

Lithium Ionic Corp.

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Potential to quickly move from 'ionic' to 'iconic'

The Desjardins Takeaway

We are initiating coverage of Lithium Ionic Corp. with a Buy–Speculative rating and C \$5.25 target price. LTH is a hard rock lithium exploration company focused on advancing its flagship Itinga project and the earlier-stage Salinas project in Minas Gerais, Brazil, a prolific jurisdiction with a prompt permitting process and established infrastructure. Following in the footsteps of neighbouring producers, LTH looks poised to progress efficiently and should earn a valuation re-rate in the process.

Highlights

Advancing a compelling project at a fast pace. The maiden resource estimate of 19.43mt at 1.42% Li₂O at Itinga provides a strong foundation for growth, in our view. With 13 drills operating, the ongoing 50,000m drill program aims to: (1) increase the resource and upgrade its classification; and (2) define mineral resource estimates at the Salinas and Itira regional targets. A PEA is expected in the coming weeks, followed by a DFS in early 2024. Our confidence in LTH's ability to rapidly navigate through the stages of project development at a relatively low capex is bolstered by its priority status granted by the state and the established infrastructure. We forecast first production in early 2026 (14-year minelife) and estimate an after-tax NPV (12% discount rate) of C \$1.1b (IRR 83%) for the Itinga project.

In good company. We view neighbouring projects, including Sigma Lithium's and CBL's producing mines, as solid proof of concept.

Well-funded for near-term priorities. LTH looks well-funded for its 2023 drilling activity and technical studies, thanks to a C\$28.8m financing. While equity may still be a source of funds to further advance projects, we believe that resource updates and the soon-to-be-released PEA/feasibility study could help widen the range of possible funding sources, including debt and/or cash inflows from an offtake partner.

Valuation

LTH trades at a discount to the hard rock lithium peer group, including its Brazilian peer Sigma. At 0.31x P/NAV, LTH is one of the cheapest names in the space despite multiple potential near-term catalysts and a quick path to production. Our C\$5.25 target (0.9x P/NAV) reflects our expectation of a re-rate on the back of upcoming milestones such as resource growth/updates, a PEA/feasibility study, permitting and strategic partnerships.

Recommendation

We are initiating coverage with a Buy–Speculative rating.

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Rating	Buy
Risk	Speculative
12-month target	C\$5.25

Symbol	LTH, TSX-V
Sector	Metals & Mining
Closing price (\$)	C\$1.82
Potential return (%)	188.5
52-week range (\$)	C\$1.27–3.05
Avg daily value traded (\$m)	C\$0.8
Shares O/S (m)	138.2
Market cap (\$m FD)	C\$252
Net debt (\$m)	C\$(30)
EV (\$m)	C\$222
NAVPS (\$)	C\$5.90
P/NAV (x)	0.31
Valuation	0.9
Year-end	Dec-31

Desjardins estimates

Annual	2022	2023E	2024E	2025E
Li prod'n (tonnes)	0	0	0	0
EPS (C\$)	(0.28)	(0.45)	(0.28)	(0.30)
P/E (x)	NM	NM	NM	NM
CFPS (C\$)	(0.15)	(0.28)	(0.25)	(0.26)
P/CFPS (x)	NM	NM	NM	NM
EBITDA (C\$m)	(26.6)	(58.3)	(45.0)	(53.2)
EV/EBITDA (x)	NM	NM	NM	NM

Thesis/key assumptions

- Resource expansion potential from Itinga and Salinas
- High-quality project (Itinga) as well as early-stage project (Salinas) in mining-friendly state
- Priority status should further accelerate project development

Potential catalysts

- Drill results and resource updates
- PEA and DFS
- Permitting approvals
- Partnerships, offtake, etc

Risks

- Commodity, permitting, financing, jurisdictional and key personnel risk

Source: Desjardins Capital Markets, Bloomberg, FactSet

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Lithium Ionic—potential to quickly move from ‘ionic’ to ‘iconic’

We are initiating coverage of Lithium Ionic Corp. with a Buy–Speculative rating and C\$5.25 target price. Lithium Ionic is a hard rock lithium exploration company focused on advancing its Itinga and Salinas projects in Brazil’s prolific Minas Gerais state, which boasts a fast permitting process, existing infrastructure and proof of concept from Sigma Lithium’s Grota do Cirilo mine.

In June 2023, Lithium Ionic released a maiden resource estimate of 19.43mt (M&I+I) at a solid grade of 1.42% Li₂O for the Bandeira and Outro Lado deposits at the Itinga project, which provides a strong foundation for further growth.

The company’s shares are listed on the TSX Venture Exchange under the symbol LTH, the OTC Exchange under the symbol LTHCF and the Frankfurt Stock Exchange under the symbol H3N. Management and insiders own 23% of the shares outstanding.

Investment thesis

In good company—the new kid on the block in an emerging district where neighbours include Sigma. Lithium Ionic’s flagship Itinga project (resource of 19.43mt at 1.42% Li₂O) is less than 1km from Companhia Brasileira de Lítio’s (CBL) Cachoeira lithium mine which has been in production for more than three decades. It is also less than 4km from Sigma’s Grota do Cirilo project which boasts one of the largest hard rock lithium resources in the Americas (85.6mt at 1.43% Li₂O) and started production in April 2023. Lithium Ionic’s earlier-stage Salinas project is adjacent to Latin Resources’ Colina project (45.2mt at 1.34% Li₂O).

Overall, we appreciate that Lithium Ionic’s land package is proximal to high-profile lithium mines/projects in what is rapidly becoming a significant hard rock district. In our opinion, these neighbouring projects within Minas Gerais state—Brazil’s largest mining state and third largest economy—put a positive light on the many derisking elements of the Lithium Ionic story, notably the region’s existing infrastructure (transport, water and power), efficient permitting process, low-cost project development and history of lithium production.

Sigma is a tangible example that the path from resource to permitting and then production can be quick in Brazil relative to other countries. In addition, our confidence in Lithium Ionic’s ability to rapidly navigate through the stages of project development is bolstered by the priority status it was granted by the state.

A fast mover advancing projects at a good pace—drilling underway to upgrade and expand the resource, PEA/feasibility study coming soon. In addition to what we view as favourable jurisdictional support for lithium projects, we also view speed of execution as a company-specific strong point. Lithium Ionic’s ongoing 50,000m drill program (13 drills operating) aims to: (1) increase the resource and upgrade its classification at the Bandeira and Outro Lado deposits; and (2) define mineral resource estimates at the Salinas and Itira regional targets. The release of a preliminary economic assessment (PEA) in the coming weeks should be quickly followed by a definitive feasibility study (DFS) in early 2024.

We estimate an after-tax NPV (12% discount rate) of C\$1.1b and IRR of 83% for the Itinga project. We assume total initial capex of US\$175m at Itinga (US\$140m at Bandeira and US\$35m at Outro Lado), which is conservative relative to Sigma’s US\$135m (Phase 1) and looks relatively inexpensive compared with projects in other countries, thanks in part to Brazil’s existing infrastructure and the possibility of using low-cost dense media separation (DMS) processing. We model first production at the start of 2026 at Itinga and see a path to close to 250,000tpa of 5.5% spodumene concentrate.

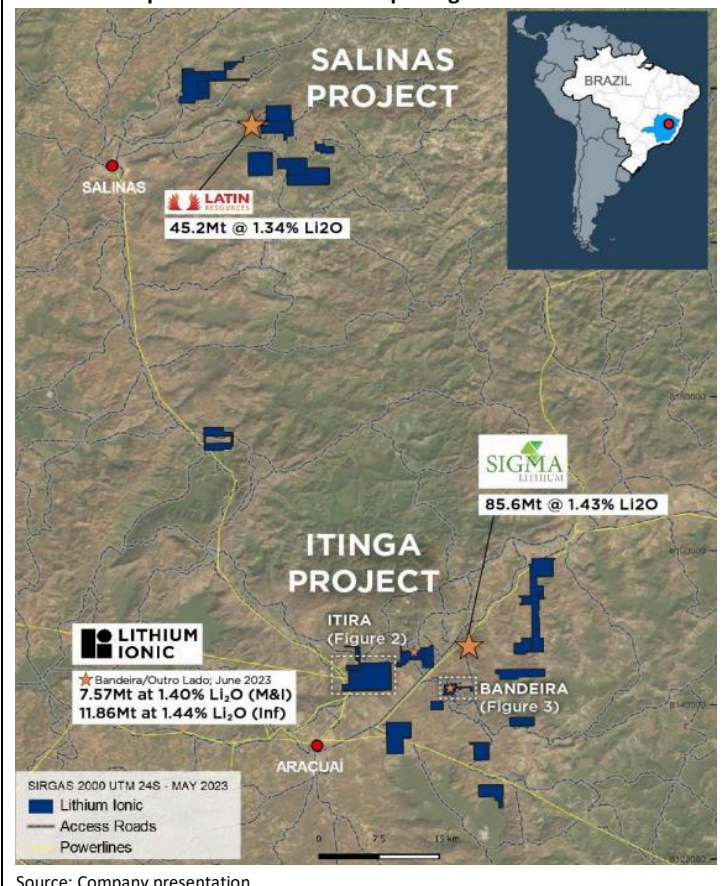
Financial position. We believe the company is well-funded for its 2023 drilling activity and technical studies, thanks to a recent C\$28.8m equity financing. We expect another equity raise in early 2024 to further advance its projects and believe that incremental funding will be needed to build a mine and start spodumene concentrate production. While equity may still be a source of funds, we believe that the future resource updates and soon-to-be-released PEA/feasibility study could help widen the range of possible funding sources, including debt and/or cash inflows from an offtake partner.

Valuation. While the stock trades at a discount to hard rock peers, including a deep gap to Sigma, we believe that Lithium Ionic is well-positioned to deliver on several potential catalysts in the near term as part of its project development efforts, which should spark a valuation re-rate. Our C\$5.25 target price reflects a P/NAV multiple of 0.9x.

Advancing two lithium projects in a prolific mining region

Lithium Ionic is a Canadian mining company focused on the exploration and development of the Itinga and Salinas hard rock lithium projects in Minas Gerais state, a mining-friendly jurisdiction in Brazil (300+ mines operating). The two lithium projects total 14,182 hectares, which makes Lithium Ionic the second largest mineral rights holder in this emerging hard rock lithium district.

Exhibit 1: Map of Lithium Ionic's land package



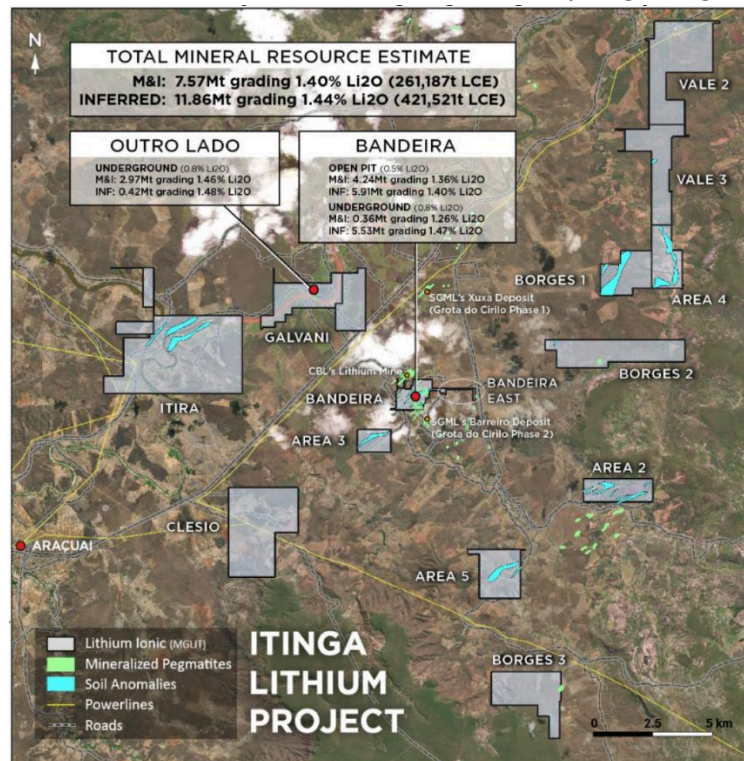
Itinga project—sizeable maiden resource estimate of 19.43mt at 1.42% Li₂O sets a solid foundation for further growth. We view Itinga as a high-quality project which ticks several important boxes, including a sizeable resource base, resource growth potential, established nearby infrastructure and visibility on a rapid and cost-efficient development. As further discussed later in this report, we also appreciate that the area has a history of lithium production via privately owned CBL's long-standing mine and, more recently, Sigma's (SGML, NASDAQ/TSX-V, not rated) Grota do Cirilo mine.

Lithium Ionic Corp.

The Itinga project totals 8,470 hectares assembled through acquisitions over the past few years. In addition to its two main deposits (Bandeira and Outro Lado, which are located ~8km from each other), Itinga includes the Itira, Clesio, Areas 2–5, Borges 1–3 and Vale 2–3 exploration targets.

In June 2023, Lithium Ionic announced a maiden mineral resource estimate of 19.43mt (M&I+I) at a grade of 1.42% Li₂O (682,708t LCE) for Itinga based on 28,204m drilled (181 holes) at the Bandeira and Outro Lado deposits. In our opinion, Lithium Ionic came out of the gate strong with: (1) substantial size which met the upper end of management’s previously communicated target of 15–20mt; (2) an attractive Li₂O grade; and (3) coarse-grained spodumene, which we believe should enable the use of low-cost DMS as part of the spodumene concentration process.

Exhibit 2: Maiden mineral resource estimate shows compelling scale/grade



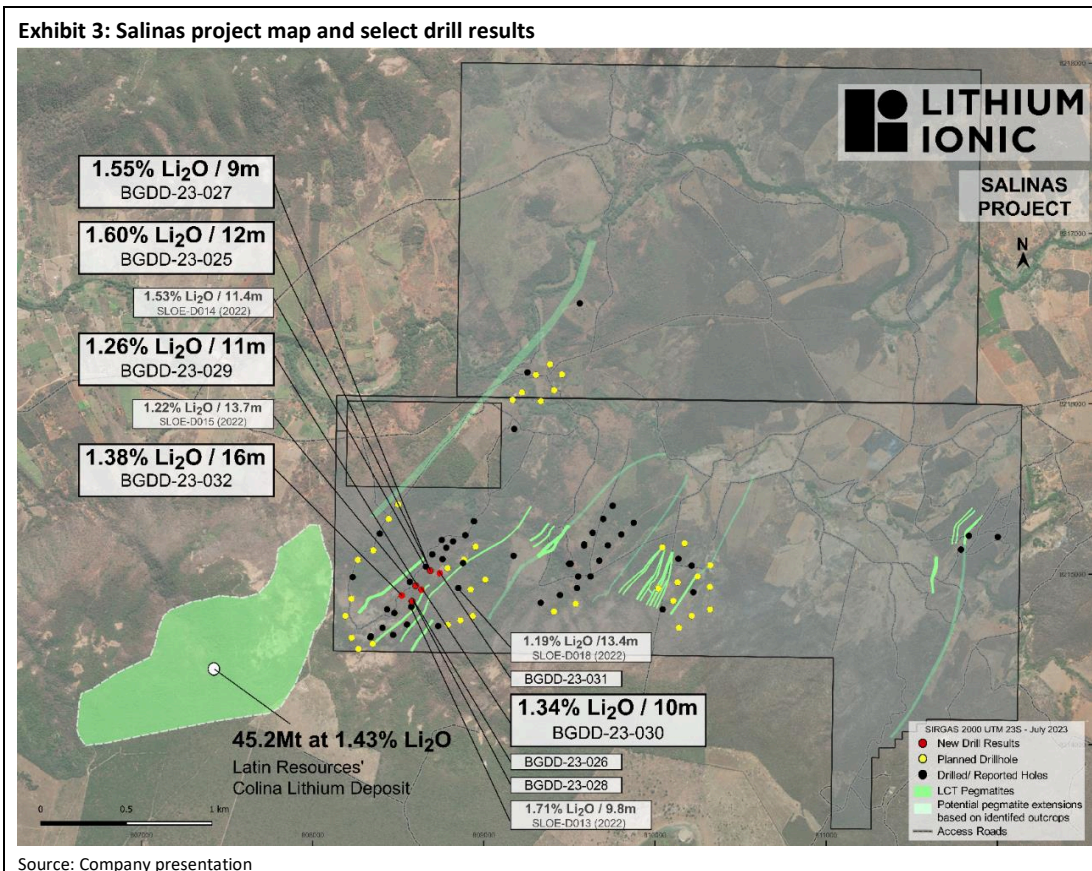
Source: Company presentation

With 13 drills operating (including six at Bandeira and three at Itira) as part of a 50,000m drill program for 2H23, we see significant resource growth potential from the Itinga project. Bandeira looks like a solid candidate for an expansion of its resource as it remains open along strike and at depth at most of its mineralized zones. Meanwhile, Outro Lado is relatively defined laterally and at depth, although there is a possibility of additional mineralization next to the deposit both laterally and at depth. Importantly, the 50,000m drill program includes 20,000m at Salinas via four drills. Overall, Lithium Ionic aims to: (1) increase the resource and upgrade its classification at the Bandeira and Outro Lado deposits; and (2) define mineral resource estimates at the Salinas and Itira regional targets.

Salinas project—encouraging first glimpse prompted the acquisition and ongoing drilling activity.

Located ~100km north of Lithium Ionic’s flagship Itinga project, the earlier-stage 5,713-hectare Salinas project contains several lithium-rich spodumene-bearing pegmatites outcropping at surface. Interestingly, Salinas is directly east of the growing Colina deposit (45.2mt at 1.34% Li₂O) owned by Latin Resources (LRS, ASX, not rated). Lithium Ionic obtained a 40% interest in the Salinas project via the acquisition in March 2023 of Neolit Minerais Participações and has the right to acquire up to 85% ownership in the project subject to certain exploration commitments.

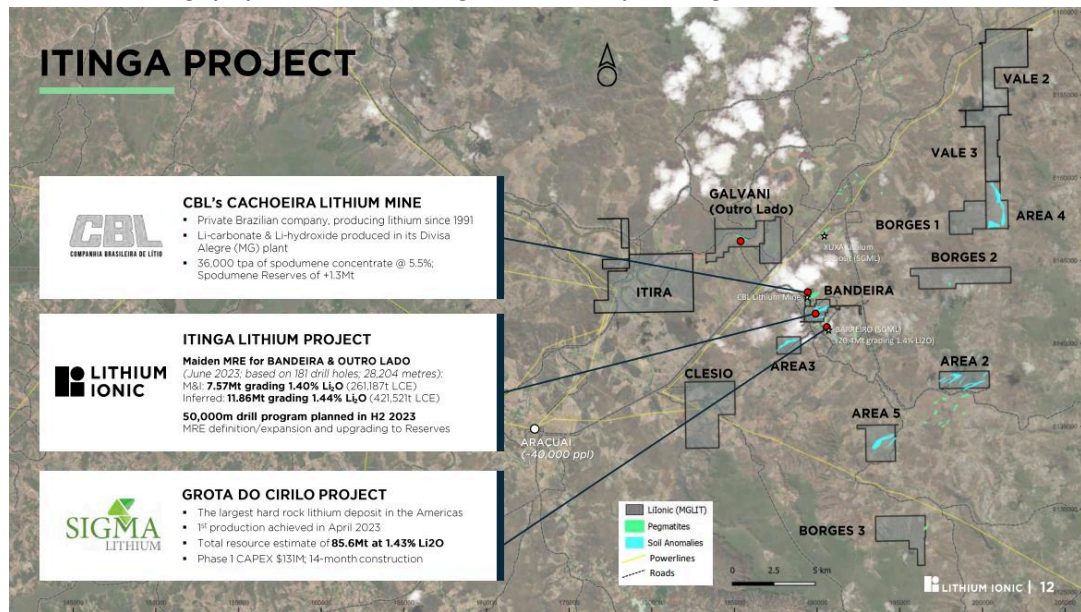
Prior to being acquired by Lithium Ionic, Neolit had completed a relatively modest and wide-spaced 24-hole drill program (4,000m) in 2H22, which showed a coarse-grained spodumene with intercepts of 11.4m at 1.53% Li_2O , 13.8m at 1.22% Li_2O , 13.4m at 1.19% Li_2O and 9.8m at 1.71% Li_2O . All pegmatite veins identified to date are open for expansion in all directions. Consequently, Lithium Ionic has completed soil geochemistry on select areas of the property and initiated a 20,000m expansion and infill drill campaign in May 2023 to test, define and expand the pegmatites identified in 2022. In July 2023, Lithium Ionic reported its initial drill results from the Salinas project, including 1.38% Li_2O intersected over 16m and 1.60% intersected over 12m (Exhibit 3). We believe it is targeting 4Q23 for the release of an initial mineral resource estimate for the Salinas property.



Good neighbours—Sigma, CBL and Latin Resources offer bullish read-throughs from resource to production

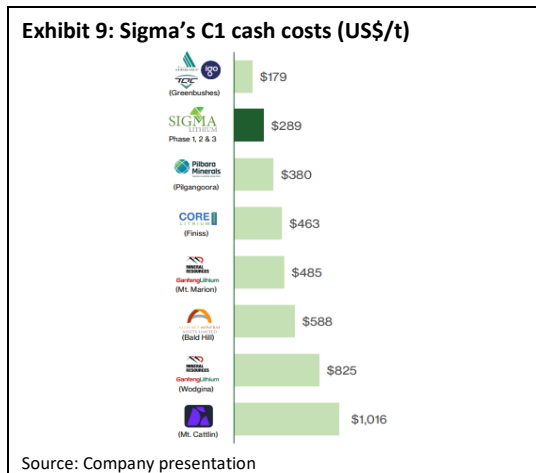
The Itinga project is less than 1km from CBL's Cachoeira lithium mine which has been in production for more than three decades. Itinga is also less than 4km from Sigma's Grota do Cirilo project which boasts one of the largest hard rock lithium resources in the Americas (85.6mt at 1.43% Li_2O) and started production in April 2023.

Overall, we appreciate that Lithium Ionic's land package is proximal to high-profile lithium mines/projects in what is rapidly becoming a significant hard rock district. In our opinion, these neighbouring projects within Minas Gerais state put a positive light on the many derisking elements of the Lithium Ionic story, notably the region's existing infrastructure, efficient permitting process, low-cost project development and history of lithium production. We believe that as the 'new kid on the block' and an emerging lithium player, Lithium Ionic is well-positioned to follow in its neighbours' footsteps.

Exhibit 4: The Itinga project is located near Sigma's and CBL's producing assets


Sigma started production this year. We believe that Sigma's Grota do Cirilo mine represents proof of concept from resource to production.

- **Resource growth.** Sigma's Grota do Cirilo grew from an initial resource estimate of 13.5mt at 1.56% Li₂O to 85.6mt at 1.43% Li₂O (proven and probable reserves of 54.8mt at 1.44% Li₂O), making it one of the largest hard rock lithium deposits in the Americas.
- **Financial viability.** A DFS estimated Grota do Cirilo's after-tax NPV (8% discount rate) at US\$15.3b, with an after-tax IRR of 1,273%.
- **Strategic partnership.** Sigma and battery manufacturer LG Energy Solution signed a six-year term sheet for a battery-grade lithium concentrate offtake agreement in October 2021 (ie 18 months before first production).
- **Production.** Following 14 months of construction, Phase 1 of spodumene concentrate production started in April 2023 at Grota do Cirilo via the commissioning of a DMS circuit, with a quick ramp-up to a run rate of ~270ktpa (July 2023) and record peak daily production (announced October 2, 2023). Sigma has highlighted cash costs which are among the lowest in the industry (Exhibit 9).
- **Low upfront capex.** We believe that existing infrastructure, limited groundworks and the use of DMS processing contribute to low-cost project development in Minas Gerais state. Initial capex for Phase 1 of Grota do Cirilo was only ~US\$135m. Sigma plans to carry out Phases 2 and 3 simultaneously at an additional pre-production capex of ~US\$155m to essentially replicate Phase 1 and thereby increase production capacity to a total of ~766ktpa. Sigma is targeting first production for Phases 2 and 3 in 2024.



CBL has been producing lithium for more than 30 years. Less than 1km from Lithium Ionic's Bandeira deposit, privately owned CBL produces ~36ktpa of spodumene concentrate (5.5% Li₂O) at its Mina da Cachoeira mine (Exhibit 10). The underground mine has been in operation since 1991, providing a positive read-through on deposit quality, project viability and the region's long-standing acceptance of lithium mining. We also note that CBL has downstream operations in Divisa Alegre that produce lithium carbonate and lithium hydroxide.

Exhibit 10: CBL's producing mine is next to Lithium Ionic's Bandeira deposit



Source: Company presentation

Exhibit 11: Equipment at CBL mine



Source: Company website

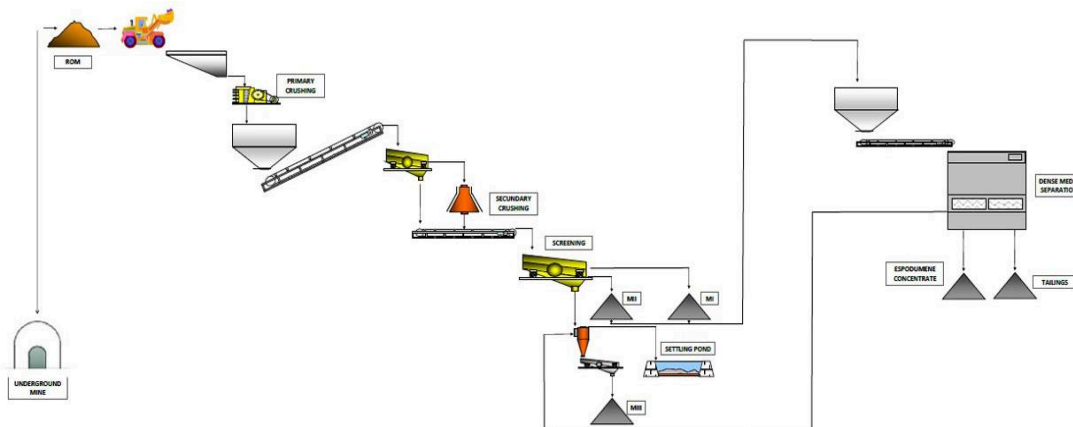
Exhibit 12: CBL production facility



Source: Company website

Like Sigma, CBL uses DMS processing to produce spodumene concentrate (Exhibit 13).

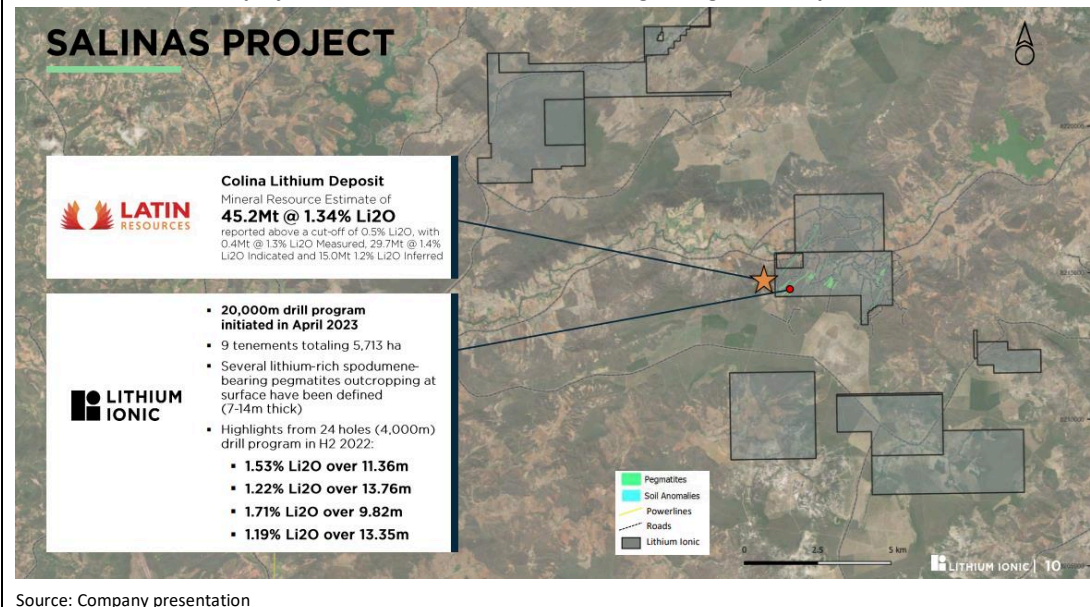
Exhibit 13: CBL's process flow diagram



Source: Company website

Latin Resources is advancing a project next to Lithium Ionic's Salinas property. Lithium Ionic's Salinas project is directly adjacent to the Colina lithium deposit for which Latin Resources has released an updated resource estimate of 45.2mt at 1.34% Li₂O. This was a large increase from the maiden resource estimate of 13.3mt at 1.21% Li₂O released in January 2023. According to Latin Resources, results from metallurgical test work show high recovery of high-grade Li₂O concentrate, indicating potential for production of high-quality concentrate with less complex and lower-cost DMS processing.

Exhibit 14: The Salinas project is located near Latin Resources' growing Colina deposit



Brazil looks to be DMS country. Based on comments from lithium explorers and producers, Brazil appears synonymous with low-cost DMS as part of the spodumene concentration process. As mentioned, both Sigma and CBL use on-site DMS at the properties close to Itinga, and Latin Resources has reported positive DMS-related test work. Similarly, Lithium Ionic's metallurgical test work appears to point to the applicability of DMS processing.

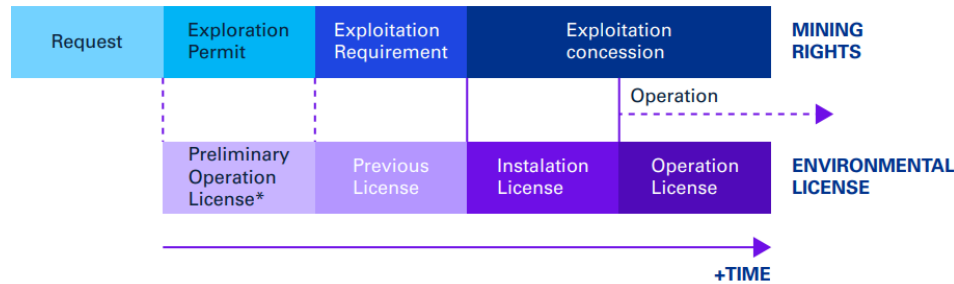
Speed to market and existing infrastructure enhance project attractiveness

In our opinion, Brazil offers key external success factors for lithium projects such as an efficient permitting process and established infrastructure.

Brazil's fast permitting process and Lithium Ionic's priority status point to good speed to market.

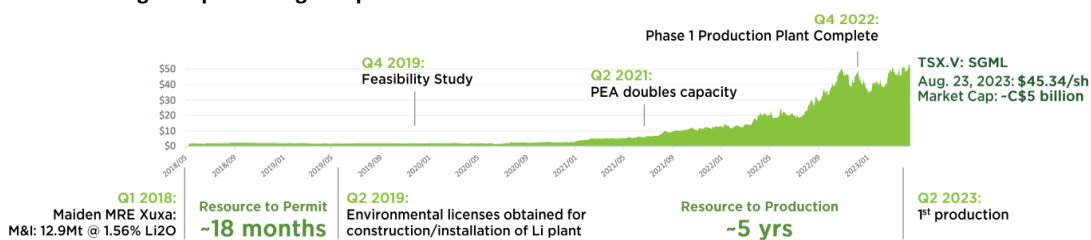
We believe that Brazil's investor-friendly stance on lithium mining differentiates it positively from nearby countries such as Chile (public-private partnerships) and Bolivia (state control). Furthermore, Lithium Ionic's projects are ideally located in Minas Gerais, which is Brazil's largest mining state and third largest economy. We believe that the region has appealing characteristics for lithium explorers, producers and investors, including its quick permitting process and established infrastructure.

The Brazilian government has shown a willingness to support the lithium industry in recent years by reducing bureaucracy. In July 2022, a presidential decree allowing unrestricted trade of any product containing lithium was issued. In May 2023, the Lithium Valley Brazil initiative was launched to enable regulatory simplicity and to streamline the permitting process for environmentally sustainable projects. Exhibit 15 illustrates the steps to obtain mining rights and an environmental licence in Brazil.

Exhibit 15: Process to obtain mining rights and an environmental licence in Brazil


Source: Brazil Country Mining Guide 2023, IBRAM

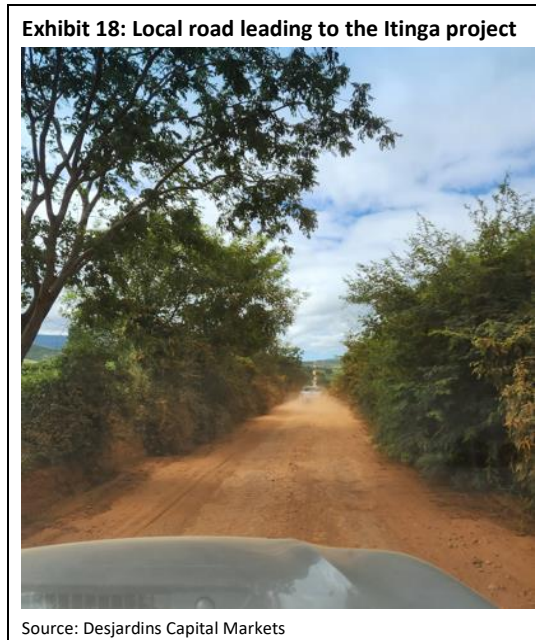
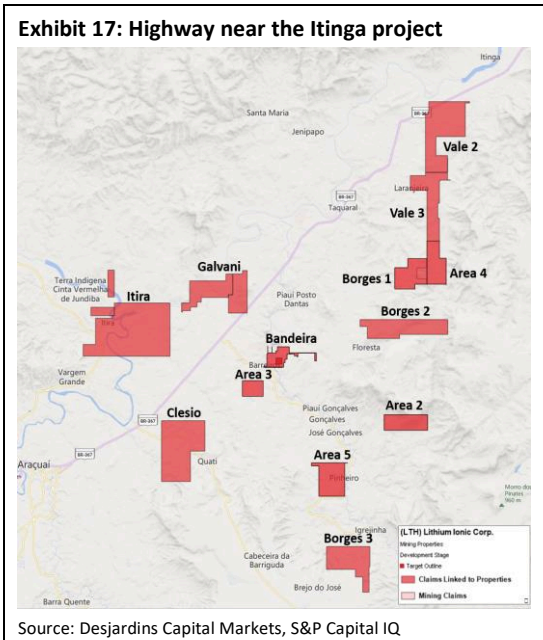
We view Sigma as an example of how rapidly projects can move forward in Brazil. It only took ~18 months for Sigma to go from resource to permit, which is at least a year faster (maybe more) than in other jurisdictions. Exhibit 16 shows Sigma’s five-year path from resource to production.

Exhibit 16: Sigma’s permitting and production timeline


Source: Company presentation

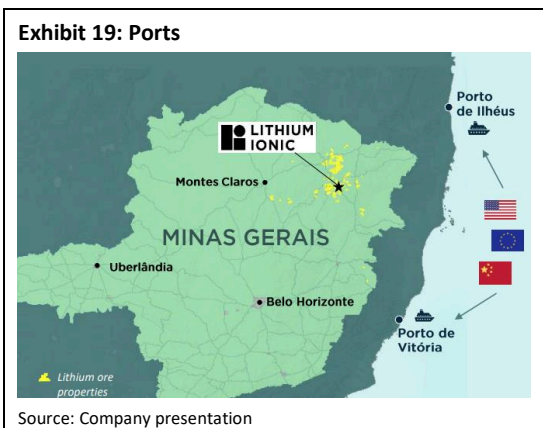
Within what was already a fast-paced system, Lithium Ionic was granted priority status by the state of Minas Gerais in July 2023 for the review of its Itinga and Salinas projects. We believe that the state’s commitment to support and prioritize Lithium Ionic could fast-track regulatory approvals and environmental licensing by several months. Assuming that the required authorizations are received around summer 2024 and that construction takes 12+ months, Lithium Ionic would be positioned for first production at Itinga during 2025 or early 2026—impressively, less than three years after the release of the maiden mineral resource estimate.

Existing transportation infrastructure provides easy access to site and should support future shipments to international markets. The Itinga project is situated 25km east from the city of Araçuaí, which can be accessed via an airport (Aeroporto Municipal de Araçuaí) or the BR-367 highway. Similarly, the Salinas project is located ~20km east from the city of Salinas, which can be accessed via Aeroporto de Salinas or the BR-342 and BR-251 highways. Local roads connect both projects to the nearby highways (Exhibits 17–18).



When thinking about potential destinations for Lithium Ionic’s future production of spodumene concentrate, we are reassured by the presence of the commercial ports of Ilhéus and Vitória (Exhibit 19). Of note, the port of Ilhéus is the largest bulk export facility in Brazil and has been used by Sigma for shipments.

Overall, we view the presence of existing road, air and maritime infrastructure around Lithium Ionic’s projects favourably given its important role for current exploration activities, as well as future mine construction and product shipments.



Nearby powerlines, water and workforce also contribute to project derisking. We note that most of Brazil’s electricity comes from hydropower and that Lithium Ionic’s projects are close to existing powerlines. For example, we expect the Itinga project to connect to a nearby powerline that is linked to the Irapé dam.

Like Sigma’s Grota do Cirilo project, we expect the nearby Jequitinhonha River to provide a reliable source of water to Lithium Ionic and that the water used during the production process can be recirculated/recycled.

We believe that the Lithium Ionic team having more than 80 years of cumulative experience in exploration and mining in Brazil is advantageous for project development. In addition, as a mining-friendly state, Minas Gerais provides a pool of qualified workers. The cities of Araçuaí and Salinas near Lithium Ionic's projects each have a population of ~40,000 people. We also expect labour availability from other neighbouring communities, and note that Belo Horizonte (Minas Gerais' capital) farther away has a population of more than 2m people.

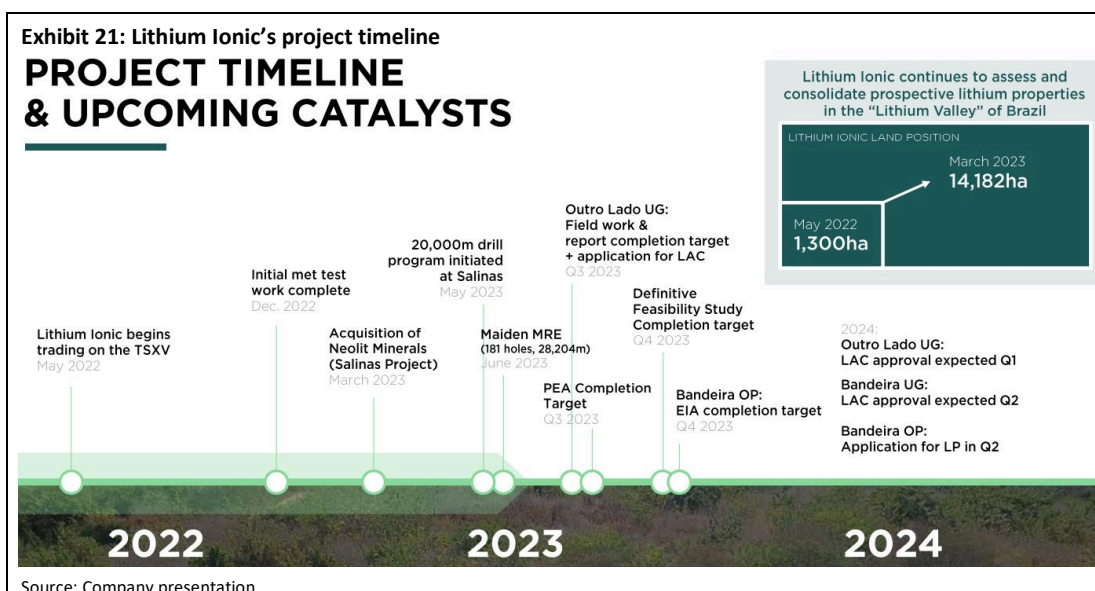
Project timeline and catalysts

In the near term, we expect updates from the ongoing 50,000m drill program (~20,000m completed as of mid September), which aims to: (1) increase the resource and upgrade its classification at the Bandeira and Outro Lado deposits; and (2) define mineral resource estimates at the Salinas and Itira regional targets.

The release of a PEA in the coming weeks should be quickly followed by a DFS in early 2024.

From a permitting standpoint, various applications are targeted for the remainder of 2023 and 2024 (Exhibit 21). We expect that the priority status granted to Lithium Ionic earlier this year should help the company navigate the permitting process promptly. Lithium Ionic obtaining a concomitant environmental and installation licence (LAC, or licença ambiental concomitante) would further simplify the environmental authorization process as an LAC takes into account the plant's small footprint and other project infrastructure, and the fact that no deforestation will be required.

The company is also continuing to assess potential property acquisitions in Brazil.



The maiden resource estimate released in June 2023 and information released by other lithium players in Brazil act as the backbone of our development/production model for Lithium Ionic's Itinga project. While the Salinas project appears promising, we are not including it in our production forecasts due to its early stage of exploration.

While starting up a small underground mine at Outro Lado first and an open pit at Bandeira second as part of a phased approach is a possibility, we are modelling simultaneous first production at the start of 2026. With potential partners (eg offtakers, chemical plant operators) looking for size, we believe it is reasonable to look at Itinga as a whole rather than in individual pieces when it comes to financing, offtake agreements, etc. We see a path to annual production of close to 250,000tpa of 5.5% Lithium Ionic Corp.

spodumene concentrate when both produce at the same time (~200,000tpa from Bandeira and ~50,000tpa from Outro Lado) until Outro Lado reaches the end of its minelife (Exhibit 22).

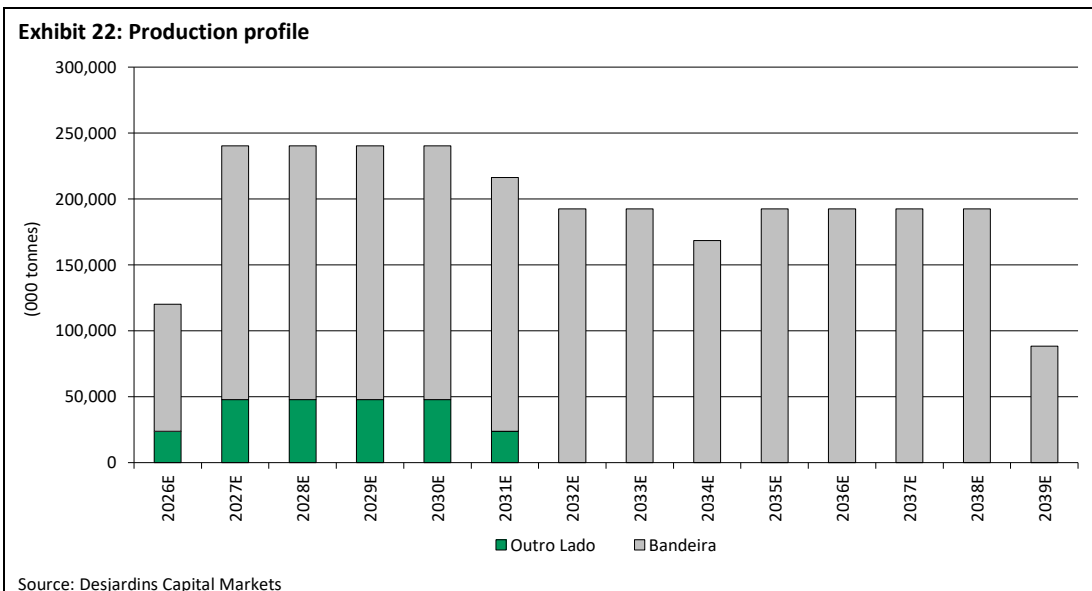


Exhibit 23: Snapshot of key operating assumptions

Outro Lado	
Minelife (years)	6
Grade (%)	1.46
Recovery (%)	60
SC production run rate (kt)	47,800
Bandeira open pit	
Minelife (years)	9
Strip ratio	13
Grade (%)	1.41
Recovery (%)	60
SC production run rate (kt)	192,000
Bandeira underground	
Minelife (years)	6
Grade (%)	1.41
Recovery (%)	60
SC production run rate (kt)	192,000

Source: Desjardins Capital Markets

We assume total initial capex of US\$175m at Itinga (US\$140m at Bandeira and US\$35m at Outro Lado), which is conservative relative to Sigma's US\$135m (Phase 1) and looks relatively inexpensive compared with projects in other countries, thanks in part to Brazil's existing infrastructure and the possibility of using DMS processing. We use a long-term price assumption for spodumene concentrate of US\$1,500/t. We estimate an after-tax NPV (12% discount rate) of C\$1.1b and IRR of 83%.

Financial position

As of June 30, 2023, Lithium Ionic had cash and cash equivalents of C\$8.8m, with no debt. Thanks to a C\$28.8m equity financing completed on July 31, 2023, we believe the company is well-funded for its 2023 drilling activity and technical studies. We model a C\$40m equity raise in 1Q24 and believe that incremental funding will be needed to build a mine and start spodumene concentrate production. While equity may still be a source of funds, we believe that the soon-to-be-released PEA/feasibility study could help widen the range of possible funding sources, including debt and/or cash inflows from an offtake partner.

Valuation

Exhibit 24 shows our NAV, incorporating an NPV (12% discount rate vs our typical 10% rate for Canadian projects) of the Itinga project.

	Value	
	(C\$m)	(C\$/share)
Itinga project	1,056	5.38
Exploration, projects and other	0	0.00
Cash and cash equivalents	30	0.15
Future equity issuances and exercise of warrants	142	0.72
Debt	0	0.00
Corporate G&A	-68.2	-0.35
Total	1,159	5.90
Shares, including future equity issuances (m)		196.4
P/NAV (x)		0.31
Target multiple (x)		0.9
Target price		5.25

Source: Desjardins Capital Markets, company reports

LTH trades at 0.31x our NAVPS, below the hard rock peer average of 0.47x (Exhibit 25). Looking at its closest Brazilian peer, we note that LTH trades at a large discount to Sigma on an EV/t LCE basis. While we understand the effects that production and takeover speculation may have on Sigma's valuation, we believe that the very large variance makes LTH a compelling valuation play for investors looking for Brazil's next potential success story. We use a valuation multiple of 0.9x, which reflects our expectation that the company is well-positioned to deliver on several potential catalysts in the near term as part of its project development efforts. The list of events capable of contributing to an expansion of the valuation multiple includes drill results, resource updates, a PEA, a feasibility study, permitting and potential strategic partnerships. It is worth noting that at our C\$5.25 target price, LTH would still trade at a significant discount (~50%) to Sigma (EV/t LCE), illustrating room for LTH's valuation to expand from current levels if solid execution leads it to be perceived by investors and/or partners as the next Sigma, or at least Brazil's next inevitable lithium play. We are initiating coverage of Lithium Ionic with a Buy-Speculative recommendation and C\$5.25 target price.

Exhibit 25: Comps

Company	Ticker	Curr	Share price (\$)	Mkt cap (\$m)	EV (\$m)	Grade				Valuation				P/		Location
						Tons (m)		(Li ₂ O %)		(EV/t) (C\$)		(EV/t LCE) (C\$)		NAVPS (\$)	NAV (x)Stage	
Hard rock developers/explorers																
Avalon Advanced Materials	AVL-CA	C\$	0.12	67	69	10.1	12.9	1.35	1.36	6.8	5.3	205.6	160.0	-	- PEA	Ontario
Critical Elements Lithium	CRE-CA	C\$	1.59	366	334	26.3	26.3	0.87	0.87	12.7	12.7	596.0	596.0	4.16	0.38 FS	Québec
Frontier Lithium	FL-CA	C\$	1.00	228	205	26.1	58.6	1.62	1.50	7.9	3.5	198.8	95.1	4.51	0.22 PFS	Ontario
Green Technology Metals	GT1-AU	A\$	0.41	127	102	5.2	22.5	1.29	1.13	17.0	3.9	538.7	141.5	-	- Exploration	Ontario
Liontown Resources	LTR-AU	A\$	2.95	6,519	6,066	138.1	171.0	1.36	1.36	38.0	30.7	1,140.6	917.3	3.00	0.98 Construction	Australia
Patriot Battery Metals	PMET-CA	C\$	9.94	1104	960	NA	109.2	NA	1.42	NA	8.8	NA	252.6	22.89	0.43 PFS	Québec
Piedmont Lithium	PLL-US	US\$	36.48	725	627	66.0	80.6	1.19	1.14	13.0	10.7	448.7	381.9	131.05	0.28 FS	N Carolina
Rock Tech Lithium	RCK-CA	C\$	1.44	140	106	10.6	14.8	0.88	0.91	10.0	7.2	465.9	321.3	2.11	0.68 PFS	Ontario
Sayona Mining	SYA-AU	A\$	0.10	978	792	89.0	145.9	1.18	1.17	7.7	4.7	266.5	164.3	0.33	0.29 Production & exploration	Québec
Average						46.4	71.3	1.22	1.21	14.1	9.7	482.6	336.7	24.01	0.47	
Hard rock developers/explorers—Brazil																
Latin Resources	LRS-ASX	A\$	0.27	750	724	30.2	45.2	1.37	1.32	20.8	13.9	618.4	428.5	-	- Updated MRE	Brazil
Sigma Lithium	SGML-US	US\$	29.67	3,324	3,313	77.0	85.6	1.43	1.43	59.0	53.1	1,684.6	1,515.3	-	- Production	Brazil
Average—Brazil						53.6	65.4	1.40	1.38	39.9	33.5	1,151.5	971.9	NA	NA	
Average—all						47.8	70.2	1.25	1.24	19.3	14.0	616.4	452.2	24.01	0.47	
Median—all						28.2	58.6	1.32	1.32	12.9	8.8	502.3	321.3	4.16	0.38	
Lithium Ionic	LTH-CA	C\$	1.82	251	221	7.6	19.4	1.40	1.42	29.3	11.4	853.0	326.6	5.90	0.31 PEA	Brazil

Source: Desjardins Capital Markets, company reports, FactSet

We see potential upside to our NAV from:

- Continued drilling at Itinga, which could lead to resource upgrades. We note that SGS Geological Services (the independent consultant that carried out the maiden mineral resource estimate) identified the potential for additional lithium pegmatite, with estimated volumes of 1.5–3.0mt (at 1.3–1.6% Li₂O) at the eastern end of the Bandeira property.
- The Salinas project. Our NAV does not currently attribute any value for Salinas. This may change after Lithium Ionic releases a maiden mineral resource estimate for this project. We believe an initial resource at Salinas would likely be lower than Itinga's—around 10mt looks achievable, in our view.

Risks and uncertainties

Commodity price risk. The lithium market has historically exhibited large demand and supply imbalances, resulting in highly volatile prices for lithium and its derivatives (eg lithium carbonate, lithium hydroxide). A significant decline in the price of spodumene concentrate and/or lithium derivatives could have a significant impact on Lithium Ionic's performance and valuation.

Permitting risk. Failure or delays in obtaining permits and/or regulatory approvals would negatively impact the company's performance and valuation.

Financing risk. We expect that Lithium Ionic will need incremental funding to get its projects across the finish line.

Jurisdictional risk. We believe that emerging markets, including Brazil, carry heightened risk of economic or political shocks.

Key personnel risk. Lithium Ionic executives and board members possess extensive experience in the mining industry, including in Brazil. The loss of one or more executives could have an adverse effect on future business developments.

Lithium Ionic Corp.
Frederic Tremblay, CFA
Liam Bergevin,
Associate

Management and directors

Blake Hylands, CEO and director. Mr Hylands is a professional geoscientist with more than a decade of experience in advanced and early-stage exploration. Previously, he co-founded Troilus Gold, where he led the technical team to the discovery of >8moz Aueq at a development-stage asset in northern Québec. Mr Hylands has successfully trained and managed large teams with a focus on gold, base metals and iron ore in Canada and internationally including South America and Europe. Additionally, he has held numerous board positions at junior mining companies. He holds a BSc in geology from Western University in London, Ontario.

Hélio Diniz, president and director. Mr Diniz has 40 years of experience in exploration and mining activities and has served as the managing director of Brazil Potash since July 2009. He started his career with GENCOR South Africa and went on to work for Xstrata (now Glencore) as managing director, during which he discovered the world-class Araguaia nickel deposit (>100mt at 1.5% Ni). After that, he went on to set up several companies, such as Falcon Metais and HDX Consultoria, as an entrepreneur to identify, explore and develop mining opportunities in Brazil. He also founded and developed several companies for the Forbes & Manhattan group in different commodities such as potash (Brazil Potash), phosphate (Aguia Metais), gold (Belo Sun Mining) and oil shale (Irati Petroleo e Energia).

Tom Olesinski, CFO. Mr Olesinski has more than 20 years of finance and executive management experience. Previously, he worked as a managing forensic accountant for BDO Dunwoody, before moving into the marketing communications industry where he served as director of finance and operations for Cossette Communication Group. He also served as CEO and CFO at Havas Media Canada and as COO and CFO at Brainrider. He currently serves as a board member at Troilus Gold. Mr Olesinski holds a bachelor of commerce and economics from the University of Toronto and is a CPA.

Carlos Costa, vice-president, exploration. Mr Costa has 29 years of work experience in base metals, gold and PGE exploration throughout Brazil. He has participated in and managed several exploration programs, from regional grassroots to bankable feasibility studies. He also has 10 years of work experience in mine geology, including underground and open pit operations. Previously, he worked as Brazil's country manager for Emerita Resources, Belo Sun and Xstrata (former Falconbridge). He also worked for Vale and BP Mineração (British Petroleum Group). Mr Costa holds a P.Geo (APGO) and a BS in geology from Federal University of Rio de Janeiro.

Damian Lopez, corporate secretary. Mr Lopez is a corporate securities lawyer who works as a legal consultant to various listed companies on the TSX and TSX Venture Exchange. He was previously a securities and merger & acquisitions lawyer at a large Toronto corporate legal firm, where he worked on a variety of corporate and commercial transactions. Mr Lopez obtained a juris doctor from Osgoode Hall and received a bachelor of commerce with a major in economics from Rotman Commerce at the University of Toronto.

André Guimarães, vice-president, corporate development. Mr Guimarães is a geology graduate with a PhD specialization in igneous petrology who has more than 10 years of experience in research. Previously, he founded Neolit (acquired by Lithium Ionic in 2023) and has been directly involved in all corporate and exploration activities, including field work and contract negotiations. With his strong background in igneous petrology, he participates directly in the analysis and interpretation of geological data, particularly geochemical results.

Patrizia Ferrarese, non-executive director. Ms Ferrarese has more than 20 years of experience in capital markets, entrepreneurship and strategy consulting. She is currently vice-president of business design and innovation at Investment Planning Counsel. Prior to this, she held senior roles in product management and performance optimization at Tangerine Bank and Praxair. Her management

consulting experience includes engagements in South America and EMEA spanning the graphite, oil & gas and potash industries focused on identifying new market opportunities.

David Gower, non-executive director. Mr Gower has held executive and director positions with several junior and mid-size mining companies for the past 12 years, including Emerita Resources (CEO and director), Nobel Resources and Brazil Potash (president). He also spent more than 20 years with Falconbridge (now Glencore) as director of global nickel and PGM exploration and as a member of the senior operating team for mining projects and operations. Mr Gower is also a director of Alamos Gold.

Lawrence Guy, non-executive director. Mr Guy is currently CEO of North 52nd Asset Management and chair of Emerita Resources. Previously, he was a portfolio manager at Aston Hill and CFO and director at Navina Asset Management, a company he co-founded which was subsequently acquired by Aston Hill. Mr Guy has also held senior positions at Fairway Capital Management and First Trust. He holds a BA (economics) from Western University and is a CFA charterholder.

Michael Shuh, non-executive director. Mr Shuh is a managing director, investment banking, at Canaccord Genuity. He has more than 20 years of investment banking experience and leads the Financial Institutions Group at Canaccord Genuity. In addition, Mr Shuh has deep expertise in structured finance and special purpose acquisition corporations (SPACs). Mr Shuh received an honours bachelor of business administration from the Lazaridis School of Business and Economics at Wilfrid Laurier University and a master's of business administration from the Richard Ivey School of Business at Western University.

ESG overview

As a pre-production mining company, LTH is naturally exposed to ESG factors. In 2Q23, LTH began using ONYEN's ESG software to efficiently manage and monitor its sustainability reporting. This platform helps to capture, monitor, manage and report ESG risks and opportunities to ensure reporting accuracy to governments while fulfilling the requirements of international sustainability agencies.

Materiality issue	Management process, controls and measurement	Momentum
Environment		
<ul style="list-style-type: none"> • Ecological risk. Material risks associated with developing, operating and decommissioning of mining facilities, which could have an adverse impact on wildlife, land and water bodies. 	<ul style="list-style-type: none"> • LTH is in the early stages of the mining lifecycle and, thus, has a minimal land disturbance footprint and no significant operating or mine decommissioning activities. • Metric – NA. 	<ul style="list-style-type: none"> • Neutral. There is scope for the company to improve disclosure on environmental policies and practices on site.
<ul style="list-style-type: none"> • Emissions. Material risks associated with GHG emissions and other significant air emissions related to physical or chemical processing, transportation, generation of electricity and fugitive emissions (intentional or unintentional releases, such as leaks, emissions from mines and venting). 	<ul style="list-style-type: none"> • Relative to the broader mining industry, LTH emits few emissions due to the early-stage nature of its lithium projects. • Administrative office in Araçuaí is powered by hydroelectricity. • Metric – NA. 	<ul style="list-style-type: none"> • Neutral. There is scope for the company to improve disclosure on environmental policies and practices on site.
<ul style="list-style-type: none"> • Effluents and waste. Material risks associated with the amount and quality of water discharged, as well as the disposal of other waste materials including overburden, waste rock, tailings, sludges and other residues. 	<ul style="list-style-type: none"> • Relative to the broader mining industry, LTH generates little to no waste due to the early-stage nature of its Itinga and Salinas lithium projects. • Metric – 50% of non-hazardous waste is recycled on site. – 90% of water on site is recycled and recirculated. 	<ul style="list-style-type: none"> • Neutral. There is scope for the company to improve disclosure on environmental policies and practices on site.
Social		
<ul style="list-style-type: none"> • Occupational health and safety. Material risks associated with mining activities and processes, which require appropriate controls, processes and training to prevent on-the-job injuries and fatalities. Examples of potential hazards include ground instability and rockfall, mobile equipment, worker fatigue, occupational disease hazards and handling of hazardous chemicals such as cyanide. 	<ul style="list-style-type: none"> • Although no mining or processing operations exist currently, LTH is committed to following industry best safety practices when conducting exploration activities. • Daily "Work Safety Dialogue" to continually improve safety procedures and minimize potential incidents/accidents. • Metric – NA. 	<ul style="list-style-type: none"> • Neutral. There is scope for the company to improve disclosures on its health and safety management systems, training and reporting.

Materiality issue	Management process, controls and measurement	Momentum
<ul style="list-style-type: none"> • Labour practices. Given mining companies operate in a variety of jurisdictions, some of which have less stringent labour laws, it is important that they promote a stable and constructive labour relations climate which is inclusive and diverse and fosters productive workplace relationships. Failure to comply with the appropriate institutional and legal frameworks could lead to workplace disruptions and increased turnover. 	<ul style="list-style-type: none"> • Commitment to supporting regional employment by using local talent wherever possible throughout the various phases of the projects. • Metric – NA. 	<ul style="list-style-type: none"> • Neutral. Key areas where the company can improve disclosures are labour practices, employee training and employee turnover as the level of on-site activity increases.
<ul style="list-style-type: none"> • Community relations and Indigenous rights. Material risks associated with a company's exposure in operating on or near territory claimed by Indigenous communities. Approaches to community relations are of particular importance as mining companies can often become a significant presence in economic, social and environmental terms in communities that may otherwise be poor, small, remote or underdeveloped. 	<ul style="list-style-type: none"> • LTH has a community action plan and involves local citizens in its operations. • Initiatives include local bridge construction, hospital donations and planned church renovations. • Metric – 65% of LTH's procurement comes from local suppliers. 	<ul style="list-style-type: none"> • Positive. LTH continues to respect and support local communities.
Governance		
<ul style="list-style-type: none"> • Diversity. Risk that the company does not appropriately support diversity within the organization. 	<ul style="list-style-type: none"> • LTH seeks to create a diverse and inclusive work environment. • Metric – 20% of employees on site are women. – Visible minorities comprise more than 50% of the management team. 	<ul style="list-style-type: none"> • Positive. LTH supports diversity, although there is scope for improvement (eg proportion of female employees on site).
<ul style="list-style-type: none"> • Anti-bribery and anti-corruption. Mining companies may operate in a variety of remote jurisdictions that require large volumes of cash to pay for goods and services. Lack of adequate systems to record the movement of cash can result in corruption scandals, which can have an adverse impact on companies and their investors. 	<ul style="list-style-type: none"> • LTH adheres to a code of business conduct and ethics which outlines rules and expectations surrounding abuse, violence, discrimination, illegal activities, conflicts of interest and unethical behaviour. • Anti-bribery policy. • Whistle-blower policy. • Metric – NA. 	<ul style="list-style-type: none"> • Neutral. There is scope for the company to improve disclosure on its anti-bribery and anti-corruption training programs for employees.

Appendix
Drill cores

Exhibit 26: Bandeira (hole ITDD-23-065)



Source: Company presentation

Exhibit 27: Salinas (hole SLOE-D018)



Source: Company presentation

Tearsheet

Lithium Ionic Corp. (LTH)						Analyst: Frederic Tremblay • (514) 841-0283 • frederic.a.tremblay@desjardins.com																															
Ticker	LTH, TSX-V					Fiscal year-end	Dec-31																														
Current price (C\$)	1.82					52-week high (C\$)	3.05																														
Stock rating	Buy					52-week low (C\$)	1.27																														
Target price (C\$)	5.25					P/NAV (x)	0.31																														
Potential total return	188%					NAV target multiple (x)	0.90																														
Risk rating	Speculative					EV/NTM EBITDA (x)	NM																														
Shares outstanding (m)	138.2					EBITDA target multiple (x)	NM																														
Market capitalization (C\$m)	251.5					FCF yield FY1 (%)	NM																														
Price forecasts						Stock/volume chart																															
	2023E	2024E	2025E	LT																																	
Spodumene concentrate (US\$/t)	4,000	3,500	2,500	1,500																																	
Financial forecasts						NAV summary																															
	2021	2022	2023E	2024E	2025E	<table border="1"> <thead> <tr> <th></th> <th>Ownership (%)</th> <th>NAVPS (C\$)</th> </tr> </thead> <tbody> <tr> <td>Itinga project</td> <td>100</td> <td>5.38</td> </tr> <tr> <td>Exploration, projects and other</td> <td></td> <td>0.00</td> </tr> <tr> <td>Cash and cash equivalents</td> <td></td> <td>0.15</td> </tr> <tr> <td>Future equity issuances and exercise of warrants</td> <td></td> <td>0.72</td> </tr> <tr> <td>Debt</td> <td></td> <td>0.00</td> </tr> <tr> <td>Corporate G&A</td> <td></td> <td>-0.35</td> </tr> <tr> <td>Total NAVPS</td> <td></td> <td>5.90</td> </tr> <tr> <td>P/NAV (x)</td> <td></td> <td>0.31</td> </tr> <tr> <td>Shares outstanding including future issuance (FD) (m)</td> <td></td> <td>196.4</td> </tr> </tbody> </table>			Ownership (%)	NAVPS (C\$)	Itinga project	100	5.38	Exploration, projects and other		0.00	Cash and cash equivalents		0.15	Future equity issuances and exercise of warrants		0.72	Debt		0.00	Corporate G&A		-0.35	Total NAVPS		5.90	P/NAV (x)		0.31	Shares outstanding including future issuance (FD) (m)		196.4
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Balance sheet (C\$m)						NAV sensitivity																															
Cash and cash equivalents	1	21	17	85	33																																
Total debt	0	0	0	100	140																																
Income statement (C\$m)						Capital structure																															
Revenue	0	0	0	0	0	<table border="1"> <thead> <tr> <th></th> <th>Shares outstanding (m)</th> </tr> </thead> <tbody> <tr> <td>As at June 2023</td> <td>138.2</td> </tr> </tbody> </table>			Shares outstanding (m)	As at June 2023	138.2																										
	Shares outstanding (m)																																				
As at June 2023	138.2																																				
Cost of sales	0	0	0	0	0																																
Operating expenses	0	27	58	45	53	<table border="1"> <thead> <tr> <th></th> <th>% outstanding</th> <th>Shares (m)</th> </tr> </thead> <tbody> <tr> <td>Diniz, Hélio Botelho</td> <td>7.0</td> <td>8.4</td> </tr> <tr> <td>Guy, Michael Lawrence</td> <td>4.1</td> <td>4.9</td> </tr> <tr> <td>Rezende Guimarães, André</td> <td>3.3</td> <td>4.0</td> </tr> <tr> <td>Gower, David Patrick</td> <td>2.1</td> <td>2.5</td> </tr> <tr> <td>JGP Global Gestao de Recursos Ltda.</td> <td>1.8</td> <td>2.2</td> </tr> <tr> <td>Lopez, Damian</td> <td>1.5</td> <td>1.8</td> </tr> </tbody> </table>			% outstanding	Shares (m)	Diniz, Hélio Botelho	7.0	8.4	Guy, Michael Lawrence	4.1	4.9	Rezende Guimarães, André	3.3	4.0	Gower, David Patrick	2.1	2.5	JGP Global Gestao de Recursos Ltda.	1.8	2.2	Lopez, Damian	1.5	1.8									
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EBITDA	0	-27	-58	-45	-53																																
Net income	0	-26	-58	-48	-58																																
Cash flow (C\$m)						Reserves and resources																															
Operating CF before W/C	0	-15	-36	-44	-50	<table border="1"> <thead> <tr> <th></th> <th>Tonnes (mt)</th> <th>Grade (Li₂O %)</th> <th>Contained Li₂O (kt)</th> </tr> </thead> <tbody> <tr> <td>As at June 2023</td> <td></td> <td></td> <td></td> </tr> <tr> <td>M&I resources</td> <td>7.6</td> <td>1.40</td> <td>106.0</td> </tr> <tr> <td>Inferred resources</td> <td>11.9</td> <td>1.44</td> <td>170.3</td> </tr> <tr> <td>Total</td> <td>19.4</td> <td>1.42</td> <td>275.8</td> </tr> </tbody> </table>			Tonnes (mt)	Grade (Li ₂ O %)	Contained Li ₂ O (kt)	As at June 2023				M&I resources	7.6	1.40	106.0	Inferred resources	11.9	1.44	170.3	Total	19.4	1.42	275.8										
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Capital expenditure	0	0	0	-90	-132																																
Equity issuance	0	39	27	100	40																																
Debt issuance or offtake prepay	0	0	0	100	90																																
Free cash flow	0	-15	-37	-133	-182																																
Per share data (C\$/FD share)						Source: Desjardins Capital Markets, FactSet, company reports																															
EPS FD	-0.01	-0.28	-0.45	-0.28	-0.30																																
CFPS before W/C	-0.01	-0.15	-0.28	-0.25	-0.26																																
FCFPS	0.00	-0.16	-0.29	-0.78	-0.93																																
Weighted avg basic shares O/S (m)	10	94	129	172	196																																
Weighted avg diluted shares O/S (m)	10	94	129	172	196																																
Operational data																																					
Production profile																																					
Spodumene concentrate (t)	2021	2022	2023E	2024E	2025E																																
	0	0	0	0	0																																
Production profile																																					
(000 tonnes) (LHS) / (t/US\$m) (RHS)																																					
Legend: Outro Lado (LHS), Bandeira (LHS), AISC (RHS)																																					

DISCLOSURES

COMPANY-SPECIFIC DISCLOSURES

The Desjardins Capital Markets research analyst(s) and/or associate(s) had communication with Lithium Ionic Corp. regarding the verification of factual material in this research publication.

Desjardins Capital Markets has performed investment banking services for Lithium Ionic Corp. and Sayona Mining Limited in the past 12 months.

Desjardins Capital Markets has received compensation for investment banking services from Lithium Ionic Corp. and Sayona Mining Limited within the past 12 months.

Desjardins Capital Markets has managed or co-managed a public offering of securities for Lithium Ionic Corp. and Sayona Mining Limited in the past 12 months.

The Desjardins Capital Markets research analyst(s) and/or associate(s) has viewed a material operation of Lithium Ionic Corp., Frontier Lithium Inc. and Patriot Battery Metals Inc., which includes but is not limited to mines, distribution centres, warehouses, production plants and/or other facilities related to the day-to-day operations of Lithium Ionic Corp., Frontier Lithium Inc. and Patriot Battery Metals Inc. as applicable, and the related travel expenses have not been paid for by the issuer.

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STOCK RATING SYSTEM

Top Pick	Buy	Hold	Sell	Not Rated
Desjardins' best investment ideas—stocks that offer the best risk/reward ratio and that are expected to significantly outperform their respective peer group* over a 12-month period	Stocks that are expected to outperform their respective peer group* over a 12-month period	Stocks that are expected to perform in line with their respective peer group* over a 12-month period	Stocks that are expected to underperform their respective peer group* over a 12-month period (includes recommendations to tender to a takeover offer)	Stock is being covered exclusively on an informational basis

RISK QUALIFIERS

Average Risk	Above-average Risk	Speculative
Risk represented by the stock is in line with its peer group* in terms of volatility, liquidity and earnings predictability	Risk represented by the stock is greater than that of its peer group* in terms of volatility, liquidity and earnings predictability	High degree of risk represented by the stock, marked by an exceptionally low level of predictability

* Peer group refers to all of the companies that an analyst has under coverage and does not necessarily correspond to what would typically be considered an industry group. Where an analyst's coverage universe is such that 'relative' performance against a 'peer group' is not meaningful, the analyst will benchmark the rating against the most appropriate market index

Distribution of ratings

Rating category	Desjardins rating	Desjardins coverage universe (# of stocks)	% distribution	Desjardins Investment Banking (# of stocks)	% distribution
Buy	Buy/Top Pick	115	71	92	71
Hold	Hold	44	27	33	26
Sell	Sell/Tender	4	2	4	3
Total		163	100	129	100

Lithium Ionic Corp. Rating History as of 10-03-2023

Powered by: BlueMatrix


Frontier Lithium Inc. Rating History as of 10-03-2023

Powered by: BlueMatrix


Patriot Battery Metals Inc. Rating History as of 10-03-2023

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Sayona Mining Limited Rating History as of 10-03-2023

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Chart legend: TP: Top Pick, B: Buy, H: Hold, S: Sell, NR: Not Rated, I: Company initiation, T: Transfer of coverage, S: Coverage suspended, DC: Coverage dropped

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