

## Lithium Ionic Corp.

LTH-TSX.V: \$1.57  
Rating: Watch List  
Target: NA

### Lithium Ionic Corp. (LTH-TSX.V)

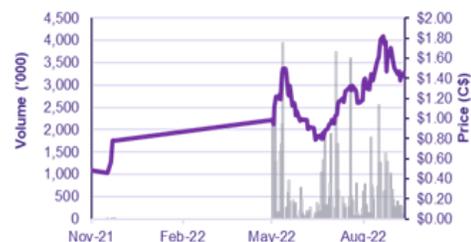
Stock Data	
Previous Close (C\$)	\$1.57
52-Week High-Low	\$1.84 / \$0.46
Avg. Daily Volume (3M)	669,544
Basic SO (MM)	117
Fully Diluted SO (MM)	127
Market Cap. (C\$ MM)	\$183
Cash (C\$ MM)	\$40
Enterprise Value (C\$ MM)	\$143

### Company Information

Projects	Galvani / Itinga
Project Location	Minas Gerais, Brazil

### Management

CEO	Blake Hylands
President	Helio Diniz



### Company

Lithium Ionic (LTH) is exploring its 100% owned Itinga & Galvani hard rock spodumene projects in Brazil's only lithium producing belt in Minas Gerais, the country's most mining friendly jurisdiction. The claims are located within 800 m of the CBL Mine (private) that has been in production for multiple decades (since 1993, 36k tpy of SC5.5%) and <4 km from near-term producer, SGML (@ ~34k tpy LCE in SC6% from 2023). LTH is in carrying out a 30,000 m drill program (5 rigs), focusing on Galvani & Area 1 while advancing other targets towards drilling with the objective of delineating a maiden resource in Q1/23 targeting 10 – 15 Mt.

## Multi-Billion Dollar Blueprint Next Door

October 6, 2022

### Location, Location, Location!

- Next to Sigma's soon to be producing Grota Do Cirilo mine (est. US\$5.1 Bn NPV8%).
- Located in a region that is emerging as one of the largest hard rock lithium producing districts, globally.
- Incredible economics due to high grades and established infrastructure.
- Potential to quickly build economic open pit tonnage; initial resource in Q1/23.
- Fast path to production (Sigma ~5 years from resource to production during COVID).

Lithium Ionic (LTH) is exploring its 100% owned Itinga & Galvani hard rock spodumene projects in an emerging world-class lithium district in Minas Gerais, the most mining friendly jurisdiction in Brazil. While early, we think exploration success could quickly transform these projects into sizeable deposits, supporting multi-billion dollar NPV with similarities to the next door neighbour – Sigma Lithium's (SGML-TSX.V; M. Cap. ~C\$4.0 Bn) Grota Do Cirilo project. This could drive outsized returns for early investors in LTH. We are adding LTH to our **WATCH LIST**.

**EMERGING GLOBALLY SIGNIFICANT LITHIUM DISTRICT:** Itinga & Galvani claims (+1,300 ha) are located within 800 m of the CBL Mine (private) that has been in production since 1993 (36k tpy of SC5.5%) and <4 km from near-term producer, SGML at ~34k tpy LCE in 2023 growing to ~70k tpy in 2024, making it one of the largest hard rock lithium mines in the world.

**LITHIUM FRIENDLY JURISDICTION:** Brazil has eased rules that allows unrestricted trade in lithium exports. Minas Gerais is a traditional mining jurisdiction with an efficient permitting process, access to deep sea ports, clean power and labour. We highlight that SGML progressed from first resource definition (2018) to production in ~5 years. In addition, industrial projects in the area, incl. SGML's Grota Do Cirilo, are expected to benefit from a potential ~75% reduction in corporate tax rate (Sudene program).

**PEGMATITE GEOLOGY ALLOWS SWIFTLY BUILDING A RESOURCE:** Spodumene bearing pegmatites are typically highly continuous in nature and do not require high drill density for resource delineation. Case in point, the ~17.4 Mt in M&I at SGML's Xuxa was defined based on just ~15,500 m of drilling across 100 holes.

**MULTIPLE TARGETS BEING DRILLED:** Multiple zones at both Area 1 and the flagship Galvani assets will be drilled this year.

**GALVANI LOOKING LIKE A SIZEABLE DEPOSIT ALREADY:** 11 shallow holes to date from Galvani (<4 km west of Xuxa) returned grades & widths similar to Xuxa with our est. avg. of ~1.5% Li<sub>2</sub>O over ~17 m over an ~800 m strike length & ~80 – 115 m depth (vs 259 m at Xuxa). Galvani remains open for expansion with potential for +10 Mt with continued drilling success. We see similar potential at Area 1 (Itinga project), located directly south of CBL mine & north of SGML's Barreiro (~29 Mt at ~1.4% Li<sub>2</sub>O), with several lithium pegmatite outcrops & Li anomalies (>3 km). Recent drilling incl. ~5.7 m at 1.93% Li<sub>2</sub>O & 8.8 m at 1.46% Li<sub>2</sub>O (trench) from Area 1.

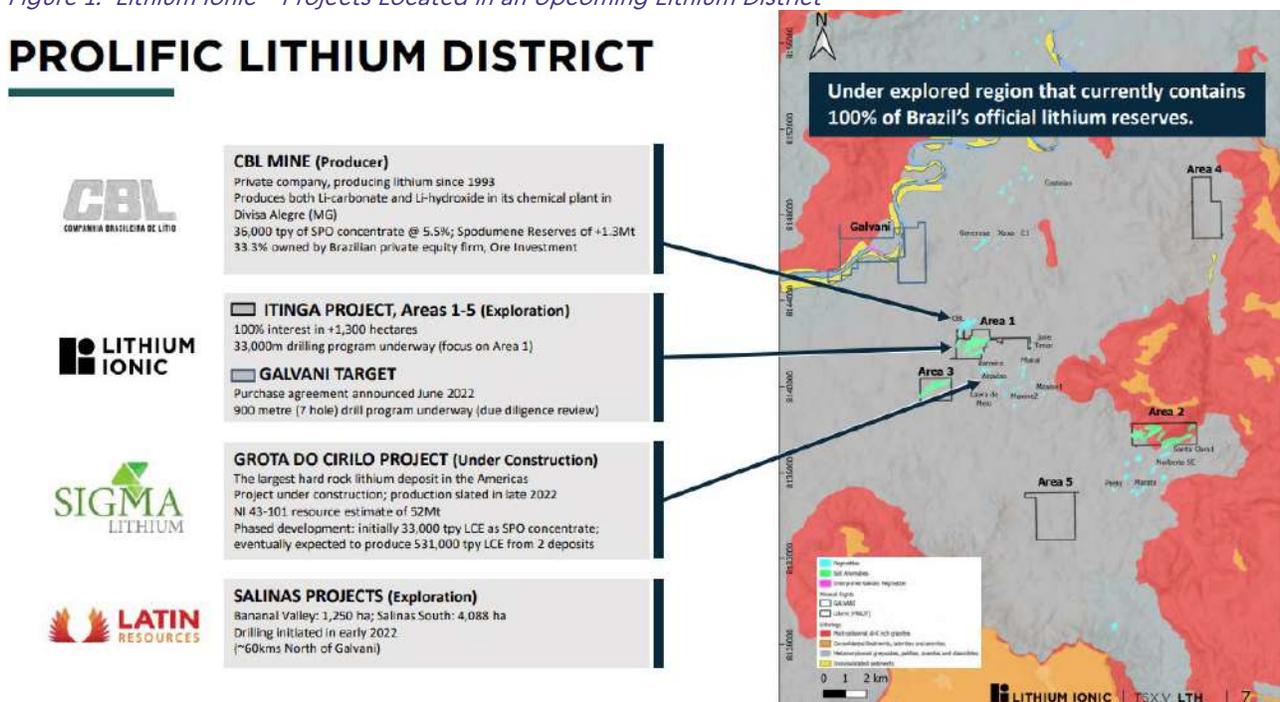
**FULLY-FUNDED DRILLING; MAIDEN RESOURCE Q1/23:** LTH is in the midst of an aggressive 30,000 m drill program (5 rigs), focusing on developing resources at Galvani & Area 1 while advancing other targets towards drilling. With the recent C\$25 MM financing and inexpensive shallow drilling (~US\$100/m), LTH is well funded to complete the program by year-end. A maiden resource is expected in Q1/23 targeting 10 – 20 Mt, which should provide the critical mass to support a mine.

**EVEN A SMALL RESOURCE CAN BE HUGE ECONOMIC:** The capital & time efficiencies coupled with low operating costs and tailwinds for high prices for lithium compounds imply that producers do not need a huge resource for a profitable project. Conceptually, a P&P resource of only 6Mt @ 1.5% Li<sub>2</sub>O, ~½ the size of SGML's Phase I Xuxa deposit, could drive an NPV8% of US\$950 MM for SC6% or ~US\$1.1 Bn for SC5.5%, with a conceptual project capex of US\$165 MM.

**SIGNIFICANT UPSIDE POTENTIAL AND LOTS OF SHOTS AT THE NET:** Under our conceptual small scale P&P resource of 6Mt at 1.5% Li<sub>2</sub>O, LTH is trading at 0.25x P/NAV, a significant discount to developer peers trading at an average of 0.48x and emerging producer peers at 0.87x, respectively, while the significantly advanced stage next door neighbour – SGML trades at 1.17x. We think there is a strong re-rate potential as LTH continues to unlock value with the drill bit and derisks the project with a maiden resource expected in Q1/23. We further note that the +1,300 ha land package with numerous pegmatite outcrops and several kilometers of lithium soil anomalies offer multiple shots at potentially multiple meaningful discoveries.

Figure 1: Lithium Ionic – Projects Located in an Upcoming Lithium District

## PROLIFIC LITHIUM DISTRICT



Source: Company Reports

Figure 2: LTH Comps

Hard Rock Lithium Comps												VALUATION		
Company	Ticker	Share Price (Local)	Mkt. Cap. (CSMM)	EV (CSMM)	Project	Type	Location	Stage	Resource Attri. kt LCE	Grade Li <sub>2</sub> O %	Production Attri. kt LCE/yr	EV / Resource EV/t (C\$/LCE)	EV/Prod. EV/t (C\$/LCE Prod.)	P/NAV
<b>EXPLORERS</b>														
Latin Resources Ltd	LRS-ASX	0.11	\$190	\$161	Salinas	SC	Brazil	Exploration	NA	NA	NA	NA	NA	NA
Patriot Battery Metals Inc	PMET-TSX.V	6.10	\$547	\$539	Corvette	SC	Quebec	Exploration	NA	NA	NA	NA	NA	0.57x
International Lithium Corp	ILC-TSX.V	0.07	\$17	\$7	Raleigh Lake	SC	Ontario	Exploration	NA	NA	NA	NA	NA	NA
Essential Metals Ltd	ESS-ASX	0.46	\$100	\$91	Dome North	SC	Australia	Exploration	335	1.21%	NA	\$272	NA	NA
Global Lithium Resources Ltd	GLI-ASX	2.28	\$318	\$289	Marble, Manna	SC	Australia	Exploration	482	1.10%	NA	\$599	NA	NA
<b>Group Average</b>			<b>\$235</b>	<b>\$217</b>					<b>409</b>	<b>1.15%</b>	<b>NA</b>	<b>\$435</b>	<b>NA</b>	<b>0.57x</b>
<b>DEVELOPERS</b>														
Atlantic Lithium Ltd	ALLA-LSE	0.35	\$332	\$311	Ewroyaa	SC	Ghana	PEA	795	1.27%	22	\$391	\$13,996	NA
Leo Lithium Ltd	LLL-ASX	0.58	\$499	\$422	Goulamina	SC	Mali	DFS	1,934	1.45%	108	\$218	\$3,924	0.30x
Frontier Lithium Inc	FL-TSX.V	2.08	\$443	\$426	PAK	SC, Integrated	Ontario	PEA	1,594	1.54%	23	\$268	\$18,543	0.44x
Rock Tech Lithium Inc	RCK-TSX.V	2.74	\$201	\$178	Georgia, Guben	SC, Converter	Ontario; Germany	PEA/Eng.	357	1.09%	33	\$500	\$5,351	0.61x
<b>Group Average</b>			<b>\$369</b>	<b>\$335</b>					<b>1,170</b>	<b>1.42%</b>	<b>47</b>	<b>\$344</b>	<b>\$10,454</b>	<b>0.45x</b>
<b>EMERGING PRODUCERS (2024 or Earlier)</b>														
Critical Elements Lithium Corp	CRE-TSX.V	1.73	\$363	\$329	Rose	SC	Quebec	FS	826	0.98%	37	\$398	\$8,943	0.31x
Sigma Lithium Corp	SGML-TSX.V	39.22	\$3,949	\$3,820	GDC	SC	Brazil	Construction	3,032	1.43%	72	\$1,260	\$52,954	1.15x
Sayona Mining Ltd	SYA-ASX	0.24	\$1,716	\$1,552	Multiple	SC	Quebec	Permitting	2,428	1.05%	38	\$639	\$41,383	NA
Piedmont Lithium Inc	PLL-NASDAQ	55.41	\$1,345	\$1,345	Multiple	SC, Integrated	USA, Ghana	Permitting	2,420	1.09%	91	\$556	\$14,791	NA
Liontown Resources Ltd	LTR-ASX	1.61	\$3,107	\$2,705	Kathleen	SC	Australia	Construction	5,394	1.40%	85	\$501	\$31,742	0.70x
Core Lithium Ltd	CXO-ASX	1.15	\$1,748	\$1,628	Finniss	SC	Australia	Construction	616	1.32%	24	\$2,642	\$68,672	1.23x
<b>Group Average</b>			<b>\$2,038</b>	<b>\$1,897</b>					<b>2,453</b>	<b>1.27%</b>	<b>58</b>	<b>\$1,000</b>	<b>\$36,414</b>	<b>0.85x</b>
Lithium Ionic Corp (pro-forma)	LTH-TSX.V	1.57	\$183	\$143	Galvani	SC	Brazil	Exploration	NA	NA	NA	NA	NA	NA
<b>Lithium Ionic Corp (Clarus Conceptual)</b>	<b>LTH-TSX.V</b>	<b>1.57</b>	<b>\$183</b>	<b>\$143</b>	<b>Galvani</b>	<b>SC</b>	<b>Brazil</b>	<b>Exploration</b>	<b>222</b>	<b>1.50%</b>	<b>33</b>	<b>\$645</b>	<b>\$4,300</b>	<b>0.25x</b>

Source: Company Reports; Refinitiv; Clarus Securities Inc.

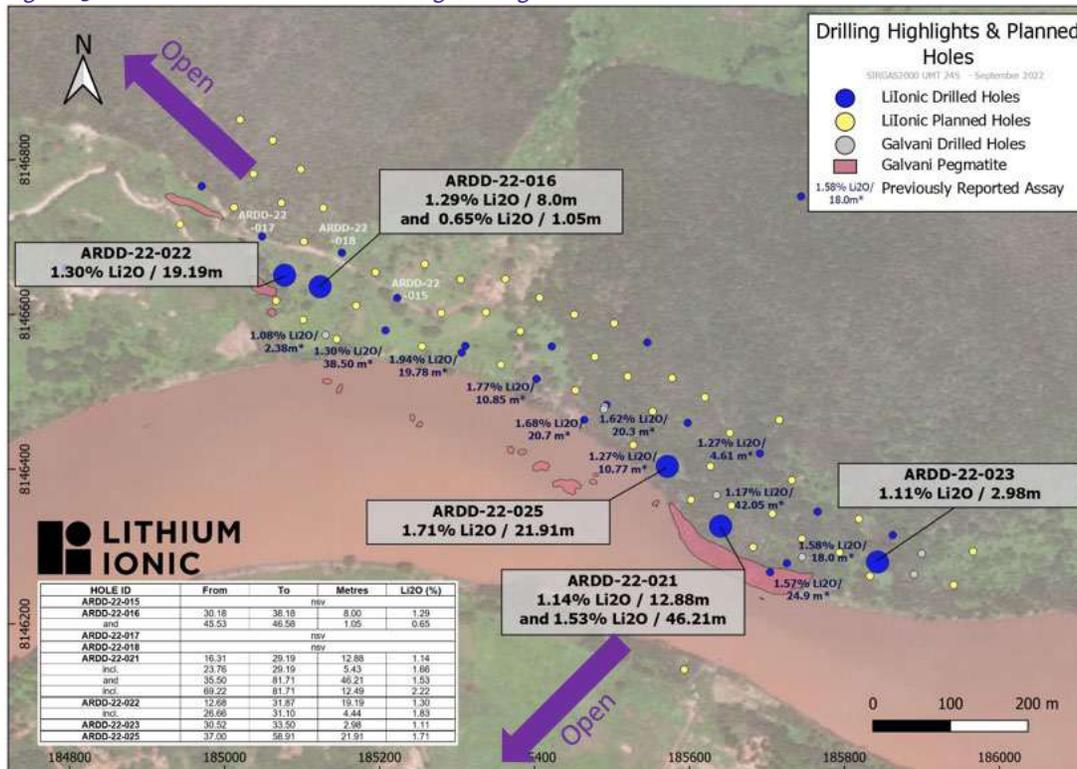
## Asset Summary

Lithium Ionic owns 100% of +1,300 ha over 7 claims across Galvani (2 claims) and Itinga (5 claims). The claims are located ~25 km east of the town of Aracuai in Minas Gerais Province, Brazil. The location is well known for pegmatite occurrences (>100 known occurrences). We think the district has the potential to become one of the major lithium producing regions in the world. CBL mine (private) has been producing lithium concentrate and hydroxide decades (since 1993, 36k tpy of spodumene concentrate (SC) grading 5.50% Li<sub>2</sub>O). Sigma Lithium (SGML; market cap. ~C\$4.0 Bn) is expected to commence production in 2023 at ~34k tpy LCE in SC6%. In addition, ASX listed Latin Resources (LRS-ASX; market cap. ~C\$190 MM) is also advancing its Salinas project in the area towards a maiden resource expected in December 2022.

## Galvani – Already Looks Like a Meaningful Deposit

The Galvani project comprises two licenses that are strategically located ~2 km to the west of Xuxa lithium deposit (~21Mt at 1.56% Li<sub>2</sub>O global resource) and ~3 km to the northwest of the CBL lithium mining operation. Lithium Ionic acquired the claims in September 2022 for US\$3.3 MM in cash. If LTH establishes a minimum of 5Mt at 1.3% Li<sub>2</sub>O resource at Galvani, a contingent payment of US\$2 MM in shares (at min. C\$0.90/share) plus US\$2 MM in cash will be owed to the vendor. Management also plans to acquire additional prospective land around Galvani.

Figure 3: Galvani – Outro Lado Showing Drilling



Source: Company Reports; Clarus Securities Inc.

Mineralization at Galvani is hosted in the same spodumene bearing pegmatites sourced from the same granitic intrusive that characterizes CBL's lithium mine and SGML's deposits. The previous operator had identified the Outro Lado showing at Galvani and conducted a small scale drill program (7 holes) that indicated potential for a significant resource at the property. **Significant historic drill results incl. 20.25 m at 1.62% Li<sub>2</sub>O, 18 m at 1.58% Li<sub>2</sub>O and 12 m at 1.78% Li<sub>2</sub>O over a ~700 m spodumene bearing pegmatite trend that is currently understood to be oriented in an east-west direction.**

Prior to completing the acquisition, LTH completed an extensive due diligence drilling program (+900 m), drilling at the Outro Lado showing. The topography is favourable for drilling, supporting relatively low drilling cost (~US\$100/m). The drill program was targeted at confirming the historic drilling, testing up and down dip of the mineralized pegmatites and determine the structural controls of the mineralization. LTH continues to drill with 3 rigs at Galvani. Key takeaways from the drilling to date:

Figure 4: Galvani – Could grow to be comparable in size and grade to SGML's Xuxa

Galvani Drill Tested Dimensions To date		Galvani *	Xuxa
Strike	m	800	1700
Width	m	17	12.5
Vertical	m	115	259
Average Grade	% Li <sub>2</sub> O	1.46%	1.56%

\* Rough resource block based on drill tested dimensions & grade to date – Clarus estimates

Source: Company Reports; Clarus Securities Inc.

- Drilling to date has validated the historic drilling, not only confirming the ~700 m of the known strike length of the spodumene bearing pegmatite trend but also successfully extended it by 100 m. Geological mapping indicates that this pegmatite trend continues for over a kilometer to west.
- Significant LTH drill intercepts incl.: *46.2 m at 1.53% Li<sub>2</sub>O; 38.5 m at 1.3% Li<sub>2</sub>O; 19.8 m at 1.94% Li<sub>2</sub>O; 21.9 m at 1.71% Li<sub>2</sub>O.*
- **A potentially game-changing concept being tested:**
  - Interestingly, all the mineralized trends in the region, including Xuxa & Barreiro, are oriented NE-SW.
  - Outro Lado has so far been tested over ~800 m along the east-west direction. The pegmatites are being mapped beyond +1 km to the west.
  - While early, management believes that there may be a bigger trend oriented in the NE-SW direction and the ~1 km east-west trend may actually be the width of a potential NE-SW trend at the Outro Lado showing.
  - Drilling from south of the river is planned to test this concept. If drilling succeeds in proving this concept, it could have major implications for the size potential for the resource envelope.
- **Swiftly building bulk tonnage:**
  - Galvani's grade, width and strike profile are all pointing to the potential to build Xuxa size deposit. For the drill assays released to date (11 holes assayed), we estimate a wtd. avg. grade of 1.46% Li<sub>2</sub>O over an average intercept of ~17 m.
  - Mineralization has been intersected from surface and confirmed down to a vertical depth of ~115 m.
  - Drill tested strike length of ~800 m (vs 700 m known strike length of the spodumene bearing pegmatite).
  - *While early and will need more infill drilling, we see conceptual potential for +4 Mt at ~1.5% Li<sub>2</sub>O resource just based on the drilled dimensions to date.*
  - The spodumene bearing pegmatite has a drill tested strike length of 800 m while new zones of mineralization with strong lithium values over significant widths have been identified beyond this.
  - *We think continued exploration success could, at a minimum, unlock a potentially 10 – 20 Mt of high grade (~1.5% Li<sub>2</sub>O) open-pit deposit at Galvani.*
- **Comparable to Sigma's Xuxa:**
  - The Galvani property is located less than 4 km from Sigma Lithium's Xuxa deposit (~21Mt grading 1.56% Li<sub>2</sub>O global resource).
  - For comparison, Xuxa's widths are in the range of 15 – 20 m. Galvani's drilling to date (incl. historic) indicates potential for similar widths and grade.

- At these widths, LTH should be swiftly able to build large tonnage with potential for +10 Mt at Galvani alone.
- **Extremely robust economics:**
  - The capital and time efficiencies (Sigma timeline: staking to production in 6 years) coupled with low operating costs imply that lithium producers do not need a huge resource for a profitable project.
  - The potential open-pit economics should look compelling with near-surface and wide mineralization.
  - *Conceptually, a 2P resource of 6Mt @ 1.5% Li<sub>2</sub>O, ~ ½ the size of Sigma's Phase I Xuxa deposit, could result in an NPV of US\$950 MM for SC6% or ~US\$1.1 Bn for SC5.5% concentrate.*
  - This conceptual scenario assumes the same build as Sigma's Phase I but with 20% capex inflation and US\$2,500/t SC6% price.
  - Additionally, pegmatite deposits are typically highly continuous and do not require the huge amount of drilling as narrow vein gold deposits. In fact, Sigma's Xuxa (17.4Mt at 1.55% Li<sub>2</sub>O in M&I) was defined with <20,000m of drilling.
- Note that the drill results released so far are all from the Outro Lado showing while pegmatites have been found all over the Galvani property. Management plans to drill test these over the coming months and exploration success outside the Outro Lado showing will further enhance the potential to quickly build economic tonnage.
- Management expects to release a couple more holes pending from the due diligence program over the coming weeks. The turnaround times for assays are very reasonable at ~3 – 4 weeks.

## Itinga

The Itinga project comprises 5 claims (Area 1 – 5) with Area 1 being the most advanced, although still at a very early stage with only a few holes drilled. All the claims have multiple pegmatite outcrops and Li anomalies over >3 km of strike extent. There are currently 2 drill rigs turning in addition to more trenching at Area 1. Once trenching is completed at Area 1, management plans to start trenching at Area 2 to advance it towards drilling. Overall, we think drilling success could unlock potential for +10 Mt at the Itinga project.

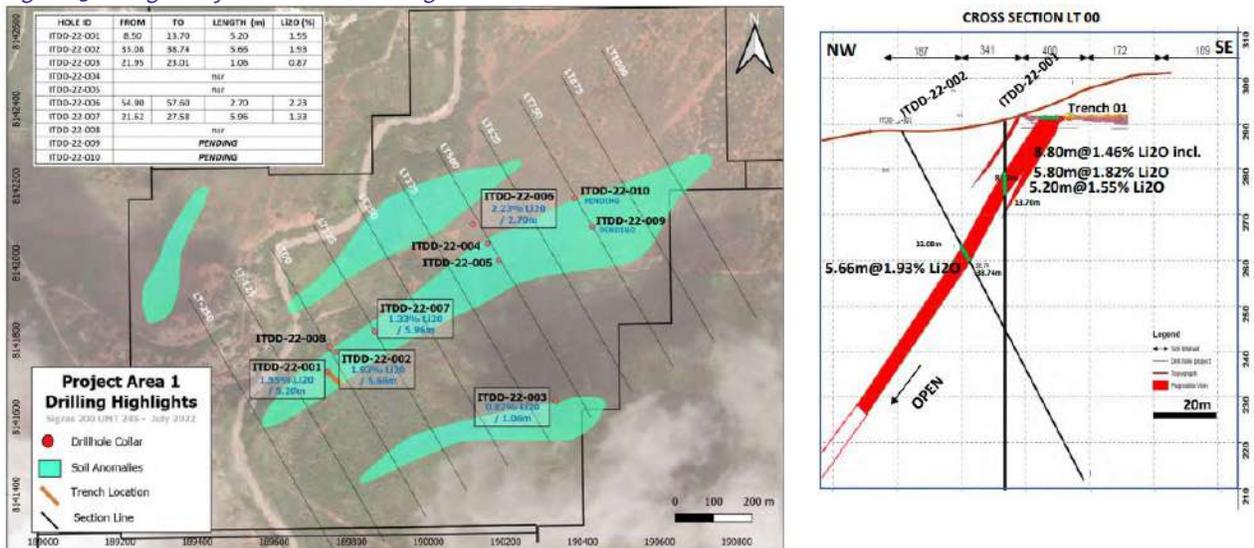
### Area 1

The mineralization is associated with a 1.3 km lithium soil anomaly located ~500 m south of the producing CBL lithium mine and north of SGML's Barreiro deposit (~29 Mt grading ~1.4% Li<sub>2</sub>O). The drill program is designed to test the depth extension and continuity of high-grade results from trenching at Area 1. Key highlights and takeaways:

- **High Grade Hits:** Incl. 5.66 m at 1.93% Li<sub>2</sub>O; 5.2 m at 1.55% Li<sub>2</sub>O in holes #001 & 002. These are similar grades and widths that being mined at the CBL lithium mine.
- **Starts at surface:** These intercepts are ~8m and ~35m beneath a surface trench that ran 8.8m @ 1.46%.

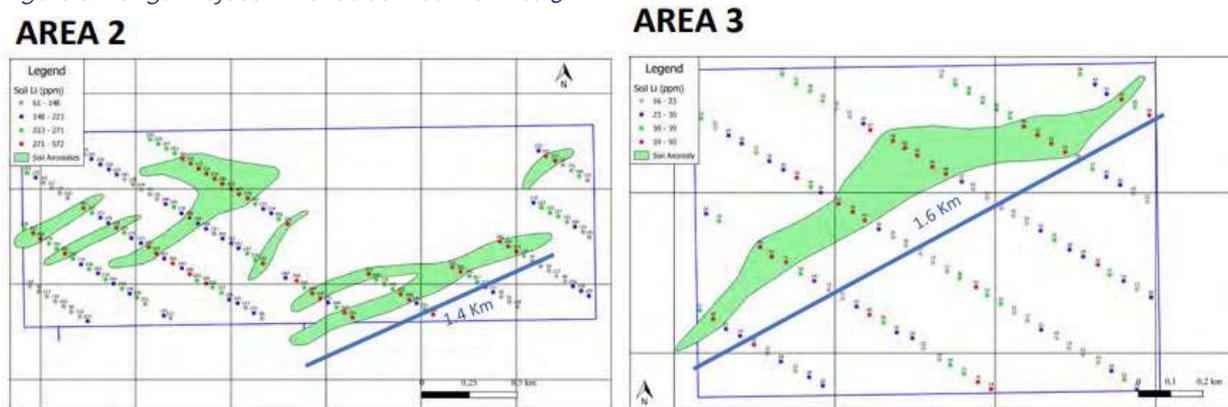
- **Strong Potential for Expansion:** Initial structure has been traced for 1.3 km with step out drilling and additional trenching ongoing to continue expanding the potential resource footprint.
- We note that follow-up drilling NE of holes #001 & #002 returned high grade intercepts some ~500 m along strike, albeit at skinnier widths, incl. 2.7 m at 2.23%. We note that these are early days and future drilling may vector into thicker zones of mineralization at Area 1.
- Potential for multiple parallel veins, similar to CBL's lithium mine.

Figure 5: Itinga Project – Area 1 Drilling



Source: Company Reports

Figure 6: Itinga Project – Trends at Area 2 & Area 3



Source: Company Reports

## Catalysts

1. Galvani infill drill holes from the due diligence program – Near-term;
2. Additional trenching results from Area 1 at the Itinga project – Near-term;
3. Commencement of trenching at Area 2 – post Area 1 trenching;
4. Completion of +30,000 m planned drill program – year end 2022;
5. Maiden resource – Q1/2023 (Clarus est.).

Figure 7: LTH Progression, Aggressive Drill Program & Maiden Resource Expected year-end or Q1/23



Source: Company Reports

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