

Brazil's Lithium Valley Well Positioned To Weather Sector Headwinds

Sigma Lithium Corp.

(SGML-TSXV, -Nasdaq; C\$55.00 Target, Buy Rec.)

Atlas Lithium Corp.

(ATLX-Nasdaq; Not Rated)

Lithium Ionic Corp.

(LTH-TSXV; Not Rated)

Latin Resources Ltd.

(LRS-ASX; Not Rated)

Unless otherwise denoted, all figures shown in US\$

A series of late November 2023 site visits in Brazil's prolific state of Minas Gerais highlighted a potent opportunity for the near-term development of new, high-quality (low impurity, high grade), near-surface (underexplored) hard rock lithium projects, due to the region's favourable permitting attitude, low cost environment, highly experienced workforce, and excellent mineral endowment. **Although ongoing development of Brazil's 'Lithium Valley' may seem at odds with trends in global jurisdictions where production is currently being curtailed, such as Western Australia and China, it highlights the importance of understanding regional considerations (in particular, related to costs) when investing in the battery materials space.**

Key Points:

- **First Mover Sigma A Pioneering Force:** From an initial FS for Xuxa in 2019 ([note](#)), through Phase 2 and 3 technical updates, Sigma has steadily advanced their flagship Grota do Cirilo project through permitting, construction, and commissioning to reach initial production in April 2023 ([note](#)). Sigma is now one of the lowest cost public producers in the country (at US\$577/t spodumene concentrate in Q3/23) and globally (after select African and Chinese mines, and Greenbushes).
- **Emerging Idea — Atlas Lithium The One To Watch This Year:** Following a 2022 shift in strategy to focus on their wholly-owned lithium projects, Atlas are pursuing a rapid timeline to first production in Q4/24 at their flagship Neves project. **Recent additions to management (including VP Corporate Development Nicholas Rowley, previously Galaxy, and Chief Geological Officer James Abson, previously Bikita) and offtake partnerships with two global lithium chemical producers** to potentially fund a very low \$49.5 MM project capex, bolster an ambitious timeline to low cost operation later this year.
- **Emerging Idea — Lithium Ionic's Bandeira Advancing Steadily:** Following a maiden mineral resource estimate for Itinga in June 2023, the company increased total estimated resources (M&I+I) at Bandiera by 78% and published a PEA in October detailing a 20-year LOM underground DMS-only operation for annual production of 187 kt SC5.5% with cash costs of US\$469/t SC5.5% (including transportation) and an initial capex spend of US\$233 MM. **We look to a near-term targeted FS and MRE update to further de-risk the project towards future planned operation.**
- **Latin Resources Salinas Project Shows Large Scale And Regional Upside:** Latin's September 2023 PEA centred on their flagship 63.5 MMt M&I+I Colina deposit grading 1.31% Li₂O detailed a 525 ktpa SC5.5% (Phase 2 peak) operation over an 11-year LOM, with a total capex of US\$308 MM and cash costs of US\$536/t SC5.5%. **The high purity, spodumene-rich pegmatite Colina deposit is also amenable to a (low cost) largely DMS-only processing flowsheet proven by Sigma in the region, which both Atlas and Lithium Ionic look to emulate as well.**

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Summary

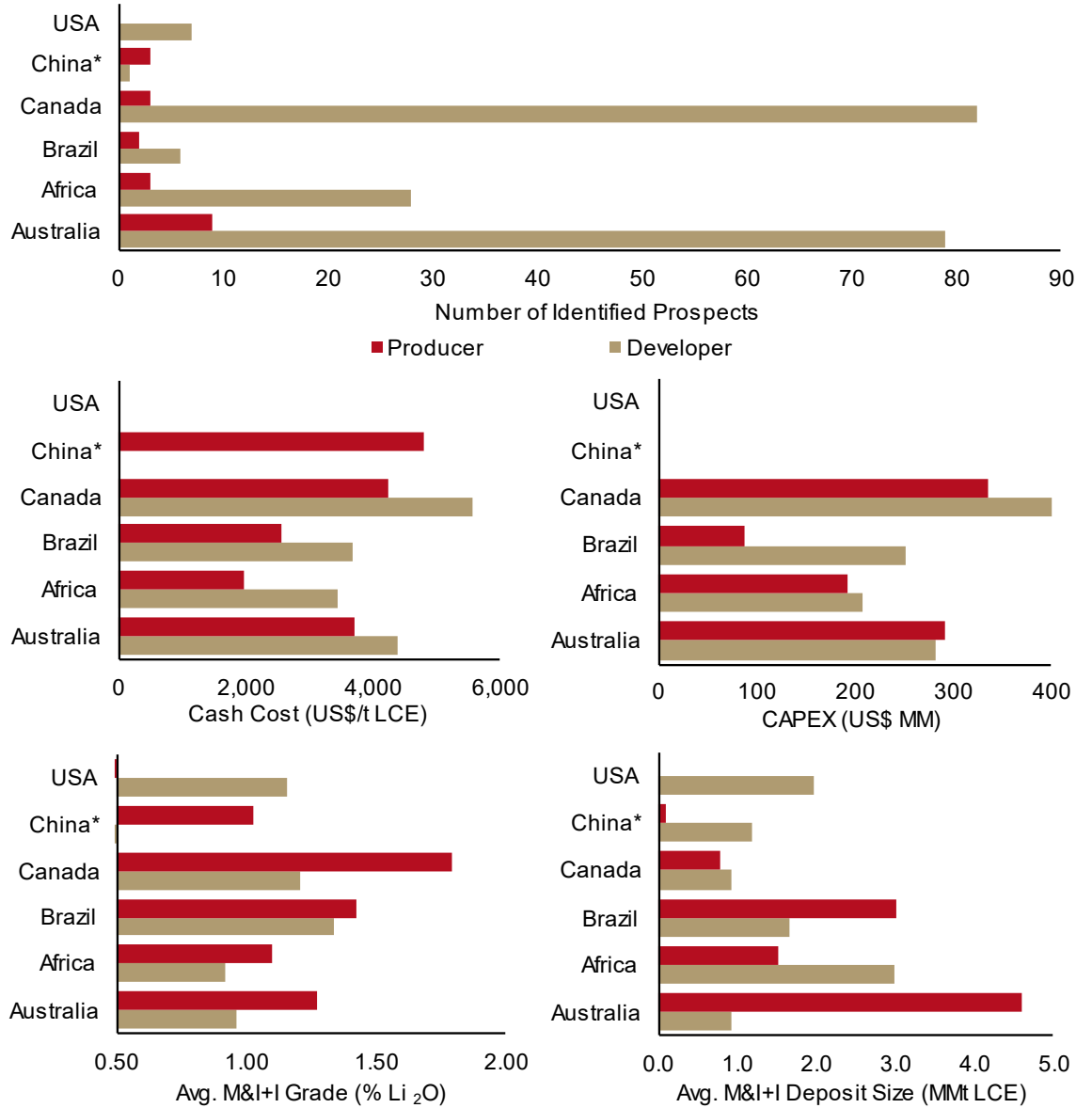
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Introduction

In late November 2023, Cormark Research conducted a week-long tour of hard rock lithium deposits in Brazil's Minas Gerais region, in the prospective 'Lithium Valley' – and host to Sigma Lithium's operating Grota do Cirilo project. We visited the flagship projects of three exploration / development companies: Lithium Ionic's Itinga project (LTH-TSXV, not rated), Atlas Lithium's Neves project (ATLX-NASDAQ; not rated), and Latin Resources' Salinas project (LRS-ASX, not rated). Recall in April 2023, Sigma Lithium (SGML-TSX, C\$55.00 target, Buy recommendation) announced first production at their flagship Grota do Cirilo project ([note](#)) – the largest-scale public hard rock lithium project to reach successful commercial production in the Americas (with realized pricing of US\$2,488/t spodumene concentrate in their first operational quarter) since Sinomine's Tanco restarted lithium production in 2021 (following a 10-year hiatus). **Brazil represents a potent opportunity for the rapid development of new, high-quality (low impurity, high grade), near-surface (underexplored) hard rock lithium projects, due to its favourable permitting attitude, low-cost environment, highly experienced workforce, and excellent mineral endowment.** These targets are favourably situated for near-term lithium concentrate production, to a market still in need of the metal despite recent price turbulence and decreased 2024 production and revenue guidance from major producers – reiterated in our report [here](#).

Our tour began with Lithium Ionic's Itinga project near Araçuaí (population ~34 k) – home to the field offices of a growing number of lithium exploration/development companies, including Atlas Lithium, as well as Sigma's operational base. After visiting the first Bandeira trench (exposing Lithium Ionic's flagship 29.5 MMt M&I+I deposit @ 1.37% Li₂O) and looking at drill core, we moved to Atlas' nearby core facility in town before heading ~50 km south to see their flagship Neves project's trenching and drill work (ongoing). Finally, we drove 60 km north of Araçuaí to Salinas (population ~41 k) to visit Latin Resources' flagship project of the same name, centred on the (recently upsized) 70 MMt M&I+I Colina deposit @ 1.27% Li₂O, ~22 km to the east. Our most significant takeaway from these tours were the rapid targeted timelines to production – with all three companies aiming to reach operation within the next 2 years. Ongoing development of this region may seem at odds with trends in other regions, such as Western Australia and China, where production is being curtailed, it highlights the importance of understanding regional considerations (in particular, related to costs) when investing in the battery materials space. In addition, we note that although the individual pegmatite bodies found in the Araçuaí orogenic belt are smaller than those hosted in >1 billion year (Ba) Australian, African, and Canadian cratons (i.e., Greenbushes, Goulamina, Corvette, etc.) they are abundant, and are characterized by relatively higher grades. **The Lithium Valley stands to benefit greatly from regional amalgamation of these smaller pegmatite bodies, which makes the exploration and development effort to produce low-cost spodumene concentrate in the near term very worthwhile.**

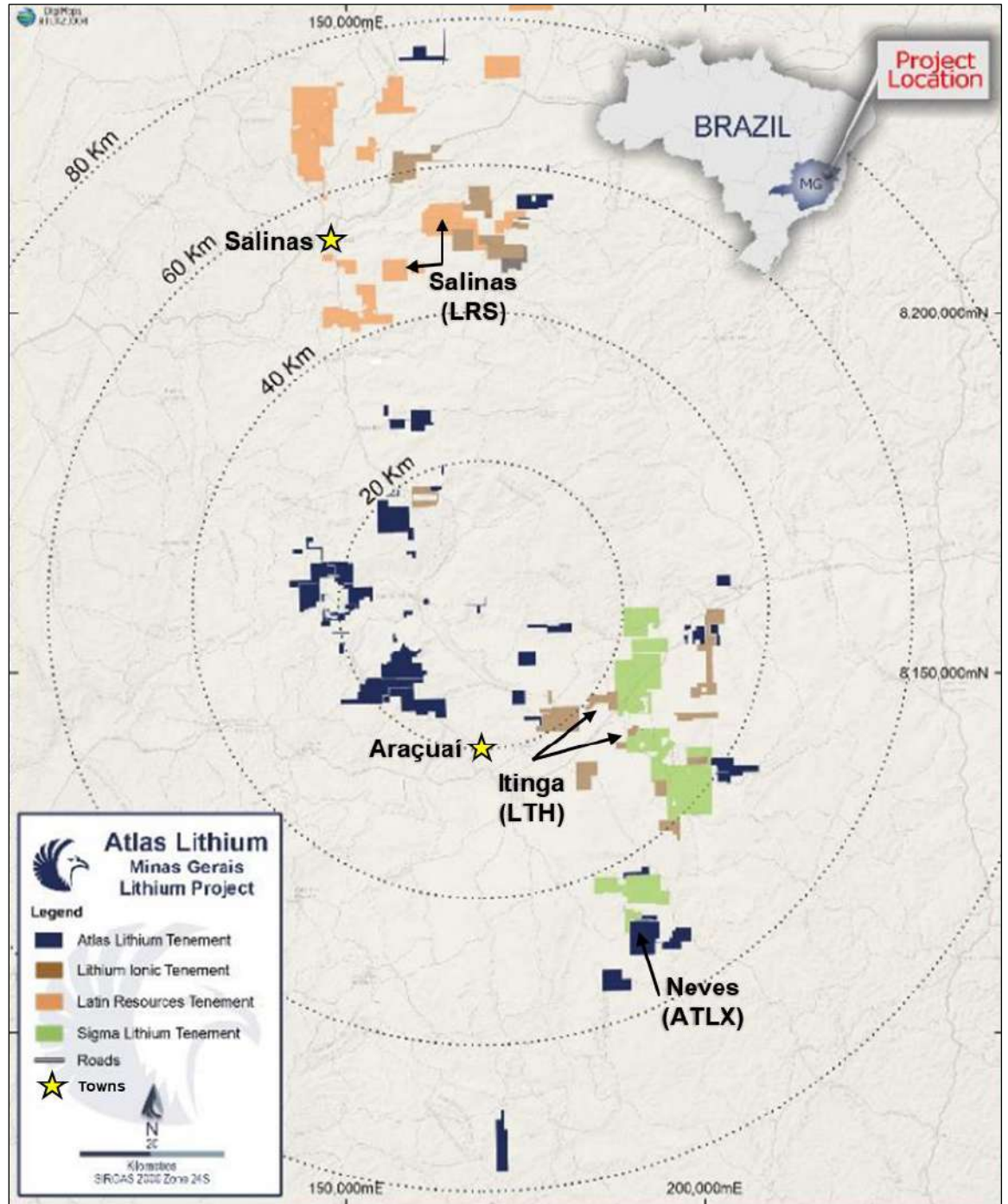
Figure 1 Location, Location, Location



*Publicly available China deposit data
Source: Cormark Securities Inc., S&P Market Intelligence, Company Reports

Figure 2

Map Of Hard Rock Project Locations Around Araçuaí, Minas Gerais BR



Source: Modified after Atlas Lithium Corp.

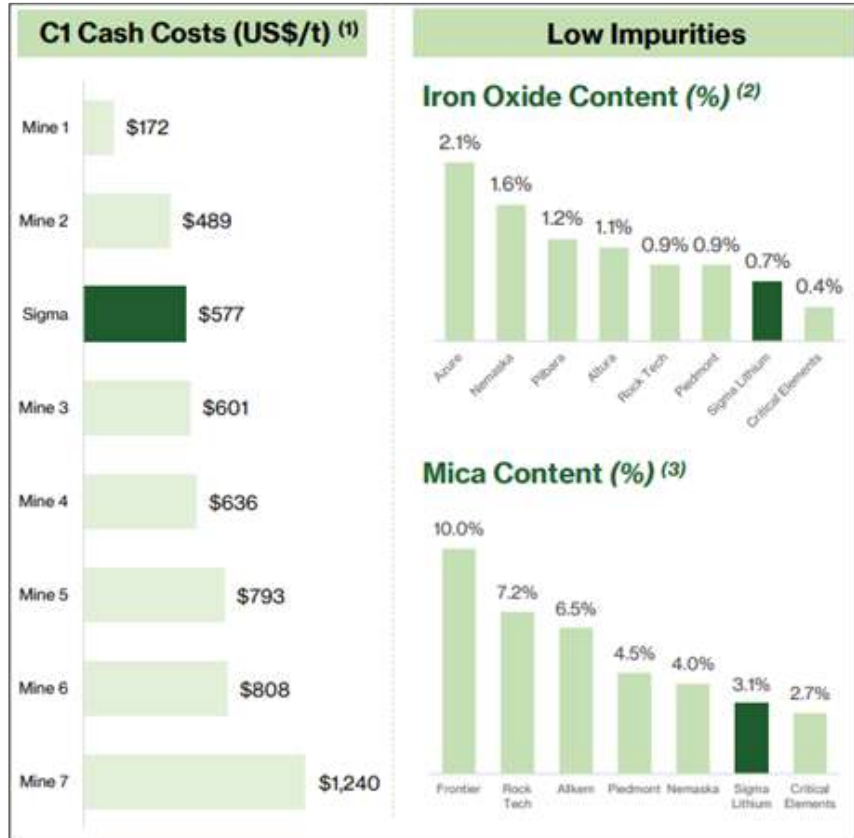
**Lithium Valley First-Mover
Sigma Shines Light On
Brazil's Critical Metals
Potential**

A thorough understanding of the regional opportunity starts with considering the path to commercial operation pursued by Sigma Lithium, which has pioneered the development of the region with a focus on high quality output suitable for the battery supply chain. Indeed, newer developers are attempting to emulate the plan by focusing on low cost DMS-only flowsheets and rapid scale-up across multiple, relatively small, high grade pegmatite bodies. In 2018, Sigma defined a maiden mineral resource at their Xuxa deposit of 13.5 MMt M&I+I grading 1.56% Li₂O ([report](#)). Since then, the company has defined an 85.6 MMt global resource grading 1.43% Li₂O at their flagship Grota do Cirilo project, with a sightline to a potential 110 MMt global resource ([note](#)), and additional untested upside across their 185 km² land package in Minas Gerais state, Brazil.

From an initial FS for Xuxa in 2019 ([note](#)), through Phase 2 and 3 technical updates, Sigma steadily advanced their flagship project through permitting, construction and commissioning to reach initial production in April 2023 ([note](#)). Although Minas Gerais is a historic, mining-friendly, and well-endowed mineral jurisdiction, there were few incentives for critical materials projects while the company was attempting to finance and construct Grota do Cirilo (although this has recently changed, below). Sigma is now one of the lowest cost, lowest opex public producers in the country (at US\$577/t spodumene concentrate in Q3/23) and globally (after select African and Chinese mines, and Greenbushes).

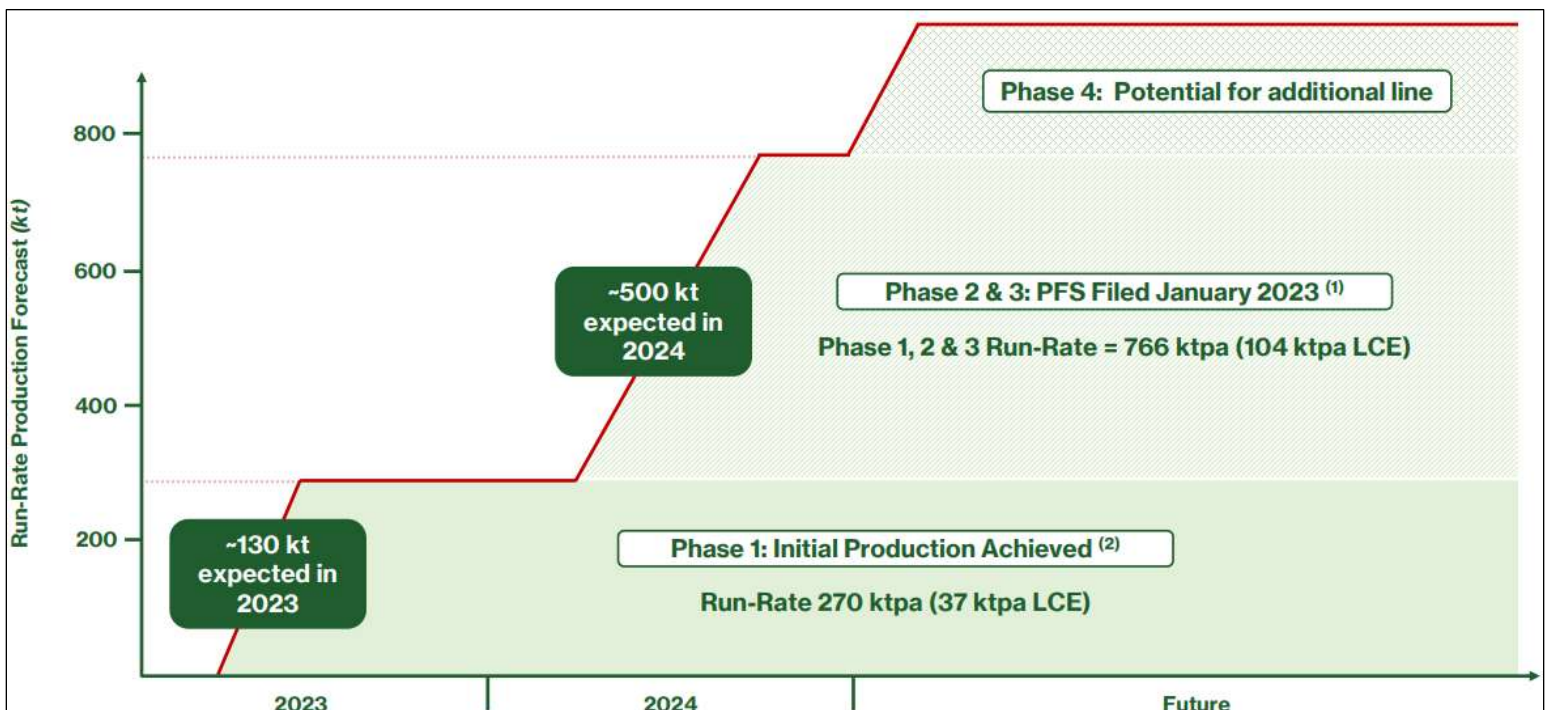
Sigma's first shipment of spodumene concentrate was made in July 2023 with realized pricing of US\$2,488/t spodumene concentrate in their first operational quarter ([note](#)). At Q4/23-end, the company was estimated to be producing at sustained Phase 1 nameplate capacity of 270 ktpa spodumene concentrate ([note](#)). Additional potential production capacity as defined in Phases 2 and 3 in a January 2023 PFS could bring the total run rate to 766 ktpa spodumene concentrate in 2024, pending a final investment decision that likely hinges on the current lithium pricing environment (noting Chinese spot at US\$990/t SC6% and US\$11,017/t LiOH, source: AsianMetal.com) and the result of an ongoing strategic review (below). Despite the depressed pricing environment, the company continues to turn an operating profit due to its substantially low opex, but we note that lower grade tailings sales will likely fluctuate off and on as the lithium price remains volatile in the near term.

Figure 3 High Quality Grota Do Cirilo Asset Vs. Global Competitors



Source: Sigma Lithium Corp.

Figure 4 Grota Do Cirilo Ramp-Up Timeline From First Production To Blue Sky Potential Run-Rates



Source: Sigma Lithium Corp.

Last year saw Sigma's Grota do Cirilo reach first production, five total shipments, and achievement of positive adjusted FCF (US\$0.49/sh in Q3/23). Sigma continues to run their competitive bid process and prepare the company for a final transaction (including considering a dual listing for the local operating company), with the Board continuing to negotiate with final parties that remain actively engaged in pursuing a definitive deal. We note that the recently publicised interest of the world's largest EV maker BYD is just one example of foreign players in the region looking to localize the vertical integration of EV manufacturing from raw materials to final product.

Sigma's deliberate advancement of their low-cost, high-quality asset has firmly set Brazil on the stage of globally significant hard rock lithium producers, paving the way for subsequent developers like Atlas Lithium, Latin Resources, and Lithium Ionic to make their debut under the interested eye of global mid- and downstream players in the battery supply chain. The May 2023 launch of the host state Minas Gerais' 'Lithium Valley Brazil' initiative has further incentivized market interest in the country by promoting the acceleration of project development supporting the lithium supply chain and appearing to welcome global investment, leaning away from the broader regional trend of resource nationalization.

Emerging Idea: Atlas Lithium Corp. (ATLX - NASDAQ)

All figures shown in US\$, unless otherwise stated

Figure 5 **Company Statistics**

Key Facts:

Ticker-Exchange	ATLX-O
Closing Price	\$22.82
Date of Report	January 25, 2024
Company Website	www.atlas-lithium.com/
Analyst	Shannon Gill

Company Statistics:

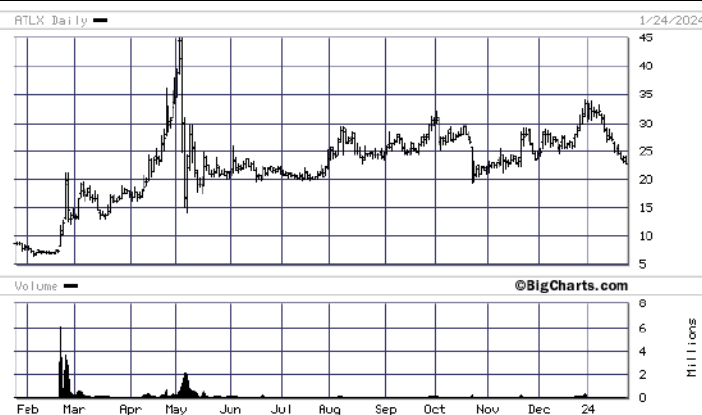
52-week High	\$45.00
52-week Low	\$6.52
Market Cap	\$246.2 MM
Shares Outstanding	
Basic	10.8 MM
Diluted	11.3 MM
Cash	\$22.8 MM
Debt	nil
CEO	Marc Fogassa

Major Shareholders (%):

Management	7%
Marc Fogassa (CEO)	41%

Source: Refinitiv Eikon, Company Reports

Figure 6 **Price Chart**



Source: BigCharts (January 24, 2024)

Atlas Lithium is a Brazilian hard rock lithium exploration and development company, looking to fast-track their flagship Neves project in the mining-friendly jurisdiction of Minas Gerais. The company garnered market attention following a 2022 pivot to focus on their wholly owned lithium assets, and subsequent announcement of their accelerated timeline targeting first production in Q4/24. Our stated interest in the excellent mining jurisdiction of Brazil (above), along with Atlas' addition of management with proven lithium experience and their targeted timeline to near-term revenue, make the Neves project one to watch through 2024.

Management Additions Underpin Accelerated Timeline: Said change in strategy coincides with a recently (2023) bolstered management team and advisory group, including VP Corporate Development Nicholas Rowley (previously Galaxy Resources) and Chief Geology Officer James Abson (previously Bikita Minerals).

Offtake Partnerships A Vote Of Confidence: At the end of 2023, Atlas announced an offtake agreement with two major lithium chemicals producers, Chengxin Lithium Group and Yahua Industrial Group, for total proceeds of US\$50 MM.

Maiden Resource Estimate On Deck: The company is simultaneously advancing a mineral resource estimate, technical evaluation, and permitting efforts towards a targeted Q4/24 production start at their flagship Neves project. Although there is risk inherent in the dearth of published technical data, we look to (planned) subsequent technical milestones throughout the year to demonstrate the project's potential value.

Upcoming Catalysts

- Maiden mineral resource estimate (MRE) and PEA – Q1/24
- Final Investment Decision (FID) and DFS – Q2/24
- Updated MRE – Q3/24
- First production – Q4/24

Company History

- The company initiated drilling at its Minas Gerais lithium projects in 2021, subsequently identifying 4 main areas of mineralization in the Jequitinhonha Valley region of the Eastern Brazilian Pegmatite province – including its (now) flagship Neves project.
- Previously Brazil Minerals Inc. (BMIX-OTC), the company announced in June 2022 that it would change its name to Atlas Lithium to reflect the company's shift in commodity focus. The change was implemented on October 06, 2022, under the ticker AT LX-OTC.
- Atlas announced an underwritten uplisting from OTC to NASDAQ on January 09, 2023, comprising 650,000 common shares at a price of US\$6.00/sh for gross proceeds of ~US\$4 MM, plus over-allotment of 101,250 common shares by the underwriters. The deal closed on January 10, 2023.

Corporate Top Line

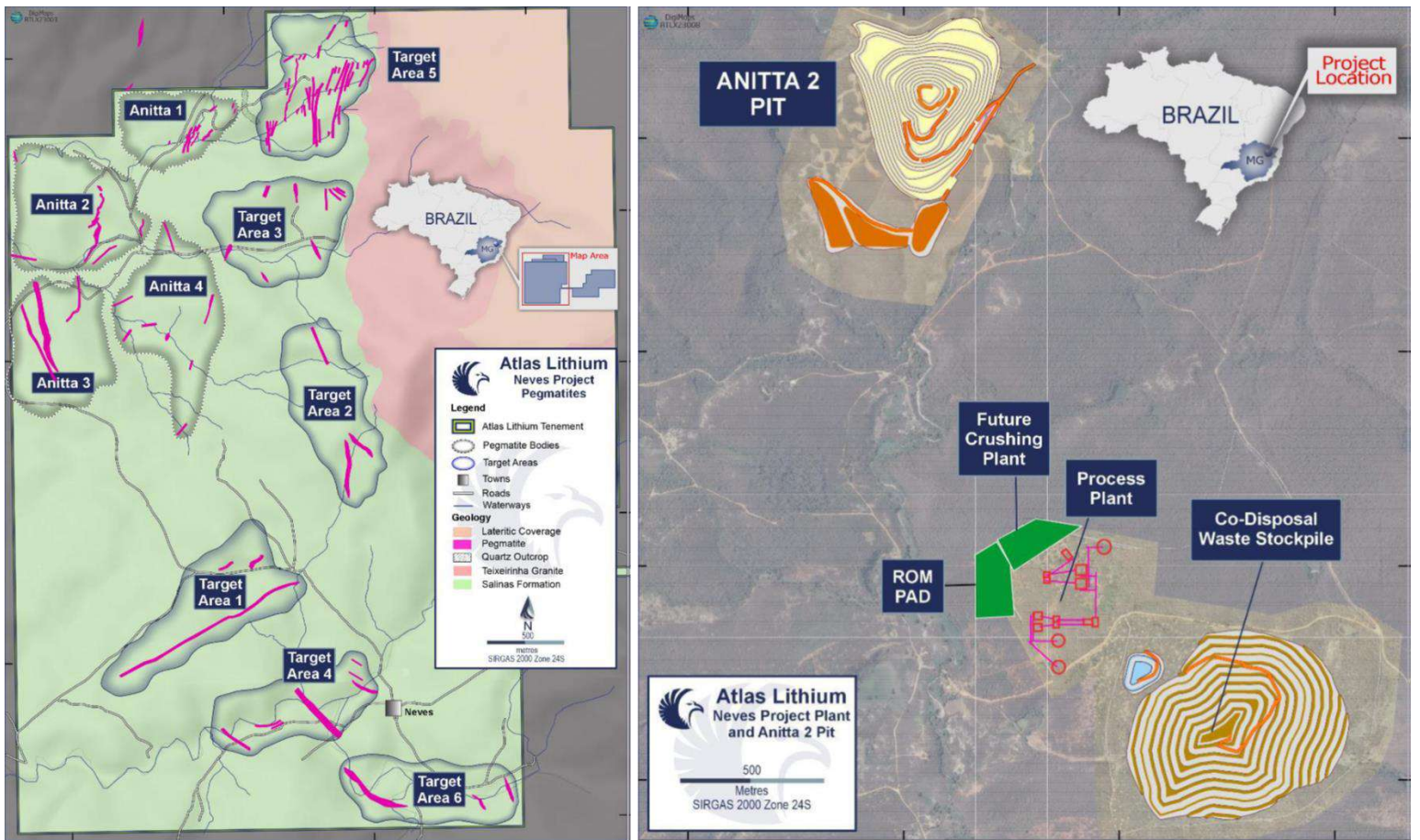
- Management team bolstered in H2/23 with the addition of VP Business Development Nicholas Rowley (former Director, Galaxy Resources), Chief Geologist James Abson (formerly Chief Geologist, Bikita Minerals, Zimbabwe), and advisors Martin Rowley (former Chair, Allkem) and Rodrigo Menck (former CFO of Sigma Lithium).
- At September 30, 2023, Atlas had ~US\$22.8 MM in cash prior to the announcement of a US\$50 MM offtake agreement with two of the global leading lithium hydroxide producers (detailed below) in December and a US\$20 MM investment in November comprised of a 3 year unsecured note with a 6.5% annual coupon convertible at US\$28.2/sh.
- Approx. 11 MM shares outstanding at October 20, 2023, with management/insiders owning ~40%. Lithium Royalty Company owns a 3% GOR royalty on the Neves project and other claim blocks (104 km² of the company's total 240 km² land package).

Neves Project Details

The 100%-owned Neves property represents a small portion of the greater land package covering Atlas' lithium projects in Minas Gerais. The project contains Atlas' top priority Anitta pegmatites (4) and 6 recently identified additional targets, which are located south of Sigma's Grota do Cirilo project and 23 km south of Araçuaí.

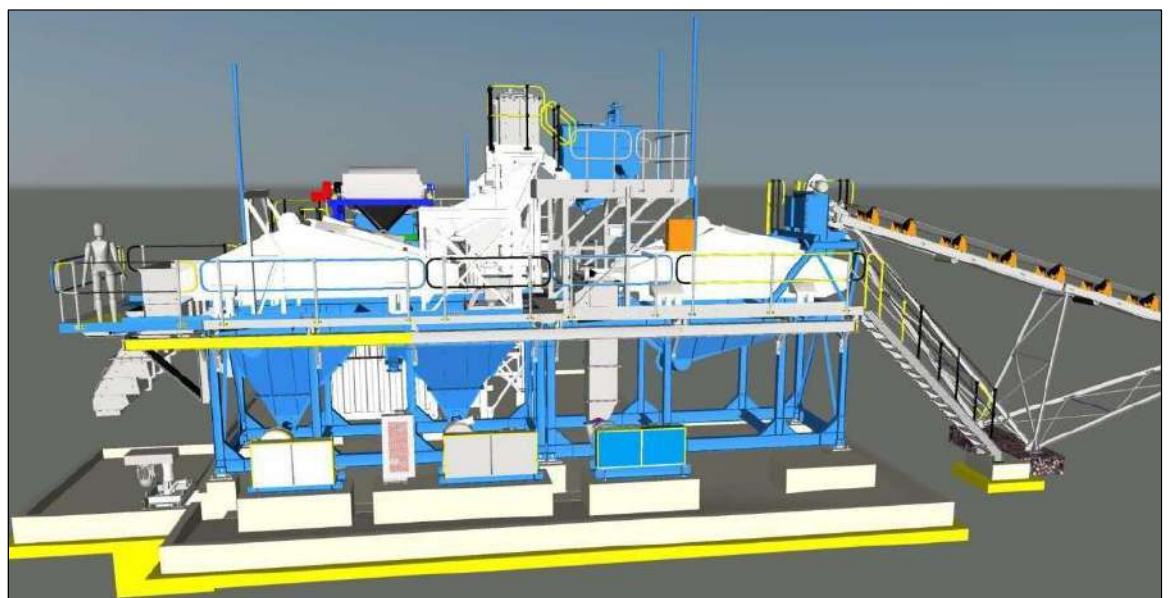
- A total of 68 km had been drilled at the project at November month-end, with significant intercepts returned including 1.22% Li₂O over 56.4 m from 7.0 m depth (DHAB-185, Anitta 3), 2.23% Li₂O over 17.8 m from 216.1 m depth (DHAB-160, Anitta 3), and 1.51% Li₂O over 84.0 m from 113.8 m depth (DHAB-104, Anitta 2).
- Preliminary metallurgical testwork (DMS + magnetic separation) has demonstrated 6.04% Li₂O spodumene concentrate with 0.53% Fe and recoveries of +70%.
- Two pegmatites, Anitta 1 and 2, have been drilled up to 25 m spacing with a 50 m spaced program ongoing at Anitta 3; the latter two representing the focal point of ongoing mineral resource estimation and feasibility study work.
- In June 2023, the host state of Minas Gerais granted Atlas' Neves project priority status for environmental permitting and licensing, which should support an accelerated permitting process by up to several months. This type of governmental support is distinct from the MOUs held by Lithium Ionic and Latin Resources (below), as Atlas' agreement is directly with the state, as opposed to the government agency Invest Minas.

Figure 7 Neves Project Map Highlighting Mapped Pegmatites & Anitta 2 Proposed Mine Site Layout



Source: Atlas Lithium Corp.

Figure 8 3D Render Of Single Modular DMS Plant

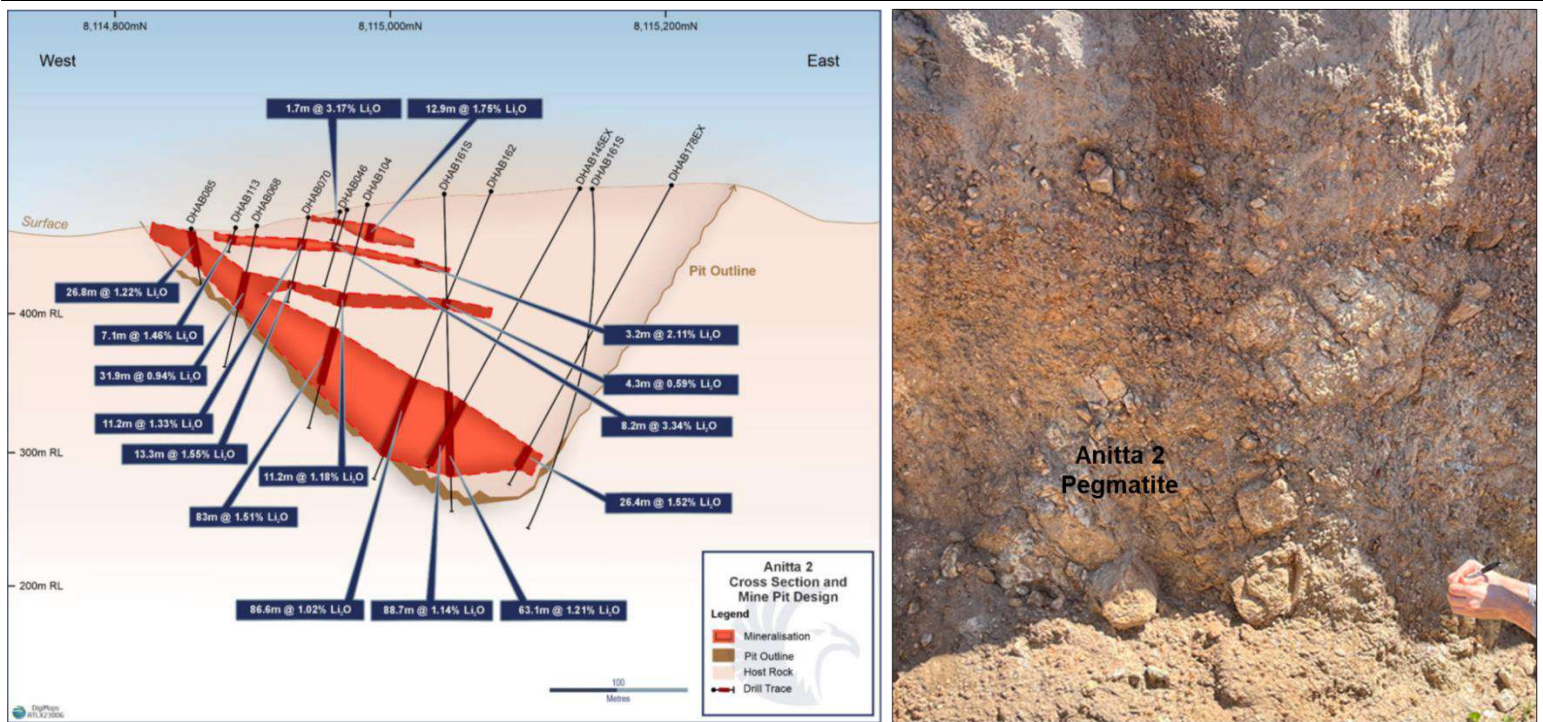


Source: Atlas Lithium Corp.

**Offtake Agreement A
Vote Of Confidence**

- In early December 2023, Atlas signed offtake agreements with Chengxin Lithium Group and Yahua Industrial Group (two of the largest lithium hydroxide producers globally) for 80% of Atlas' Phase 1 production (targeted 150 ktpa spodumene concentrate) over a 5-year term, allowing for early termination should Atlas Lithium undergo a change of control transaction.
- The two chemical companies have committed US\$50 MM total, consisting of US\$10 MM in equity at \$29.77/sh (a 10% premium to VWAP) and a US\$40 MM prepayment.
- Said funding stands to cover the estimated US\$49.5 MM capex for Phase 1 production, as well as an ongoing exploration campaign focused on resource delineation at Neves and anticipated regional exploration. Offtake pricing will be calculated based on the global lithium hydroxide price for both agreements.

Figure 9 Anitta 2 Idealized Cross Section (left) And Exposed Pegmatite Body In Trench 06 (right)



Source: Atlas Lithium Corp. (left) and Cormark Securities Inc. (right)

**2024 To Be A
Catalyst-Rich Year**

1. Q1/24 maiden mineral resource and PEA publication.
2. Q2/24 Final Investment Decision and start of project construction, publication of DFS for combined Phase 1 and 2 production.
3. Q3/24 updated mineral resource estimate.
4. Q4/24 first production of Phase 1 (150 ktpa spodumene concentrate).
5. Mid-2025 completion of Phase 2 line to increase production output to 300 ktpa spodumene concentrate (majority uncommitted by offtake agreements).

How Atlas Plans To Meet Targeted Q4/24 Production

- Rapid (ongoing) permitting of the Anitta pegmatites is expected to be facilitated by the project's priority regulatory review status with the state.
- Proximity of the Anitta pegmatite bodies to surface, tightly spaced drilling, and initial metallurgical results should support near-term resource delineation and shorten timelines to first (potential) ore extraction.
- Two modular DMS units (up to 1,000 ktpa material throughput) have been partially paid in advance and are currently under construction overseas, with an expected delivery date to Brazil in ~April 2024. Although modular DMS technology for hard rock lithium mining has not been used in Brazil to date, this is the same process currently employed at Mt Cattlin in Australia, which was implemented by the same Allkem team that previously included Nicholas and Martin Rowley. In addition, Atlas plans to use contracted crushing and mining services with experience and current presence in the Araçuaí region. Q4/24 first production of Phase 1 (150 ktpa spodumene concentrate).
- Mid-2025 completion of Phase 2 line to increase production output to 300 ktpa spodumene concentrate (majority uncommitted by offtake agreements).

Regional Upside Essential To Long-term Outlook For Company

- Atlas is targeting an aggressive new development and exploration strategy of their large ~240 km² land package, following Chief Geologist James Abson's arrival in October 2023.
- An ongoing mapping campaign is following up historic mapping and soil geochemical surveys and a recently completed drone survey mapped topography in preparation for 2024 fieldwork.
- Airborne (drone) magnetic surveys were underway at the beginning of January 2024, the first of which will cover the Neves project in an effort to delineate further extensions to mineralization and additional (proximal) prospective pegmatite targets.
- Recently published (January 2024) results from Anitta 3 infill and step out drilling continue to demonstrate good grades over robust widths, including 47 m grading 1.44% Li₂O from 59 m downhole in hole DHAB-345.

Figure 10

Outlined Spodumene Crystals In DHAB-339 From 162-169 m (Anitta 3)



Source: Cormark Securities Inc.

Figure 11

Fluoresced (left) Spodumene Crystals In DHAB-345 @ 78 m (Anitta 3)



Source: Cormark Securities Inc.

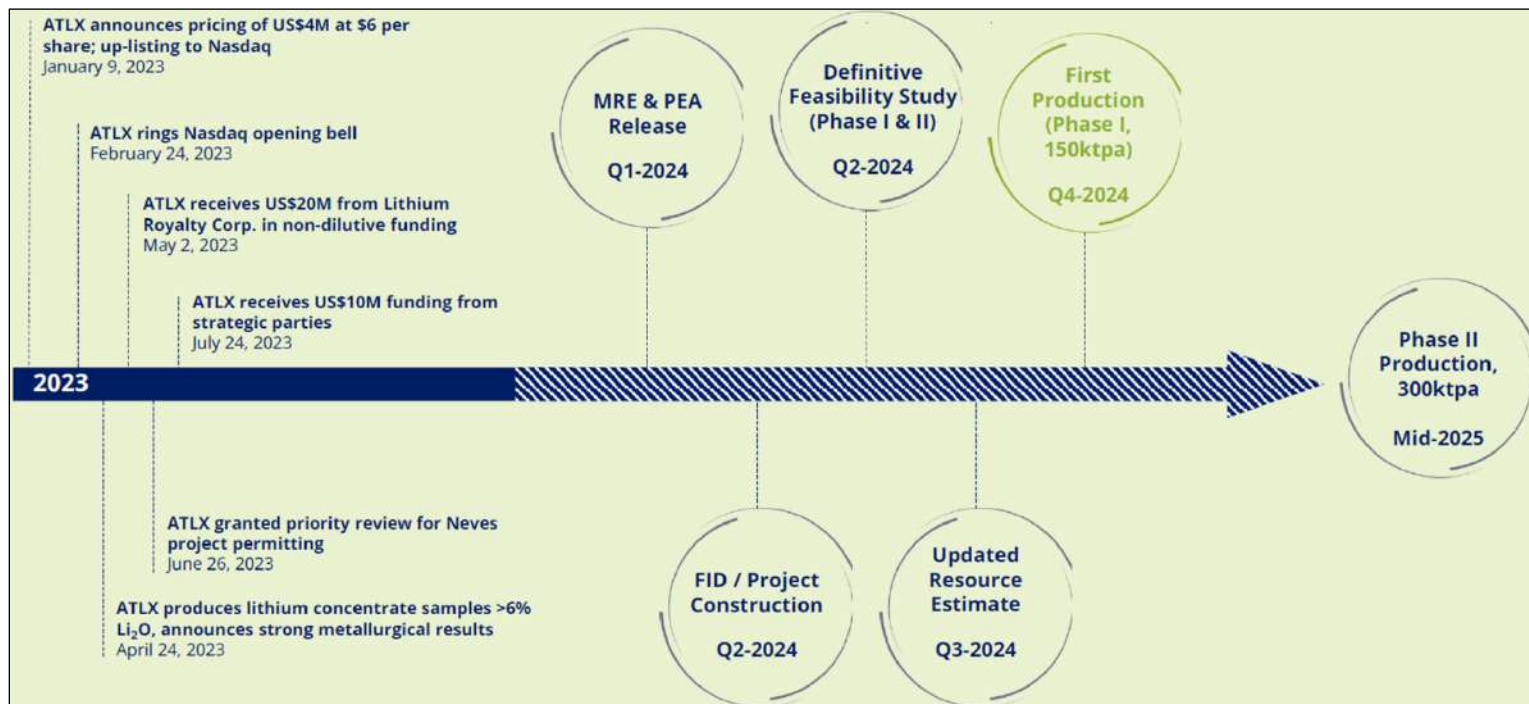
Geology Underpins Future Valuation Potential

- The main spodumene-bearing pegmatite bodies at the Neves project consist of Anitta 2 and 3, followed by the thinner Anitta 1 body and more recently discovered Anitta 4 pegmatite.
- All 4 pegmatites are expected to be included in the forthcoming maiden resource estimate, with Anitta 2 and 3 expected to be detailed in the planned PEA for Phase 1 production.
- Like most other deposits in the region (see below), the pegmatites are hosted in the Salinas Formation mica schist, adjacent to intruded peraluminous granites of unknown relation.
- The Anitta pegmatites are generally concordant to foliation, striking NE-SW and dipping to the NW, with an overall estimated average thickness of 26 m.
- Spodumene crystals are irregular in size and volumetrically represent 10-12% of the pegmatites, which also contain ~5% petalite. These classic LCT-style pegmatite bodies are interpreted to be moderately zoned with some tourmaline (dominantly schorl).

CSI Catalysts

- Primarily, we look to a forthcoming maiden mineral resource estimate and subsequent suite of feasibility studies to come throughout 2024, which should fully detail the design parameters (especially with regards to metallurgical processing related to mineralogy) required to reach Q4/24 first production.
- Results from the recently ramped up regional exploration strategy across the 240 km² property portfolio are also on the radar. We look to regional exploration success in delineating additional high quality spodumene pegmatites, and/or potential synergies between other developers / operators in the region, to add conceptual tonnage to the Anitta pegmatites for a more robust potential life of mine.

Figure 12 Atlas Lithium’s Near-Term Project Development Catalysts



Source: Atlas Lithium Corp.

Management And Board Details

- **Marc Fogassa, Chairman & Chief Executive Officer** of Atlas lithium from 2012 (previously Brazil Minerals Inc.). He graduated with a double major B.Sc. from MIT and holds an MD and MBA from Harvard. Mr. Fogassa is also the Chairman and Chief Executive Officer of Jupiter Gold and Chairman and Chief Executive Officer of Apollo Resources.
- **Gustavo Aguiar, CFO & Treasurer.** Mr. Aguiar was previously the Controller of Jaguar Mining, Inc. from 2016 until 2022.
- **James Abson, Chief Geological Officer.** Mr. Abson was previously Chief Geologist and exploration manager for Bikita Minerals Lithium in Zimbabwe. He has over 29 years of experience in multi-commodity mining and mineral exploration.
- **Nicholas Rowley, Vice President, Business Development.** Mr. Rowley was most recently the Director of Corporate Development at Galaxy Resources, helping to execute the A\$6.0 B merger with Orocobre in 2021 to create Allkem. He is a founder of Electramin (also CEO) and R-Tek International (also executive director).
- **Igor Tkachenko, Vice President, Corporate Strategy.** Mr. Tkachenko served as a strategic advisor to Atlas Lithium from February 2020-2022, after which he assumed the role of Director, Strategic Development. He assumed his current role following ATLX’s uplisting in 2023. He is a licensed MD in the USA.
- **Raimundo Almeida Jr., Vice President, Lithium Processing.** He has 23 years of operations management experience in the mining industry, including overseeing the commissioning and operations of the initial dense media separation (DMS) pilot plant for Sigma Lithium.
- **Joel Monteiro, Esq., ESG Chief & Vice President, Administration.** Previously Partner at PRA Advogados. Mr. Monteiro is also a director of Jupiter Gold and Apollo Resources.
- **Brian W. Bernier, Vice President, Investor Relations.** Mr. Bernier held several previous roles at capital markets firms.

- **Areli Nogueira, Geol., Vice President, Mineral Exploration.** He is the founder and CTO of consultancy MineXplore. Previously, he worked at the Brazilian mining department and before that as a geologist at Usiminas Mineração.
- **Roger F. Noriega, Independent Director & Member of the Audit Committee.** Former Assistant Secretary of State during the George W. Bush administration from 2003 to 2005. Current Managing Director of Vision Americas.
- **Stephen R. Petersen, CFA, Independent Director & Member of the Audit Committee.** Mr. Petersen has over 40 years of experience in capital markets and investment management. He has been a Managing Director and member of the Investment Committee at Prio Wealth since 2013.
- **Cassi Olson, Esq., Independent Director & Member of the Audit Committee.** Ms. Olson is an attorney with extensive experience in international contracts and venture negotiations. Since February 2021, she has been an attorney with Ellenoff Grossman & Schole LP.

Other Property Details

In addition to their flagship Neves project and surrounding Minas Gerais land package, Atlas holds the 100%-owned Northeastern Brazil Lithium Project, a 16,266 acre set of properties spanning the Rio Grande do Norte and Paraíba state border that is also host to spodumene-bearing pegmatite mineralization.

The company also owns (100%) multiple other land packages, consisting of:

- Nickel and cobalt properties totalling 137,883 acres in Piauí and Goiás.
- Rare earth element properties totalling 30,009 acres in Bahia, Goiás and Tocantins.
- Titanium properties totalling 22,050 acres in Minas Gerais.
- Graphite properties totalling 13,766 acres in Minas Gerais.

The company also retains equity positions in two subsidiaries:

- Apollo Resources Corp. (private, 45%-owned) – iron-focused; 57,665 acre land package across Brazil; 641 acre Iron Quadrangle project (operating) located in Minas Gerais.
- Jupiter Gold Corp. (JUPGF-OTC; 27%-owned) – gold-focused; 132,173 acre land package across Brazil; 27,733 acre flagship Alpha development project located in Minas Gerais.

Emerging Idea: Lithium Ionic Corp. (LTH – TSXV)

All figures shown in C\$, unless otherwise stated

Figure 13 **Company Statistics**

Key Facts:

Ticker-Exchange	LTH-TSXV
Closing Price	\$1.10
Date of Report	January 25, 2024
Company Website	www.lithiumionic.com/
Analyst	Shannon Gill

Company Statistics:

52-week High	\$3.05
52-week Low	\$1.00
Market Cap	\$128.9 MM
Shares Outstanding	
Basic	117.2 MM
Diluted	132.1 MM
Cash	\$10.0 MM
Debt	nil
CEO	Blake Hylands

Major Shareholders (%):

Management	20%
Institutional	27%

Source: Refinitiv Eikon, Company Reports

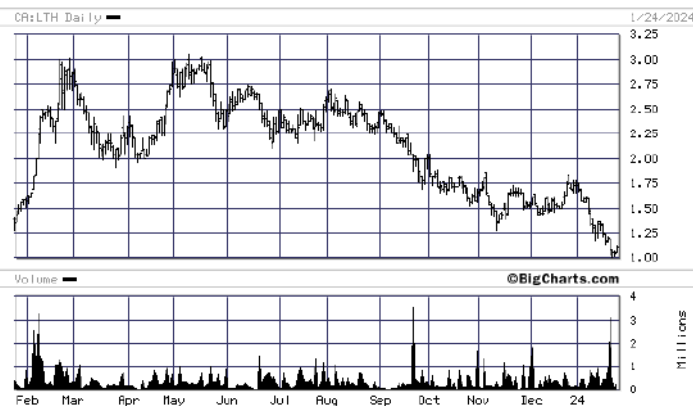
Lithium Ionic is a hard rock lithium exploration and development company with projects in Minas Gerais’ prospective ‘Lithium Valley’. The company is steadily advancing their flagship Itinga project toward production, with a proposed underground operation to be centred on the 29.5 MMt (M&I+I) Bandeira deposit grading 1.37% Li₂O. Below we detail Itinga project updates since our last site visit in [February 21, 2023](#) and initial report from [June 06, 2022](#) in which the full company background can be found.

2023 A Transformational Year: Following a maiden mineral resource estimate for Itinga tabled in June 2023, Lithium Ionic increased total estimated resources (M&I+I) at Bandiera by 78% and published a PEA detailing a 20-year LOM underground DMS-only operation for annual production of 187 kt SC5.5% and initial capex spend of US\$233 MM.

Local Management Boasts Regional And Subject Matter Expertise: The Araçuaí-centred technical team boasts extensive experience in the region and especially in hard rock lithium prospective geological terrain like the Eastern Brazilian Pegmatite province.

Lithium Ionic Putting Bandeira Through Its Paces: The company continues to advance its flagship project prudently through ongoing technical study and permitting. We can expect an updated MRE and project FS ~mid-Q1/24 and a steady progression of project permitting throughout the year. Stay tuned!

Figure 14 **Price Chart**



Source: BigCharts (January 24, 2024)

Upcoming Catalysts

- FS and updated MRE – Q1/24
- LAC permit approval (submitted) – mid-2024
- Submission of Environmental Impact Assessment (EIA) – H1/24

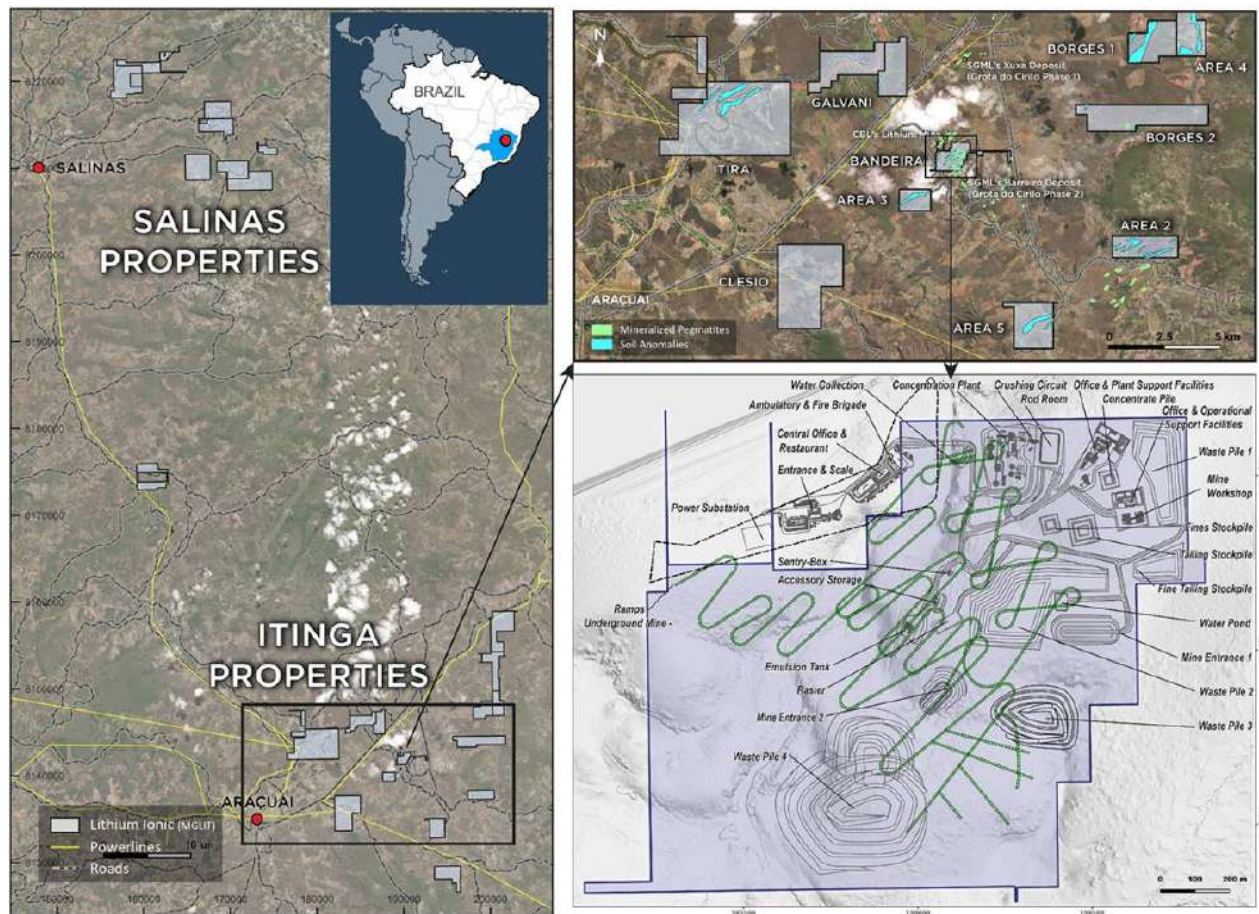
Company Review

Recall, Lithium Ionic CEO and Director Blake Hylands was the co-founder and former Chairman of Troilus Gold, while President and Director Helio Deniz previously helmed Brazil Potash and Xstrata Brazil as Managing Director and founded Belo Sun Mining. Management and insiders own ~23% of the 138 MM outstanding LTH shares and had a cash balance of ~\$10 MM in January 2024.

Property Updates

The company’s flagship, 100%-owned Itinga project contains the Bandeira and Outro Lado deposits (among other targets), for which a maiden resource was announced in June and updated in October 2023 defining a 29.5 MMt M&I+I resource grading 1.37% Li₂O for ~998 kt LCE contained (based on 204 drill holes), along with a PEA detailing a US\$1.6 B NPV8% and 121% IRR based on a 20-year LOM underground DMS-only operation (Bandeira-only) for annual production of 187 kt SC5.5%, initial capex of US\$233 MM (incl. 25% contingency) and operating costs of US\$349/t SC5.5% (not including transportation) based on US\$1,859/t SC5.5 pricing (compared to Cormark’s LT estimate of US\$1,490/t SC5.5, [report](#)) – noting Bandeira is sandwiched between neighbouring CBL’s private Cachoeira hard rock lithium operation and Sigma’s Barreiro deposit (Grotta do Cirilo project). In July 2023, the company signed a non-binding MoU with the State Economic Department of Minas Gerais and the Integrated Development Institute, collectively known as ‘Invest Minas’, which granted the Itinga and Salinas projects state-level priority status, in an effort to potentially streamline and accelerate the regulatory approval process for environmental licensing, project development, and future operation. Lithium Ionic’s 85%-owned Salinas project (not visited) is situated to the east of Latin Resources’ flagship Colina deposit (see below) and located ~100 km north of Itinga. The project was acquired as part of Neolit Minerals in March 2023 and ~24,000 m (99 holes) have been completed at the target by Lithium Ionic to date.

Figure 15 Property Map With Major Deposit Locations & Bandeira PEA Mine Layout (Oct 19, 2023 PR)



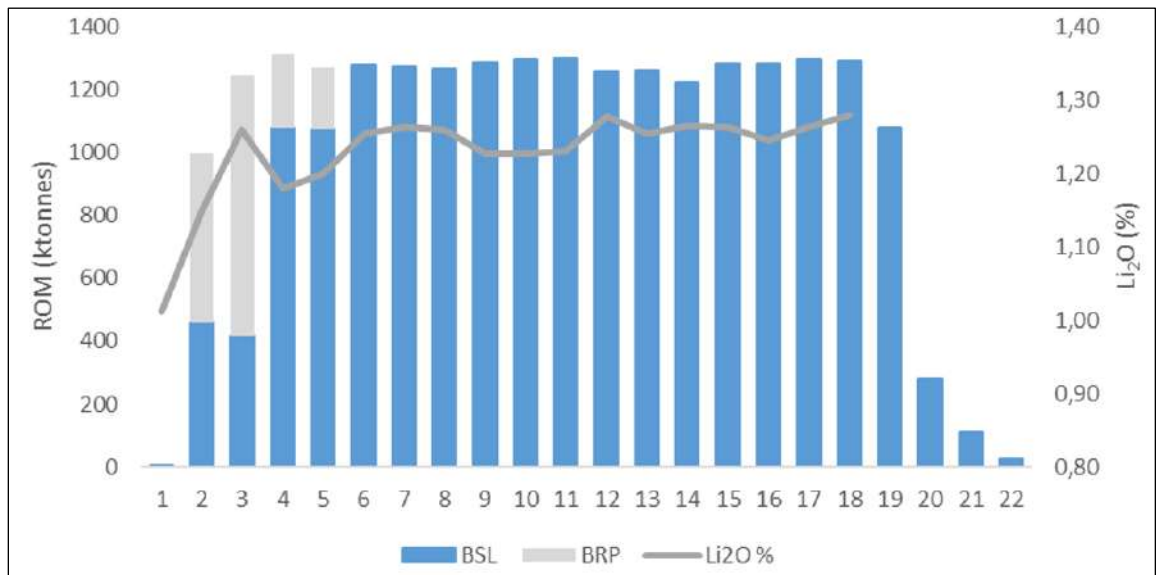
Source: Lithium Ionic Corp.

Figure 16 **Bandeira Updated (October 2023) MRE**

Category	Resource (tonnes)	Grade (% Li ₂ O)	Contained LCE (t)
Measured	2,000,000	1.40	69,226
Indicated	11,720,000	1.40	405,666
Measured + Indicated	13,720,000	1.40	474,892
Inferred	15,790,000	1.34	523,118

Source: Lithium Ionic Corp.

Figure 17 **Bandeira PEA Mine Plan And Production Schedule (Oct 19, 2023 PR)**



Source: Lithium Ionic Corp.

Ongoing Work

Lithium Ionic continues to complete minor infill and exploration drilling with 3 drill rigs around Bandeira and at the Itira target located ~7 km to the west, while 4 rigs turn at Salinas. Regional exploration efforts, including groundwork (i.e., mapping, geochemistry), are complimented by ongoing engineering and metallurgical work toward a targeted Q1/24 Bandeira FS. In mid-November 2023, the company submitted their Concomitant Environmental and Installation License (LAC) permit for small footprint disturbance related to their planned underground operation at Bandeira. The permit is anticipated to be expedited with a ~90-day turnaround due to the 'priority project' status defined in the above-mentioned MOU. In addition, in October 2023 the company announced it had signed a contract with power distributor Cemig to facilitate the construction and electrification of power infrastructure between the existing grid and Bandeira, ~3 km away. Total project costs are expected to be ~C\$4.6 MM, with construction anticipated to be completed by Q4/25. Lithium Ionic will undertake construction of the system, while the two companies will jointly manage environmental permitting. Lithium Ionic will also be eligible for an ~18% rebate.

Figure 18

Perpendicular Spodumene Crystal Growth In Bandeira SRP Outcrop

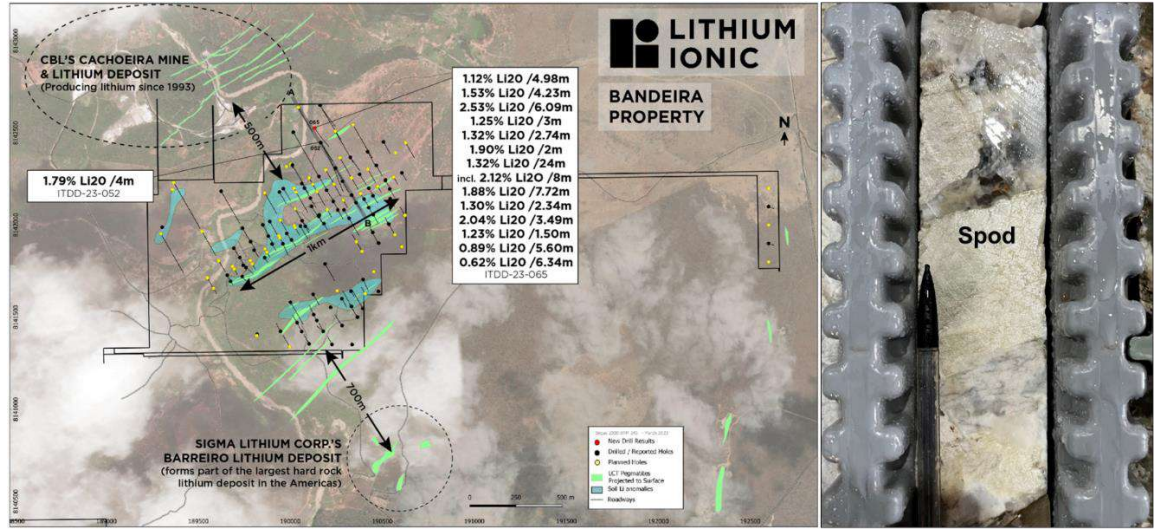


Source: Cormark Securities Inc.

Regional Context

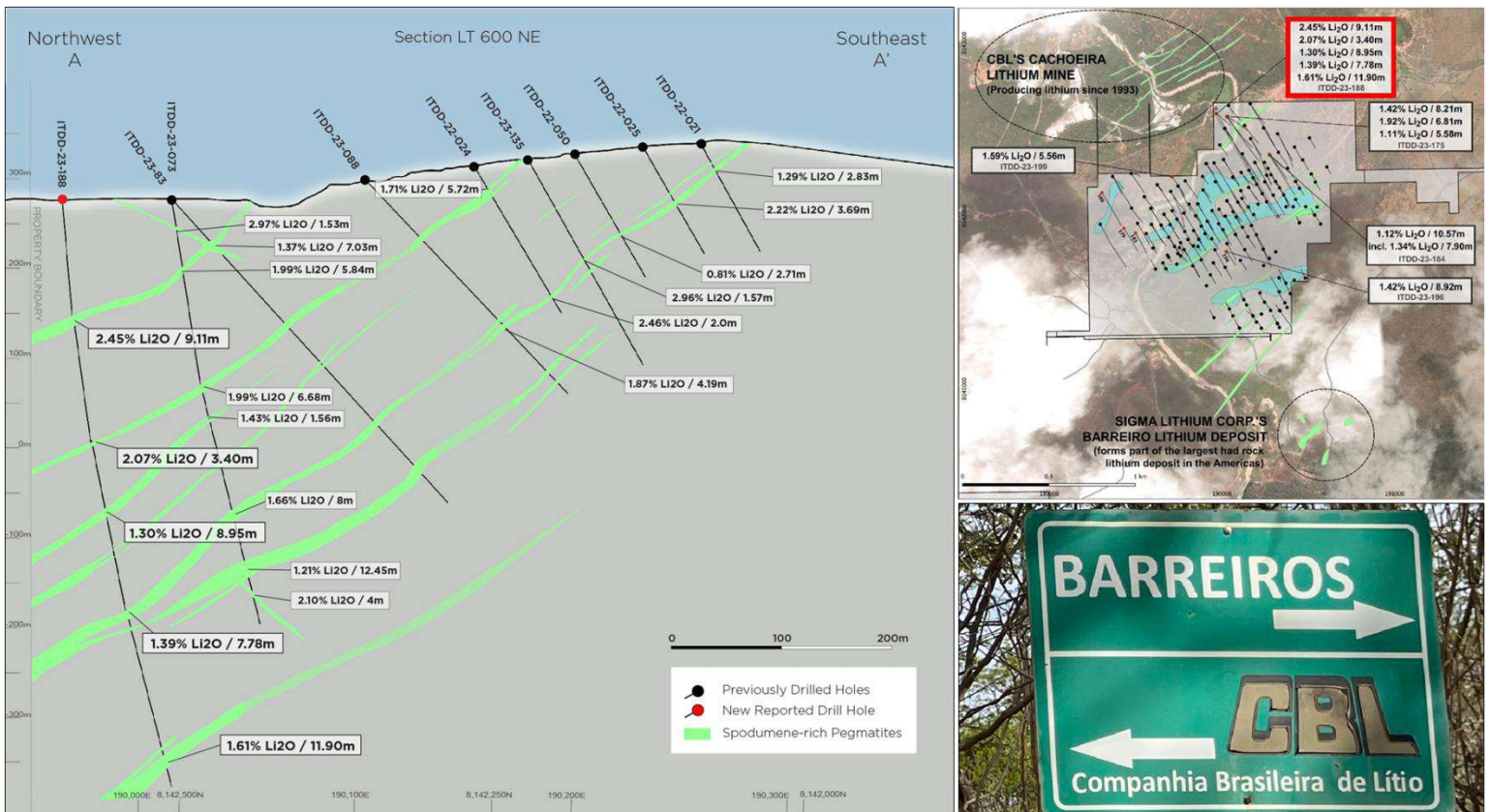
Bandeira's stacked, generally 10-15 m wide pegmatites (up to 24 m in concordant bodies and up to 53 m wide in the discordant bodies) are a regional 'type' of spodumene- rich pegmatite (SRP; after Pedrosa-Soares et al., 2011) similar to those mined at neighbouring CBL's Cachoeira operation and Sigma's Xuxa operation to the northeast, containing dominantly spodumene as the lithium-bearing mineral of significance (~17% by volume) with crystal sizes up to +20 cm and thus boding well for higher recoveries in a DMS-only circuit. These pegmatite types are poorly zoned (~homogeneous) relative to the more classic lithium-cesium-tantalum (LCT) type that are complexly zoned, and thus contain less tourmaline and other Li, Ta and Cs bearing accessory minerals. These SRP pegmatites are individually smaller than some of the larger, zoned LCT pegmatites typical of +1 Ba intracratonic environments, and are particularly abundant in Minas Gerais, adjacent to the peraluminous S-type granite bodies that were emplaced in schist host rocks between ~530-500 Ma, during the Araçuaí Orogen, noting the general absence of hydrous mineral phases (i.e., tourmaline, lepidolite) was likely related to somewhat anhydrous formation conditions. Bandeira's parallel, widely spaced (+50 m) SRP lenses are generally oriented NE-SW following the main foliation of the host mica schist, and dip 40-50°NW, unless hosted by fractures (potentially thicker). The lenses do outcrop but are generally lower grade at shallow depths due to weathering / kaolinization and tend to thicken down-dip, thus may be more amenable to underground extraction.

Figure 19 Spodumene Crystals in Hole ITDD-23-065, Section LT700 NE (24 m @ 1.32% Li₂O; Mar 29, 2023 PR)



Source: Lithium Ionic Corp. (left) and Corrmark Securities Inc. (right)

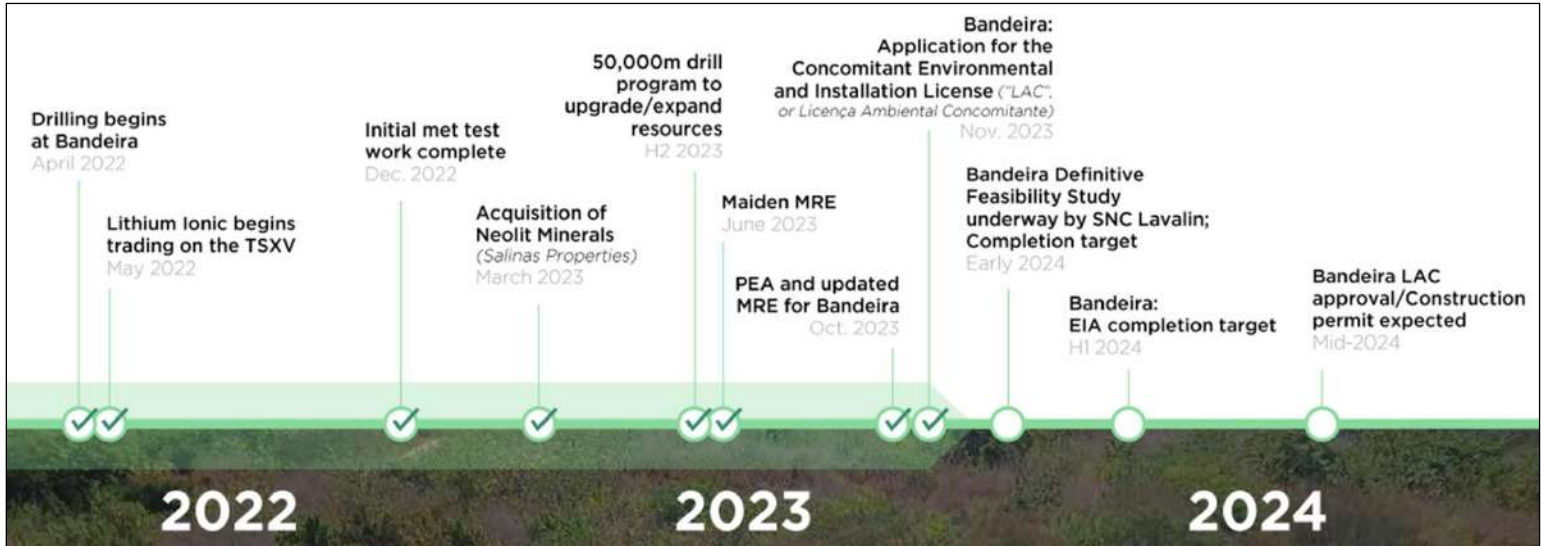
Figure 20 Section LT600NE Highlighting Interpreted Bandeira Pegmatite Morphology (Nov 15, 2023 PR)



Source: Lithium Ionic Corp. and Cormark Securities Inc. (bottom right)

On Deck An updated MRE and FS for Bandeira are expected mid-Q1/24, while the LAC permit approval (submitted) is anticipated to be received in mid-2024. Lithium Ionic is also working towards submission of an environmental impact assessment (EIA) for Bandeira, targeted for H1/24.

Figure 21 Lithium Ionic’s Near-Term Project Development Catalysts



Source: Lithium Ionic Corp.

CSI Catalysts

We look to the Lithium Ionic team to continue their advancement of regional exploration to develop additional resources. Although the company’s understanding of the regional geology appears to be very advanced and their targeting thus highly prospective, we will look for a priority list to emerge as greenfields exploration progresses.

In addition, metallurgical testwork is ongoing toward the anticipated FS, to further optimize the current PEA flowsheet that defines a 77.7% overall recovery via ore sorting, DMS for coarse material (to SC5.5), and finally gravity concentration via spirals for the fine portion (for SC3). Continued testing of the currently envisioned flowsheet should also examine additional treatment steps for iron content (~Fe 0.6%) and potential flotation of fines, which were not incorporated in the original PEA flowsheet.

Site Visit Review: Latin Resources Ltd. (LRS-ASX)

Company Overview

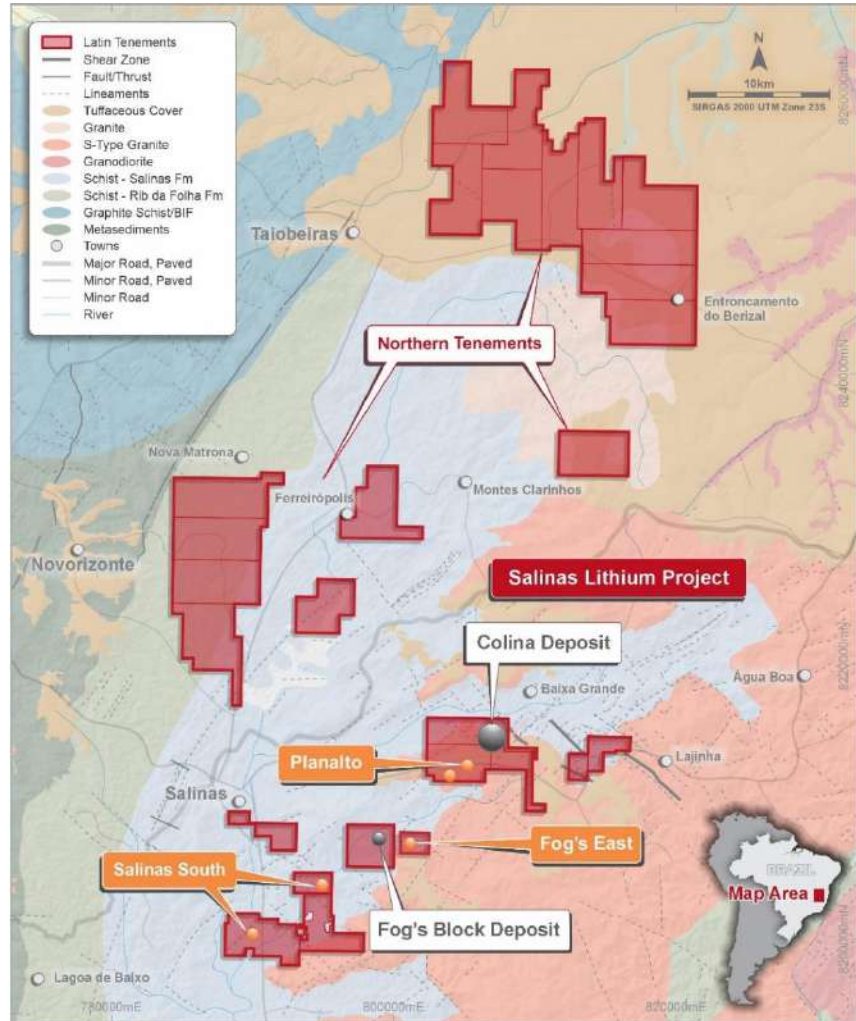
Latin Resources' management team consists of Chris Gale, founder and Managing Director (and founder of Allegra Capital), Peter Oliver, Director (former CEO and Managing Director of Talison Lithium), and Tony Greenaway, VP Operations (previously held technical management roles at Oar Resources, Solis Minerals, Talisman, and Hancock Prospecting). The company held ~A\$65 MM in cash at October 2023, with ~13% of the 2.8 B common shares outstanding owned by management / insiders.

Property Background

The Salinas project contains the 63.5 MMt M&I+I Colina deposit grading 1.31% Li₂O and the 6.8 MMt inferred Fogs Block resource grading 0.9% Li₂O for a global mineral resource of 70.3 MMt grading 1.27% Li₂O. Said resource estimates were updated December 6, 2023, and are based on ~70,000 m of drilling (207 drill holes). Robust upside potential exists along a mineralized NE-SW striking corridor, between the Colina and Fogs Block deposits and to the southwest (Salinas South). In September 2023, Latin announced a PEA for Salinas detailing a A\$3.6 B NPV8%, 132% IRR open pit DMS-only operation based on annual production of up to 525 ktpa SC5.5% (Phase 2) over an 11-year LOM, with a total capex of US\$308 MM and operating costs of US\$536/t SC5.5% (based on US\$1,699/t SC5.5 pricing). Said PEA is based on total ore mined of 31.4 MMt despite the initial 45.2 MMt M&I+I resource grading 1.32% Li₂O as basis of the study, noting the northeast property boundary directly abuts Lithium Ionic's project of the same name. Similar to Lithium Ionic, Latin Resources signed an MOU with Invest Minas to help prioritize the State regulatory approval process for their Salinas critical materials project. In addition, metallurgical testwork is ongoing toward the anticipated FS, to further optimize the current PEA flowsheet that defines a 77.7% overall recovery via ore sorting, DMS for coarse material (to SC5.5), and finally gravity concentration via spirals for the fine portion (for SC3). Continued testing of the currently envisioned flowsheet should also examine additional treatment steps for iron content (~Fe 0.6%) and potential flotation of fines, which were not incorporated in the original PEA flowsheet.

In addition to its flagship Salinas project, the company also has the Cloud Nine project (100% owned, halloysite-kaolin, Australia), the Catamarca project (50% owned, hard rock lithium, Argentina), the MT-03 project (100% owned, copper, Peru), and holds an 18% interest in Solis Minerals (SLMN-V, not covered).

Figure 22 Map Of Latin Resources' Minas Gerais Land Packages



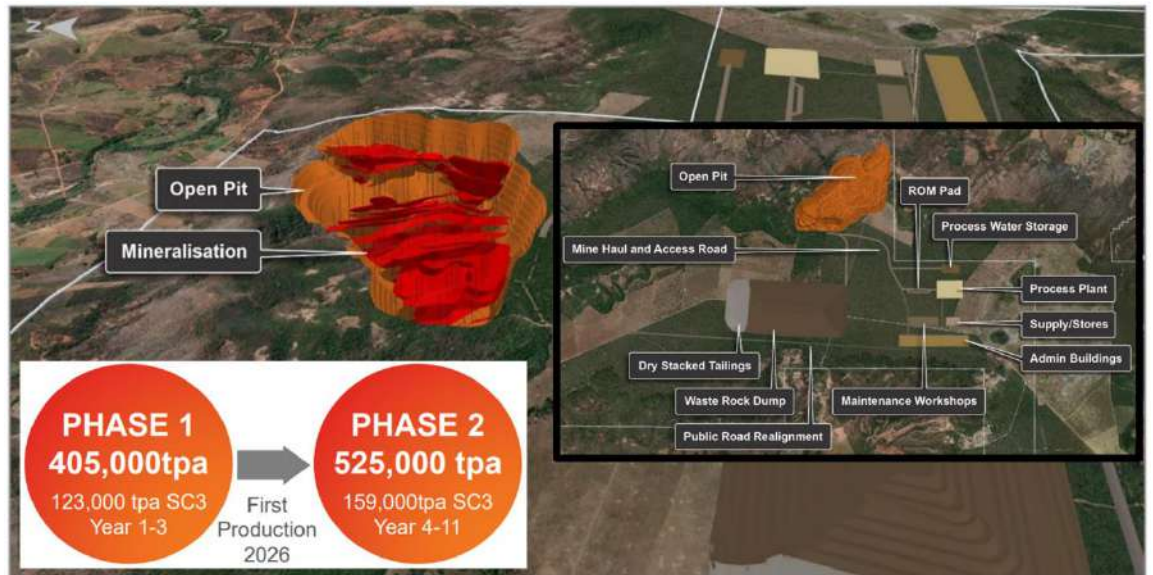
Source: Latin Resources Ltd.

Figure 23 Colina And Fog's Block Resource Estimates (December 2023)

Deposit	Resource Category	Tonnes (Mt)	Grade (Li ₂ O %)	Li ₂ O (Kt)	Contained LCE (Kt)
Colina	Measured	1.73	1.47	25.8	62.8
	Indicated	39.29	1.36	534.0	1,320.6
	<i>Measured + Indicated</i>	41.02	1.36	559.4	1,383.4
	Inferred	22.47	1.21	271.8	672.1
	Total	63.49	1.31	831.2	2,055.6
Deposit	Resource Category	Tonnes (Mt)	Grade (Li ₂ O %)	Li ₂ O (Kt)	Contained LCE (Kt)
Fog's Block	Measured	-	-	-	-
	Indicated	-	-	-	-
	<i>Measured + Indicated</i>	-	-	-	-
	Inferred	6.79	0.87	57.3	141.7
	Total	6.79	0.87	57.3	141.7

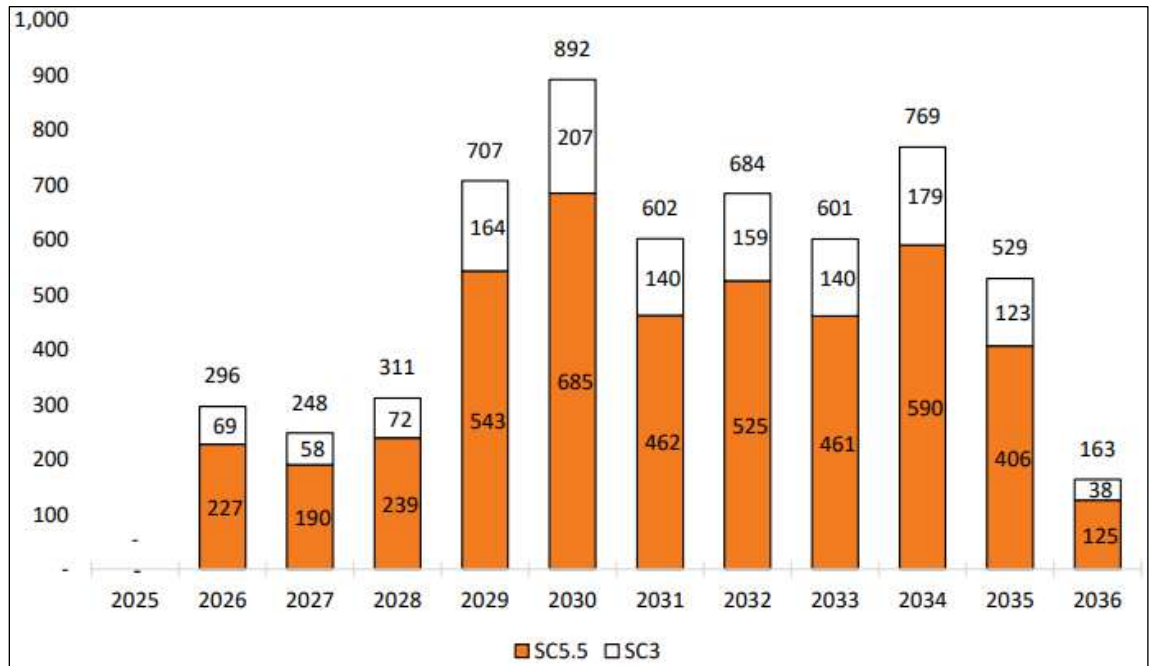
Source: Latin Resources Ltd.

Figure 24 Oblique Colina PEA Mine Plan Layout, Looking East (map view inset)



Source: Cormark Securities Inc. after Latin Resources Ltd.

Figure 25 Colina PEA Mine Plan And Production Schedule (Sep 23, 2023 PR)



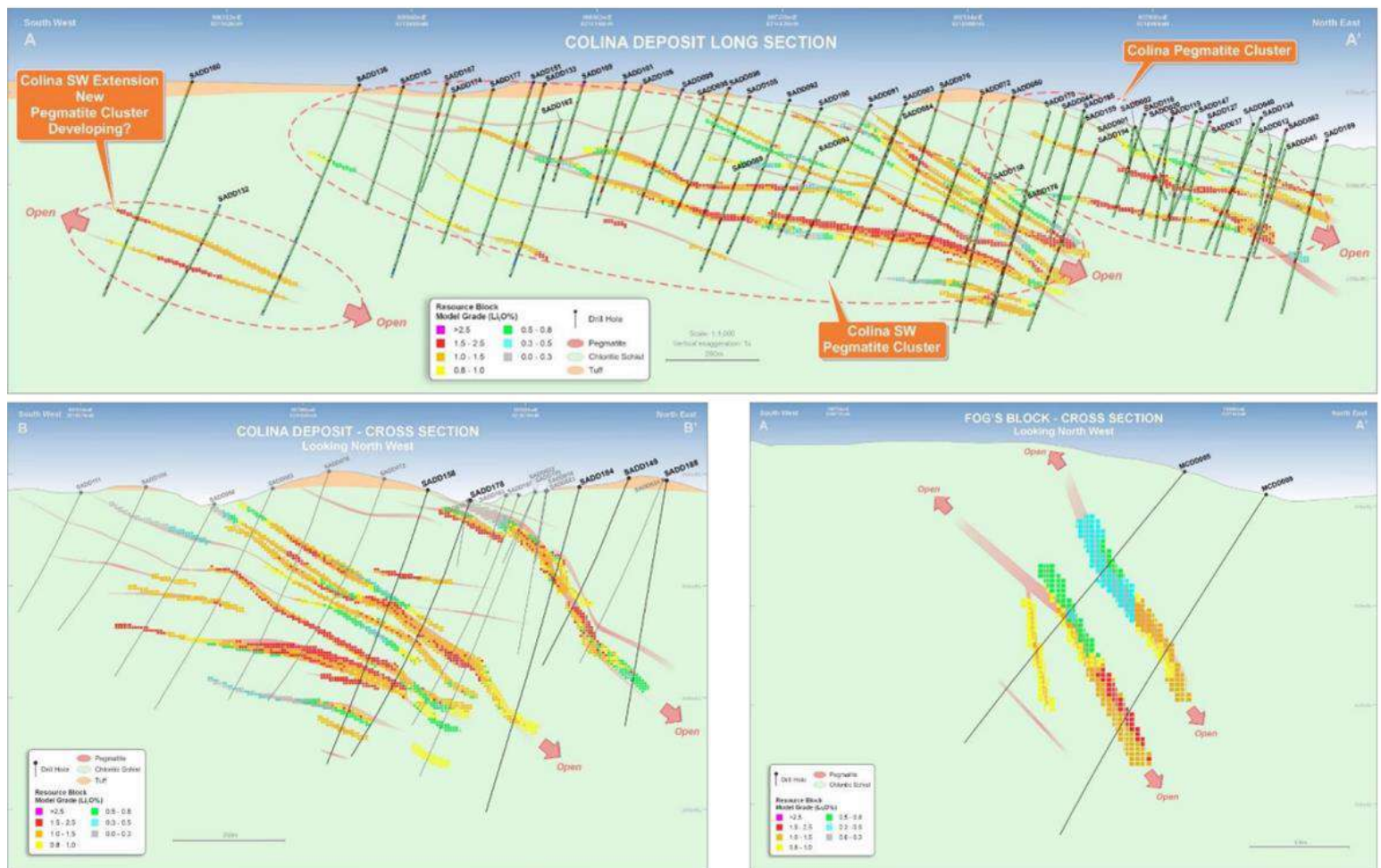
Source: Latin Resources Ltd.

Ongoing Work

To date, over 80,000 m have been drilled at Latin’s Salinas project, and 10 drill rigs are currently active on the property. The company plans to increase this to 16 rigs in early 2024 for condemnation and infill drilling of the recently expanded Colina deposit, as well as targeting down-dip extensions of known pegmatite mineralization. In addition, exploration drilling will continue at the recently identified Fogs Block East target adjacent to the Fogs Block deposit and at the Planalto prospect located 1.8 km southwest of Colina. The latter target was discovered with the completion of hole SADD223, which intersected 18 m of continuous spodumene pegmatite mineralization at 424 m depth (assays pending). We note that the large land package also includes the Northern Tenements representing >50% of the total property area owned, and we anticipate that some field exploration will be conducted here as well over the next year.

In addition, Latin continues to work toward a planned DFS for mid-2024, which will be based on the most recent mineral resource estimate (above). Said upsized global resource stands to support a third phase of throughput, beyond the targeted 3.6 MMtpa Phase 2 throughput in year 4 – this additional phase is planned to be evaluated in the forthcoming DFS. Although an assumed recovery was applied to the updated resource estimate (60%), preliminary metallurgical testing focused on a DMS-only flowsheet returned 93.1% recoveries (not including mass loss) of coarse material to a SC5.5 concentrate, while a post-DMS gravity circuit is employed to recover a targeted 123 ktpa SC3%. Feasibility-level metallurgical testwork is ongoing, which will presumably examine ore sorting and flotation towards optimizing recoveries, and potential production of a chemical (lithium hydroxide) product.

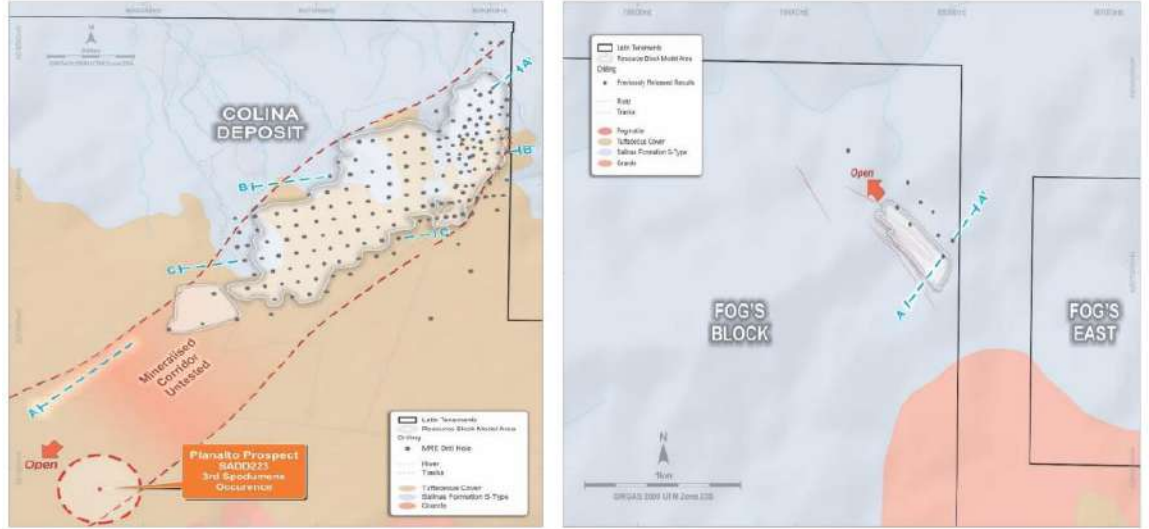
Figure 26 Sections Of Modelled Colina And Fogs Block Deposits – Development Of A Pegmatite Corridor



Source: Latin Resources Ltd.

Figure 27

Maps Of Priority Target Locations, Planalto (left) And Fogs Block (right)



Source: Latin Resources Ltd.

Regional Context

The stacked, thin (10-15 m) pegmatite lenses that comprise Colina are dominantly composed of large (average ~5 cm) spodumene crystals, ~10-12% by volume, with no petalite or lepidolite – another SRP-type LCT pegmatite deposit type similar to CBL’s Cachoeira and Sigma’s Xuxa to the south with uncomplicated mineralogy. The best intercept to date from hole SADD077 returned 33.1 m grading 1.83% Li₂O from 319.5 m depth, noting the majority of the 31 defined ore bodies begin well below cover (30-80 m overburden). At Fogs Block, located 12 m southwest of Colina, spodumene pegmatites are thinner (3-5 m) with slightly smaller crystal sizes. Latin plans to conduct additional drilling to test extensions along strike and at depth, as well as the mapped but not yet drilled outcropping Fogs Block East pegmatite. The team continues to identify exploration upside along the known Salinas trend NE and SW of the Colina deposit, with additional upside potential along the parallel Northern Tenements trend – noting the working regional geological model might benefit from additional detail, which is expected to be refined as the company works to complete their Colina feasibility study.

Figure 28

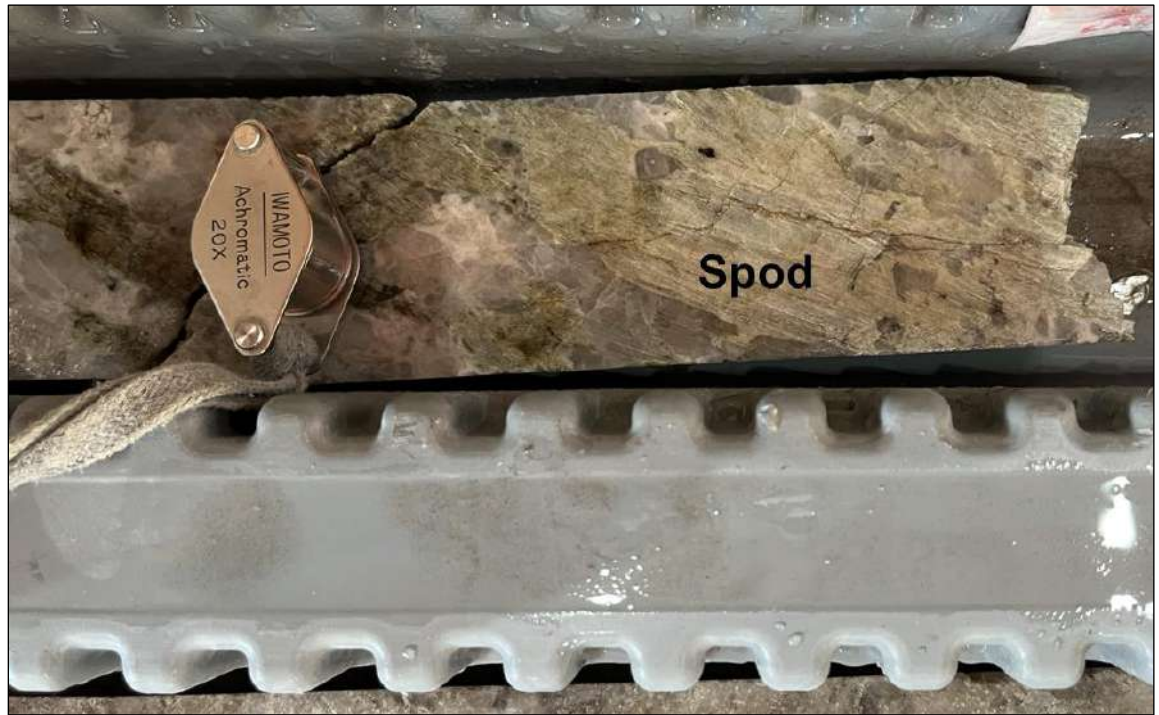
Wide, Perpendicular Spodumene Crystals At Colina Discovery Outcrop, Below SADD-001



Source: Cormark Securities Inc.

Figure 29

Large Spodumene Crystals In SADD-077 @ 349 m (33 m @ 1.83% Li₂O)



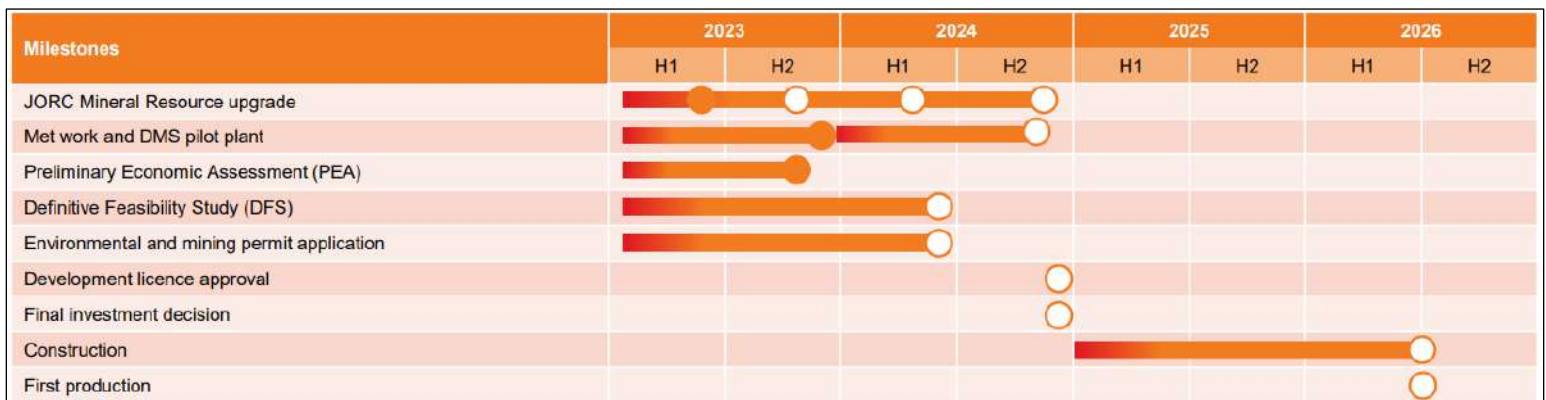
Source: Cormark Securities Inc.

On Deck

Following the resource update in early December that included a maiden Fogs Block estimate, Latin Resources is targeting a DFS for the Colina deposit in mid-2024 – noting the company should be fully funded to reach this goal following a A\$35 MM equity raise (priced at A\$0.25/sh) in October 2023. The feasibility work will include ongoing metallurgical testing to determine optimal flowsheet for recovery of spodumene concentrate. The study is also expected to examine potential for an upsized Phase 3 throughput scenario on the back of the December 6, 2023, resource update as well as water access, which is currently sourced from Salinas township. First production is targeted for 2026, noting the planned construction of a 20 km overhead transmission line from the main transformer does not require a power purchase agreement.

Figure 30

Latin Resources' Near-Term Project Development Catalysts



Source: Latin Resources Ltd.

CSI Catalysts

We look to additional exploration drilling results from Colina SW and Fogs Block to see how exploration success improves as the geological team continues to develop a robust/testable geological model for the Salinas project area. Delineation of additional resources across the property and/or regional synergies would also support extension of the project LOM past the currently defined 11 years. Additional detail from the targeted mid-2024 DFS on metallurgical process flowsheet and recoveries should help to further de-risk the project.

Summary

A Place For Hard Rock In The Global Context For Lithium Supply / Demand

Currently, the majority of lithium is extracted economically from two sources: first from brines as a chemical compound, and secondarily from rock (generally pegmatite or greisen) as a hard rock concentrate. While the large, long-lived brine deposits represent a mature industry with known processing requirements, new (high lithium grade and low impurity) brines are more difficult to find and are relatively small. The rise in EV demand and acceleration of battery manufacturing worldwide has incentivized chemicals and other downstream customers to look elsewhere. Hard rock lithium deposits were historically relatively under-exploited and are still able to be discovered (or rediscovered from government-made maps) near- or at surface. These deposits are thus amenable to rapid development to produce a saleable product in the form concentrate to downstream chemical producers (often with minimal processing, lowering opex costs). Although the production of concentrate is only an intermediate processing step to final battery-grade lithium chemical product, the product retains value in the supply chain through relatively lower costs of production (vs. brines) and in the more efficient conversion of spodumene concentrate to lithium hydroxide, a necessary input to high nickel cathodes (such as NMC, NCA, and others), as opposed to additional conversion of lithium carbonate, which is suitable for LFP batteries and non-battery applications of lithium.

However, not all hard rock deposits are created equal. These deposits range from lithium-cesium-tantalum (LCT) pegmatites to zinnwaldite-dominated greisen and low-grade lepidolite deposits, with a range of lithium-bearing ore minerals including spodumene, petalite, lepidolite, amblygonite, and zinnwaldite, among others. Of these, spodumene is relatively abundant, containing up to 8.03% Li_2O or (3.73% lithium) by weight, and large crystals can be separated from the host rock via simple dense media separation circuits to form a 'spodumene concentrate'. ***This makes the above-mentioned SRP-type pegmatites highly desirable, as their lithium-bearing mineralogy can be dominated by spodumene, which can then processed and sold as a low impurity (or battery grade) concentrate at a premium.***

Brazil Moving Up In Hard Rock Rankings

Brazil's Lithium Valley in Minas Gerais contains an abundance of LCT-type and, significantly, SRP-type pegmatites that are a product of the well-endowed district geological setting (the Eastern Brazilian Pegmatite [or EBP] province that formed during the ~630-480 Ma Araçuaí orogen) and typically display many of the above-mentioned desirable characteristics – spodumene dominant, large crystal size, and proximal to surface – and are thus amenable to the lowest cost tier of mining and processing. Although the region is bustling with lithium exploration activity, more pegmatites continue to be found as older maps are investigated and updated on the ground. In addition to these geologically significant characteristics, Brazil, and especially Minas Gerais, is a historic mining-friendly jurisdiction with exposure to low operating costs, abundant clean energy, and a highly skilled workforce. We note that the pegmatite ore bodies in Brazil trend small relative to the large, longer-lived hard rock deposits in the older >1 Ba cratonic rocks of Australia, Canada, and Africa – but we see this as a significant opportunity for consolidation in the region.

Considering the negative near-term economic themes for lithium – including Chinese destocking and depressed near-term EV manufacture guidance – ***we believe the lowest cost hard rock projects are most likely to be built and begin producing before the higher cost projects (i.e., Core Lithium's Finniss project) come back online. This is especially true for those projects with offtake partners, who should be more incentivized to see first production through any set backs encountered during ramp up.*** Minas Gerais' efforts to streamline permitting for its lithium projects further bolsters project economics. Of the three projects, Atlas Lithium will be the most closely watched, for its rapid targeted timeline to Q4/24 production is based on extremely low estimated capex costs, offtake commitments from two large chemical producers, and priority permitting status with the Minas Gerais government. Risks inherent in the company's plans include their dearth of published technical work, and as such we look to a targeted maiden mineral resource estimate and PEA for the Neves project this quarter for additional information. Although Lithium Ionic and Latin Resources project slightly longer timelines to first production (~2025-2026) and relatively costlier mining economics (remaining very low on a global scale), the two projects are being steadily advanced through detailed development phases and are based on excellent mineral assets – thus a potentially lower risk profile

with a relatively longer timeline to positive cash flow. **Project detail agnostic, Brazil is poised to become a leading hard rock lithium producer on the world stage, founded on high quality spodumene pegmatite assets supported by low costs and permitting incentive for the development of projects in the EV battery supply chain.**

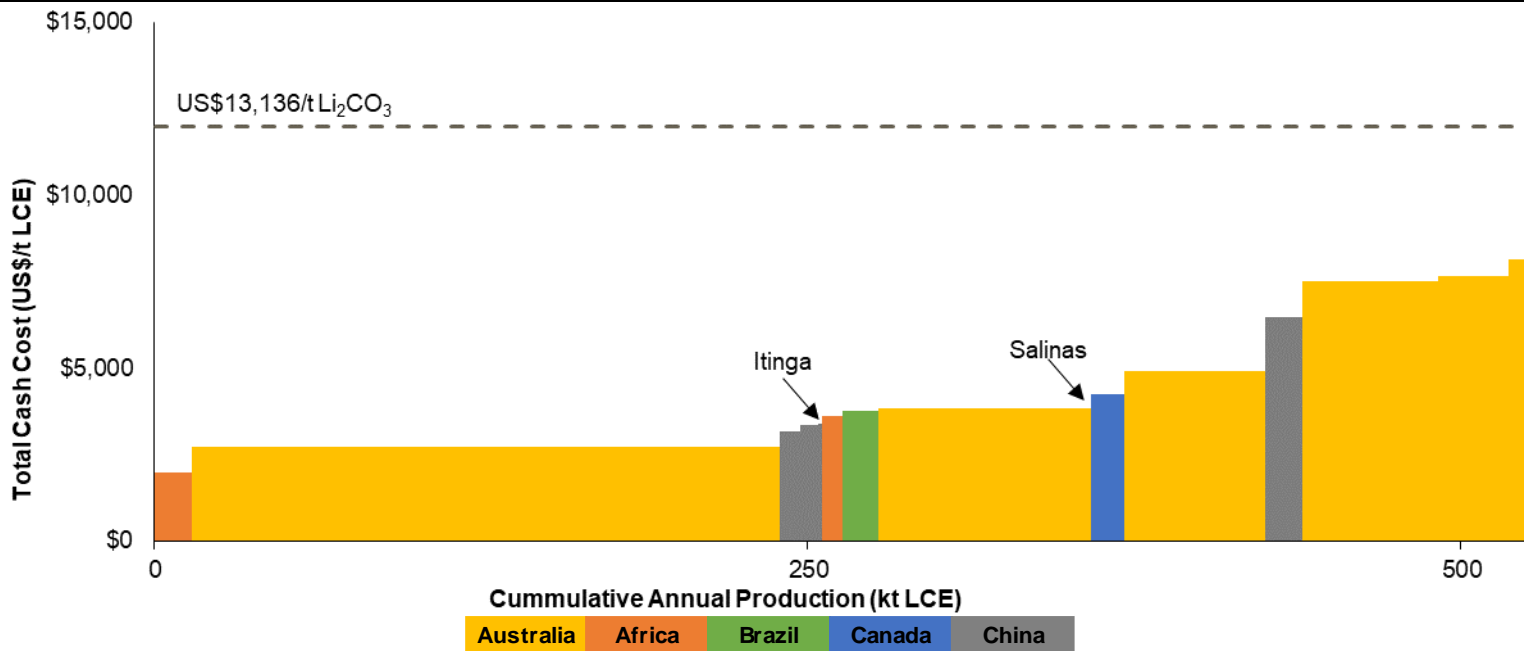
Figure 31 Brazil Hard Rock Lithium – Detailed Study Comparison Table

		Sigma Lithium SGML		Atlas Lithium ATLX	Lithium Ionic LTH	Latin Resources LRS
Project		Xuxa	Grota do Cirilo	Neves	Bandeira	Colina
Stage		Production	FID	Resource Definition	Feasibility	Feasibility
Technical Report		2023 FS - Ph 1	2023 FS - Ph 1-3	---	2023 PEA	2023 PEA
Total M&I+I Resources	MMt	21.2	85.6	---	29.5	63.5
Grade	% Li ₂ O	1.56%	1.43%	---	1.37%	1.30%
LCE Contained	kt	816	2,904	---	998	2,041
LOM Ore Processed	MMt	11.8	54.7	---	22.9	31.4
LOM Average Grade	% Li ₂ O	1.55%	1.44%	---	1.23%	1.24%
Strip Ratio		16.4:1	14.7	---	---	17.6:1
Dilution	%	---	---	---	16.8%	---
Throughput	MMtpa	1.5	4.2	---	1.3	3.6
LCT Pegmatite Type		SRP	LCT	LCT	SRP	SRP
Recovery (SC5.5)*	%	60%	57%	70%	67%	67.2%
Iron Oxide Content	% Fe ₂ O ₃	---	0.34%	0.53%	0.24%	0.40%
Recovery (SC3)	%	---	---	---	11%	11.1%
LOM	years	8	13	---	20	11
First Production	year	2023A	2024E	2024E	2025E	2026E
Production SC5.5	ktpa	270	766	150	187	405
Production SC3	ktpa	---	---	---	56	123
Mining Method		Open pit	Open pit	Open Pit	Underground	Open Pit
Process Flowsheet		DMS + cyclones + magnetic separation	DMS + cyclones + magnetic separation	DMS + (?)	Ore sorting + DMS + spiral separation	DMS + spiral separation
Total Cash Cost	US\$/t SC	\$539	\$521	---	\$469	\$536
Capital Costs	US\$ MM	\$131	\$285	\$50	\$233	\$308
Contingency	%	8%	8%	---	25%	20%
Sustaining Costs	US\$ MM	\$3.4	\$17.5	---	\$118	---
SC5.5 Price	US\$/t	\$1,375	\$1,375	---	\$1,859	\$1,699
SC3 Price	US\$/t	---	---	---	\$865	\$927
Post-tax NPV	US\$ MM	\$5,699	\$15,289	---	\$1,586	\$2,500
Discount Rate	%	8%	8%	---	8%	8%
Post-tax IRR	%	1282%	1273%	---	121%	132%
Market Cap	US\$ MM		\$2,520	\$246	\$95	\$322
Share Count	MM		110	11	117	2,796
EV	US\$ MM		\$2,779	\$223	\$82	\$327
EV/t Resource	US\$/t LCE	\$3,405	\$957	---	\$82	\$160

*Sigma Lithium targeting 6.0% Li₂O spodumene concentrate.

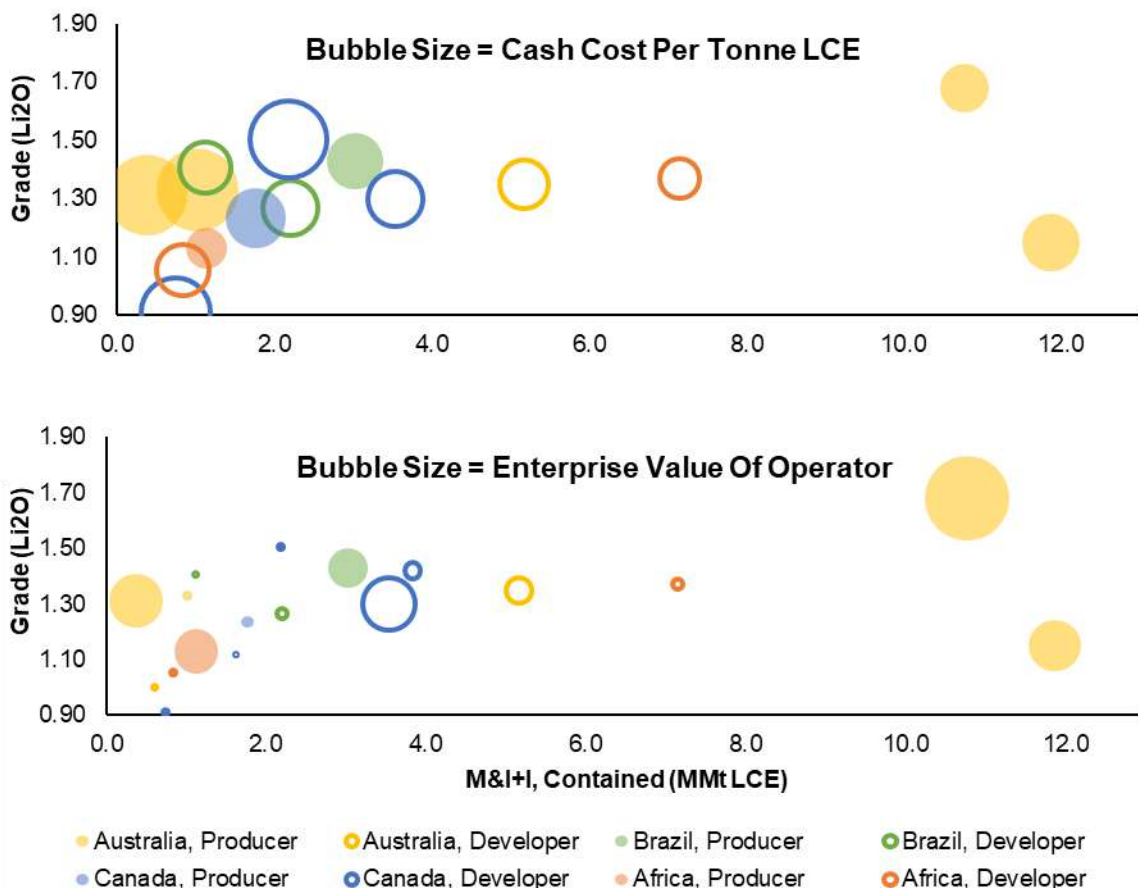
Source: Cormark Securities Inc. and Company reports

Figure 32 Cost Curve Of Global Hard Rock Lithium Operations



Source: Cormark Securities Inc., S&P Market Intelligence, Company Reports (based on 2022A and 2023E operating results)

Figure 33 Grade Vs Tonnage, Select Global Hard Rock Operations & Developments



Source: Cormark Securities Inc., S&P Market Intelligence, Company Reports

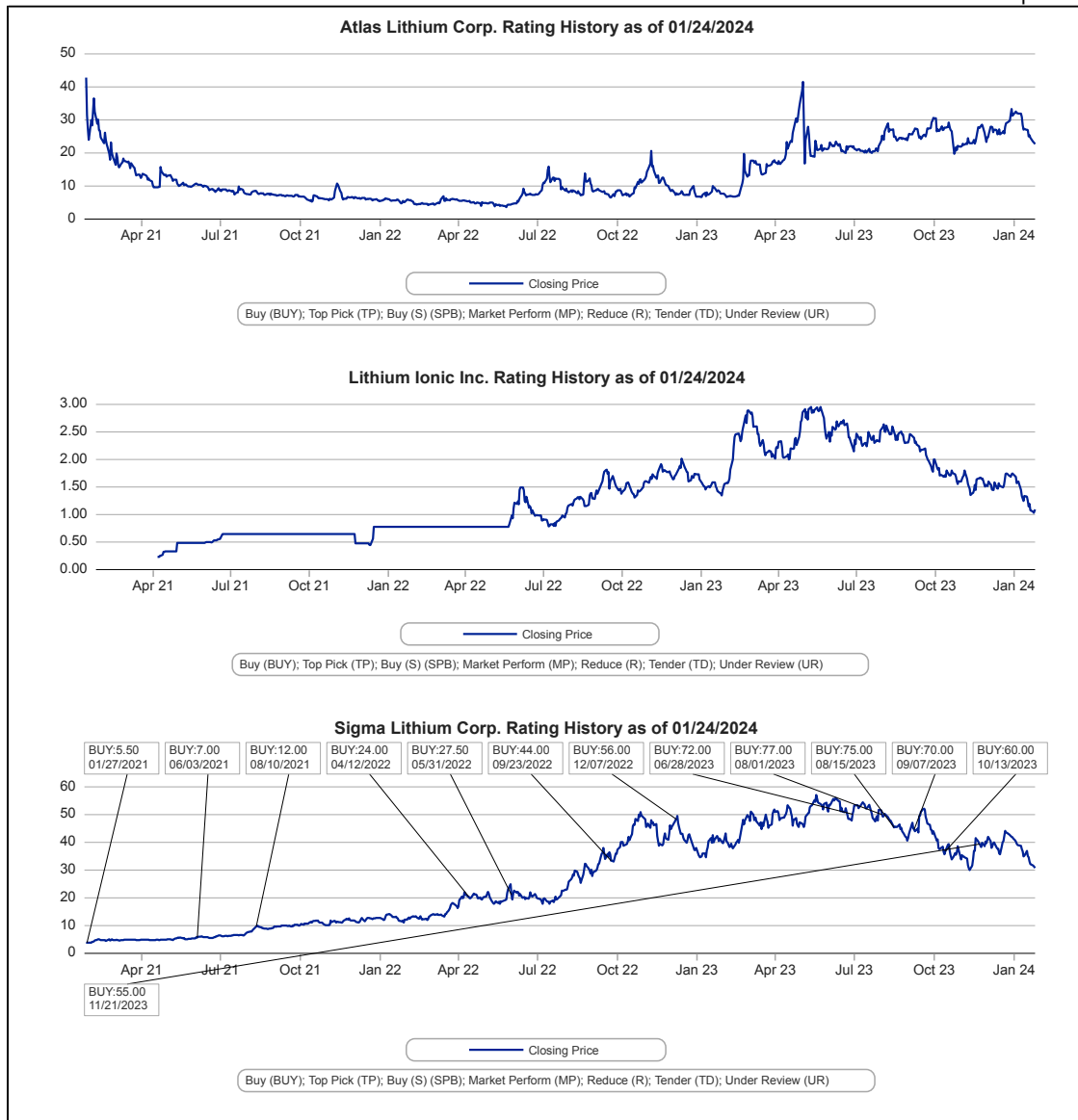
Figure 34 Global Hard Rock Lithium Comparison Table

Company	Symbol	Exch.	Share Price	Mkt. Cap. US\$MM	Cash US\$MM	Debt US\$MM	30-Day Avg. Val Traded US\$MM	Attr. Resource (LCE)			EV/t LCE			Estimates				Period Returns								
								P&P MMT	M&I MMT	Total MMT	P&P US\$/t	M&I US\$/t	Total US\$/t	NAVPS /sh	P/NAV	2024 EV/EBITDA US\$MM	2025 EV/EBITDA US\$MM	1 Wk	1 Mo	3 Mo	6 Mo	YTD 2023	1 Yr			
Major Producers / Integrated																										
Albemarle	ALB	.N	\$121.69	\$21,085	\$1,602	\$3,808	\$80.0	9.0	16.1	19.9	\$2,586	\$1,448	\$1,173	NA	-	\$1,896	12.3x	\$2,490	9.4x	3.1%	(18.9%)	(10.1%)	(42.1%)	(43.9%)	(55.1%)	
Ganfeng Lithium	002460	.SZ	¥40.61	\$17,706	\$1,297	\$2,633	\$190.2	6.8	23.5	46.8	\$2,786	\$810	\$407	NA	-	\$1,251	15.2x	\$1,475	12.9x	(3.8%)	1.7%	(7.5%)	(30.7%)	(41.6%)	(48.1%)	
Arcadium Lithium	ALTM	.N	C\$5.45	\$4,165	\$113	\$250	-	4.5	7.8	12.7	\$953	\$548	\$338	NA	-	\$640	6.7x	\$1,234	3.5x	0.6%	NA	NA	NA	NA	NA	
Mineral Resources	MIN	.AX	A\$59.39	\$9,135	\$918	\$2,152	\$35.8	3.3	3.7	4.9	\$3,156	\$2,767	\$2,107	A\$71.15	0.83x	\$902	11.5x	\$1,274	8.1x	1.5%	(12.8%)	(1.2%)	(19.5%)	(23.1%)	(37.0%)	
Pilbara Minerals	PLS	.AX	A\$3.53	\$8,899	\$2,222	\$314	\$51.6	7.2	11.0	13.1	\$972	\$636	\$535	A\$3.98	0.89x	\$537	13.0x	\$636	11.0x	2.0%	(7.8%)	(9.0%)	(30.1%)	(5.9%)	(30.9%)	
SQM	SQM	.N	C\$48.76	\$19,338	\$1,185	\$3,693	\$22.8	4.3	49.4	63.5	\$5,083	\$442	\$344	NA	-	\$2,803	7.8x	\$3,226	6.8x	1.7%	(18.9%)	(4.2%)	(34.6%)	(38.9%)	(47.3%)	
Tianqi Lithium	002466	.SZ	¥56.01	\$16,467	\$1,113	\$1,508	\$262.0	2.0	2.7	3.1	\$8,312	\$6,327	\$5,393	NA	-	\$2,181	7.7x	\$2,460	6.9x	(4.1%)	3.1%	5.9%	(13.9%)	(29.1%)	(40.4%)	
Average											\$3,407	\$1,854	\$1,471			0.86x		615.7x		2.9x						
Median											\$2,786	\$810	\$535			0.86x		11.5x		8.1x						
Hard Rock Developers																										
Atlantic Lithium	ALLA	.L	£0.21	\$236	\$10	\$0	\$0.3	0.3	0.4	0.5	\$647	\$570	\$459	NA	-	-	-	-	-	(5.6%)	(9.0%)	(5.2%)	(9.2%)	(45.2%)	(50.5%)	
Atlas Lithium*	ATLX	.N	\$23.25	\$230	\$23	\$0	\$0.0	-	-	-	NA	NA	NA	\$51.93	0.45x	-	-	-	-	(8.6%)	(19.6%)	13.7%	5.0%	NA	167.2%	
Avalon Advanced Materia	AVL	.TO	C\$0.10	\$37	\$1	\$2	\$0.0	-	0.1	0.2	NA	\$291	\$226	NA	-	-	-	-	-	0.0%	(5.0%)	(9.5%)	(44.1%)	(20.8%)	(36.7%)	
Azure Minerals	AZS	.AX	A\$3.61	\$108	\$12	\$0	\$2.0	-	-	-	NA	NA	NA	A\$4.56	0.79x	-	-	-	-	(1.6%)	(3.5%)	48.0%	102.8%	1504.4%	1064.5%	
Critical Elements																										
Core Lithium	CXO	.AX	A\$0.19	\$1,210	\$102	\$15	\$2.5	0.4	0.8	1.0	\$3,204	\$1,495	\$1,103	A\$0.17	1.07x	-	-	-	-	(11.9%)	(28.8%)	(47.1%)	(73.6%)	(82.0%)	(83.5%)	
European Metals	EMH	.AX	A\$0.32	\$77	\$6	\$0	\$0.0	0.3	2.2	3.6	\$268	\$32	\$20	NA	-	-	-	-	-	(3.0%)	(33.3%)	(50.0%)	(63.2%)	(50.0%)	(50.8%)	
Frontier Lithium	FL	.V	C\$0.69	\$116	\$17	\$0	\$0.1	-	1.0	2.2	NA	\$96	\$46	C\$3.64	0.19x	-	-	-	-	(1.4%)	(6.8%)	(22.5%)	(62.3%)	(66.5%)	(70.0%)	
Grid Metals	GRDM	.V	C\$0.09	\$19	\$3	\$0	\$0.0	-	-	0.4	NA	NA	\$44	C\$1.74	0.05x	-	-	-	-	0.0%	(10.5%)	(26.1%)	(46.9%)	(48.5%)	(59.5%)	
Green Technology Metals	GT1	.AX	A\$0.15	\$103	\$7	\$1	\$0.1	-	0.5	0.7	NA	\$199	\$140	A\$0.49	0.31x	-	-	-	-	(25.0%)	(40.0%)	(62.5%)	(76.2%)	(81.8%)	(84.4%)	
Infinity Lithium	INF	.AX	A\$0.09	\$38	\$8	\$0	\$0.0	0.6	0.9	1.7	\$53	\$33	\$18	NA	-	-	-	-	-	(6.3%)	(5.3%)	6.0%	(19.1%)	(25.8%)	(28.8%)	
Latin Resources	LRS	.AX	A\$0.17	\$231	\$31	\$0	\$1.6	-	1.4	2.2	NA	\$145	\$92	A\$1.27	0.13x	-	-	-	-	(25.0%)	(34.0%)	(38.9%)	(52.9%)	68.4%	37.5%	
Leo Lithium	LLL	.AX	A\$0.51	\$456	\$45	\$1	\$0.0	-	1.3	2.6	NA	\$311	\$160	A\$1.96	0.26x	-	-	-	-	0.0%	0.0%	0.0%	(55.7%)	4.1%	(17.9%)	
Lepidico	LPD	.AX	A\$0.01	\$52	\$7	\$5	\$0.0	0.1	0.1	0.1	\$622	\$532	\$418	NA	-	-	-	-	-	(14.3%)	(25.0%)	(40.0%)	(60.0%)	(62.5%)	(60.0%)	
Li-FT Power	LIFT	.V	C\$5.95	\$260	\$27	\$0	\$0.3	-	-	-	NA	NA	NA	C\$13.59	0.44x	-	-	-	-	(1.3%)	9.0%	(19.0%)	(29.9%)	(45.9%)	(40.5%)	
Liontown Resources	LTR	.AX	A\$0.92	\$4,231	\$203	\$81	\$11.5	2.3	4.6	5.5	\$1,811	\$902	\$743	A\$1.15	0.80x	-	-	-	-	(24.3%)	(39.3%)	(49.2%)	(67.6%)	(30.3%)	(40.3%)	
Lithium Ionic*	LTH	.V	C\$1.10	\$95	\$17	\$0	\$0.5	-	0.6	1.1	NA	\$301	\$115	-	-	-	-	-	-	(8.3%)	(37.1%)	(31.3%)	(53.0%)	(32.1%)	(23.6%)	
Patriot Battery Metals	PMET	.V	C\$6.86	\$581	\$133	\$0	\$0.7	-	-	3.8	NA	NA	\$117	C\$18.87	0.36x	-	-	-	-	2.5%	(29.6%)	(31.7%)	(50.1%)	3.9%	(45.6%)	
Piedmont Lithium	PLL	.AX	A\$0.26	\$1,009	\$94	\$2	\$0.2	1.1	1.4	2.2	\$868	\$633	\$414	A\$2.02	0.13x	-	-	-	-	(10.3%)	(38.8%)	(45.3%)	(67.5%)	(59.7%)	(71.6%)	
Prospect Resources	PSC	.AX	A\$0.08	\$44	\$17	\$0	\$0.0	-	-	-	NA	NA	NA	A\$0.10	0.80x	-	-	-	-	(6.1%)	(13.5%)	(19.8%)	(38.4%)	(35.8%)	(30.0%)	
Delta Lithium	DLI	.AX	A\$0.28	\$138	\$56	\$0	\$0.4	-	0.4	1.1	NA	\$196	\$78	A\$1.09	0.25x	-	-	-	-	(5.2%)	(39.6%)	(53.7%)	(68.6%)	(40.6%)	(45.7%)	
Rock Tech Lithium	RCK	.V	C\$1.11	\$164	\$10	\$1	\$0.1	0.1	0.2	0.3	\$1,038	\$668	\$460	C\$2.37	0.47x	-	-	-	-	(11.2%)	(14.6%)	(9.0%)	(44.5%)	(47.1%)	(56.8%)	
Savannah Resources	SAVS	.L	£0.02	\$82	\$6	\$0	\$0.0	-	0.5	0.7	NA	\$161	\$105	£0.42	0.05x	-	-	-	-	(7.3%)	(7.3%)	(41.5%)	(59.1%)	(17.4%)	(30.9%)	
Sayona Mining	SYA	.AX	A\$0.04	\$1,210	\$141	\$21	\$2.0	0.6	1.7	2.8	\$1,710	\$632	\$383	A\$0.26	0.15x	-	-	-	-	(9.1%)	(37.5%)	(52.9%)	(74.2%)	(78.9%)	(85.5%)	
Sigma Lithium	SGML	.V	C\$30.85	\$2,500	\$63	\$94	\$0.2	1.9	2.6	2.9	\$1,304	\$973	\$871	C\$42.14	0.73x	-	-	-	-	(7.1%)	(29.2%)	(13.3%)	(37.5%)	(19.0%)	(23.7%)	
Snow Lake Resources	LITM	.N	\$0.97	\$53	\$3	\$0	\$0.0	-	0.2	0.2	NA	\$251	\$223	NA	-	-	-	-	-	(16.4%)	(18.5%)	(5.8%)	(52.7%)	(54.7%)	(60.2%)	
Winsome Resources	WR1	.AX	A\$0.60	\$168	\$28	\$0	\$0.8	-	-	1.6	NA	NA	\$86	A\$3.56	0.17x	-	-	-	-	(13.7%)	(41.7%)	(52.0%)	(63.5%)	(51.2%)	(73.3%)	
Average											\$1,061	\$427	\$280			0.39x										
Median											\$868	\$296	\$140			0.28x										

* Denotes Emerging Idea. Cormark estimates highlighted in grey
 Note: Cormark price deck is \$22,500/t Li2CO3, \$19,800/t LiOH.H2O, and \$1,625/t SC6% long-term
 Source: Cormark Securities Inc., Thompson Reuters, S&P Market Intelligence

Price Chart and Disclosure Statement

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