well positioned to benefit from future market conditions.

	Low Case	Base Case	High Case			
	*See Fastmarkets Spodumene price forecast chart on next side					
SC5.5 Price (LOM Average)	\$1,822/t	\$2,277/t	\$3,416/t			
NPV	\$864 M	\$1.31B	\$2.41B			
IRR	32.5%	40.3%	62.2%			
Payback	4.3 years	3.4 years	2.2 years			



* Long-term price forecast established by Fastmarkets, as of April 2024

IRR: GLOBAL BENCHMARKING

Based on 24 lithium project economic studies completed since 2022.





SPODUMENE PRICE FORECAST

Fastmarkets

Fastmarkets Spodumene Price Forecast (2024-2034)



FEASIBILITY FINANCIAL RESULTS

Positioned to capture lithium market recovery



Cumulative Annual Free Cash Flow



CAPEX & OPEX

Conservative approach to capital costs

- Costs benchmarked with other recent construction projects in the region
- Established regional contractors and infrastructure to support site construction
- Regionally based engineering and construction management

CAPEX

\$266

MILLION

Mine	\$50.5M
Plant	\$102.7M
EPCM Services	\$26.6M
Infrastructure & Other	\$41.9M
Pre-operation	\$10.8M
Contingency	\$33.7M
Total	\$266.2M

Mine

Plant

- EPCM Services
- General Infrastructure & Others
- Pre operacional
- Contingency

Low operating cost supporting strong cash flow

- Costs validated by regional peer group
- Contract operations for mine development
- Owner-operated underground fleet for production mining
- Locally based workforce
- Simple process design minimizes high-cost unit operations

OPEX			
(per tonne of	ore	processed)	

Mining	\$36.7/t
Processing	\$24.6/t
SG&A	\$3.0/t
Total	\$64.4/t

OPEX

(per tonne of concentrate produced)

Mining	\$254/t
Processing	\$170/t
SG&A	\$21/t
Total	\$444/t
Transportation costs	+ + + = /:

Transportation costs \$113/t to customer



GLOBAL BENCHMARKING

RECENT LITHIUM PROJECT ECONOMIC STUDIES

NPV/CAPEX

Bandeira outperforms global hard rock lithium projects, highlighting its efficient use of capital and higher returns on investment.



CAPITAL INTENSITY

Bandeira is more cost-effective compared to other global lithium projects, underscoring its economic viability and efficient use of resources.





\$1,744

BANDEIRA FLOWSHEET



SITE LAYOUT

- Sustainable underground mining and minimal land-use footprint
- Low-cost and low complexity DMS (Dense Media Separation) operation

PERMITTING PROGRESS

WATER RIGHTS GRANTED IN APRIL 2024

Lithium Ionic receives approval to draw water from the Piauí River for the Bandeira Project from the Minas Gerais Institute of Water Management ("Instituto Mineiro de Gestão das Águas" or "IGAM")



MINING & PROCESSING

Demonstrated mining methods supported by regional operating peers

- Demonstrated underground mining methods supported by 30 years of operating history at CBL operations
- Utilizes a room-and-pillar design for the southern portion of the orebody during start-up
- Transitions to sub-level stoping of the main orebody for the remaining life of mine





PROCESSING

Proven processing methods utilizing DMS to generate spodumene concentrate

- Ore sorting technology prevents unnecessary processing of barren material recovering 94% of Li₂O while rejecting 20% of mass
- Simple coarse dense medium separation (DMS) method for producing concentrate. A demonstrated process by CBL and Sigma.
- Coarse processing negates the need for a slurry tailings impoundment.
- Supported by recent pilot plant work by Steinert and SGS Geosol.
- 68.9% overall plant recovery, supported by external qualified professional reviewers.



Rougher DMS Recovery -9,5 + 0,5 mm



BANDEIRA FEASIBILITY STUDY: KEY HIGHLIGHTS



LTH PROJECTS GRANTED PRIORITY STATUS

- July 2023: MOU signed with Invest Minas (State Economic Department of Minas Gerais and the Minas Gerais Integrated Development Institute), mutually supporting the development of the battery materials sector in the region.
- Lithium Ionic's Itinga and Salinas lithium projects are granted priority status by the state of Minas Gerais regional government bodies, facilitating support and acceleration of approvals and licensing through the development process.
- Invest Minas to support and prioritize Lithium Ionic from the exploration to operational stages, including environmental licensing and regulatory approvals.
- LAC Permit Approval expected in late Q1 2025.



RECENT MILESTONES & PATH TO PRODUCTION



PRIORITIZING SUSTAINABILITY & ESG

Sustainable Mine Design: Bandeira



Underground Mine

Smaller environmental footprint, Moves ~16 times less rock, Reduces dust production.



Dense Media Separation (DMS) Tailings

This technology minimizes water use, energy consumption, chemical use, and overall tailings volume, ensuring a safer disposal process.



Sustainable Water Access

"Water Rights" Permits were obtained for Ribeirao Piaui, with a goal of 90% water recirculation once in production.



Secured Hydroelectric Grid Access

In Q4 2023, we partnered with Cemig Distribuição S.A., Brazil's largest hydroelectric provider, to connect to the main power infrastructure for our future Bandeira operation.



Corporate Policies in Place

- ✓ Audit Committee Charter
- ✓ Anti-Bribery Policy
- ✓ Code of Business Conduct and Ethics
- ✓ ESG Policy
- ✓ Diversity and Inclusion Policy
- ✓ Human Rights Policy

ESG Reporting



Lithium Ionic utilizes Onyen's ESG software to streamline sustainability reporting, and enable accurate tracking and compliance with international standards such as SASB and GRI.



Lithium Ionic has initiated the IRMA self-assessment for the Bandeira Project to benchmark operations against the IRMA Ready Standard to ensure our project is aligned with industry best practices.



Lithium Ionic proudly joins the UN Global Compact, reinforcing our commitment to responsible business practices, environmental stewardship, and sustainable growth.

CAPITAL STRUCTURE

TSX.V: LTH

Common Shares Outstanding	158,579,158
Options	15,127,000
Warrants	11,775,853
Market Capitalization	~C\$155M
52-week High/Low	C\$1.17/C\$0.41
Share Price (4/01/25)	C\$0.86
Cash (Q3 ending Sept. 30, 2024)	~C\$28 million

ANALYST COVERAGE:

CLARUS SECURITIES INC.	Varun Arora
вмо 🗠	Greg Jones
STIFEL SGMP	Cole McGill
Canaccord Genuity	Katie Lachapelle
Desjardins	Frederic Tremblay
	Shannon Gill



EXECUTIVE LEADERSHIP TEAM



Blake Hylands CEO. Director

Professional Geoscientist with 13 years of international experience in advanced and early-stage exploration (gold, base metals, iron ore). Cofounder of Troilus Gold where he led the technical team to the discovery of +8Moz AuEq gold in Quebec. Extensive capital markets, corporate development and community relations experience.

Helio Diniz

President, Director

+40 years of experience in the mining sector. Former Managing Director Brazil for Xstrata (Glencore) where he discovered the Araguaia Nickel Deposit (+100Mt, 1.5% Ni). Began his career with GENCOR South Africa: Sao Bento gold mine. Brazil (AngloGold Ashanti). Founder of Falcon Metais and HDX Consultoria to identify/explore and develop mining opportunities in Brazil. Founded and developed several companies for the F&M Group, incl: Brazil Potash (current Managing Director), Aguia Metais (potash), Belo Sun (gold) and Irati (oil shale).



Mike Westendorf

C00

Professional engineer with 20 years of diversified experience in mining operations, capital projects, engineering, and corporate development. Most recently acted as Director of Operational Excellence for Copper Mountain Mining Corp. (now Hudbay Minerals), where he led initiatives to improve production, execute capital upgrades, and reduce costs at the Copper Mountain Mine, Canada. Here, he also acted as Production Manager, overseeing the development of their Eva Copper Project in Australia, and Director of Metallurgy, supporting resource expansions and development.

Tom Olesinski

+25 years of finance and executive management experience. Former forensic accountant for BDO Dunwoody. Former Director of Finance and Operations for Cossette Communication Group, CEO and CFO at Havas Media Canada, and COO and CFO for Brainrider. Current board member of Troilus Gold Corp.

Carlos Costa VP Exploration

~40 years of experience; 29 yrs in base metals, gold and PGE exploration throughout Brazil. Managed several exploration programs, from regional grassroots to bankable feasibility studies. 10 yrs experience in mine geology, including underground and open pit operations. Former Country Manager Brazil for Emerita; Led exploration programs for Belo Sun, Xstrata, Falconbridge; with experience at Vale and BP Mineração (British Petroleum Group).



André Guimarães VP Corp. Development

PhD Geology graduate specializing in igneous petrology with +10 years of experience in research. Founder of Neolit Minerals (2020), where he has been directly involved in all corporate and exploration activities, including analyses and interpretation of geological data, particularly geochemical results, field work and contract negotiations. Former archaeologist who was involved in rescue archaeology projects associated with the development of mining sites in Brazil.

Damian Lopez Corporate Secret Corporate securities lawy

Corporate Secretary Corporate securities lawyer with +15 years experience working as a legal consultant to various TSX and TSXV listed companies. Previously worked as a securities and merger &

companies. Previously worked as a securities and merger & acquisitions lawyer at a large Toronto corporate legal firm, where he worked on a variety of corporate and commercial transactions.

DIRECTORS

Broad experience in mining and other industries

Blake Hylands Patrizia Ferrarese

Helio Diniz Michael Shuh

David Gower David D'Onofrio Lawrence Guy Ian Pritchard

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THANK YOU

LITHIUM IONIC

TSX.V: LTH | OTCQX: LTHCF | FSE: H3N

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